

**PUNYASHLOK AHILYADEVII HOLKAR SOLAPUR UNIVERSITY, SOLAPUR**



**Name of the Faculty: Humanities**

**Name of the Course: B. A. (English) Part - III**

**Name of the Paper: Content Writing and Editing in English Language**

**With effect from June-2021-22, 2022-23 & 2023-24**

**PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR**

Name of the Course: **B. A. –III**

Name of the Paper: **Content Writing and Editing in English Language**

**Preamble:**

In this course, the students will study how to write and edit content in English. The course will examine different types of content writings. Consistent, engaging, and high-quality **content** impacts the audience more than any other technique. **Content writing** allows your brand to create cohesive pieces of information. Consistency, especially in brand messaging, is one of the significant factors to determine the growth and success of your business. An editor will find themselves planning, coordinating and editing material for publication at newspaper, magazine, publishing house or other organization. This course offers the writing and editing skills to train "aspiring-content writers and editors.

**Objectives of the Course:**

1. The course aims to inculcate the content writing and content editing skills among the students.
2. This course can also be beneficial to the existing content writers in honing their skills.

**Course Outcome:**

1. Content writing is considered a highly skilled area and presents opportunity for a full time/part time career.
2. Students will be able to write and edit the content.

**PUNYASHLOK AHILYADEVJI HOLKAR SOLAPUR UNIVERSITY,  
SOLAPUR**

Name of the Course: **B. A. –III**

Name of the Paper: **Content Writing and Editing in English Language**

**[Credits:04 Theory-(45), Practical-(15)]**

**Total Theory Lectures-(45)**

**Total Credits – (04)**

**Unit No: 1 Introduction to Content Writing and Editing (Credit: 01) (15)**

**Unit No: 2 Structuring and Writing Quality Content (Credit: 01) (15)**

**Unit No: 3 Copy Writing, Sales, Advertising and Promotion. (Credit: 01) (15)**

**Unit No: 4 Digital Content Writing (Credit: 01) (15)**

**Course Structure:**

<b>Semester</b>	<b>Paper No.</b>	<b>Title of Paper</b>	<b>No. of Lectures</b>	<b>College Assessments (Marks)</b>	<b>University Assessments (Marks)</b>	<b>Total Marks</b>	<b>Credits</b>
		CONTENT WRITING AND EDITING IN ENGLISH	60	20	80	100	04

**PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR**

Name of the Course: **B. A. –III**

Name of the Paper: **Content Writing and Editing in English Language**

**Unit: I Introduction to Content Writing and Editing**

- Origin and need of content writing
- Career in content writing
- Types of content writings
- The Concept of Content Marketing
- Difference between Academic and Content Writing.

**Unit: II Structuring and Writing Quality Content**

- Brainstorming and Collection of Material
- Proof Reading Techniques
- How to Structure a Book and ensure content Quality?
- Documentation and Formatting

**Unit: III Copy Writing, Sales, Advertising and Promotion.**

- Writing Newsletters, Product Descriptions and Press Releases
- Importance of Page Layout and Text Outline
- Effective Writing Techniques
- Writing Articles
- Mistakes to Avoid

**Unit: IV – Digital Content Writing**

- Video scripts
- Email newsletters
- Keynote speeches
- Social media posts
- Podcast titles
- Web page copy
- YouTube video descriptions
- Blog

**List of References:**

1. A. Z. Gill, Content Writing: A helpful Guide,

**PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR**



**Name of the Faculty: Humanities**

**Name of the Course: M. A. (English) Part – II**

**Name of the Paper: Linguistic Competence for Advertising, Marketing and  
Public Relations**

**With effect from June-2021-22, 2022-23 & 2023-24**

# **Punyashlok Ahilyadevi Holakar Solapur University, Solapur**

Name of the Course: **M.A (English) Part-II**

Name of the Paper: **Linguistic Competence for Advertising, Marketing and Public Relations**

## **Objectives:**

Objectives of the course are to:

7. Introduce importance linguistic Competence in communication industry.
8. Create awareness of the type of language used in advertising.
9. Explain linguistic skills required for marketing.
10. Inform linguistic skills required for public relations.

## **Course Outcomes:**

At the end of the course, students will be able to:

1. Demonstrate knowledge of linguistic skills in communication industry.
2. Obtain linguistic skills required for advertising, marketing and public relations.
3. Draft advertise, practice marketing and establish public relations.
4. Enhance employability skills.

# **Punyashlok Ahilyadevi Holakar Solapur University, Solapur**

Name of the Course: **M.A (English) Part-II**

Name of the Paper: **Linguistic Competence for Advertising, Marketing and Public Relations**

**[Credits: 05 Theory-(45), Practical-(15)]**

**Total Theory Lectures-(45)**

**Total Credits – (05)**

**Unit No: 1 Introduction to linguistic Competence and Communication Industry  
(Credit: 02)(30)**

**Unit No: 2 Linguistic Competence for Drafting Advertisement (Credit: 01)(15)**

**Unit No: 3 Linguistic Competence for Marketing (Credit: 01) (15)**

**Unit No. 4 Linguistic Competence for Public Relations (Credit: 01)(15)**

## **Course Structure:**

<b>Semester</b>	<b>Paper No.</b>	<b>Title of Paper</b>	<b>No. of Lectures</b>	<b>College Assessments (Marks)</b>	<b>University Assessments (Marks)</b>	<b>Total Marks</b>	<b>Credits</b>
		<b>Linguistic Competence for Advertising, Marketing and Public Relations</b>	60	20	80	100	05

# **Paper – Linguistic Competence for Advertising, Marketing and Public Relations**

## **SEMESTER**

### **Unit: I Introduction to Linguistic Competence and communication Industry**

- The concept of linguistic skills in English
- Linguistic skills and employability: Interlinking
- Career communication industry
- Drivers and dynamics of the communications industry
- Developing employability through effective language skills
- 

### **Unit: II Linguistic Competence for drafting advertisement**

- Advertising as means of communication
- Writing advertising slogans: rhythm and rhyme
- Use of Extreme adjectives, superlative phrases, glowing idioms and vocabulary
- Use of parts of speeches in drafting advertisement

### **Unit: III Linguistic Competence for Marketing**

- Importance of effective language for marketing
- Requirement of linguistic skills at marketing workplace: writing ad copy, sales collateral, blogs and newsletters
- Enhancing language proficiency
- Marketing and Public speaking skills
- Marketing and Non Verbal skills

### **Unit: IV – Linguistic Competence for Public Relations**

- Writing for clients: press releases, reports, feature articles and opinion pieces
- Conducting media interactions including invites, pitches and interviews
- Engaging clients with reports, proposals or even simple emails
- Posting on social media channels with tweets, Instagram captions or LinkedIn articles
- Networking — face-to-face or over the phone — with the media, clients or partners

### **Reference book:**

- Foreign Languages in Advertising: Linguistic and Marketing Perspectives by Jos Hornikx and Frank van Meurs

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PAH SOLAPUR UNIVERSITY, SOLAPUR

Skill Enhancement Course

Fermentation Technology

**SYLLABUS**

FOR B.Sc III



## **Skill Enhancement Course (SEC)**

### **Introduction: -**

Solapur district is known for the production of fruits like Grapes, Pomegranate and sugarcane. One of the emerging agro based industry is the Fermentation industry. Fermented food products are part and partial of our daily. Recently, farmers have realized this fact and Government has also taken initiatives by relaxing the taxation and certification rules for the Industries. In future large number of expertise is likely to be required in this area. In order to meet this requirement of skilled expertise the **Skill Enhancement Course** in Fermentation Technology is proposed to be started as a part of B Sc. Microbiology course.

### **Objective of the course**

- 1.To provide the knowledge of basic principle of fermentation process, which help students to design, develop and operate industrial level fermentation process.
- 2.To develop skills of the students in the area of downstream processing
- 3.To impart basic knowledge of quality control and good manufacturing practices in industries
4. To equip the students to pursue higher studies.
5. To prepare the student for an eventual job in industry.

The **Skill Enhancement Course** in fermentation Technology provides platform for job opportunities in exciting fields of fermentation industry. This course has to be completed along with the degree course.

**B.Sc. III-Microbiology (Semester-V)**

**w. e. f. June 2021**

**[Credits -4, Total Lectures-60(theory 30+practical 30)]**

**Title :SEC: Fermentation Technology**



SEC	Fermentation Technology	Total30 lectures
UNIT I	Definition and Scope of Industrial Microbiology. Basic Concepts of Fermentations. a) Fermentations Introductions b) Fermenter design - parts & their functions c) Types of fermenter - batch, Continuous, Dual and Multiple d) Design of fermentation media- water, carbon and nitrogen source, Growth factors, precursors, aeration and antifoam agents. e) Factors affecting fermentation process.	05
UNIT II	Selection & Preservation of Industrial microorganisms a) Primary and Secondary Screening b) Strain Improvement c) Scale up of Fermentation d) Preservation of Industrially important microorganisms e) Microbiological assays	05
UNIT III	Specific Fermentations a. Penicillin b. Amylase c. Vinegar d. Vit B 12 Production of SCP, biogas, biofertilizers, biopesticides	11
UNIT IV	1. Recovery of Fermentation product, Criteria for method selection, Methods- Filtration, Centrifugation, Drying, Crystallization, Solvent extraction etc. 2.-Quality control of Health Care Products, Testing for Sterility, Toxicity, Pyrogenicity, Allergy, Carcinogenicity. 3-Good Manufacturing Practices-General requirements, GMP 10-Principles, GMP Categories.	09

SEC	PRACTICAL COURSE	total 30 practical lectures
	1. Sterility testing of dry powder by direct inoculation on Soyabean casein digest medium	
	2. Sterility testing of media	
	3. Bioassay of Vitamin B12	
	4. Bioassay of Penicillin	
	5. Screening of antibiotic producers	
	6. Estimation of alcohol by using K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	
	7. Thin layer chromatography	
	8. Demonstration of crude recovery of amylase enzyme	
	9. Immobilization of enzyme by using Sodium alginate.	
	10. Preservation of industrially important microorganisms	

**References:**

1. Stanbury P.F., Whitaker A., Hall S.J., (1997) Principles of fermentation technology. 2nd ED, Aditya books(P) Ltd, New Delhi.
2. El-mansi E.M.T., Bryce C.F.A., Demain A.L., Allman A.R., (2009) Fermentation microbiology and biotechnology, 2nd ED, CRC Press.
3. Crueger W. and Crueger A. (2003) Biotechnology: A textbook of industrial microbiology, 2nd ED, Panima publishing corporation, New delhi.
4. Bailey J. S. and Bhatia S.C. (2009) Biochemical engineering. Vol – 1&2. CBS publishers & distributors, India.
5. Reed, G. (1981) Prescott and Dunn's Industrial Microbiology. Chapman & Hall.

Shri Shivaji Shikshan prasarak Barshi's  
Shri Shivaji Mahavidyalaya, Barshi.  
Punyaslok Ahilyadevi Holkar Solapur University, Solapur

B.A.III (हिंदी) sem.VI CBCS Pattern.

प्रश्नपत्र का नाम : रोजगारपरक हिंदी (प्रमाणपत्र कोर्स)

समय : 10:00 am-12:30 pm.

तिथि : 16/06/2022

सूचना :- 1. सभी प्रश्न अनिवार्य हैं।

2. दिए गये विकल्प में से सही विकल्प चुनकर वाक्य फिर से लिखिए।

कुल अंक - 40

प्रश्न 1. सही विकल्प चुनकर वाक्य फिर से लिखिए 8

1) कम से कम शब्दों में भावों को अभिव्यक्ति प्रदान करने के लिए तथा कभी-

कभी लाक्षणिक प्रयोग के लिए ----- शब्द का प्रयोग किया जाता है।

अ) एक ब) चार क) अनेक ड) बहुत

2) 'आँख' शब्द के लिए पर्यायवाची शब्द है-----।

अ) पटल ब) नयन क) मूर्धन्य ड) जिह्वा

3) अनुवादक का -----गुण है।

अ) भाषा प्रभुत्व ब) पलायन क) निडरता ड) असतर्कता

4) 'आशा' शब्द का विलोम शब्द है-----।

अ) क्रोध ब) उदासी क) शांत ड) निराशा

5) कहानी को दृश्य-श्राव्य माध्यम से अभिव्यक्त करने के लिए----लिखी

जाती है।

अ) डायरी ब) सामग्री क) पटकथा ड) निराशा

6) 'हस्त' यह -----शब्द है ।

अ) तत्सम ब) देशज क) फारसी ड) तद्भव

7) पर्यटन मार्गदर्शक के लिए ----- की प्राथमिक आवश्यकता होती है ।

अ) भाषा कौशल ब) खान-पान क) दौड़ने ड) सोने

8) 'भीख' यह ----- शब्द है ।

अ) तत्सम ब) देशज क) फारसी ड) तद्भव

प्रश्न.2. दो या तीन वाक्यों में उत्तर लिखिए । (6 में से 4)

12

1) 'अनेक शब्द के लिए एक शब्द' सोदाहरण स्पष्ट कीजिए ।

2) प्रूफ शोधन के तीन चिन्ह एवं अर्थ लिखिए ।

3) पर्यायवाची शब्द की परिभाषा देकर दो उदाहरण लिखिए ।

4) समाचार लेखक की भूमिका

5) तत्सम एवं तद्भव शब्द

6) कुशल पर्यटक की योग्यता और कार्य

प्रश्न. 3. दीर्घोत्तरी प्रश्न लिखिए ।

10

अ) पटकथा और संवाद लेखन को विस्तार से लिखिए ।

अथवा

ब) भाषिक संप्रेषण कौशल और लेखन कौशल का विवेचन कीजिए।

प्रश्न. 4. दीर्घोत्तरी प्रश्न लिखिए ।

10

1. अनुवाद का स्वरूप तथा अनुवादक के गुण लिखिए ।

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**Shri Shivaji Mahavidyalaya, Barshi**

Affiliated to Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Under Graduate

Name of the course: Add on course / Skill Enhancement Course

Class: B.A. IIISem: VISubject: शेजगारपरक टिकीTitle of the paper: शेजगारपरक टिकी (प्रमाणपत्र कोर्स)Name of the student: बाकरा मुस्कान उमरSeat No. 910931 PRN 201903250010931 Roll No. 910931-5042Day & Date: 16 & 6 2022 Time: 2 hrs Mark: 40Signature of supervisor: [Signature] Signature of Student: [Signature]

Q.No.	1.	2.	3.	4.	Total
Mark	08	12	10	10	40
Obtained Mark	08	11	08	08	= 35

# Shri Shivaji Mahavidyalaya, Barshi.

Supervisor's Sign

I / II / Term Examination

Name ..... Bakra Muskan Amara .....

Roll No. ... 910931 .....

Class ..... B. A. III .....

Sub. राजगारपरकीटिणी (प्रमाणपत्र कोर्स) Section / Paper No. ....

Date 16 / 06 / 2022

Examiner Signature .....

Q. No.	Marks
1	
2	
3	
4	
Total	

Q. No. - 1 = 08

1 सही विकल्प चुनकर वाक्य फिर से लिखिए।

1) कम से कम शब्दों में भावों को अभिव्यक्ति प्रदान करने के लिए तथा कभी-कभी लाक्षणिक प्रयोग के लिए एक शब्द का प्रयोग किया जाता है।

2) 'आँख' शब्द के लिए पर्यायवाची शब्द नयन है।

3) अनुवाक का भाषा प्रभुत्व गुण है।

4) 'आशा' शब्द का विलोम शब्द है निराशा।

5) कहानी को दृश्य-श्राव्य माध्यम से अभिव्यक्त करने के लिए पटकथा लिखी जाती है।

6) 'दस्त' यह तत्सम शब्द है।

7) पर्यटन मार्गदर्शक के लिए भाषा कौशल्य की प्राथमिक आवश्यकता होती है।

8) 'आँख' यह लङ्घ्य शब्द है।



Q. No 2  
 $3+3+2+3 = 11$

प्रश्न दो या तीन वाक्यों में उत्तर लिखिए।

1) → भाषा को चुस्त बनाने के लिए, कम शब्दों में भावों को अभिव्यक्ति प्रदान करने के लिए तथा कभी-कभी लाक्षणिक प्रयोग के लिए एक ही शब्द का प्रयोग किया जाता है जिससे पूरी बात स्पष्ट हो जाती है। इतना ही नहीं कभी-कभी तो ऐसा होता है कि एक ही उचित शब्द के अभाव में मन कष्टता रहता है और निरन्तर प्रयास करने के बाद भी अभिव्यक्ति सफल नहीं हो पाती है।  
 हम किसी को लासकहते रहे कि आप किसी के उफकार को नहीं मानते तो वह आदमी उतन मानेगा जितना मिलेगा व जितना यह सुनकर 'अनेक शब्द के लिए यह एक शब्द' माना जाता है।

2) → हिन्दी में जो पर्यायवाची शब्द हैं वे संस्कृत के ही तत्सम शब्द हैं। समान अर्थ वाले शब्द ही पर्यायवाची कहलाते हैं। हिन्दी में विशेषतः संस्कृत के पर्यायवाची में ही लिए गये हैं। कुछ ऊर्ध्व उर्ध्व शब्द भी यद्यत्कदा दिखाई पड़ते हैं। असा-यथा-वश्या के पर्यायवाची में 'तवय्यं' शब्द का प्रयोग किया जाता है। उसी प्रकार 'परीक्षा' के लिए 'इस्तदान' का प्रयोग किया जाता है। वस्तुतः ऐसा होना चाहिए, यदि गौर किया जाए तो एकार्थक शब्द, पर्यायवाची, युग्म शब्द, विपरीतार्थक शब्द, श्रुतिव्यभिन्नार्थक शब्द आदि अर्थ की दृष्टि से

अनेक रूपों में हमारे सामने आते हैं।

1) आँख - नेत्र, नयन, लोचन, दृग, चक्षु, विलोचन, अक्षि

2) जल - पानी, अम्बु, तीर्थ, वारि, पय, अमृत, नीर, अलिल उदक, जीवन, मेघपुष्प।

4) → समाचार लेखन की भूमिका समाचार पत्रकारिता का प्राणतत्व है। आधुनिक युग में समाचार जनसंचार का एक प्रमुख वाहक है। समाचार हमारी आदत का अंग बन गया है। मानव की ज्ञान-पिपासा तब शान्त होती है जब वह समाचार सुन लेता है। अथवा पढ़ लेता है। जैसे सुबह की चारु न मिलने पर हमें तलब के कारण बेचैनी होने लगती है, वैसे समाचार-पत्र पढ़ या सुने बिना हम बेचैनी का अनुभव करने लगते हैं। प्रातःकालीन नित्य क्रिया का एक अभिन्न अंग नये-नये समाचारों की जानकारी प्राप्त करना है।

आज पूरी दुनिया विश्व गाँव में बदल गयी है। इस बदलाव के कारण आज लोगों के बातचीत का दायरा अत्यन्त विस्तृत हो गया है। तथा उनसे सम्बन्धित समाचारों पर टिप्पणी करते हुए नजर आते हैं।

यह समाचार लेखकन की भूमिका है।

2) → सूक्ष्म शोधन के तीन चिन्ह -

शुद्ध मुद्रण कार्य के लिए कंपोज की गई सामग्री का सूक्ष्म पढ़न अथवा संशोधन करना अत्यंत महत्वपूर्ण है। प्रत्येक मुद्रणालय

प्रकाशन संस्थान में पुस्तक संशोधक की नियुक्ति करना अत्यधिक आवश्यक है। प्रति संशोधन के अभाव में मुद्रण कार्य सुचारु रूप से कदापि संभव नहीं है। इस कार्य के लिए स्वतंत्र पुस्तक संशोधक की सेवाओं का भी लाभ उठाया जा सकता है। यह पुस्तक शोधन है।

1) ~~≠~~ Three lines underscore with diagonal crossout line (कैपिटल अक्षरों को छोटे अक्षरों में करें)

2) [ ] Enclosing matter to be centred (मध्य में करें)

प्र 3. दीर्घात्तरी शब्द प्रश्न लिखिए ।

अ) → पटकथा लेखन :-

किसी कहानी को उसकी मूल स्थिति के आधार पर फिल्मांकित नहीं किया जा सकता। कहानी को दृश्य-श्रव्य माध्यम से अभिव्यक्त करने के लिए पटकथा लिखी जाती है। पटकथा लिखने के लिए मूल कथा तथा संवादों में यथोचित परिवर्तन करने पड़ते हैं। इसके अतिरिक्त कथा या कहानी के दृश्यों को फिल्मांकित करने के लिए विभिन्न लॉटेशन्स, कोणों की योजना भी पटकथा में शामिल होती है। कहानी का दृश्य विभाजन, कैमरा का स्थान तथा कोण, कलाकारों की भूमिका, उनकी वेशभूषा, हाव-भाव तथा संवादों का विस्तृत व्योम पटकथा कहलाती है। फिल्म निर्माण के दौरान पटकथा की भूमिका एक समन्वय के समान होती है। दृश्यों का पूरा विश्लेषण होने से फिल्म निर्माण से जुड़े अनेक व्यक्ति जैसे कैमरामैन, साउंड रिकार्डिस्ट, मैकअपमैन, सैट डिजाइनर, अभिनेता, अभिनेत्री आदि की पटकथा से अपने-अपने कार्यों की पूर्ण जानकारी मिल जाती है।

संवाद लेखन :-

संवाद नाट्य साहित्य का प्राणत्व होता है। नाटक तथा फिल्म की आत्मा संवाद होती है। कथा साहित्य, टी.वी., फिल्म, रेडियो नाटक और शृंगार नाटक में संवाद अत्यंत महत्वपूर्ण भूमिका निभाते हैं। जब पात्र आपस में बातलाप करते रहते हैं तो उनके बीच

परस्पर वातलिप को संवाद कहा जाता है।  
संवादों के अभाव में कथा साहित्य और  
नाटक की रचना असंभव सी है। संवाद  
पात्रों की अभिव्यक्ति का माध्यम है। पात्रों  
की चरित्रगत विशेषताओं, आदतों,  
व्यवहारों, मनोभावों में कथा साहित्य और  
नाटक की रचना असंभव सी है। संवाद  
पात्रों की अभिव्यक्ति का माध्यम है।

नाटक या फिल्म के लिए संवाद  
लिखे जाते हैं। संवाद लेखन के कुछ महत्वपूर्ण  
सूत्र होते हैं। इन सूत्रों के आधार पर संवादों  
का लेखन किया जाता है। नाटक रंगमंच,  
टी.वी. तथा फिल्म के लिए संवाद अनिवार्य  
तत्व हैं। कथा साहित्य में संवाद उतने  
महत्वपूर्ण नहीं होते हैं।

अगर इस प्रकार की पटकथा  
हो तो वह निश्चित रूप से सर्वश्रेष्ठ या  
सफल कही जाएगी।

प्र 4 भा) दीर्घोत्तरी परन लिखए।

→ अनुवाद : स्वरूप :-

अनुवाद एक साहित्यिक विद्या है। अनुवाद साहित्यिक विद्या होते हुए भी मौलिक साहित्य रचना की कोटि में नहीं आ सकती। कुछ विद्वान अनुवाद को 'सेकण्ड हेंड' साहित्य मानते हैं। इसी कारण अनुवाद को मूल लेखन पर आधारित भाषांतर कह सकते हैं। एक भाषा की सामग्री को किसी दूसरी भाषा में अंतरित करने का माध्यम अनुवाद माना जाता है। कुछ विद्वान अनुवाद प्रक्रिया की तुलना आत्मा के परकाया प्रवेश की प्रक्रिया से करते हैं।

अनुवाद के लिए दोनों भाषाओं की आवश्यकता होती है। इन दोनों भाषाओं को अनुवाद विज्ञान में स्रोत भाषा और लक्ष्य भाषा की संज्ञा दी जाती है। जिस भाषा की सामग्री अनुदित होती है वह स्रोत भाषा कहलाती है और जिस भाषा में अनुवाद विशेष जाता है वह लक्ष्य भाषा कहलाती है।

- 1) लड़का गिरा।
- 2) लड़का गिर गया।

अनुवादक के गुण :-

(i) निष्ठा :-

अनुवादक को अपने कलिय के प्रति

निष्ठावान होना चाहिए अन्यथा निष्ठा के अभाव में अनुवाद अपूर्ण होगा ही, साथ ही बीच-बीच में अनुवाद छोड़ना, कठिन शब्दों का अधिकाधिक लिप्यंतरण व निर्जीव अनुवाद जैसी बुराइयाँ आ जाएँगी।

② रुचिः - अनुवाद-कार्य के प्रति निष्ठा जितनी जरूरी है उतना ही जरूरी है अनुवाद के प्रति रुचि व रुझान, इन गुणों के अभाव में अनुवाद विश्वसनीय नहीं होता व अनुवादक अनुवाद कार्य को एक बोझ समझकर करता है।

③ परकाया प्रवेश में निपुणः - अनुवाद अर्थ को परक प्रवेश भी कहा जाता है। अनुवादक मूल लेखक के मन-मस्तिष्क में प्रवेश करके उसकी भावना के साथ तादात्म्य स्थापित करता है। अतः अनुवाद को परकाया प्रवेश में निपुण होना चाहिए।

④ मूल के प्रति निष्ठाः - अनुवाद में कभी ऐसा भी होता है कि मूल छोड़कर स्वतंत्र अनुवाद अधिक सरल होता है परंतु अनुवादक को चाहिए कि वह मूल के प्रति अदैव निष्ठावान रहे व मूल से आँट टटकर न चले। अतः मूल से दूर न हटना भी अनुवादक का गुण है। इसे मूलनिष्ठता भी कह सकते हैं।

इस प्रकार अनुवाद का स्वरूप तथा अनुवादक के गुण हैं।

पुण्यशुभाक आहारादेवी हॉलकर सोनपुर विश्वविद्यालय  
सोनपुर.

सुबं  
श्री. शिवानी महाविद्यालय, वार्शी  
हिंदी विभाग

विज्ञापन-प्रमाणपत्र कोर्स  
M.A. II (हिंदी) Sem IV [CBCS pattern]

समय → सुबह 10-00 बजे  
अंक → 80

तिथि → 25/06/2022

छात्र का नाम →  
महाविद्यालय का नाम →  
परीक्षा केंद्र →  
परीक्षक का हस्ताक्षर →  
छात्र का हस्ताक्षर →

सूचना → निम्नादिखिल 45 प्रश्नों में से 40 प्रश्नों  
के उत्तर अनिवार्य हैं  
② निम्नालिखित विकल्पों में से सही विकल्प  
चुनकर रिक्त स्थानों की पूर्ति कीजिए।  
③ एक वस्तुनिष्ठ प्रश्न 2 अंकों के लिए है।

प्रश्न-1- निम्नालिखित विकल्पों से सही विकल्प चुनकर रिक्त स्थानों  
की पूर्ति कीजिए।

① → \_\_\_\_\_ एक ऐसा माध्यम है, जिसके जरिये हम किसी  
सामग्री के प्राप्ति, व्याप्ति के प्राप्ति जनसामान्य को भावपूर्ण  
रूप से का प्रयास करते हैं।

→ (a) विज्ञापन (b) सूचना (c) समाचार (d) सुंप्रेषण  
② \_\_\_\_\_ में विज्ञापन के लिए "Advertisement" शब्द का  
प्रयोग किया जाता है।

→ (a) हिंदी (b) अंग्रेजी (c) उर्दू (d) मराठी  
③ विज्ञापन हमेशा ही \_\_\_\_\_ के उद्देश को लेकर चलते हैं।  
→ (a) प्रचार (b) लाभ (c) प्रसार (d) विकास

④ \_\_\_\_\_ आम विज्ञापन का सबसे नया और विस्तृत  
माध्यम बन चुका है।

→ (a) रेडियो (b) फिल्म (c) टेलीविजन (d) इंटरनेट



(5) शब्द "वि" और "ज्ञापन" इन दो शब्दों के  
मिलकर बना है

- (a) समाचार (b) विज्ञापन  
(c) पत्रकारिता (d) अनुसंधान

(6) विज्ञापन शब्द \_\_\_\_\_ भाषा के "Advertisere" शब्द  
से लिया गया है।

- (a) लैटिन (b) रोमन  
(c) पाली (d) प्राकृत

(7) \_\_\_\_\_ के आधुनिक मुद्रण कला के आविष्कार के  
साथ ही विज्ञापन कला के भी एक नया आयाम मिल  
गया।

- (a) सन् 1420 (b) सन् 1430  
(c) सन् 1440 (d) सन् 1450

(8) \_\_\_\_\_ विज्ञापन का माध्यम का प्रयोग सीमित अवधि  
के किसी आयोजन अथवा अन्य संदर्भ में स्थान विशेष  
की जनता तक किसी खास विज्ञापन संदेश को पहुँचाने  
के लिए किया जाता है।

- (a) डाक (b) बैनर  
(c) पोस्टर (d) वाह्य

(9) \_\_\_\_\_ में पहली बार रेडियो का उपयोग विज्ञापन  
के माध्यम रूप में किया गया।

- (a) 1926 (b) 1927  
(c) 1928 (d) 1929

(10) कीर्तियों, सार्वजनिक स्थानों और सड़क के किनारों  
प्रदर्शित किए जाने वाले विज्ञापन \_\_\_\_\_ के माध्यम  
के अंतर्गत आते हैं।

- (a) बैनर (b) वाह्य  
(c) फिल्म (d) डाक

(11) दूरदर्शन से पहली बार \_\_\_\_\_ में विशापनों का प्रसारण  
शुभ हुआ था।

- (a) 1975 (b) 1976  
(c) 1977 (d) 1978

(12) \_\_\_\_\_ भी स्थानीय स्तर पर विशापन का एक  
माध्यम है।

- (a) आउटडोर (b) बैनर  
(c) पोस्टर (d) डाक

(13) विडियो डिस्क \_\_\_\_\_ का ऐसा माध्यम है जिसके  
जरिए अभोक्ता के मन में उत्पाद के प्रति विश्वास  
की जाती है।

- (a) लोकसंपर्क (b) जनसंचार  
(c) तकनीकी (d) विशापन

(14) \_\_\_\_\_ में 1841 कोल्नी वी. पामर नामक व्यवसायी  
ने विश्व की पहली विशापन एजेंसी की स्थापना की थी।

- (a) जपान (b) अमेरिका  
(c) रशिया (d) फ्रान्स

(15) विशापन कॉफी के माध्यम से \_\_\_\_\_ अपना संदेश  
दर्शकों अथवा पाठकों तक पहुँचाने है।

- (a) अनुवादक (b) विशापनकर्ता  
(c) संपादक (d) पत्रकार

(16) \_\_\_\_\_ एक व्यक्ति के मास्तिवक से दूसरे व्यक्ति के  
मास्तिवक में एक विचार को स्थापित करने की कला  
है।

- (a) अनुवाद (b) विशापन  
(c) ज्ञान (d) विज्ञान

(17) विशापन कला विभाग का मुखिया कला \_\_\_\_\_ होता है।

- (a) निदेशक (b) विशेषज्ञ  
(c) निर्देशक (d) लेखक

(18) विभाग द्वारा (विज्ञापनदाता) का एजेंसी  
की जा रही सेवाओं का लेखा लेखा किया जाता है

→ (a) प्रशासनिक (b) लेखा  
(c) सृजन (d) माध्यम

(19) विज्ञापन एजेंसियां की विज्ञापन से संबंध  
प्रत्येक आवश्यकताओं को पूरा करने का साधन बन गई  
हैं

→ (a) विशेषज्ञता (b) प्रबंधकों  
(c) विज्ञापनदाताओं (d) अनुवादकों

(20) विज्ञापन कॉफी प्रकार की होती है

→ (a) एक (b) दो  
(c) तीन (d) चार

(21) विभाग का कार्य विज्ञापनदाता द्वारा लेखा  
कुशलता से किया जाता है  
निर्माण करना है

→ (a) सृजन (b) मुद्रण  
(c) संशोधन (d) वितरण

(22) विभाग द्वारा फोल्डर शो-कार्ड और  
हायस्किट आदि का भी निर्माण किया जाता है

→ (a) डाक (b) उत्पादन  
(c) बैंक (d) विमा निगम

(23) सृजन विभाग का कार्य के अनुसार कॉफी विभाग  
कला विभाग उत्पादन विभाग आदि भागों में  
बँटा जाता है

→ (a) दो (b) तीन  
(c) चार (d) पाँच

(24) विज्ञापन एजेंसी के व्यावसायिक कार्यों की पूर्ति  
के लिए विभाग होता है

→ (a) प्रशासनिक (b) व्यावसायिक  
(c) व्यापार (d) उद्योग

मान) (8) \_\_\_\_\_ विभाग एजेंसी के लिए विपणन संबंधी कार्य करना है। निम्न उद्ये संवेदन, विक्री संवर्धन, प्रत्यक्ष क्रय-विक्रय और जनसंपर्क के कार्यों को निष्पादित किया जाता है।

- (a) मुद्रण (b) वितरण  
(c) संशोधन (d) विपणन

(9) \_\_\_\_\_ का कार्य विज्ञापन एजेंसी के विभिन्न विभागों के मध्य समन्वय बनाए रखना और विज्ञापन योजना पर नजर बनाए रखने का कार्य किया जाता है।

- (a) ट्रैफिक कंट्रोल विभाग (b) सृजनात्मक स्टूडियो  
(c) हॉट शॉप एजेंसी (d) पूर्ण सेवा प्रदान विज्ञापन एजेंसी

(10) \_\_\_\_\_ व्यापारिक संस्था या विज्ञापन एजेंसी का कर्मचारी होता है जो विज्ञापन से संबंधित कार्यों के लिए संस्थान के प्रति उत्तरदायी होता है।

- (a) विज्ञापन विशेषज्ञ (b) विज्ञापन संयोजक  
(c) विज्ञापन प्रबंधक (d) विज्ञापन आयोजक

(11) विज्ञापन एजेंसियों के \_\_\_\_\_ प्रकार हैं।

- (a) दो (b) तीन  
(c) चार (d) पाँच

(12) जनसंचार तथा पत्रकारिता में \_\_\_\_\_ भी रोजगार का एक नया क्षेत्र बन चुका है।

- (a) समाचार (b) पत्र-पत्रिका  
(c) अनुवाद (d) विज्ञापन

(13) \_\_\_\_\_ विज्ञापनों को "एडवर्टोरियल" भी कहा जाता है।

- (a) वर्गीकृत विज्ञापन (b) समाचार सूचना  
(c) सजावट विज्ञापन (d) उपभोक्ता विज्ञापन

(31) विज्ञापनों का प्रसार क्षेत्र के आधार पर \_\_\_\_\_ है।  
बॉय जाता है।  
→ (a) एक (b) दो  
(c) तीन (d) चार

(32) \_\_\_\_\_ विज्ञापन किसी उत्पाद या सेवा का राष्ट्रीय स्तर पर विज्ञापन कहते हैं।  
→ (a) क्षेत्रीय (b) राष्ट्रीय  
(c) स्थानीय (d) अन्तरराष्ट्रीय

(33) \_\_\_\_\_ शब्द "वि" और "ज्ञापन" से मिलकर बना है।  
→ (a) विज्ञापन (b) समाचार  
(c) विचार (d) सुविचार

(34) विज्ञापन जगत में \_\_\_\_\_ का महत्वपूर्ण स्थान है। जनसंपर्क के द्वारा ही जनता की रुचियों और इच्छाओं का पता लगाकर जनमानस के अनुकूल ही उत्पाद का निर्माण किया जाता है।  
→ (a) जनता (b) जनसंपर्क  
(c) लोगों (d) समूहों

(35) विज्ञापन का सबसे प्रभावशाली माध्यम \_\_\_\_\_ है।  
→ (a) रेडियो (b) समाचार पत्र  
(c) दूरदर्शन (d) पोस्टर

(36) \_\_\_\_\_ आज के आर्थिक स्पर्धा के युग में एक साधन ही नहीं जो उपभोक्ताओं अथवा उत्पादकों को सेवा करता है।  
→ (a) अर्थ (b) लोकसंपर्क  
(c) विज्ञापन (d) तकनीकी व्यवस्था

(37) \_\_\_\_\_ के प्रयोग में संगीत और लय में ढाँचे-बोती है, जिससे विज्ञापन और भी प्रभावशाली बन जाता है।  
→ (a) छंदों (b) अलंकारों  
(c) रसों (d) शब्दों

3) विज्ञापन ऐसी कला है, जिसमें मनोवैज्ञानिक और \_\_\_\_\_  
दोनों तरीकों का इस्तेमाल किया जाता है

- (a) आधुनिक तकनीकी व्यवस्था (b) कल्पना  
(c) सृजनात्मकता (d) वैज्ञानिक

(39) लोकन्तव्य, लोक रंगमंच, लोकसंघर्ष, पर्व, त्योहार या  
सामाजिक उत्सव जनता तक विज्ञापन पहुंचाने के एक  
अच्छे \_\_\_\_\_ हैं

- (a) साधन (b) मार्ग  
(c) माध्यम (d) तरीका

(40) विज्ञापन की सहायता से उत्पाद के विक्रय में \_\_\_\_\_  
होती है, जिससे उत्पादक को फायदा होता है

- (a) आय (b) क्षमता  
(c) धारिता (d) कार्यक्षमता

(41) विज्ञापन का मुख्य \_\_\_\_\_ उत्पादन निर्माता कंपनी द्वारा  
निर्मित उत्पादों को बाजार में उतारने से पूर्व उपभोक्ता  
ओं को उत्पाद से संबंधित जानकारी देना, उन्हें  
खरीदने के लिए मानसिक तौर पर तैयार करना है।

- (a) स्वरूप (b) अवधारणा  
(c) उद्देश्य (d) इस्तेमाल

(42) विज्ञापन और \_\_\_\_\_ का दिग्दर्शक रिश्ता है।  
इसकी भाषा में ऐसा (नवीकृत) है कि वास्तविकता  
और संभावना की अनन्तियों परतें दिखाई पड़ती पड़ती हैं

- (a) भाषा (b) शैली  
(c) भाषा (d) कला

(43) प्रिंट और इलेक्ट्रॉनिक मीडिया - दोनों में ही विज्ञापन  
की भाषा में क्लिप शब्द का प्रयोग नहीं हो | वाक्य  
\_\_\_\_\_ होने चाहिए।

- (a) बड़े-बड़े (b) असमान  
(c) छोटे-छोटे (d) सरल

(144) भाषा का जटिलता से विज्ञापन की होती है

→ (a) सुंदरता (b) सहजता  
(c) स्पष्टता (d) सरलता

(145) विज्ञापन की विशेषता होनी चाहिए कि वह हो

→ (a) क्रमबद्ध (b) संपीन  
(c) विम्बनिष्ठ (d) स्पष्ट





Shri. Shivaji Shiksha Prasarak Mandal, Barshi. (1)  
Shri. Shivaji Mahavidyalaya Barshi.  
Punyastok Ahilyadevi Holkar Solapur University, Solapur  
M.A. II (हिंदी) Sem - IV CBCS Pattern.

प्रश्नपत्र का नाम → विज्ञापन - (प्रमाणपत्र कोर्स) - 2022  
विज्ञापन-कोर्स(७) विकास प्रश्नपत्र (Certificate Course)  
समय - 10 to 12-30  
अंक - 80  
मिथि - 23/05/2023

- \* सूचना - 1) सभी प्रश्न अनिवार्य हों।  
2) नीचे दिए गए विकल्प में से सही विकल्प चुनकर वाक्य फिर से लिखिए।

प्रश्न 1] सही विकल्प चुनकर वाक्य फिर से लिखिए। [अंक (16)]

- 1) \_\_\_\_\_ एक ऐसा माध्यम है, जिसके द्वारा हम किसी सामग्री या व्यक्ति विशेष के प्रति जनसामान्य को आकर्षित करने का प्रयास करते हैं।  
→ (a) समाचार (b) विज्ञापन (c) सूचना (d) संप्रेषण
- (2) विज्ञापन हमेशा ही \_\_\_\_\_ के उद्देश को लेकर चलते हैं।  
→ (a) विकास (b) प्रचार (c) लाभ (d) प्रसार
- (3) \_\_\_\_\_ शब्द "वि" और "ज्ञापन" इन दो शब्दों से मिलकर बना है।  
→ (a) पत्रकारिता (b) विज्ञापन (c) अनुसंधान (d) कम्प्यूटर
- (4) \_\_\_\_\_ में आधुनिक मुद्रण कला के आविष्कार के साथ ही विज्ञापन कला को भी एक नया आयाम मिल गया है।  
→ (a) सन् 1420 (b) सन् 1430 (c) सन् 1440 (d) सन् 1450
- (5) दूरदर्शन से पहली बार \_\_\_\_\_ में विज्ञापनों का प्रसारण शुरू हुआ था।  
→ (a) 1975 (b) 1976  
(c) 1977 (d) 1978

(6) \_\_\_\_\_ में विज्ञापन के लिए "Advertising" शब्द प्रयुक्त किया जाता है

→ (a) मराठी (b) उर्दू (c) अंग्रेजी (d) हिंदी

(7) \_\_\_\_\_ भी स्थानीय स्तर पर विज्ञापन का एक आदर्श माध्यम है

→ (a) पोस्टर (b) बैनर (c) डाक (d) आउटडोर

(8) \_\_\_\_\_ आज विज्ञापन का सबसे नया और विस्तृत माध्यम बन चुका है

→ (a) रेडियो (b) टेलीविजन (c) इंटरनेट (d) फिल्म

(9) \_\_\_\_\_ में 1841 कोल्बर्ग की पामर नामक व्यवसायी ने विश्व की पहली व्यवसायी विज्ञापन एजेंसी की स्थापना की थी

→ (a) जपान (b) अमेरिका (c) रूसिया (d) फ्रान्स

(10) विज्ञापन कॉफी के माध्यम से \_\_\_\_\_ अपना संदेश दर्शकों अथवा पाठकों तक पहुँचाने है

→ (a) अनुवादक (b) संपादक (c) विज्ञापनकर्ता (d) पत्रकार

(11) विज्ञापन कला विभाग का मुख्यालय कला \_\_\_\_\_ होता है

→ (a) लेखक (b) कलाकार (c) निदेशक (d) विशेषज्ञ

(12) विज्ञापन एजेंसियों के \_\_\_\_\_ प्रकार हैं

→ (a) दो (b) तीन (c) चार (d) पाँच

(13) जनसंचार तथा \_\_\_\_\_ में भी राजगार का एक नया क्षेत्र विज्ञापन भी बन चुका है।

→ (a) अनुवाद (b) पत्रकारिता (c) जनसंचार (d) समाचार

(14) \_\_\_\_\_ एक व्यक्ति के मास्किंग से दूसरे मास्किंग में एक विचार को स्थानांतरित करने की कला है।

→ (a) अनुवाद (b) विज्ञापन (c) पत्रकारिता (d) संप्रेषण

(15) विज्ञापनों की भाषा में \_\_\_\_\_ भाषा का विशेष प्रयोग किया जाता है। (3)

→ (a) वीर (b) करुण (c) शृंगार (d) रोद्र

(16) विज्ञापन की विशेषता होनी चाहिए। की, वह \_\_\_\_\_ हो।

→ (a) क्रमबद्ध (b) आक्षेप (c) विम्बानिबद्ध (d) स्पष्ट

प्रश्न 2) निम्नलिखित प्रश्नों के दो या तीन वाक्यों में उत्तर लिखिए।  
(6 में से 4) (अंक 16)

- 1) विज्ञापन को अंग्रेजी में क्या कहते हैं? तथा इस शब्द की उत्पत्ती कहाँ से हुयी?
- 2) गोपाल सरकार के अनुसार विज्ञापन की क्या परिभाषा है?
- 3) विज्ञापन माध्यम क्या है?
- 4) विज्ञापन कौफी के चार प्रमुख अंग पर प्रकाश डालिए।
- 5) इलेक्ट्रॉनिक मीडिया के विज्ञापनों की सर्वाधिक प्रचलित शैली कौन सी है?
- 6) विज्ञापन व्यवसाय के तीन आधार क्या हैं?

प्रश्न 3) रिक्तों को निम्नलिखित (4 में से 2) (अंक 16)

- 1) इंटरनेट - विज्ञापन के प्रसारण माध्यम।
- 2) विज्ञापन एजेंसी के कार्य।
- 3) विज्ञापन के प्रकाशन माध्यम - समाचार पत्र।
- 4) विज्ञापन कौफी लेखन।

प्रश्न 4) विद्योत्तरी प्रश्न लिखिए।

1) (अ) विज्ञापन का अर्थ, स्वरूप, परिभाषा और स्वरूप स्पष्ट कीजिए। (अंक 16)

अथवा

(ब) विज्ञापन काम के सिद्धांत पर  
प्रकार आदि

[अंक 16]

प्रश्न 5) विज्ञापन के उद्देश और महत्त्व को स्पष्ट कीजिए।

[अंक 16]

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Shivaji Shikshan Prasarak, Bhusi.  
Shri. Shivaji Mahavidyalaya, Bhusi.

Punyastok Ahilyadevi Holkar Solapur University  
Solapur. M. A. भाग - II - 2023-24

प्रश्नपत्र का नाम - विज्ञापन (प्रमाणपत्र कोर्स) - 2023-24

विज्ञापन - कॉशक विकास प्रश्नपत्र - [Certificate course]

समय - 10-00 - 12-30 pm.

तिथि - 20/03/2024

अंक - 80

\* सुचना -

- 1) सभी प्रश्न अनिवार्य हैं।
- 2) नीचे दिए गए विकल्प में से सही विकल्प चुनकर वाक्य फिर से लिखिए।

प्रश्न 1] सही विकल्प चुनकर वाक्य फिर से लिखिए। (अंक 16)  
1) दूरदर्शन से पहली बार \_\_\_\_\_ में विज्ञापनों का प्रसारण हुआ।

→ (a) 1975 (b) 1976

(c) 1977 (d) 1978

2) \_\_\_\_\_ शब्द "वि" और "ज्ञापन" इन दो शब्दों से मिलकर बना है।

→ (a) पत्रकारिता (b) अनुसंधान

(c) विज्ञापन (d) अनुवाद

3) \_\_\_\_\_ में आधुनिक मुद्रणकला के आविष्कार के साथ ही विज्ञापन कला को भी एक नया आयाम मिल गया है।

→ (a) सन 1420 (b) सन 1430

(c) सन 1440 (d) सन 1450

4) विज्ञापन हमेशा ही \_\_\_\_\_ के उद्देश को लेकर चलते हैं।

→ (a) प्रचार (b) प्रसार

(c) लाभ (d) विकास

5) \_\_\_\_\_ एक ऐसा माध्यम है, जिसके द्वारा हम किसी सामग्री या व्याक्ति विशेष के प्रति जनसामान्य को आकर्षित करने का प्रयास करते हैं।

→ (a) समाचार (b) विज्ञापन

(c) सूचना (d) संप्रेषण

(6) \_\_\_\_\_ में विज्ञापन के लिए "Advertising" शब्द का प्रयोग किया जाता है।

→ (a) मराठी (b) उर्दू  
(c) हिंदी (d) अंग्रेजी

(7) \_\_\_\_\_ आज विज्ञापन का सबसे नया और विस्तृत माध्यम बन चुका है।

→ (a) रेडियो (b) रेनी विजन  
(c) फिल्म (d) इंटरनेट

(8) \_\_\_\_\_ भी स्थानिय स्तर पर विज्ञापन का एक आदर्श माध्यम है।

→ (a) पोस्टर (b) बैनर  
(c) आकटोर (d) डाक

(9) \_\_\_\_\_ में 1874 कोलनी की पामर नामक व्यक्ती ने विश्व की पहली विज्ञापन एजेंसी की स्थापना की थी।

→ (a) अमेरिका (b) जपान  
(c) रशिया (d) फ्रान्स

(10) विज्ञापन कौफी के माध्यम से \_\_\_\_\_ अपना संदेश दर्शकों अथवा पाठकों तक पहुँचाते हैं।

→ (a) अनुवादक (b) संपादक  
(c) विज्ञापनकार (d) पत्रकार

(11) विज्ञापन कला विभाग का मुख्या कला \_\_\_\_\_ होता है।

→ (a) लेखक (b) कलाकार  
(c) निर्देशक (d) विशेषज्ञ

(12) विज्ञापन एजेंसियों के \_\_\_\_\_ प्रकार हैं।

→ (a) दो (b) तीन  
(c) चार (d) पाँच

(13) जनसंचार तथा \_\_\_\_\_ में भी रोजगार का एक नया क्षेत्र विज्ञापन भी बन चुका होता है।

→ (a) अनुवाद (b) पत्रकारिता

(14)

समाचार (व) जनसंचार

(14) एक व्यक्ति के मास्तेक से दूसरे मास्तेक में एक विचार को स्थानांतरित करने की कला है।

→ (क) अनुवाद (ब) विज्ञापन  
(क) पत्रकारिता (क) संप्रेषण

(15) विज्ञापनों की भाषा में \_\_\_\_\_ भाषा का विशेष प्रयोग किया जाता है।

→ (क) वीर (ब) कठोर  
(क) शृंगार (क) शैव

(16) विज्ञापन की विशेषता होनी चाहिए कि वह \_\_\_\_\_ हो।

→ (क) क्लमबद्ध (ब) सांक्षिप्य  
(क) विस्मयनिष्ठ (क) स्पष्ट

प्रश्न 2] निम्नलिखित प्रश्नों के दो या तीन वाक्यों में उत्तर लिखिए। (6 में से 4) (अंक 16)

1) विज्ञापन को अंग्रेजी में क्या कहते हैं? तथा इस शब्द की उत्पत्ति कहाँ से हुई?

2) गोपाल सरकार के अनुसार विज्ञापन की क्या परिभाषा है?

3) विज्ञापन माध्यम क्या है?

4) विज्ञापन कॉफी के चार प्रमुख अंग पर प्रकाश डालिए।

5) इलेक्ट्रॉनिक मीडिया के विज्ञापनों की सर्वाधिक प्रचलित शैली कौन-सी है?

6) विज्ञापन व्यवसाय के तीन आधार क्या हैं?

प्रश्न 3] टिप्पणी लिखिए। (2 में से 2) (अंक 16)

1) विज्ञापन कॉफी लेखन।

2) इंटरनेट - विज्ञापन के प्रसारण माध्यम।

3) विज्ञापन एजेंसी के कार्य।

4) विज्ञापन के प्रकाशन माध्यम - समाचार पत्र।

श्न 4] विद्योत्तरी प्रश्न लिखिए।

1] (अ) विज्ञापन का अर्थ परिभाषा और स्वरूप स्पष्ट कीजिए। (अंक - 16)

(ब) विज्ञापन कला के सिद्धांत पर प्रकाश डालिए।  
अथवा

श्न 5) विज्ञापन के उद्देश और महत्त्व को स्पष्ट कीजिए।  
(अंक - 16)





# SHRI SHIVAJI MAHAVIDYALAYA, BARSHI.

B.A.-III (Semester – V) Examination, 2022-23

Skill Oriented Course w. e. f. 2021 – 22

## Sub-Physical Education

### PAPER - CERTIFICATE COURSE OF GYM INSTRUCTOR

Time -1 Hours	Day and Date	Marks - 20
<b>Q.1) Choose the correct alternative. (Each one mark)</b>		<b>4</b>
1) First aid kit contains ..... material. A) Strip b) Scissors c) Spirit d) All of the above		
2) To push or pull an object is to say ..... A) Flexibility b) Strength c) Reaction time d) Speed		
3) "Short training" means ..... months of training A) 1 month b) 2 months c) 6 months d) 3 months		
4) The human body has ..... bones. A) 206 b) 250 c) 100 d) 50		
<b>Q.2) Give the short answer (Each two mark)</b>		<b>6</b>
1) Tell me what is provocative movement		
2) What is first aid?		
3). How to increase muscle strength?		
<b>Q.3) Short notes (any one)</b>		<b>5</b>
1) Write the musculoskeletal system in detail. Or		
2) Write the exercise and diet in detail.		
<b>Q.3) Short notes (any Two)</b>		<b>5</b>
1) Nutrition 2) Training methods		
3) Flexibility		



मराठी रुपांतर

प्रश्न १ - योग्य पर्याय निवडा . ( प्रत्येकी एक गुण )

४

१) प्रथोमपचार पेटीत ..... साहित्य असते.

अ) पट्टी                      ब) कात्री                      क) स्पिरीट                      ड) वरील सर्व

२) एखादी वस्तू "ढकलणे किवां ओढणे" म्हाणजे ..... म्हणता येईल

अ) लवचिकता                      ब) ताकद                      क) प्रतिक्रिया क्रिया                      ड) वेग

३) "लघु प्रशिक्षण" म्हाणजे ..... महिन्याचे प्रशिक्षण असते

अ) १ महिना                      ब) २ महिना                      क) ६ महिना                      ड) ३ महिना

४) मानवी शरीरामध्ये ..... हाडे असतात.

अ) २०६                      ब) २५०                      क) १००                      ड) ५०

प्रश्न. २ रा थोडक्यात उत्तरे दया . ( प्रत्येकी दोन गुण )

६

१) उत्तेजक हालचाली म्हाणजे काय सांगा

२) प्रथोमपचार म्हाणजे काय .

३) . स्नायुचा दमदार माना कसा वाढवता येईल ?

प्रश्न. ३ रा सविस्तर उत्तर लिहा. ( कोणताही एक )

५

१) स्नायु संस्था सविस्तर लिहा .

किंवा

२) व्यायाम आणि आहार सविस्तर लिहा .

प्रश्न ४ था टिपा लीहा (कोणत्याही दोन)

५

१) पोषण                      २) प्रशिक्षण पद्धती                      ३) लवचिकता

**SHRI SHIVAJI MAHAVIDYALAYA, BARSHI.**

B.A.-III (Semester – V) Examination, 2023-24

Skill Oriented Course w. e. f. 2021 – 22

**Sub-Physical Education**

**PAPER - CERTIFICATE COURSE OF CRICKET COACHING**

**Time -1 Hours** **Date** **Marks - 20**

**Q.1) Choose the correct alternative. (Each one mark) 4**

- 1) In cricket, the place called "Dipmidwicket" is next to .....  
A) Leg b) Off c) Straight d) None of these.
- 2) The weight of the ball used in the game of cricket is .....  
A) 225 gm b) 163 gm c) 175 gm d) 200 gm
- 3) The height of stumps used in cricket is .....  
A) 41.12 cm b) 61.12 cm c) 71.12 cm d) 81.12 cm
- 4) One day cricket matches have ..... ohrs in one innings.  
A) 40 b) 20 c) 100 d) 50

**Q.2) Give the short answer (Each two mark) 6**

- 1) Explain the responsibilities of a scorer in cricket
- 2) Give four decisions of umpires in cricket.
- 3) How does a no ball happen in cricket?

**Q.3) Short notes (any one) 5**

1) Write Test cricket match in detail.

Or

2) Write 20/20 cricket match in detail.

**Q.3) Short notes (any Two) 5**

- 1) Diet for cricketers
- 2) Materials required for playing cricket
- 3) Exercises required for playing cricket

मराठी रूपांतर

प्रश्न १ - योग्य पर्याय निवडा . ( प्रत्येकी एक गुण )

४

१) क्रिकेट खेळात " डीपमिडविकेट" हे ठिकाण ..... बाजूला आहे.

अ) लेग                      ब) ऑफ                      क) स्ट्रेट                      ड) या पैकी नाही.

२) क्रिकेट या खेळात वापरल्या जाणाऱ्या बॉल चे वजन ..... असते.

अ) २२५ ग्राम      ब) १६३ ग्राम      क) १७५ ग्राम      ड) २०० ग्राम

३) क्रिकेट या खेळात वापरल्या जाणाऱ्या स्टंप ची उंची ..... असते.

अ) ४१.१२ से.मी      ब) ६१.१२ से.मी.      क) ७१.१२ से.मी.      ड) ८१.१२ से.मी.

४) एक दिवशीय क्रिकेट सामन्यात एका इनिंग मध्ये ..... ओहर असतात.

अ) ४०      ब) २०      क) १००      ड) ५०

प्रश्न. २ रा थोडक्यात उत्तरे द्या . ( प्रत्येकी दोन गुण )

६

१) क्रिकेट मध्ये गुणलेखकाच्या जबाबदारी सांगा

२) क्रिकेट मध्ये पंचाचे चार इशारे सांगा .

३) क्रिकेट मध्ये नो बॉल कोणकोणत्या प्रकारे होतो.

प्रश्न. ३ रा सविस्तर उत्तर लिहा. ( कोणताही एक )

५

१) कसोटी क्रिकेट स्पर्धा सविस्तर लिहा .

किंवा

२) २० /२० क्रिकेट स्पर्धा सविस्तर लिहा .

प्रश्न ४ था टिपा लीहा (कोणत्याही दोन )

५

१) क्रिकेट खेळाडूसाठी आहार

२) क्रिकेट खेळा साठी आवश्यक साहित्य

३) क्रिकेट खेळा साठी आवश्यक व्यायाम लिहा.



पुण्यश्लोक अहिल्यादेवी होळकर  
सोलापूर विद्यापीठ

॥ विद्यया संपन्नता ॥

NAAC Accredited - 2015  
B' Grade (CGPA - 2.62)

**PUNYASHLOK AHILLYADEVI HOLKAR  
SOLAPUR UNIVERSITY, SOLAPUR**

**SKILL ORIENTED COURSE FOR  
B.A. PROGRAMME**

TITLE OF THE COURSE

**CERTIFICATE COURSE OF CRICKET COACHING**

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**Title of the Course: CERTIFICATE COURSE OF CRICKET COACHING**

- Eligibility of the course : B.A. Semester - V
  - Total credit of the course : 04 Credit
  - Total marks of the course : 100 Marks
  - Weightage to practical work (marks) : 80 Marks
  - Weightage to Theory work (marks) : 20 Marks
  - Duration of the course : 12 weeks (60 Hours)
- 

**Aim of the course:** To develop the skillful Cricket training.

**Learning Outcomes:** After successful completion of this course, the students will be able to:

- 1) To develop highly skilled scholars in the field of Cricket.
- 2) To be sensitive about emerging issues in Cricket.
- 3) To develop in the students an inquiring mind & ability to understand the true nature and to solve the innermost questions of Cricket.
- 4) To provide opportunity for creativity, self-expression & provide information on continued professional growth in Cricket.
- 5) To develop in the students an inquiring mind & ability to employ reasoning, rational thinking, critical thinking in the problems & issues relating to the Cricket.
- 6) To master the competencies and skills needed to become professional Cricket resource person.

- 
- **Course Content:**
  - **Module 01: History of Cricket**
    - History of Cricket.
    - Preparation of Cricket Ground.
    - Measurement of Cricket Ground.

**Module 02: Cricket ground Measurement.**

- a) Warm up Exercise
- b) Specific cricket Exercise.
- c) Psychology Preparation of Cricket Player.
- d) Basic skill of cricket.
- e) Advance skill of cricket.
- f) Top performers skill of cricket.

**Module 03:**

- a) Training Program of Batsman.
- b) Training Program of Bowling.
- c) Training Program of Wicket keeper.
- d) Training Program of Fielder.
- e) Balance diet for cricket player.

**Module 04: Officiating of Cricket**

- a) Low of Test, One day, Twenty- twenty Cricket Match.
- b) Officiating of Cricket
- c) Organization of State, District, Taluka, College, school and Club etc. Cricket Tournament..
- d) First aid

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**List of the Practical Tests:** Teacher educator for implementation of the skill-oriented course uses following Test.

Sr. No.	Verbal / Non verbal Tests	Performance Tests
01	Specific Cricket Exercises	Observation
02	Ground Marking	Observation
03	Rules	Question Answer
04	All Cricket Skills	Observation
05	Officiating	Observation

Teacher educator also may be uses different psychology tests as per availability. This list is just for reference.

Course Lay out

Week	Content	Place	Hours
Week 01	History of Cricket. Preparation of cricket Ground. Cricket ground measurement	Classroom	05
Week 02	War map Exercises Specific Cricket Exercises	Cricket Ground	05
Week 03	Batting Skill Grip, Stance ,Front Foot, Defense , Drives	Cricket Ground	05
Week 04	Bating Skill Back Foot, Defense , Drives ,Cut Shout	Cricket Ground	05
Week 05	Bowling Fast :- Grip , run up ,Jump, in swing , Out swing	Cricket Ground	05
Week 06	Bowling Spin: - off, leg. goggle	Cricket Ground	05
Week 07	Fielding :- Different all Position.	Cricket Ground	05
Week 08	Wicket keeping skill For Spin and Fast Bowling	Cricket Ground	05
Week 09	Officiating	Cricket Ground / Class room	05



Week 10	Low of Cricket A District , Tal uka, College,school and Club Tournament of Cricket.	Cricket Ground	05
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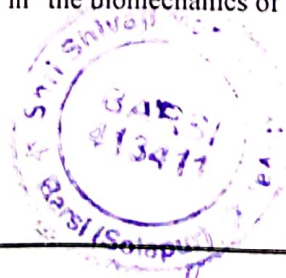
Week 11	<ul style="list-style-type: none"> <li>Practice and revision of administration &amp; assessment of tests under the supervision of educator. <ul style="list-style-type: none"> <li>Evaluation Process includes: <ol style="list-style-type: none"> <li>Practical Activity</li> </ol> </li> </ul> </li> </ul>	Cricket Ground	05
Week 12	<ul style="list-style-type: none"> <li>Evaluation Process includes: <ol style="list-style-type: none"> <li>Practical Activity</li> <li>Viva Voce</li> </ol> </li> </ul>	Cricket Ground	05
	<ul style="list-style-type: none"> <li>Theory Test or exam</li> </ul>	Classroom	


### Evaluation system or process of the course:

Sr. No.	Course Nature	Particular	Marks
01	Theory course	MCQ test at the end of the course	20
02	Practical Activity evaluation	Verbal or Non-verbal Test Administration, Assessment (any Six test)	60
03	Practical Activity evaluation	Performance Test Administration, Assessment (any one test)	10
04	Viva Voce	Viva Voce related to Practical Activity	10
<b>TOTAL MARKS</b>			<b>100</b>

### References:

- Hardayal singh (1984) Sport training general theory and methods Netaji subhs. Nat. inst. of Sports.
- Ferdinands, R. M. (2003). The effect of flexed elbow on the bowling speed in cricket . Journal of sports biomechanics , 65-71.
- Feros, S, A. (2015). The determinant and development of fast bowling performance in cricket . ballarat victoria: Federation University Australia .
- Khangure, B. C. (2002). Disk degeneration and fast bowling in cricket: An intervention study. Medicine & Science in Sports & Exercise , 1714-8
- Lee, A. (1980). Cricket. London: Hamlet Sports Special
- Max C Stuelcken "Successful cricket coaching the Aussie way" Australian Journal of sports medicines. (2003)19-24
- Max C. Stuelcken "A Kinematic analysis of off side front foot drives in elite men cricket batting", Australian Journal of Sports Medicine(March 2001), p. 260 -270
- Tyagi, A. K. (2012). Cricket Skills & Rules. New Delhi: Khel Sahitya Kendra.
- Tyson, F. (1976). "Complete cricket coaching" in "the biomechanics of fast bowling in men's cricket: A review. Chicago



  
**Head,**  
**Department of Physical Education, B.A.R.S.I.**



पुण्यश्लोक अहिल्यादेवी होळकर  
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SOLAPUR UNIVERSITY, SOLAPUR**

**SKILL ORIENTED COURSE FOR  
B.A. PROGRAMME**

**TITLE OF THE COURSE**

**CERTIFICATE COURSE OF GYM INSTRUCTOR**

## Module 02: Nutrition and Biomechanics

- a) Nutrition
- b) Lever
- c) Motion
- d) Force
- e) Flexibility

## Module 03: Physical fitness factors

- a) Cardio vascular endurance
- b) Muscular Strength
- c) Muscular endurance
- d) Exercise & diet
- e) Flexibility

## Module 04: Training and training methods

- a) Definition of training and its Principles Load and Adaptation
- b) Scheduling (Short term & long term training.
- c) Training Methods
- d) Fitness testing

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**List of the Practical Tests:** Following test are used by teacher educator for implementation of the skill oriented course.

Sr. No.	Verbal / Non verbal Tests	Performance Tests
01	Student choice war map Exercises	Technical and Wright positions
02	Examiner choice war map Exercises	
03	Student choice Upper Body	
04	Examiner choice Upper Body	
05	Student choice Lower body	
06	Examiner choice Lower body	
07	Student choice Specific Exarches	
08	Examiner choice Specific Exarches	

Teacher educator also may be uses different psychology tests as per availability. This list is just for reference.

**Course Lay out**

Week	Content	Place	Hours
Week 01	Muscular System ,Cardio respiratory systems ,Injuries and their management., First aid., Rehabilitation and Therapeutic Modalities	Classroom	05
Week 02	Nutrition , Lever ,Motion ,Force ,Flexibility	Classroom	05
Week 03	Warming up and cooling down: • General exercise • Stretching exercise • Specific exercises • Conditioning exercises	Gym Hall	05
Week 04	Exercıses , Basic Concept,	Gym Hall	05
Week 05	Squat , Banch Press Incline Bench Press	Gym Hall	05
Week 06	Hammer Strength Machine , Various training methods for fitness	Gym Hall	05
Week 07	Training Programmer ,Dumbbells	Gym Hall	05
Week 08	Pull-up Bar Abdominal Bench / Sit -up ench Daily Analysis, Measurement and Record of athlete	Gym Hall	05
Week 09	Cardio vascular endurance, Muscular Strength, Muscular endurance, Exercise & diet , Flexibility	Classroom	05
Week 10	Definition of training and its Principles Load and Adaptation ,	Classroom	05

	Scheduling (Short term & long term training. Training Methods ,Fitness testing		
Week 11	<ul style="list-style-type: none"> <li>Practice and revision of administration &amp; assessment of tests under the supervision of educator.</li> <li>Evaluation Process includes:               <ol style="list-style-type: none"> <li>Practical Activity</li> </ol> </li> </ul>	Classroom	05
Week 12	<ul style="list-style-type: none"> <li>Evaluation Process includes:               <ol style="list-style-type: none"> <li>Practical Activity</li> <li>Viva Voce</li> </ol> </li> </ul>	Educational Yoga Laboratory	05
	<ul style="list-style-type: none"> <li>Theory Test or exam</li> </ul>	Classroom	


### Evaluation system or process of the course:

Sr. No.	Course Nature	Particular	Marks
01	Theory course	MCQ test at the end of the course	20
02	Practical Activity evaluation	Verbal or Non-verbal Test Administration, Assessment (any Six test)	60
03	Practical Activity evaluation	Performance Test Administration, Assessment (any one test)	10
04	Viva Voce	Viva Voce related to Practical Activity	10
<b>TOTAL MARKS</b>			<b>100</b>

### References:

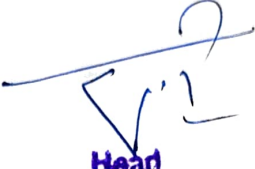
- Basic Weight Training for Men and Women Thomas D. Fahey
- Concepts of Athletic Training Pfeiffier Mangus.
- Nutrition and Diet Therapy Lutz and Przytulshi
- Sport Training Principles Frank W. Dick .
- Strength Training and Conditioning R. A. Proctor



  
 Head,  
 Department of Physical  
 Education, BARSII.

**SHRI SHIVAJI MAHAVIDYALYA BARSHI**  
**DEPARTMENT OF ZOOLOGY**  
Add on Course - Timetable  
**2021-22**

Class	Day and Date	Time	Add on Course Title
B.Sc. III	Saturday - 25/06/2022	12.00-1.00	Vermiculture Technology
M.Sc. II	Saturday - 25/06/2022	12.00-1.00	Sericulture

  
**Head**  
**Department of Zoology**  
**Shri Shivaji Mahavidyalaya**  
**Barsi Dist Solapur**

P. A. H. Solapur University Solapur  
Shri Shivaji Mahavidyalaya Barshi  
Department of Zoology  
Add on course : Vermiculture technology  
Examination Jun 2022

Date:

Time

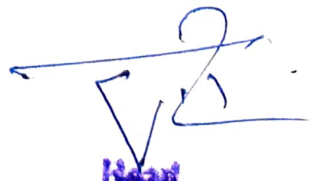
Marks: 50

Each question carries 2 marks

1. Which of the following species has a shorter body size?  
a) *Epifilis* b) *Endogens*  
c) *Aneciques* d) *Eudrilus*
2. Which of the following species is most stable in Indian conditions?  
a) *Perionyx* b) *Epifilis*  
c) *Endogens* d) *Aneciques*
3. Which of the following cannot be established properly in the field?  
a) *Eisenia foetida* b) *Perionyx*  
c) *Epifilis* d) *Aneciques*
4. Earthworms subsidize to the burial of wastes?  
a) True b) False
5. Which of the following is not a method of worm cast harvesting or manufacturing?  
a) Homogenization b) Active feeding  
c) Drying under adequate light d) Separation of cocoons
6. What is the major advantage of three-tire vermi-culture technology?  
a) It can be applied to both solid and liquid wastes  
b) It cannot be applied to both solid and liquid wastes  
c) It involves chemical treatment  
d) It can degrade organic waste
7. While burrowing, the anterior ends of earthworms become turgid serving as a hydraulic skeleton though they do not possess a skeleton. This is as a result of  
a) Setae b) gut peristalsis  
c) coelomic fluid d) none of the above
8. This is apt for vermicomposting  
a) Algae b) Nitrifying bacteria  
c) Earthworms d) Fungus
9. Vermicompost is a/an  
a) toxic material b) organic biofertilizer  
c) inorganic fertilizer d) synthetic fertilizer
10. This can be the best worm for composting  
a) pink worms b) red wigglers  
c) maggots d) does not matter



11. In earthworms, typhlosole is a  
 a) excretory structure  
 b) a circulatory system structure  
 c) fold of intestine  
 d) defence mechanism
12. Which of the following nutrients is abundantly found in worm castings?  
 a) Phosphorus  
 b) Nitrogen  
 c) Calcium and other minerals  
 d) All of these
13. Which of the following methods uses earthworms during composting?  
 a) Vermicomposting  
 b) Vertical composting  
 c) Windrow composting  
 d) Burning
14. Which of the following is not a major objective of Vermicomposting?  
 a) To elevate the value of original material  
 b) To accelerate the rate of degradation  
 c) To obtain toxic products  
 d) To obtain products free of any pollutants
15. Which among the following is not a major reason for choosing earthworms for Vermicomposting?  
 a) Low incubation time  
 b) Digestion rate  
 c) Adaptability  
 d) Low growth rate
16. Which of the following species of earthworms is not suitable for Vermicomposting?  
 a) *Epifilis*  
 b) *Endogens*  
 c) *Aneciques*  
 d) *Plasmodium*
17. For vermicomposting, this species of earthworm is not apt  
 a) *Perionyx excavates*  
 b) *Pheretima posthuma*  
 c) *Eudrilus eugeniae*  
 d) *Eisenia fetidae*
18. The process in which earthworms are used to degrade organic wastes is  
 a) Compost bedding  
 b) Humus forming  
 c) Vermicomposting  
 d) None
19. Kitchen wastes and animal excreta can be minimized most profitably via  
 a) vermiculture  
 b) biogas production  
 c) direct usage as biofertilizers  
 d) storing in underground storage tanks
20. The process of covering spawned compost with a suitable material is known as  
 a) cropping  
 b) casing  
 c) spawning  
 d) composting
21. The earthworm belongs to ----- group.  
 a) Polychaeta  
 b) Hirudinea  
 c) Oligochaeta  
 d) Crustacea
22. The typhlosole in earthworm is a part of \_\_\_\_\_  
 a) Digestive system  
 b) Reproductive system  
 c) Excretory System  
 d) Nervous system
23. The animal does not show metamorphosis in larval stage is.  
 a) Asteria  
 b) House fly  
 c) *Pheretima posthuma*  
 d) Butterfly
24. Typhlosole is found in the ----- region of earthworm.  
 a) Stomach  
 b) Oesophagus  
 c) Intestine  
 d) Gizzard
25. In earthworm mouth is located on \_\_\_\_\_.  
 a) Stomium  
 b) Peristomium  
 c) Prostomium  
 d) Protostomium

  
 Head  
 Department of Zoology  
 Shri Shivaji Mahavidyalaya  
 Barsi Dist Solapur

**SHRI SHIVAJI MAHAVIDYALYA BARSHI**  
**DEPARTMENT OF ZOOLOGY**  
**M.Sc. II**  
**Add on Course -Sericulture**  
**2021-22**

**Date: 25/06/2022**

**Time:12.00-1.00**

**Marks: 50**

- 
1. **What is sericulture?**
    - a) The cultivation of silk-producing plants
    - b) The cultivation of silkworms for silk production
    - c) The study of insects
    - d) The production of synthetic fibers
  2. **Which of the following countries is considered the birthplace of sericulture?**
    - a) India
    - b) China
    - c) Japan
    - d) Brazil
  3. **The most commonly produced type of silk is:**
    - a) Muga silk
    - b) Tussar silk
    - c) Eri silk
    - d) Mulberry silk
  4. **Which species is primarily used in commercial silk production?**
    - a) Bombyx mori
    - b) Antheraea mylitta
    - c) Philosamia ricini
    - d) Samia cynthia
  5. **The history of sericulture dates back to:**
    - a) 500 BC
    - b) 2700 BC
    - c) 1500 AD
    - d) 2000 AD
  6. **Which type of silk is produced by Antheraea mylitta?**
    - a) Mulberry silk
    - b) Tussar silk
    - c) Eri silk
    - d) Muga silk
  7. **Muga silk is primarily produced in which part of India?**
    - a) Assam
    - b) Karnataka
    - c) Tamil Nadu
    - d) Gujarat
  8. **Eri silk is also known as:**
    - a) Vanya silk
    - b) Ahimsa silk
    - c) Wild silk
    - d) Peace silk
  9. **Which of the following is not a silk-producing species?**
    - a) Bombyx mori
    - b) Antheraea assamensis
    - c) Apis mellifera
    - d) Philosamia ricini
  10. **Sericulture primarily contributes to:**
    - a) Steel production
    - b) Textile industry
    - c) Plastic manufacturing
    - d) Chemical industry
  11. **The life cycle of a silkworm includes the following stages:**
    - a) Egg, larva, pupa, adult
    - b) Egg, nymph, adult
    - c) Egg, larva, adult
    - d) Nymph, pupa, adult
  12. **The larval stage of the silkworm is known as:**

- a) Caterpillar
  - b) Pupa
  - c) Nymph
  - d) Chrysalis
13. **Silkworms primarily feed on:**
- a) Oak leaves
  - b) Mulberry leaves
  - c) Bamboo leaves
  - d) Mango leaves
14. **The silkworm spins its cocoon during which stage?**
- a) Egg
  - b) Larva
  - c) Pupa
  - d) Adult
15. **The silk gland in silkworms is responsible for producing:**
- a) Fibroin and sericin
  - b) Chitin and keratin
  - c) Collagen and elastin
  - d) Cellulose and lignin
16. **Which part of the silkworm's body is responsible for silk production?**
- a) Antennae
  - b) Silk gland
  - c) Spinneret
  - d) Proboscis
17. **The duration of the larval stage in *Bombyx mori* is typically:**
- a) 3-5 days
  - b) 10-14 days
  - c) 20-30 days
  - d) 40-50 days
18. **Which stage of the silkworm's life cycle is the most critical for silk production?**
- a) Egg
  - b) Larva
  - c) Pupa
  - d) Adult
19. **The scientific name for the domestic silkworm is:**
- a) *Bombyx mori*
  - b) *Antheraea mylitta*
  - c) *Philosamia ricini*
  - d) *Attacus atlas*
20. **Silkworm breeding is primarily aimed at:**
- a) Increasing cocoon size
  - b) Producing more eggs
  - c) Enhancing silk quality and quantity
  - d) Reducing the number of life cycle stages
21. **Hybrid vigor in silkworms refers to:**
- a) The increase in disease resistance
  - b) The reduction in silk production
  - c) The improved performance of hybrids over purebreds
  - d) The decrease in cocoon quality
22. **Silkworm breeding techniques are primarily used to:**
- a) Produce different colors of silk
  - b) Increase the production of silk
  - c) Reduce the number of life cycle stages
  - d) Decrease the size of silkworms
23. **Which of the following is a common disease affecting silkworms?**
- a) Pebrine
  - b) Rust
  - c) Blight
  - d) Mildew
24. **Pebrine disease in silkworms is caused by:**
- a) Bacteria
  - b) Virus
  - c) Fungus
  - d) Protozoa
25. **Integrated pest management (IPM) in sericulture focuses on:**
- a) Using chemical pesticides only

- b) Combining biological, cultural, and chemical control methods  
 c) Reducing silk production  
 d) Eliminating all pests using chemicals
26. **One of the common pests that affect silkworms is:**  
 a) Red spider mite  
 b) Uzi fly  
 c) Aphids  
 d) Whitefly
27. **Uzi fly infestation in silkworms primarily affects which stage?**  
 a) Egg  
 b) Larva  
 c) Pupa  
 d) Adult
28. **The primary focus of silkworm genetics is to:**  
 a) Produce new colors of silk  
 b) Improve silk quality and yield  
 c) Decrease the lifespan of silkworms  
 d) Increase the feeding capacity of silkworms
29. **Silkworm breeding often involves:**  
 a) Crossbreeding between different species  
 b) Genetic modification  
 c) Crossbreeding within the same species to enhance desired traits  
 d) Inbreeding to maintain pure lines
30. **The practice of managing silkworm diseases and pests primarily aims to:**  
 a) Increase silk production  
 b) Reduce labor costs  
 c) Decrease the quality of cocoons  
 d) Shorten the life cycle of silkworms
31. **The ideal temperature range for rearing silkworms is:**  
 a) 10-15°C  
 b) 20-25°C  
 c) 25-30°C  
 d) 35-40°C
32. **A rearing house for silkworms should have:**  
 a) High humidity and low temperature  
 b) Good ventilation and controlled temperature  
 c) Low ventilation and high temperature  
 d) No light and high humidity
33. **The primary function of rearing equipment is to:**  
 a) Provide warmth  
 b) Maintain hygiene and optimal rearing conditions  
 c) Increase the size of silkworms  
 d) Decrease the rearing time
34. **The most crucial factor for silkworm rearing success is:**  
 a) Temperature control  
 b) Lighting  
 c) Rearing tray size  
 d) Quantity of feed
35. **During which stage of rearing is the environment most critical?**  
 a) Egg stage  
 b) Young larval stage  
 c) Mature larval stage  
 d) Pupal stage
36. **Feeding silkworms primarily involves providing them with:**  
 a) Synthetic feed  
 b) Mulberry leaves  
 c) Fruit pulp  
 d) Rice husks
37. **Harvesting cocoons should be done:**  
 a) Immediately after the larva spins

- the cocoon
- b) After the pupa has fully developed
  - c) After the adult moth emerges
  - d) Before the larva begins spinning
38. **Silk reeling is the process of:**
    - a) Feeding silkworms
    - b) Unwinding silk fibers from cocoons
    - c) Breeding silkworms
    - d) Spinning silk yarn
  39. **Cocoon processing primarily aims to:**
    - a) Increase cocoon size
    - b) Extract the maximum silk from cocoons
    - c) Breed more silkworms
    - d) Reduce the silk quality
  40. **Which of the following is a key quality assessment parameter for silk yarn?**
    - a) Length of the yarn
    - b) Color consistency
    - c) Fiber fineness and strength
    - d) Cocoon size
  41. **Which method is often used to process cocoons for silk reeling?**
    - a) Freezing
    - b) Boiling
    - c) Drying
    - d) Steaming
  42. **The main purpose of spinning in sericulture is to:**
    - a) Produce synthetic fibers
    - b) Convert silk fibers into yarn
    - c) Increase cocoon size
    - d) Improve mulberry cultivation
  43. **Mulberry is cultivated primarily for:**
    - a) Textile production
    - b) Feed for silkworms
    - c) Medicinal purposes
    - d) Fiber extraction
  44. **Which of the following is NOT a variety of mulberry?**
    - a) *Morus alba*
    - b) *Morus nigra*
    - c) *Morus indica*
    - d) *Morus tinctoria*
  45. **Pest management in mulberry cultivation primarily involves:**
    - a) Using only chemical pesticides
    - b) A combination of cultural, mechanical, and chemical methods
    - c) Ignoring pest issues
    - d) Removing affected leaves manually
  46. **The economic significance of sericulture is primarily due to:**
    - a) High production costs
    - b) Export potential of silk products
    - c) Minimal market demand
    - d) Limited job creation
  47. **Which of the following is a common value addition in sericulture products?**
    - a) Dyeing and printing of silk fabrics
    - b) Reducing silk quality
    - c) Shortening the rearing cycle
    - d) Limiting cocoon production
  48. **Which government scheme focuses on sericulture development in India?**
    - a) MNREGA
    - b) Krishi Vikas Yojana
    - c) National Silk Mission
    - d) Sarva Shiksha Abhiyan
  49. **Global sericulture development is supported by:**
    - a) Decreasing silk production
    - b) Increasing use of synthetic fibers
    - c) Promotion of sustainable silk practices
    - d) Limiting the availability of silk

50. **Sericulture contributes to rural development by:**

- a) Reducing employment opportunities
- b) Increasing rural incomes and providing livelihoods
- c) Promoting urbanization
- d) Decreasing agricultural productivity

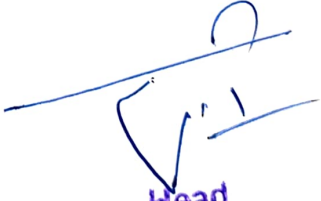
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Head

**Department of Zoology  
Shri Shivaji Mahavidyalaya  
Barsi Dist. Solapur**

**SHRI SHIVAJI MAHAVIDYALYA BARSHI**  
**DEPARTMENT OF ZOOLOGY**  
**Add on Course - Timetable**  
**2023-24**

Class	Day and Date	Time	Add on Course Title
B.Sc. III	Monday - 08/04/2024	12.00-1.00	Vermiculture Technology
M.Sc. II	Monday - 08/04/2024	12.00-1.00	Bioinformatics

  
Head  
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Barshi Dist Solapur

**SHRI SHIVAJI MAHAVIDYALYA BARSHI**  
**DEPARTMENT OF ZOOLOGY**  
**B.Sc. III**  
**Add on Course -Vermicomposting Technology**  
**2023-24**

**Date:08/4/2024**

**Time:12.00-1.00**

**Marks: 50**

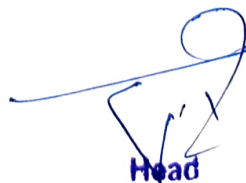
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1. What is vermicomposting?
    - a) Composting using fungi
    - b) Composting using bacteria
    - c) Composting using earthworms
    - d) Composting using chemicals
  2. Which of the following is a key difference between vermicomposting and traditional composting?
    - a) Vermicomposting produces more heat
    - b) Traditional composting is faster
    - c) Vermicomposting uses earthworms
    - d) Traditional composting requires less maintenance
  3. Which country is known to have first used vermicomposting on a large scale?
    - a) India
    - b) China
    - c) USA
    - d) Australia
  4. One of the main benefits of vermicomposting is:
    - a) Increased use of chemical fertilizers
    - b) Decrease in soil quality
    - c) Reduction of organic waste
    - d) High production of methane gas
  5. Vermicomposting primarily helps in:
    - a) Increasing non-biodegradable waste
    - b) Enhancing soil fertility
    - c) Promoting deforestation
    - d) Increasing water pollution
  6. What is one advantage of vermicomposting over traditional composting?
    - a) Requires higher temperatures
    - b) Uses non-organic materials
    - c) Produces vermicast, a rich organic fertilizer
    - d) Slower decomposition process
  7. Vermicomposting is most beneficial for:
    - a) Increasing chemical fertilizer usage
    - b) Reducing soil pH
    - c) Organic waste management
    - d) Producing fossil fuels
  8. Vermicompost is also known as:
    - a) Worm castings
    - b) Compost tea
    - c) Mulch
    - d) Biochar
  9. Vermicomposting is most commonly used for:
    - a) Managing electronic waste
    - b) Degrading plastic
    - c) Recycling organic waste
    - d) Increasing metal content in soil
  10. Which of the following is NOT a product of vermicomposting?
    - a) Vermicast
    - b) Worm tea
    - c) Biofuel
    - d) Worm biomass
  11. Which of the following systems is NOT found in earthworms?
    - a) Circulatory system
    - b) Respiratory system
    - c) Digestive system
    - d) Nervous system
  12. The digestive system of earthworms includes:
    - a) Stomach
    - b) Crop



- c) Gizzard  
d) All of the above
13. Which of these is the primary function of the earthworm's clitellum?  
a) Digestion  
b) Reproduction  
c) Movement  
d) Respiration
14. Earthworms breathe through:  
a) Lungs  
b) Gills  
c) Skin  
d) Trachea
15. The common species used in vermicomposting is:  
a) *Lumbricus terrestris*  
b) *Eisenia fetida*  
c) *Pheretima posthuma*  
d) *Perionyx excavatus*
16. *Eisenia fetida* is commonly known as:  
a) Nightcrawler  
b) Earthworm  
c) Red wiggler  
d) Flatworm
17. What is the typical lifespan of an earthworm in a vermicomposting system?  
a) 6 months  
b) 1-2 years  
c) 5-7 years  
d) 10 years
18. Earthworms are classified as:  
a) Insects  
b) Mollusks  
c) Annelids  
d) Arachnids
19. Which of the following describes the reproductive system of earthworms?  
a) Hermaphroditic  
b) Gonochoristic  
c) Asexual  
d) Viviparous
20. Earthworm cocoons typically contain:  
a) One egg  
b) Two to three eggs  
c) Five to ten eggs  
d) Over ten eggs
21. Earthworms help in improving soil structure by:  
a) Increasing soil compaction  
b) Enhancing soil aeration  
c) Decreasing water retention  
d) Increasing soil temperature
22. The habitat preference of *Eisenia fetida* is:  
a) Dry sandy soils  
b) Moist organic-rich environments  
c) Arid desert regions  
d) High-altitude cold areas
23. The average size of a mature *Eisenia fetida* earthworm is:  
a) 1-2 cm  
b) 3-5 cm  
c) 7-10 cm  
d) 12-15 cm
24. Earthworm reproduction typically occurs:  
a) Asexually  
b) Through budding  
c) Sexually, with mutual copulation  
d) Via external fertilization
25. The term "vermicompost" refers to:  
a) Composting with microorganisms  
b) Worm castings produced from organic waste  
c) The habitat of earthworms  
d) The process of composting leaves
26. The ideal pH range for a vermicomposting system is:  
a) 3-4  
b) 5-6  
c) 6.5-7.5  
d) 8-9
27. Which of the following is NOT suitable bedding material for a vermicomposting system?  
a) Shredded newspaper  
b) Straw  
c) Gravel  
d) Coconut coir
28. Vermicomposting units should be kept in:  
a) Direct sunlight  
b) A dry, cool place  
c) A warm, moist, and dark environment  
d) A well-ventilated, open area
29. The primary purpose of bedding material in a vermicomposting system is to:  
a) Retain moisture  
b) Provide a breeding ground

- c) Create a barrier for predators
  - d) Decrease decomposition rate
30. How often should a vermicomposting system be monitored?
- a) Daily
  - b) Weekly
  - c) Monthly
  - d) Bi-annually
31. Which of the following is a common sign that a vermicomposting system is functioning well?
- a) Presence of foul odors
  - b) High temperatures
  - c) Earthworms actively feeding and moving
  - d) Excessive moisture build-up
32. Earthworms in a vermicomposting system are typically fed:
- a) Fresh meat scraps
  - b) Dairy products
  - c) Fruit and vegetable scraps
  - d) Inorganic waste
33. The best way to introduce earthworms to a new vermicomposting system is to:
- a) Place them directly on top of the bedding
  - b) Mix them into the feedstock
  - c) Leave them in the sun before adding
  - d) Place them in a separate container first
34. Overfeeding in a vermicomposting system can lead to:
- a) Faster composting
  - b) Increased earthworm population
  - c) Foul odors and pest problems
  - d) Higher quality vermicompost
35. How long does it typically take to harvest vermicompost from a well-maintained system?
- a) 1-2 weeks
  - b) 4-6 weeks
  - c) 3-6 months
  - d) 1 year
36. Which method is commonly used to separate earthworms from finished vermicompost?
- a) Drying and sieving
  - b) Using light to drive worms to the bottom
  - c) Flushing with water
  - d) Freezing and thawing
37. The ideal moisture content for a vermicomposting system is around:
- a) 10%
  - b) 20%
  - c) 60-70%
  - d) 90%
38. A good indicator of vermicompost maturity is:
- a) Presence of visible food scraps
  - b) Dark, crumbly texture with an earthy smell
  - c) Excessive moisture content
  - d) High number of visible worms
39. To prevent overfeeding, one should:
- a) Add more worms
  - b) Increase the temperature
  - c) Feed small amounts at regular intervals
  - d) Add more bedding material
40. Which of the following is not a recommended practice in vermicomposting maintenance?
- a) Regularly turning the bedding
  - b) Keeping the system in a shaded area
  - c) Ensuring adequate drainage
  - d) Adding citrus fruits regularly
41. Vermicompost is particularly beneficial for:
- a) Reducing soil fertility
  - b) Increasing soil salinity
  - c) Enhancing soil structure and fertility
  - d) Reducing crop yield
42. In agriculture, vermicompost is used primarily to:
- a) Decrease soil pH
  - b) Replace chemical fertilizers
  - c) Increase pesticide usage
  - d) Increase soil compaction
43. Vermicompost can help in:
- a) Decreasing water retention in soil
  - b) Increasing nutrient availability for plants
  - c) Making the soil infertile
  - d) Reducing organic matter content in soil
44. Which of the following is a benefit of using vermicompost in horticulture?
- a) Slower plant growth

- b) Reduced flowering
  - c) Improved plant health and resilience
  - d) Decreased water retention
45. Vermicompost is often used in landscaping because:
- a) It is highly acidic
  - b) It improves soil structure and plant growth
  - c) It repels insects
  - d) It slows down the growth of plants
46. In waste management, vermicomposting helps by:
- a) Increasing landfill usage
  - b) Reducing the volume of organic waste
  - c) Promoting the accumulation of waste
  - d) Decreasing the rate of decomposition
47. The use of vermicompost in agriculture can lead to:
- a) Reduced soil biodiversity
  - b) Increased use of chemical inputs
  - c) Enhanced soil fertility and crop yield
  - d) Soil degradation
48. Which of the following is an advantage of integrating vermicomposting into other waste management systems?
- a) Slower processing of waste
  - b) Lower quality of compost
  - c) Enhanced efficiency of organic waste recycling
  - d) Increased production of toxic waste
49. In horticulture, vermicompost is often used as:
- a) A primary pesticide
  - b) A soil conditioner and fertilizer
  - c) A growth inhibitor
  - d) An herbicide
50. Vermicompost contributes to sustainable agriculture by:
- a) Increasing the dependency on chemical fertilizers
  - b) Promoting soil erosion
  - c) Reducing the need for synthetic inputs
  - d) Decreasing organic matter in soil



**SHRI SHIVAJI MAHAVIDYALYA BARSHI**  
**DEPARTMENT OF ZOOLOGY**  
**M.Sc. II**  
**Add on Course -Bioinformatics**  
**2023-24**

**Date: 08/04/2024**

**Time: 12.00-1.00**

**Marks: 50**

**1. Bioinformatics primarily involves the use of:**

- a) Chemical methods
- b) Computational tools
- c) Physical methods
- d) Manual data entry

**2. The Human Genome Project was completed in:**

- a) 1990
- b) 1995
- c) 2003
- d) 2010

**3. Which of the following is a key application of bioinformatics?**

- a) Drug discovery
- b) Weather forecasting
- c) Data encryption
- d) Space exploration

**4. A common database used in bioinformatics for storing DNA sequences is:**

- a) PubMed
- b) GenBank
- c) ArXiv
- d) JSTOR

**5. BLAST is a tool used for:**

- a) Protein folding
- b) Sequence alignment
- c) Phylogenetic analysis
- d) Gene prediction

**6. In bioinformatics, the term "homology" refers to:**

- a) Similarity due to shared ancestry
- b) Similarity due to random chance
- c) Differences between sequences
- d) Unrelated sequences

**7. Which programming language is most commonly used in bioinformatics?**

- a) Python
- b) Java
- c) C++
- d) Ruby

**8. The central dogma of molecular biology involves:**

- a) DNA to RNA to protein
- b) RNA to DNA to protein
- c) Protein to DNA to RNA
- d) DNA to protein to RNA

**9. Which of the following is an example of a sequence alignment tool?**

- a) Pymol
- b) BLAST
- c) RASMOL
- d) Chimera

**10. FASTA format is commonly used for:**

- a) Protein structure files
- b) DNA sequence files
- c) Phylogenetic trees
- d) Metabolic pathways

**11. The process of predicting the three-dimensional structure of a protein from its amino acid sequence is known as:**

- a) Protein sequencing
- b) Protein folding
- c) Protein docking
- d) Protein modeling

**12. In bioinformatics, a "motif" refers to:**

- a) A repeated sequence pattern
- b) A single nucleotide polymorphism
- c) A protein complex
- d) A gene regulatory network

**13. The abbreviation "SNP" stands for:**

- a) Sequence Naming Protocol
- b) Single Nucleotide Polymorphism
- c) Structural Network Prediction
- d) Serial Number of Proteins

**14. Phylogenetic trees are used to represent:**

- a) Protein structures
- b) Evolutionary relationships
- c) Gene expression levels
- d) Metabolic pathways

**15. Which database is primarily used for storing protein sequences?**

- a) PDB
- b) GenBank
- c) UniProt
- d) DDBJ

**16. The Needleman-Wunsch algorithm is used for:**

- a) Global sequence alignment
- b) Local sequence alignment
- c) Phylogenetic analysis
- d) Protein folding

**17. Which of the following is an example of a bioinformatics workflow management system?**

- a) Taverna
- b) BLAST
- c) PyMOL
- d) MATLAB

**18. An example of a secondary protein structure is:**

- a) Alpha-helix
- b) Beta-sheet
- c) Gamma-turn
- d) All of the above

**19. The process of converting mRNA into cDNA is known as:**

- a) Translation
- b) Transcription
- c) Reverse transcription
- d) DNA replication

**20. In molecular docking, the main goal is to:**

- a) Predict the binding affinity between two molecules
- b) Align two protein sequences

- c) Model the 3D structure of a protein
- d) Compare gene expression profiles

**21. Which of the following is a tool used for protein structure visualization?**

- a) BLAST
- b) Chimera
- c) ClustalW
- d) HMMER

**22. A substitution matrix in bioinformatics is used for:**

- a) Calculating sequence similarity
- b) Predicting protein structure
- c) Modeling gene expression
- d) Designing primers

**23. The ENSEMBL database is mainly used for:**

- a) Storing chemical compounds
- b) Annotating eukaryotic genomes
- c) Visualizing protein structures
- d) Analyzing microarray data

**24. Which algorithm is typically used for local sequence alignment?**

- a) Needleman-Wunsch
- b) Smith-Waterman
- c) BLAST
- d) ClustalW

**25. In genomics, "coverage" refers to:**

- a) The percentage of the genome sequenced
- b) The depth of sequencing at each position
- c) The accuracy of sequence reads
- d) The number of genes in a genome

**26. The Gene Ontology (GO) database is used for:**

- a) Analyzing protein-protein interactions
- b) Annotating gene functions
- c) Predicting gene expression
- d) Storing sequence data

**27. The term "in silico" refers to experiments that are:**

- a) Conducted in a lab
- b) Performed in living organisms
- c) Carried out on a computer
- d) Based on chemical synthesis

**28. A heatmap in bioinformatics is typically used to visualize:**

- a) Gene expression data
- b) Protein structures
- c) Sequence alignments
- d) Phylogenetic trees

**29. Which of the following is a next-generation sequencing (NGS) technology?**

- a) Sanger sequencing
- b) Illumina sequencing
- c) Maxam-Gilbert sequencing
- d) Edman degradation

**30. A common method for gene expression analysis is:**

- a) PCR
- b) Microarray
- c) Southern blot
- d) Western blot

**31. Which tool is commonly used for constructing phylogenetic trees?**

- a) BLAST
- b) MEGA
- c) ClustalW
- d) FASTA

**32. The HMMER tool is used for:**

- a) Sequence alignment using Hidden Markov Models
- b) Protein structure prediction
- c) Phylogenetic analysis
- d) RNA secondary structure prediction

**33. The term "orthologs" refers to genes that:**

- a) Are duplicated within a species
- b) Have evolved from a common ancestral gene
- c) Perform the same function in different species
- d) Are involved in different pathways

**34. A "transcriptome" represents:**

- a) The complete set of proteins in a cell
- b) The complete set of RNA transcripts in a cell
- c) The complete set of DNA sequences in a genome
- d) The complete set of metabolic pathways in an organism

**35. Which database is commonly used for storing RNA sequences?**

- a) PDB
- b) Rfam
- c) GenBank
- d) UniProt

**36. ClustalW is a tool used for:**

- a) Multiple sequence alignment
- b) Protein structure visualization
- c) Phylogenetic tree construction
- d) Sequence annotation

**37. In protein-ligand docking, a "ligand" typically refers to:**

- a) A protein
- b) A small molecule
- c) A nucleotide sequence
- d) A DNA molecule

**38. Which of the following is an open-source bioinformatics software platform?**

- a) Galaxy
- b) MATLAB
- c) SPSS
- d) SAS

**39. The term "epigenetics" refers to:**

- a) Changes in DNA sequence
- b) Changes in gene expression without altering DNA sequence
- c) Mutations in genetic code
- d) Inheritance of physical traits

**40. The Pfam database is used for:**

- a) Storing protein families and domains
- b) Visualizing gene expression
- c) Modeling protein structures
- d) Predicting protein-ligand interactions

**41. An "exon" is a segment of a gene that:**

- a) Is transcribed into RNA but not translated into protein
- b) Is translated into protein
- c) Is never transcribed
- d) Is always spliced out

**42. In the context of NGS data, a "read" refers to:**

- a) A sequence of nucleotides generated by sequencing
- b) The number of genes in a genome
- c) The length of a DNA sequence
- d) The quality score of a sequence

**43. The primary structure of a protein refers to:**

- a) Its amino acid sequence
- b) Its 3D conformation
- c) Its interaction with ligands
- d) Its post-translational modifications

**44. A "gene fusion" event involves:**

- a) The combination of two or more genes to form a new gene
- b) The deletion of a gene
- c) The duplication of a gene
- d) The inversion of a gene segment

**45. The RCSB PDB database is used to:**

- a) Store protein 3D structures
- b) Annotate gene functions
- c) Visualize metabolic pathways
- d) Predict protein-ligand interactions

**46. A common tool for genome assembly is:**

- a) BLAST
- b) SPAdes
- c) PyMOL
- d) HMMER

**47. "Metagenomics" refers to the study of:**

- a) Individual genomes in isolation
- b) Collective genomes of microorganisms in an environment
- c) Genomic data from model organisms
- d) Genomic variations in a population

**48. RNA-Seq is a method used for:**

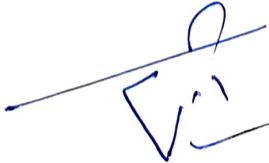
- a) Sequencing RNA transcripts
- b) Sequencing DNA
- c) Analyzing protein structure
- d) Analyzing metabolic pathways

**49. A "contig" in genome assembly is:**

- a) A contiguous sequence of DNA constructed from overlapping reads
- b) A single gene
- c) A protein-coding region
- d) A regulatory element

**50. The primary purpose of "functional genomics" is to:**

- a) Analyze gene function and interactions
- b) Sequence whole genomes
- c) Annotate protein structures
- d) Visualize metabolic pathways

  
Head  
Department of Zoology  
Shri Shivaji Mahavidyalaya  
Barsi Dist Solapur

Punyashlok Ahilyadevi Holkar Solapur University, Solapur  
B.Sc.-III (Electronics)  
CBCS Pattern Semester -V

Self learning: Add-on Course / Skill Based Course

**Designing and development of printed circuit board**

Total Marks: 100

Credits: 04  
(60 Periods)

**Unit I: Introduction to PCB and Design Rules**

Introduction to PCB: Fundamentals of electronic components and their categories, basic electronic circuits, Basics of printed circuit board designing: Layout planning, general rules and parameters, ground conductor considerations, thermal issues, check and inspection of artwork.

Design rules for PCB: Design rules for Digital circuit PCBs, Analog circuit PCBs, high frequency and fast pulse applications, Power electronic applications, Microwave applications

**Unit II: Electronic Design Automation (EDA) Tools**

Brief Introduction of various simulators, ORCAD, PROTEUS, SPICE and PSPICE Environment, Selecting the Components Footprints as per design, Making New Footprints, Assigning Footprint to components, Net listing, PCB Layout Designing, Auto routing and manual routing.

**Unit III: PCB Production Techniques**

Photo printing, film- master production, reprographic camera, basic process for double sided PCBs photo resists, Screen printing process, plating, relative performance and quality control, Etching machines, Solders alloys, fluxes, soldering techniques, Mechanical operations.

**Unit IV: PCB Technology Trends**

Multilayer PCBs. Multiwire PCB, Flexible PCBs, Surface mount PCBs, Reflow soldering, Introduction to High-Density Interconnection (HDI) Technology.

**Project work:** Introduction to PCB design using Proteus tool Making the schematic of Academic and Industrial projects, PCB Designing of a circuit, Soldering and De-soldering of components as per circuit, Testing and Troubleshooting Methods.

**Reference Books:**



1. Printed circuit Board Design and technology, Walter C. Bosshart
2. Printed Circuits Handbook, Sixth Edition, by Clyde F. Coombs, Jr, Happy T. Holden, Publisher: McGraw-Hill Education Year: 2016
3. Complete PCB Design Using OrCAD Capture and PCB Editor, Kraig Mitzner Bob Doe Alexander Akulin Anton Suponin Dirk Müller, 2nd Edition 2009.
4. Introduction to System-on-Package, Rao R Tummala & Madhavan Swaminathan, MGH, 2008
5. Flexible Printed circuit board Design and manufacturing, By Robert torzwell
6. Printed circuit board design, fabrication assembly and testing By R. S. Khandpur, Tata

**विषय : मराठी**  
**बी.ए. भाग तीन सत्र सहा**  
(कौशल्यावर आधारित आवश्यक अभ्यासपत्रिका CBCS)  
**मराठी भाषा : संभाषण व लेखन कौशल्ये**

**गुण ४०**

**उद्दिष्ट्ये :**

१. विद्यार्थ्यांचे व्यक्तिमत्व भाषिकदृष्ट्या प्रगल्भ व विकसित करणे.
२. मराठीतील भाषिक कौशल्ये समजून घेणे.
३. विद्यार्थ्यांना संभाषण कौशल्य आत्मसात करण्यास प्रवृत्त करणे.
४. लेखन कौशल्याचे व्यावसायिक महत्त्व समजून घेणे.
५. मराठीतील भाषिक कौशल्यावर आधारित अर्थाजनाच्या संधी लक्षात घेणे.

अ.क्र.	घटक	तासिका	श्रेयांक	गुण
१.	<b>संभाषण कौशल्ये</b> अ) संभाषण (उच्चार, अनुस्वार, ऱ्हस्वदीर्घ, वर्णांचे उच्चार, स्वराघात) ब) औपचारिक संभाषण (महाविद्यालये व कार्यालयीन) क) अनौपचारिक संभाषण (वैयक्तिक व कौटुंबिक) ड) आधुनिक माध्यमांतील संभाषण (मोबाईल, झूम, गुगल मीट इ.)	१५	१	१०
२.	<b>वाचन कौशल्ये</b> अ) प्रगट वाचन (सस्वर, सुस्वर) ब) मुकवाचन (सखोलवाचन, संदर्भवाचन, विस्तृतवाचन, गतिवाचन) क) अभिवाचन (वाचनकृतीचे आकलन, उच्चारणसामर्थ्य) ड) वाचिक अभिनय (आवाज, आशयनुरूप संवाद)	१५	१	१०
३.	<b>भाषण कौशल्ये</b> अ) वक्तृत्व (पूर्वतयारी व प्रात्यक्षिक) ब) कथाकथन (संहिता व सादरीकरण)	१५	१	१०

	क) स्पर्धा परीक्षेतील मुलाखत (पूर्वतयारी व प्रात्यक्षिक) ड) प्रसारमाध्यमातील उद्घोषणा व निवेदन (माध्यमभान व तंत्रे)			
४.	<b>लेखन कौशल्ये</b> अ) हस्ताक्षर (अक्षर व सुलेखन) ब) पटकथा लेखन (प्रसंग व संवादलेखन) क) संगणकीय लेखन/भ्रमणध्वनीवरील लेखन (आज्ञावली - सॉफ्टवेयर व उपयोजन -अॅप) ड) प्रशासकीय लेखन (अर्ज व परिचयपत्र-बायोडेटा)	१५	१	१०
	<b>एकूण</b>	<b>६०</b>	<b>०४</b>	<b>४०</b>

### संदर्भ ग्रंथ :

१. व्यावहारिक मराठी : ल.रा.नसिराबादकर, फडके प्रकाशन, कोल्हापूर.
२. मराठी भाषिक कौशल्य विकास : संपा. डॉ.पृथ्वीराज तौर, अथर्व पब्लिकेशन, जळगाव.
३. संभाषण चातुर्य : आशा परुळेकर, उन्मेष प्रकाशन, पुणे.
४. संभाषण चातुर्य : ह.अ.भावे, वरदा प्रकाशन,पुणे.
५. कला संभाषणाची : डॉ. नीलम ताटके, डायमंड पब्लिकेशन्स, पुणे.
६. वाचन : का व कसे ? : वा.शि.आपटे, वरदा प्रकाशन,पुणे.
७. वाचन कौशल्य : कृती,गती आणि प्रगती : मेघमाला राजगरू, उन्मेष प्रकाशन,पुणे.
८. वाचन विकास : अशोक इंगवले, इंद्रायणी साहित्य प्रकाशन,पुणे.
९. वाचन संस्कार : सतीश पोरे, पद्मगंधा प्रकाशन, पुणे.
- १०.वाचनसंस्कृती : आक्षेप आणि अपेक्षा : नरेंद्र लांजेवार, विजय प्रकाशन, नागपूर.
- ११.लिहित्या लेखकाचं वाचन : विलास सारंग, शब्द पब्लिकेशन, मुंबई.
१२. वाचिक अभिनय : श्रीराम लागू, राजहंस प्रकाशन, पुणे.
१३. वक्तृत्व आणि संभाषण कौशल्य : श्रुतीश्री वडगबाळकर, सुविद्या प्रकाशन, सोलापूर.
१४. कथाकथनाची कथा : व.पु.काळे, मेहता पब्लिशिंग हाऊस, पुणे.
१५. कथा आणि कथाकथन : राजा मंगळवेढेकर, मंजुल प्रकाशन, पुणे.
१६. मुलाखंत : तंत्र व साधना : उद्धव हरिभाऊ कोळपे, संस्कृती प्रकाशन, लातूर.

१७. हस्ताक्षर विकास : द.दा.जोशी, नीलकंठ प्रकाशन, पुणे.
१८. मराठी चित्रपटाची पटकथा : अनिल सकपाळ, प्रतिमा प्रकाशन, पुणे.
१९. मराठी साहित्य आणि चित्र पटकथा (१९१३ ते २०१३) : प्रवीण नारायण महाजन, माय बुक पब्लिकेशन, नवी दिल्ली.
२०. सुंदर हस्ताक्षर कसे काढावे ? : सुभाष जमदाडे, मनोविकास प्रकाशन, पुणे.
२१. भाषिक सर्जन आणि उपयोजन - संपादक राजन गवस, अरुण शिंदे, गोमटेश्वर पाटील, दर्या प्रकाशन, पुणे.
२२. उपयोजित मराठी - शंकरानंद येडले, संस्कार प्रकाशन, लातूर.
२३. उपयोजित मराठी - डॉ. संजय लांडगे, दिलीपराज प्रकाशन, पुणे.
२४. स्पर्धा परीक्षा संपूर्ण मार्गदर्शक - डॉ. आनंद पाटील, स्टडी सर्कल पब्लिकेशन, पुणे.
२५. संगणकाचे अंतरंग : चंद्रसेन टिळेकर, दिलीपराज प्रकाशन, पुणे.

# **Punyashlok Ahilyadevi Holkar Solapur University, Solapur**

## **BA III History Sem. VI Skill Based Course**

### **Indian History for Competitive Examinations**

Credits - Theory:3 Project/Report: 1 Total: 4

Total Periods: 60

#### **Preamble:**

Competitive examination has become an essential part of government, semi-government and private sector jobs. Many students study with the dream of achieving success in these various examinations but most of the students do not get proper guidance. Easy study techniques and the ability to give accurate answers are not mastered. The result is failure in competitive examinations. The study units of Indian history of many competitive examinations have been placed at different levels in compulsory and optional form. Students will be able to better prepare for the history study units for various competitive examinations if develop skills like examination scope, nature of questions, suitable study methods for correct answers, self-study techniques, availability of reference books and their use as per the scope of the examination. Since this paper is to be studied in the final semester of the final year of graduation, they will acquire important skills at the right time. This skill oriented subject will be used by the students to get appointments through various competitive examinations, to work in competitive exam. Centers as well as private guides and to give lectures and speeches using lecture series, ceremonies and social media.

#### **Objectives:**

1. To aware the students about various competitive examinations
2. To facilitate the students to take up the challenges of appearing for competitive examinations.
3. To get the information about the exams conducted for the entry into jobs
4. To explain the various important events in Indian history.
5. To develop self-study techniques of history subject useful for competitive examinations.

#### **Learning Outcomes:**

1. Understand various opportunities in competitive examinations.
2. Students will be aware of the competitive examinations
3. History knowledge Utilize for professional jobs.
4. Skills Will be develop for self-study of history units suitable for various competitive examinations.
5. Students knows History subject importance UPSC, MPSC, Staff selection Bank, Railway, Army, Police, Post office etc. Examination.

**Chapter I. Introduction to Various Competitive Examinations.** 10

1. UPSC Examinations.
2. MPSC Examinations
3. Staff selection, Bank, Railway, Army, Police, Post Office etc. Examinations.

**Chapter II. Ancient Indian History for Various competitive exams.** 10

1. UPSC Examinations. (Preliminary and mains)
2. MPSC Examinations. (Preliminary and mains)
3. Other Examinations.

**Chapter III. Medieval Indian History for Various competitive exams** 10

1. UPSC Examinations. (Preliminary and mains)
2. MPSC Examinations. (Preliminary and mains)
3. Other Examinations.

**Chapter IV. Modern Indian History for Various competitive exams.** 10

1. UPSC Examinations. (Preliminary and mains)
2. MPSC Examinations. (Preliminary and mains)
3. Other Examinations.

**Project Report:** 20

- Students should get information about reference books and periodicals on Indian history available in their nearest libraries. Among them, read the components of Indian history study which are useful for competitive examinations and submit a brief report of the work done to the concerned teacher.

OR

- Students should collect Indian history questionnaires from various competitive examinations previous question papers, sample question papers from libraries, competitive exam. Guidance centers as well as competitive examinations related websites and find out the answers to those questions and submit a brief report to concerned teacher.

**Evaluation Method:**

The University examination for this course will be of 40 marks. Nature of the question paper and criteria for passing will be the same as other subjects for B. A. III Sem. VI. Internal assessment is for 10 marks and a minimum of 04marks is required for passing. Students should submit a project report of at least five pages in writing to the concerned teacher for Internal Evaluation.

**List of Reference:**

- 1) [www.upsc.gov.in](http://www.upsc.gov.in) Examination patterns and syllabus
- 2) [www.mpsc.gov.in](http://www.mpsc.gov.in) Examination patterns and syllabus
- 3) Other examination websites and direct recruitment patterns and syllabus
- 4) Bhide Gajananan, Pracheen Bharat (Marathi)
- 5) Chandra Bipan, Adhunik Bharat ka Itihas (Hindi)
- 6) Chandra Bipan, India After Independence 1947-2000
- 7) Chandra Satish, History of Medieval India
- 8) Dhavale, Bargal, Madhyayugin Bharat (Marathi)
- 9) Gathal S. S., Bharatiya Rashtriya Chalvalicha Itihas (Marathi)
- 10) Habib Irfan, Medieval India
- 11) Mujumdar R. C. Ancient India
- 12) Kathare Anil, Adhunik Maharashtracha Itihas (Marathi)
- 13) Pawar Jaishingrao, Bhartiya Swatantrya Chalvalicha Itihas
- 14) Pawar Jaishingrao, Marathi Samrajyacha Uday ani Asta (Marathi)
- 15) Sharma R. S., India's Ancient Past
- 16) Singhania Nitin, Indian Art and Culture
- 17) Saradesai, Nalawde, Adhunik Bhartacha Itihas (Marathi)
- 18) Thapar Romila, A History of India
- 19) Vaidya Suman, Kothekar, Aphonic Bhartacha Itihas (Marathi)

## पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर

बी. ए . ३ सत्र ६ कौशल्य आधारित अभ्यासक्रम

### स्पर्धा परीक्षांसाठी भारतीय इतिहास

क्रेडिट : ३+१ =४

एकुण तासिका :६०

#### प्रस्तावना:

स्पर्धा परीक्षा ही शासकीय, निमशासकीय व खासगी क्षेत्रातील नोकरीसाठी अत्यावश्यक बाब बनली आहे.या विविध परीक्षांमध्ये यश संपादन करण्याचे स्वप्न उराशी बाळगून अनेक विद्यार्थी अभ्यास करत असतात परंतु बहुतांशी विद्यार्थ्यांना योग्य मार्गदर्शन मिळत नाही. अभ्यासाची सहज सुलभ तंत्रे व अचूक उत्तरे देण्याचे कौशल्य आत्मसात होत नाही. परिणामी, स्पर्धा परीक्षांमध्ये अपयश पदरी पडते. अनेक स्पर्धा परीक्षांच्या अभ्यासक्रमात इतिहास विषयातील विविध अभ्यास घटक वेगवेगळ्या स्तरांवर आवश्यक व ऐशिक स्वरूपात ठेवण्यात आले आहेत. सदर घटकांची परीक्षेनुरूप व्याप्ती, प्रश्नांचे स्वरूप, अचूक उत्तरांसाठी सुयोग्य अभ्यास पध्दती, स्वयंअध्ययनाची तंत्रे, संदर्भ साधनांची उपलब्धता व परीक्षेच्या आवाक्याप्रमाणे त्यांचा वापर आदि कौशल्य विकसित झाल्यास विद्यार्थ्यांना विविध स्पर्धा परीक्षांसाठी इतिहास अभ्यास घटकांची उत्तम तयारी करता येईल. पदवीच्या अंतिम वर्षातील अंतिम सत्रात प्रस्तुत अभ्यासक्रम पूर्ण करावयाचा असल्याने विद्यार्थ्यांना योग्य वेळी महत्वपूर्ण कौशल्य आत्मसात होणार आहे. विविध स्पर्धा परीक्षांच्या माध्यमातून नियुक्ती मिळविण्यासाठी , स्पर्धा परीक्षा मार्गदर्शन केंद्रात तसेच खासगी मार्गदर्शक म्हणून कार्य करण्यासाठी आणि व्याख्यानमाला, सभा, समारंभ व समाज माध्यमांतून व्याख्याने, भाषणे देऊन उत्तम वक्ता म्हणून नावलौकिक मिळविण्यासाठी या कौशल्य अधारित अभ्यासक्रमाचा विद्यार्थ्यांना निश्चित उपयोग होईल.

#### उद्दिष्टे :

- 1) विद्यार्थ्यांना विविध स्पर्धा परीक्षांची माहिती देणे.
- 2) विद्यार्थ्यांना स्पर्धा परीक्षेतील आव्हाने पेलण्यासाठी समर्थ बनवणे.
- 3) नोकरीसाठी घेण्यात येणाऱ्या परीक्षांची माहिती मिळविणे.
- 4) भारतीय इतिहासातील महत्वपूर्ण घटना स्पष्ट करणे.
- 5) स्पर्धा परीक्षांसाठी इतिहास अभ्यास घटकांच्या स्वयंअध्ययनाचे तंत्र विकसित करणे.



## शिक्षण परिणाम :

- 1) विविध स्पर्धा परीक्षांची माहिती होईल व स्पर्धा परीक्षांमधून मिळणाऱ्या संधी समजतील.
- 2) विद्यार्थ्यांमध्ये स्पर्धा परीक्षांबद्दल जानीव जागृती होईल.
- 3) इतिहासाचे ज्ञान व्यावसायिक हेतूने व नोकरीसाठी उपयोगात आणता येईल.
- 4) विविध स्पर्धा परीक्षांसाठी उपयुक्त अशा इतिहास अभ्यास घटकांचे स्वयंअध्ययन करण्याचे कौशल्य विकसित होईल.
- 5) विद्यार्थ्यांना केंद्रीय लोकसेवा आयोग, महाराष्ट्र लोकसेवा आयोग यांच्या मार्फत घेण्यात येणाऱ्या परीक्षा व इतर परीक्षांमधील इतिहासाचे महत्त्व समजेल.

### प्रकरण पहिले- विविध स्पर्धा परीक्षांची माहिती

१०

- 1) केंद्रीय लोकसेवा आयोग (युपीएससी) याद्वारे घेतल्या जाणाऱ्या परीक्षा
- 2) महाराष्ट्र लोकसेवा आयोग (एमपीएससी) याद्वारे घेतल्या जाणाऱ्या परीक्षा
- 3) स्टाफ सिलेक्शन, बँक, रेल्वे, आर्मी, पोलीस, पोस्ट व इतर भरतीसाठी घेण्यात येणाऱ्या परीक्षा

### प्रकरण दुसरे- विविध स्पर्धा परीक्षांसाठी प्राचीन भारताचा इतिहास

१०

- 1) केंद्रीय लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 2) महाराष्ट्र लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 3) इतर परीक्षा

### प्रकरण तिसरे- विविध स्पर्धा परीक्षांसाठी मध्ययुगीन भारताचा इतिहास

१०

- 1) केंद्रीय लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 2) महाराष्ट्र लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 3) इतर परीक्षा

### प्रकरण चौथे- विविध स्पर्धा परीक्षांसाठी आधुनिक भारताचा इतिहास

१०

- 1) केंद्रीय लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 2) महाराष्ट्र लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 3) इतर परीक्षा

\*विद्यार्थ्यांनी आपल्या नजीकच्या ग्रंथालयात भारतीय इतिहासासंबंधी उपलब्ध असलेल्या संदर्भ ग्रंथांची व नियतकालिकांची माहिती मिळवावी. त्यातून स्पर्धा परीक्षांच्या अनुषंगाने उपयुक्त अभ्यास घटकांचे वाचन करावे. केलेल्या कार्याचा संक्षिप्त अहवाल संबंधित शिक्षकाकडे लेखी स्वरूपात सादर करावा.

### किंवा

\*विद्यार्थ्यांनी विविध स्पर्धा परीक्षांच्या मागील प्रश्नपत्रिका ग्रंथालये, स्पर्धा परीक्षा मार्गदर्शन केंद्रे तसेच स्पर्धा परीक्षे संबंधित संकेतस्थळांवरून उपलब्ध करून त्यातील भारतीय इतिहास अभ्यास घटकांवर विचारण्यात आलेले प्रश्न संकलित करावेत. त्या प्रश्नांची उत्तरे शोधावित आणि केलेल्या कार्याचा संक्षिप्त अहवाल संबंधित शिक्षकाकडे लेखी स्वरूपात सादर करावा.

### मूल्यमापन पद्धती:

सादर अभ्यासक्रमासाठी विद्यापीठ परीक्षा ४० गुणांची असेल. प्रश्नपत्रिकेचे स्वरूप व उत्तीर्णतेचा निकष बी. ए. भाग ३ सत्र ६ साठी असणाऱ्या अन्य विषयाप्रमाणे असेल. अंतर्गत मूल्यमापन १० गुणांसाठी असून उत्तीर्णतेसाठी किमान ०४ गुण मिळविणे आवश्यक आहेत. अंतर्गत मूल्यमापनासाठी विद्यार्थ्यांनी उपरोक्त सूचीत केल्याप्रमाणे किमान पाच पृष्ठांचा प्रकल्प अहवाल संबंधित शिक्षकाकडे सादर करावयाचा आहे.

## **Add On Course**

Name of the add on course

Skill Based Course

### **SURVEY AND PUBLIC OPINION**

**Lecture 45-Project/Report work-15**

**Credits – 4**

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#### **Course Objective / Outcome:**

This course will introduce the students to the principles and practices of public opinion in the context of Indian democracy. It will familiarize the students with how to conceptualize and measure public opinion using quantitative methods. It will develop basic skills relating to the data collection, data analysis and data utilization.

#### **Unit I**

Public Opinion: Meaning and Features. Public Opinion and Democracy

#### **Unit II**

Representation and Sampling a) Sample- Meaning and Use, Types of Samples

#### **Unit III**

Understanding Interview techniques and Questionnaire

#### **Unit IV**

Quantitative Data: Meaning, Analysis and Interpretation

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#### **Reference Books:**

- 1) Gallup G., (1948) A Guide to Public Opinion Polls, Princeton: Princeton University Press  
Kalton, (1983) Introduction to Survey Sampling Beverly Hills, Sage Publication.
- 2) Lokniti Team, (2004) 'National Election Study 2004', Economic and Political Weekly, Vol. XXXIX (51).
- 3) Karandikar R., C. Pyne and Y Yadav, (2002) 'Predicting the 1998 Indian Parliamentary Elections', Electoral Studies, Vol. 21
- 4) Erikson R. and K.Tedin, (2011), American Public Opinion, 8th edition, New York, Pearson Longman Publishers.

**Shri Shivaji Mahavidyalaya, Barshi**

**Department of Botany**

**Add On Course/ Skill Development Course**

**M.Sc. II (Sem III and IV)**

**Title of Course: Bioinstrumentation**

**Day: Friday  
Time: 12:00-02:00**

**Date: 17/06/2022  
Total Marks: 50**

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**Q. 1 Multiple Choice Questions.**

**(10)**

1. HPLC stands for \_\_\_\_\_.

- a) High Performance Liquid Chromatography
- b) High Pressure Liquid Chromatography
- c) High Pressure Lipid Chromatography
- d) High Performance Lipid Chromatography.

2. In measure expression of RNA amongst gene \_\_\_\_\_ technique is used.

- a) Southern blotting
- b) Western blotting
- c) Eastern blotting
- d) Northern blotting.

3. Colorimeter is applied only in relation to \_\_\_\_\_.

- a) UV light.
- b) X- rays
- c) Visible light
- d) IR rays.

4. In genome southern blotting can be used to identify \_\_\_\_\_.

- a) Sequences
- b) Exact no. of sequences
- c) DNA fragments
- d) RNA sequences.

5. In flame emission photometer the measurement of \_\_\_\_\_ is used for quantitative analysis.

- a) Color
- b) Intensity
- c) Velocity
- d) Frequency.

6. The PCR is \_\_\_\_\_.

- a) DNA sequence technique
- b) DNA degradation technique
- c) DNA amplification technique
- d) All of the above.

7. In TLC the eluant filled in the closed jar is \_\_\_\_\_.

- a) Mixture of gases
- b) Mixture of lipids
- c) Mixture of solids
- d) Mixture of solids and lipids.

8. What is the shape of the graph of absorbance against concentration?

- a) Straight line
- b) Parabola

c) Sine wave

d) Cosine wave.

9. Ion exchange chromatography is used for the separation of\_\_\_\_\_.

a) Non polar molecules

b) Polar molecules

c) Both non polar and polar molecules

d) Amphipathic molecules.

10. In electrophoresis DNA will migrate towards\_\_\_\_\_.

a) Cathode or positive electrode

b) Anode or negative electrode

c) Cathode or negative electrode

d) Anode or negative electrode.

**Q. 2 Answer any five of the following.**

(10)

1. Write the principle of colorimeter.
2. Describe the working of flame photometry.
3. Give the applications TLC.
4. Write a short note on northern blotting.
5. Explain the basic principle of chromatography.
6. Write the applications of spectrophotometer.

**Q. 3 Answer any Two of the following.**

(10)

A. Describe in brief Ion Exchange Chromatography.

(04)

OR

A. Write a note on Agarose gel preparation.

(04)

B. Explain the principle of Flame photometry, and give its application.

(06)

OR

B. Write a note on southern blotting.

(06)

**Q. 4 Answer any Two of the following.**

(10)

A) Explain TLC with their applications.

(05)

B) Write a note on X-ray diffraction.

(05)

C) Explain principle and working of spectrophotometer.

(05)

**Q.5 Answer any One of the following.**

(10)

A) Explain working principle of HPLC and enumerate its applications.

(10)

B) Write a note on PCR with its applications.

(10)

**Shri Shivaji Mahavidyalaya, Barshi**

**Department of Botany**

**Add On Course/ Skill Development Course**

**M.Sc. II (Sem III and IV)**

**Title of Course: Bioinstrumentation**

**Practical Examination**

**Day: Friday**

**Time: 03:00-05:00**

**Date: 17/06/2022**

**Total Marks: 50**

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**Q.1 Perform TLC and separate the amino acids from given plant sample. (10)**

**Q.2 To estimate chlorophyll content from given sample by using spectrophotometer (10)**

**Q.3 Identification. (20)**

A) Identify and Describe.

B) Identify and comment.

C) Identify and Describe.

D) Identify and list it's applications.

E) Identify and comment.

**Q. 4 Submission**

A) Visit report of laboratory at Sanghavi Industry. (05)

B) Viva-Voce. (05)

**PUNYASHLOK AHILYADEVI HOLKAR**  
**SOLAPUR UNIVERSITY, SOLAPUR**  
**M.A.II, Sem.-IV, History**  
**Skill Oriented Subject**  
**Historical Application in Tourism**  
Credit- Theory – 03 Project/Report-01,  
Total – 04, Total periods – 80

Preamble :-

This course is planned to introduce students to the study of Historical Tourism and Museums as an auxiliary subject of History. To provide professional knowledge for the field of History. To provide professional knowledge for the field of Historical tourism and museums. It gives theoretical and practical knowledge of historical monuments and sites. To motivate the students for conservation and preservation of Historical places, museums and historical sites.

Objective of the course :-

- 1) Students will develop an informed familiarity with multiple cultures.
- 2) Students will employ a full range of techniques and methods used to gain historical knowledge.
- 3) Students will develop an ability to convey verbally their historical knowledge.
- 4) To facilitate the students to take up the challenges of appearing for jobs.
- 5) To provide professional knowledge for the field of Tourism and Museum.
- 6) To explain the various important Historical places.

Outcomes of the course :-

- 1) Grasp about the importance of museums in understanding of historical legacy properly.
- 2) Understand about the historical tourism and its importance in grasping historical facts.
- 3) History knowledge Utilize for professional jobs.
- 4) Skill will be developed for History tourism Guide.
- 5) The students will understand the concept of the tourism and learn the basic principles of Museum.

## Historical Application in Tourism

### Unit-I - Tourism

- a) Definition and Nature of Tourism 10 periode
- b) Types of Tourism – Domestic, Regional, National and International
- c) Motivation of Tourism – Pleasure, Education, Culture, Social, Religious, Health and History.

### Unit-II - Economic Importance of Tourism

- a) Guide 10 periods
- b) Traveling and Lodging
- c) Catering and Marketing

### Unit-III - Museum.

- a) Definition and Importance of museum 10 periods
- b) Types of museum
- c) Important museum – Chh Shivaji Maharaj Museum, Mumbai, Salarjang Museum, Hydrabad.

### Unit- IV - Important Monuments, Religious Centers and History sites

- 10 periods
- a) Temple – Siddheshwar Temple (Solapur), Sun Temple (Konark)  
Stup Of sanchi, Golden Temple (Amrutsar)
- b) Forts – Raigad, Redfort (Delhi)
- c) Caves – Ajanta, Ellora.( Maharashtra)
- d) Need of Conservation and Preservation in Historical monuments and sites.

### Projectwork / Report writing :-

20 periods

Students should be visit any historical place and collect information and submit brief report of the work done to the concerned teacher.

### Evaluation Method :-

The University examination for this course will be of 80 marks. Nature of question paper and criteria for passing will be the same as other subjects for M.A.II sem - IV. Internal assessment is for 20 marks and a minimum of 08 marks is required for passing students should submit a project report of at least fire pages in writing to the concerned teacher for Internal Evaluation.



**List of Reference Books**

- 1) Chris Cooper and Fletcher, Tourism : Principles and Practices.
- 2) S. Wahab, Tourism Marketing.
- 3) James W. Morrison, Travel Agent and Tourism.
- 4) John Bakewell, The Complete Traveler.
- 5) Edward D. Mill's, Design for Holiday's and Tourism.
- 6) A. K. Bhatia, Tourism :Principles.
- 7) Douglas Pierce, Tourism Today : a Geographical Analysis.
- 8) Mujumdar R. C. (Gen. Ed.) for Arts Architecture Culture, Bhartiya Vidya Bhavan's All Volumes on Indian History, Mumbai, 1988

**Punyashlok Ahilyadevi Holkar Solapur University, Solapur**

**Political Science**

**M.A. Part II**

**Skill Enhancement Course**

**Political Process and Journalism**

**Class – 4 Hours / week**

**Credits – 4**

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**Course Objective / Outcome:**

This course will introduce the students to the role of media in the context of Indian political process. Right to communication is now seen as a fundamental right. The main goal of this syllabus is to acquaint the students with media and help them acquire media skills.

**Unit I Journalism: Definition, Nature & Scope**

**Unit II Journalists and their characteristics, Duties, Rights and Responsibility**

**Unit III Politics and election- Nature of political news, Sources of political news, election news etc.**

**Unit IV Right to information and Panchayat Raj**

**Reference Books:**

- 1) पाधे प्रभाकर, (अनु. प्र.ना. परांजपे) , पत्रकारीतेची मुलतत्त्वे, १९९१
- 2) पवार सुधाकर, वृतपत्र व्यवसाय-काल आणि आज, १९८६
- 3) ताम्हाणे चंद्रकांत, वार्तासंकलन, पॉप्युलर प्रकाशन, मुंबई.
- 4) धारुरकर वि.ल., आजकालची पत्रकारीता, चैतन्य प्रकाशन, औरंगाबाद.
- 5) धारुरकर वि.ल., जनसंवाद सिद्धांत, चैतन्य प्रकाशन, औरंगाबाद.
- 6) डोळे जयदेव, समाचार-अर्थात प्रसारमाध्यमांची झाडाझडती, लोकवाड.मय गृह, मुंबई.
- 7) माळी सुनिल, बातमीदारी, राजहंस प्रकाशन, पुणे.
- 8) कदम प्रशांत, पंचायतराज, ग्रामीण व नागरी स्थानिक शासनसंस्था, टाटा मेघाहील, दिल्ली.
- 9) बिरमल नितिन व पवार वैशाली, महाराष्ट्रातील पंचायतराज संस्था, डायमंड पब्लिकेशन, पुणे.
- 10) डॉ. रसाळ रविंद्र, वृतपत्र प्रसार: साक्षरता आणि ग्रामीण विकास, पुणे, १९९७, दास्ताने रामचंद्र अँड कंपनी.
- 11) K. M. Shrivastave, News Reporting and Editing, 1987, Sterling Publishers, New Delhi.
- 12) Right to information act, 2005

एम. ए. भाग दोन - सत्र चार  
कौशल्यावर आधारित अभ्यासपत्रिका (Skill Based)  
मुद्रितशोधन व ग्रंथ प्रकाशन कौशल्ये

उद्दिष्ट्ये

1. मुद्रितशोधन व ग्रंथ प्रकाशन ही कौशल्ये आत्मसात करणे.
2. लेखनविषयक नियम व मुद्रितशोधन यांची उपयुक्तता समजावून घेणे.
3. मुद्रितशोधन कौशल्य उपयोजनाची विविध क्षेत्रे अवगत करून घेणे.
4. ग्रंथनिर्मिती प्रक्रिया समजून घेणे.

अ. क्र.	घटक	तासिका	श्रेयांक	गुण
विभाग १. Module 1	मुद्रितशोधन व लेखनविषयक नियम : अ) प्रमाणलेखनाची आवश्यकता ब) प्रमाणलेखन विषयक नियम क) मराठी विरामचिन्हांचा परिचय	१५	१	२०
विभाग २. Module 2	मुद्रितशोधन : स्वरूप व महत्त्व अ) मुद्रितशोधनाचे स्वरूप व मुद्रितशोधनाच्या खुणा ब) मुद्रितशोधन : उपयोजनाची विविध क्षेत्रे क) प्रात्यक्षिक	१५	१	२०
विभाग ३. Module 3	प्रकाशन व्यवहार अ) ग्रंथप्रकाशनासाठीचे आवश्यक गुण ब) ग्रंथ प्रकाशन संस्था : स्वरूप व कार्यप्रणाली क) स्वामित्व हक्क कायदा(कॉपीराईट अॅक्ट)	१५	१	२०
विभाग ४. Module 4	ग्रंथनिर्मिती प्रक्रिया अ) ग्रंथनिर्मिती प्रक्रियेतील विविध टप्पे ब) संपादकीय संस्कार क) प्रात्यक्षिक	१५	१	२०
एकूण		६०	०४	८०

## संदर्भग्रंथ :

1. मराठी लेखन कोश - अरुण फडके, केशव भिकाजी ढवळे प्रकाशन, पुणे, २००१
2. मराठी लेखन मार्गदर्शिका - यास्मिन शेख, राज्य मराठी विकास संस्था, मुंबई. २०१७
3. मराठीच्या प्रमाण भाषेचे स्वरूप, कॉन्टिनेन्टल, पुणे, १९८३
4. मराठी व्याकरण - लीला गोविलकर, मेहतापब्लिकेशन, पुणे, १९९३
5. सुगम मराठी व्याकरण व लेखन - मो. रा. वाळिंबे, नितिन प्रकाशन, पुणे २०१७ (५३ वी आवृत्ती)
6. सुलभ मराठी व्याकरण व लेखन - पद्मिनी बिनिवाले, नवनीत, मुंबई,
7. शुद्धलेखन नियमावली- भाषा संचालनालय, महाराष्ट्र शासन, मुंबई, १९८७
8. मराठी शुद्धलेखन प्रदीप - मो. रा. वाळिंबे, नितिन प्रकाशन, पुणे
9. व्यावहारिक मराठी - ल. रा. नसिराबादकर, फडके प्रकाशन, कोल्हापूर, २००८.
10. ग्रंथ व्यवहार - दशा आणि दिशा, अनिल कुलकर्णी, साहित्य चपराक, पुणे, २०१७.
11. प्रकाशन व्यवसाय परिचय, शरद गोगटे, अखिल भारतीय मराठी प्रकाशक संघ, पुणे
12. मराठी ग्रंथ प्रकाशनाची 200 वर्ष, शरद गोगटे, राजहंस प्रकाशन, पुणे, २००८.
13. ग्रंथव्यवहार, अ. ह. लिमये, व्हीनस प्रकाशन, पुणे, १९५२.
14. पॉप्युलर रीतिपुस्तक, रामदास भटकळ, मृदुला जोशी, पॉप्युलर प्रकाशन, पुणे. २०१५.
15. प्रकाशन व्यवहार आणि संपादन, उज्वला भोर, प्रशांत पब्लिकेशन, जळगाव, २०२०.

**विषय : मराठी**  
**बी.ए. भाग तीन सत्र सहा**  
(कौशल्यावर आधारित आवश्यक अभ्यासपत्रिका CBCS)  
**मराठी भाषा : संभाषण व लेखन कौशल्ये**

**गुण ४०**

**उद्दिष्ट्ये :**

१. विद्यार्थ्यांचे व्यक्तिमत्व भाषिकदृष्ट्या प्रगल्भ व विकसित करणे.
२. मराठीतील भाषिक कौशल्ये समजून घेणे.
३. विद्यार्थ्यांना संभाषण कौशल्य आत्मसात करण्यास प्रवृत्त करणे.
४. लेखन कौशल्याचे व्यावसायिक महत्त्व समजून घेणे.
५. मराठीतील भाषिक कौशल्यावर आधारित अर्थाजनाच्या संधी लक्षात घेणे.

अ.क्र.	घटक	तासिका	श्रेयांक	गुण
१.	<b>संभाषण कौशल्ये</b> अ) संभाषण (उच्चार, अनुस्वार, ऱ्हस्वदीर्घ, वर्णांचे उच्चार, स्वराघात) ब) औपचारिक संभाषण (महाविद्यालये व कार्यालयीन) क) अनौपचारिक संभाषण (वैयक्तिक व कौटुंबिक) ड) आधुनिक माध्यमांतील संभाषण (मोबाईल, झूम, गुगल मीट इ.)	१५	१	१०
२.	<b>वाचन कौशल्ये</b> अ) प्रगट वाचन (सस्वर, सुस्वर) ब) मुकवाचन (सखोलवाचन, संदर्भवाचन, विस्तृतवाचन, गतिवाचन) क) अभिवाचन (वाचनकृतीचे आकलन, उच्चारणसामर्थ्य) ड) वाचिक अभिनय (आवाज, आशयनुरूप संवाद)	१५	१	१०
३.	<b>भाषण कौशल्ये</b> अ) वक्तृत्व (पूर्वतयारी व प्रात्यक्षिक) ब) कथाकथन (संहिता व सादरीकरण)	१५	१	१०

	क) स्पर्धा परीक्षेतील मुलाखत (पूर्वतयारी व प्रात्यक्षिक) ड) प्रसारमाध्यमातील उद्घोषणा व निवेदन (माध्यमभान व तंत्रे)			
४.	<b>लेखन कौशल्ये</b> अ) हस्ताक्षर (अक्षर व सुलेखन) ब) पटकथा लेखन (प्रसंग व संवादलेखन) क) संगणकीय लेखन/भ्रमणध्वनीवरील लेखन (आज्ञावली - सॉफ्टवेयर व उपयोजन -अॅप) ड) प्रशासकीय लेखन (अर्ज व परिचयपत्र-बायोडेटा)	१५	१	१०
	<b>एकूण</b>	<b>६०</b>	<b>०४</b>	<b>४०</b>

### संदर्भ ग्रंथ :

१. व्यावहारिक मराठी : ल.रा.नसिराबादकर, फडके प्रकाशन, कोल्हापूर.
२. मराठी भाषिक कौशल्य विकास : संपा. डॉ.पृथ्वीराज तौर, अथर्व पब्लिकेशन, जळगाव.
३. संभाषण चातुर्य : आशा परुळेकर, उन्मेष प्रकाशन, पुणे.
४. संभाषण चातुर्य : ह.अ.भावे, वरदा प्रकाशन,पुणे.
५. कला संभाषणाची : डॉ. नीलम ताटके, डायमंड पब्लिकेशन्स, पुणे.
६. वाचन : का व कसे ? : वा.शि.आपटे, वरदा प्रकाशन,पुणे.
७. वाचन कौशल्य : कृती,गती आणि प्रगती : मेघमाला राजगरू, उन्मेष प्रकाशन,पुणे.
८. वाचन विकास : अशोक इंगवले, इंद्रायणी साहित्य प्रकाशन,पुणे.
९. वाचन संस्कार : सतीश पोरे, पद्मगंधा प्रकाशन, पुणे.
- १०.वाचनसंस्कृती : आक्षेप आणि अपेक्षा : नरेंद्र लांजेवार, विजय प्रकाशन, नागपूर.
- ११.लिहित्या लेखकाचं वाचन : विलास सारंग, शब्द पब्लिकेशन, मुंबई.
१२. वाचिक अभिनय : श्रीराम लागू, राजहंस प्रकाशन, पुणे.
१३. वक्तृत्व आणि संभाषण कौशल्य : श्रुतीश्री वडगबाळकर, सुविद्या प्रकाशन, सोलापूर.
१४. कथाकथनाची कथा : व.पु.काळे, मेहता पब्लिशिंग हाऊस, पुणे.
१५. कथा आणि कथाकथन : राजा मंगळवेढेकर, मंजुल प्रकाशन, पुणे.
१६. मुलाखंत : तंत्र व साधना : उद्धव हरिभाऊ कोळपे, संस्कृती प्रकाशन, लातूर.

१७. हस्ताक्षर विकास : द.दा.जोशी, नीलकंठ प्रकाशन, पुणे.
१८. मराठी चित्रपटाची पटकथा : अनिल सकपाळ, प्रतिमा प्रकाशन, पुणे.
१९. मराठी साहित्य आणि चित्र पटकथा (१९१३ ते २०१३) : प्रवीण नारायण महाजन, माय बुक पब्लिकेशन, नवी दिल्ली.
२०. सुंदर हस्ताक्षर कसे काढावे ? : सुभाष जमदाडे, मनोविकास प्रकाशन, पुणे.
२१. भाषिक सर्जन आणि उपयोजन - संपादक राजन गवस, अरुण शिंदे, गोमटेश्वर पाटील, दर्या प्रकाशन, पुणे.
२२. उपयोजित मराठी - शंकरानंद येडले, संस्कार प्रकाशन, लातूर.
२३. उपयोजित मराठी - डॉ. संजय लांडगे, दिलीपराज प्रकाशन, पुणे.
२४. स्पर्धा परीक्षा संपूर्ण मार्गदर्शक - डॉ. आनंद पाटील, स्टडी सर्कल पब्लिकेशन, पुणे.
२५. संगणकाचे अंतरंग : चंद्रसेन टिळेकर, दिलीपराज प्रकाशन, पुणे.

# Shri Shivaji Mahavidyalaya, Barshi

## Department of Botany

### B.Sc. III Botany (Semester V/VI)

#### Add On Course/Skill Development Course

#### Title of the Course: Mushroom Cultivation

### Syllabus

(Lecture periods-80)

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#### Unit 1: Introduction of edible mushrooms:

History, Nutritional and medicinal value of edible mushrooms; Poisonous mushrooms. Types of edible mushrooms available in India -Volvariella volvacea, Pleurotus citrinopileatus, Agaricus bisporus.

(10 Lectures)

#### Unit 2: Prerequisite for Cultivation of Mushrooms:

Infrastructure: substrates (locally available) Polythene bags, vessels, Inoculation hook, inoculation loop, sieves, culture rack, mushroom unit (Thatched house) water sprayer, tray.

(10 Lectures)

#### Unit 3: Preparation of Pure culture:

Culture medium, sterilization, preparation of spawn, multiplication. Mushroom bed preparation -paddy straw, sugarcane trash, maize straw, banana leaves. Factors affecting the mushroom bed preparation -Low cost technology, Composting technology in mushroom production.

(10 Lectures)

#### Unit 4: Storage Techniques and Nutritional Values:

Short-term storage (Refrigeration -upto 24 hours) Long term Storage (canning, pickles, papads), drying, storage in salt solutions. Nutritional constituents: Proteins -amino acids, mineral elements nutrition -Carbohydrates, Crude fibre content -Vitamins.

(10 Lectures)

#### Unit 5: Food Preparation, Research and Marketing:

Types of foods prepared from mushroom. Research Centers -National level and Regional level. Cost benefit ratio -Marketing in India and abroad, Export Value.

(10 lectures)

#### Practicals:

(30 lectures)

- 1) Identification of edible and poisonous mushroom
- 2) Media preparation for mushroom cultivation
- 3) Isolation techniques used in mushroom cultivation



- 4) Study of spawn preparation methods
- 5) Study of sterilization techniques in mushroom cultivation
- 6) Study of substrate preparation for mushroom cultivation
- 7) Study of environmental factors which affect growth of mushrooms
- 8) Study the effect of different types of compost on mushroom growth
- 9) Study of nutritional quality of mushroom
- 10) Estimation of protein content in mushroom

**References:**

1. Marimuthu, T. Krishnamoorthy, A.S. Sivaprakasam, K. and Jayarajan. R (1991) Oyster Mushrooms, Department of Plant Pathology, Tamil Nadu Agricultural University, Coimbatore.
2. Swaminathan, M. (1990) Food and Nutrition. Bappco, The Bangalore Printing and Publishing Co. Ltd., No. 88, Mysore Road, Bangalore –560018
- . 3. Tewari, Pankaj Kapoor, S.C., (1988). Mushroom cultivation, Mittal Publications, Delhi.
4. Nita Bahl (1984-1988) Hand book of Mushrooms, II Edition, Vol. I & Vol. II.

# **Shri Shivaji Mahavidyalaya, Barshi**

## **Department of Botany**

**M.Sc. II Botany (Semester III/IV)**

**Add On Course/Skill Development Course**

**Title of the Course: Bioinstrumentation**

### **SYLLABUS**

**(Lecture periods-80)**

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**Module I: Introduction, principle, operation and applications of following instruments:**

**(15 Lectures)**

1.1: Colorimeter

1.2: Spectrophotometer

1.3: Flame photometry

1.4: Unit test on module I

**Module II: Introduction, principle, operation and applications of Chromatography**

**(15 Lectures)**

2.1: Thin Layer Chromatography

2.2: HPLC

2.3: Ion Exchange

2.4: Unit test on module II

**Module III: Introduction, principle, operation and applications of following techniques:**

**(15 Lectures)**

3.1: Gel Electrophoresis

3.2: Polymerase Chain Reaction

3.3: Gel documentation

3.4: Unit test on module III

**Module IV: Introduction, principle, operation and applications of following techniques**

**(15 Lectures)**

4.1: X-ray diffraction

4.2: Southern blotting

4.3: Northern Blotting

4.4: Unit test on module IV

## **Practicals:**

**(20 Lectures)**

- 1) To study working principle of calorimeter and uses in biological analysis.
- 2) To study working principle of spectrophotometer and uses in biological analysis.
- 3) To study working principle of flame photometer and uses in biological analysis.
- 4) To study thin layer chromatography and separate amino acids from plant sample.
- 5) Demonstration of HPLC technique (Virtual mode)
- 6) Demonstration of Ion exchange chromatography (Virtual mode)
- 7) To study principle and demonstration of Gel Electrophoresis.
- 8) Demonstration of PCR technique (Virtual mode)
- 9) Demonstration of Gel documentation ((Virtual mode)
- 10) To study X-ray diffraction.
- 11) Demonstration of Southern blotting technique (Virtual mode)
- 12) Demonstration of Northern blotting technique.
- 13) Visit at laboratories.

# **Shri Shivaji Mahavidyalaya, Barshi**

## **Department of Botany**

**M.Sc. II Botany (Semester III/IV)**

**Add On Course/Skill Development Course**

**Title of the Course: Bioinstrumentation**

### **SYLLABUS**

**(Lecture periods-80)**

---

**Module I: Introduction, principle, operation and applications of following instruments:**  
**(15 Lectures)**

1.1: Colorimeter

1.2: Spectrophotometer

1.3: Flame photometry

1.4: Unit test on module I

**Module II: Introduction, principle, operation and applications of Chromatography**  
**(15 Lectures)**

2.1: Thin Layer Chromatography

2.2: HPLC

2.3: Ion Exchange

2.4: Unit test on module II

**Module III: Introduction, principle, operation and applications of following techniques:**  
**(15 Lectures)**

3.1: Gel Electrophoresis

3.2: Polymerase Chain Reaction

3.3: Gel documentation

3.4: Unit test on module III

**Module IV: Introduction, principle, operation and applications of following techniques**  
**(15 Lectures)**

4.1: X-ray diffraction

4.2: Southern blotting

4.3: Northern Blotting

4.4: Unit test on module IV

## **Practicals:**

**(20 Lectures)**

- 1) To study working principle of calorimeter and uses in biological analysis.
- 2) To study working principle of spectrophotometer and uses in biological analysis.
- 3) To study working principle of flame photometer and uses in biological analysis.
- 4) To study thin layer chromatography and separate amino acids from plant sample.
- 5) Demonstration of HPLC technique (Virtual mode)
- 6) Demonstration of Ion exchange chromatography (Virtual mode)
- 7) To study principle and demonstration of Gel Electrophoresis.
- 8) Demonstration of PCR technique (Virtual mode)
- 9) Demonstration of Gel documentation ((Virtual mode)
- 10) To study X-ray diffraction.
- 11) Demonstration of Southern blotting technique (Virtual mode)
- 12) Demonstration of Northern blotting technique.
- 13) Visit at laboratories.

PAH SOLAPUR UNIVERSITY, SOLAPUR

Skill Enhancement Course

Fermentation Technology

**SYLLABUS**

FOR B.Sc III

## **Skill Enhancement Course (SEC)**

### **Introduction: -**

Solapur district is known for the production of fruits like Grapes, Pomegranate and sugarcane. One of the emerging agro based industry is the Fermentation industry. Fermented food products are part and partial of our daily. Recently, farmers have realized this fact and Government has also taken initiatives by relaxing the taxation and certification rules for the Industries. In future large number of expertise is likely to be required in this area. In order to meet this requirement of skilled expertise the **Skill Enhancement Course** in Fermentation Technology is proposed to be started as a part of B Sc. Microbiology course.

### **Objective of the course**

- 1.To provide the knowledge of basic principle of fermentation process, which help students to design, develop and operate industrial level fermentation process.
- 2.To develop skills of the students in the area of downstream processing
- 3.To impart basic knowledge of quality control and good manufacturing practices in industries
4. To equip the students to pursue higher studies.
5. To prepare the student for an eventual job in industry.

The **Skill Enhancement Course** in fermentation Technology provides platform for job opportunities in exciting fields of fermentation industry. This course has to be completed along with the degree course.

**B.Sc. III-Microbiology (Semester-V)**

**w. e. f. June 2021**

**[Credits -4, Total Lectures-60(theory 30+practical 30)]**

**Title :SEC: Fermentation Technology**



SEC	Fermentation Technology	Total30 lectures
UNIT I	Definition and Scope of Industrial Microbiology. Basic Concepts of Fermentations. a) Fermentations Introductions b) Fermenter design - parts & their functions c) Types of fermenter - batch, Continuous, Dual and Multiple d) Design of fermentation media- water, carbon and nitrogen source, Growth factors, precursors, aeration and antifoam agents. e) Factors affecting fermentation process.	05
UNIT II	Selection & Preservation of Industrial microorganisms a) Primary and Secondary Screening b) Strain Improvement c) Scale up of Fermentation d) Preservation of Industrially important microorganisms e) Microbiological assays	05
UNIT III	Specific Fermentations a. Penicillin b. Amylase c. Vinegar d. Vit B 12 Production of SCP, biogas, biofertilizers, biopesticides	11
UNIT IV	1. Recovery of Fermentation product, Criteria for method selection, Methods- Filtration, Centrifugation, Drying, Crystallization, Solvent extraction etc. 2.-Quality control of Health Care Products, Testing for Sterility, Toxicity, Pyrogenicity, Allergy, Carcinogenicity. 3-Good Manufacturing Practices-General requirements, GMP 10-Principles, GMP Categories.	09



SEC	PRACTICAL COURSE	total 30 practical lectures
	1. Sterility testing of dry powder by direct inoculation on Soyabean casein digest medium	
	2. Sterility testing of media	
	3. Bioassay of Vitamin B12	
	4. Bioassay of Penicillin	
	5. Screening of antibiotic producers	
	6. Estimation of alcohol by using K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	
	7. Thin layer chromatography	
	8. Demonstration of crude recovery of amylase enzyme	
	9. Immobilization of enzyme by using Sodium alginate.	
	10. Preservation of industrially important microorganisms	

#### References:

1. Stanbury P.F., Whitaker A., Hall S.J., (1997) Principles of fermentation technology. 2nd ED, Aditya books(P) Ltd, New Delhi.
2. El-mansi E.M.T., Bryce C.F.A., Demain A.L., Allman A.R., (2009) Fermentation microbiology and biotechnology, 2nd ED, CRC Press.
3. Crueger W. and Crueger A. (2003) Biotechnology: A textbook of industrial microbiology, 2nd ED, Panima publishing corporation, New delhi.
4. Bailey J. S. and Bhatia S.C. (2009) Biochemical engineering. Vol – 1&2. CBS publishers & distributors, India.
5. Reed, G. (1981) Prescott and Dunn's Industrial Microbiology. Chapman & Hall.

# **Punyashlok Ahilyadevi Holkar Solapur University, Solapur**

## **BA III History Sem. VI Skill Based Course**

### **Indian History for Competitive Examinations**

Credits - Theory:3 Project/Report: 1 Total: 4

Total Periods: 60

#### **Preamble:**

Competitive examination has become an essential part of government, semi-government and private sector jobs. Many students study with the dream of achieving success in these various examinations but most of the students do not get proper guidance. Easy study techniques and the ability to give accurate answers are not mastered. The result is failure in competitive examinations. The study units of Indian history of many competitive examinations have been placed at different levels in compulsory and optional form. Students will be able to better prepare for the history study units for various competitive examinations if develop skills like examination scope, nature of questions, suitable study methods for correct answers, self-study techniques, availability of reference books and their use as per the scope of the examination. Since this paper is to be studied in the final semester of the final year of graduation, they will acquire important skills at the right time. This skill oriented subject will be used by the students to get appointments through various competitive examinations, to work in competitive exam. Centers as well as private guides and to give lectures and speeches using lecture series, ceremonies and social media.

#### **Objectives:**

1. To aware the students about various competitive examinations
2. To facilitate the students to take up the challenges of appearing for competitive examinations.
3. To get the information about the exams conducted for the entry into jobs
4. To explain the various important events in Indian history.
5. To develop self-study techniques of history subject useful for competitive examinations.

#### **Learning Outcomes:**

1. Understand various opportunities in competitive examinations.
2. Students will be aware of the competitive examinations
3. History knowledge Utilize for professional jobs.
4. Skills Will be develop for self-study of history units suitable for various competitive examinations.
5. Students knows History subject importance UPSC, MPSC, Staff selection Bank, Railway, Army, Police, Post office etc. Examination.

**Chapter I. Introduction to Various Competitive Examinations.** 10

1. UPSC Examinations.
2. MPSC Examinations
3. Staff selection, Bank, Railway, Army, Police, Post Office etc. Examinations.

**Chapter II. Ancient Indian History for Various competitive exams.** 10

1. UPSC Examinations. (Preliminary and mains)
2. MPSC Examinations. (Preliminary and mains)
3. Other Examinations.

**Chapter III. Medieval Indian History for Various competitive exams** 10

1. UPSC Examinations. (Preliminary and mains)
2. MPSC Examinations. (Preliminary and mains)
3. Other Examinations.

**Chapter IV. Modern Indian History for Various competitive exams.** 10

1. UPSC Examinations. (Preliminary and mains)
2. MPSC Examinations. (Preliminary and mains)
3. Other Examinations.

**Project Report:** 20

- Students should get information about reference books and periodicals on Indian history available in their nearest libraries. Among them, read the components of Indian history study which are useful for competitive examinations and submit a brief report of the work done to the concerned teacher.

OR

- Students should collect Indian history questionnaires from various competitive examinations previous question papers, sample question papers from libraries, competitive exam. Guidance centers as well as competitive examinations related websites and find out the answers to those questions and submit a brief report to concerned teacher.

**Evaluation Method:**

The University examination for this course will be of 40 marks. Nature of the question paper and criteria for passing will be the same as other subjects for B. A. III Sem. VI. Internal assessment is for 10 marks and a minimum of 04marks is required for passing. Students should submit a project report of at least five pages in writing to the concerned teacher for Internal Evaluation.

**List of Reference:**

- 1) [www.upsc.gov.in](http://www.upsc.gov.in) Examination patterns and syllabus
- 2) [www.mpsc.gov.in](http://www.mpsc.gov.in) Examination patterns and syllabus
- 3) Other examination websites and direct recruitment patterns and syllabus
- 4) Bhide Gajananan, Pracheen Bharat (Marathi)
- 5) Chandra Bipan, Adhunik Bharat ka Itihas (Hindi)
- 6) Chandra Bipan, India After Independence 1947-2000
- 7) Chandra Satish, History of Medieval India
- 8) Dhavale, Bargal, Madhyayugin Bharat (Marathi)
- 9) Gathal S. S., Bharatiya Rashtriya Chalvalicha Itihas (Marathi)
- 10) Habib Irfan, Medieval India
- 11) Mujumdar R. C. Ancient India
- 12) Kathare Anil, Adhunik Maharashtracha Itihas (Marathi)
- 13) Pawar Jaishingrao, Bhartiya Swatantrya Chalvalicha Itihas
- 14) Pawar Jaishingrao, Marathi Samrajyacha Uday ani Asta (Marathi)
- 15) Sharma R. S., India's Ancient Past
- 16) Singhania Nitin, Indian Art and Culture
- 17) Saradesai, Nalawde, Adhunik Bhartacha Itihas (Marathi)
- 18) Thapar Romila, A History of India
- 19) Vaidya Suman, Kothekar, Aphonic Bhartacha Itihas (Marathi)

## पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर

बी. ए . ३ सत्र ६ कौशल्य आधारित अभ्यासक्रम

### स्पर्धा परीक्षांसाठी भारतीय इतिहास

क्रेडिट : ३+१ =४

एकुण तासिका :६०

#### प्रस्तावना:

स्पर्धा परीक्षा ही शासकीय, निमशासकीय व खासगी क्षेत्रातील नोकरीसाठी अत्यावश्यक बाब बनली आहे.या विविध परीक्षांमध्ये यश संपादन करण्याचे स्वप्न उराशी बाळगून अनेक विद्यार्थी अभ्यास करत असतात परंतु बहुतांशी विद्यार्थ्यांना योग्य मार्गदर्शन मिळत नाही. अभ्यासाची सहज सुलभ तंत्रे व अचूक उत्तरे देण्याचे कौशल्य आत्मसात होत नाही. परिणामी, स्पर्धा परीक्षांमध्ये अपयश पदरी पडते. अनेक स्पर्धा परीक्षांच्या अभ्यासक्रमात इतिहास विषयातील विविध अभ्यास घटक वेगवेगळ्या स्तरांवर आवश्यक व ऐशिक स्वरूपात ठेवण्यात आले आहेत. सदर घटकांची परीक्षेनुरूप व्याप्ती, प्रश्नांचे स्वरूप, अचूक उत्तरांसाठी सुयोग्य अभ्यास पध्दती, स्वयंअध्ययनाची तंत्रे, संदर्भ साधनांची उपलब्धता व परीक्षेच्या आवाक्याप्रमाणे त्यांचा वापर आदि कौशल्य विकसित झाल्यास विद्यार्थ्यांना विविध स्पर्धा परीक्षांसाठी इतिहास अभ्यास घटकांची उत्तम तयारी करता येईल. पदवीच्या अंतिम वर्षातील अंतिम सत्रात प्रस्तुत अभ्यासक्रम पूर्ण करावयाचा असल्याने विद्यार्थ्यांना योग्य वेळी महत्वपूर्ण कौशल्य आत्मसात होणार आहे. विविध स्पर्धा परीक्षांच्या माध्यमातून नियुक्ती मिळविण्यासाठी , स्पर्धा परीक्षा मार्गदर्शन केंद्रात तसेच खासगी मार्गदर्शक म्हणून कार्य करण्यासाठी आणि व्याख्यानमाला, सभा, समारंभ व समाज माध्यमांतून व्याख्याने, भाषणे देऊन उत्तम वक्ता म्हणून नावलौकिक मिळविण्यासाठी या कौशल्य अधारित अभ्यासक्रमाचा विद्यार्थ्यांना निश्चित उपयोग होईल.

#### उद्दिष्टे :

- 1) विद्यार्थ्यांना विविध स्पर्धा परीक्षांची माहिती देणे.
- 2) विद्यार्थ्यांना स्पर्धा परीक्षेतील आव्हाने पेलण्यासाठी समर्थ बनवणे.
- 3) नोकरीसाठी घेण्यात येणाऱ्या परीक्षांची माहिती मिळविणे.
- 4) भारतीय इतिहासातील महत्वपूर्ण घटना स्पष्ट करणे.
- 5) स्पर्धा परीक्षांसाठी इतिहास अभ्यास घटकांच्या स्वयंअध्ययनाचे तंत्र विकसित करणे.

## शिक्षण परिणाम :

- 1) विविध स्पर्धा परीक्षांची माहिती होईल व स्पर्धा परीक्षांमधून मिळणाऱ्या संधी समजतील.
- 2) विद्यार्थ्यांमध्ये स्पर्धा परीक्षांबद्दल जानीव जागृती होईल.
- 3) इतिहासाचे ज्ञान व्यावसायिक हेतूने व नोकरीसाठी उपयोगात आणता येईल.
- 4) विविध स्पर्धा परीक्षांसाठी उपयुक्त अशा इतिहास अभ्यास घटकांचे स्वयंअध्ययन करण्याचे कौशल्य विकसित होईल.
- 5) विद्यार्थ्यांना केंद्रीय लोकसेवा आयोग, महाराष्ट्र लोकसेवा आयोग यांच्या मार्फत घेण्यात येणाऱ्या परीक्षा व इतर परीक्षांमधील इतिहासाचे महत्त्व समजेल.

### प्रकरण पहिले- विविध स्पर्धा परीक्षांची माहिती

१०

- 1) केंद्रीय लोकसेवा आयोग (युपीएससी) याद्वारे घेतल्या जाणाऱ्या परीक्षा
- 2) महाराष्ट्र लोकसेवा आयोग (एमपीएससी) याद्वारे घेतल्या जाणाऱ्या परीक्षा
- 3) स्टाफ सिलेक्शन, बँक, रेल्वे, आर्मी, पोलीस, पोस्ट व इतर भरतीसाठी घेण्यात येणाऱ्या परीक्षा

### प्रकरण दुसरे- विविध स्पर्धा परीक्षांसाठी प्राचीन भारताचा इतिहास

१०

- 1) केंद्रीय लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 2) महाराष्ट्र लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 3) इतर परीक्षा

### प्रकरण तिसरे- विविध स्पर्धा परीक्षांसाठी मध्ययुगीन भारताचा इतिहास

१०

- 1) केंद्रीय लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 2) महाराष्ट्र लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 3) इतर परीक्षा

### प्रकरण चौथे- विविध स्पर्धा परीक्षांसाठी आधुनिक भारताचा इतिहास

१०

- 1) केंद्रीय लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 2) महाराष्ट्र लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
- 3) इतर परीक्षा

\*विद्यार्थ्यांनी आपल्या नजीकच्या ग्रंथालयात भारतीय इतिहासासंबंधी उपलब्ध असलेल्या संदर्भ ग्रंथांची व नियतकालिकांची माहिती मिळवावी. त्यातून स्पर्धा परीक्षांच्या अनुषंगाने उपयुक्त अभ्यास घटकांचे वाचन करावे. केलेल्या कार्याचा संक्षिप्त अहवाल संबंधित शिक्षकाकडे लेखी स्वरूपात सादर करावा.

### किंवा

\*विद्यार्थ्यांनी विविध स्पर्धा परीक्षांच्या मागील प्रश्नपत्रिका ग्रंथालये, स्पर्धा परीक्षा मार्गदर्शन केंद्रे तसेच स्पर्धा परीक्षे संबंधित संकेतस्थळांवरून उपलब्ध करून त्यातील भारतीय इतिहास अभ्यास घटकांवर विचारण्यात आलेले प्रश्न संकलित करावेत. त्या प्रश्नांची उत्तरे शोधावित आणि केलेल्या कार्याचा संक्षिप्त अहवाल संबंधित शिक्षकाकडे लेखी स्वरूपात सादर करावा.

### मूल्यमापन पद्धती:

सादर अभ्यासक्रमासाठी विद्यापीठ परीक्षा ४० गुणांची असेल. प्रश्नपत्रिकेचे स्वरूप व उत्तीर्णतेचा निकष बी. ए. भाग ३ सत्र ६ साठी असणाऱ्या अन्य विषयाप्रमाणे असेल. अंतर्गत मूल्यमापन १० गुणांसाठी असून उत्तीर्णतेसाठी किमान ०४ गुण मिळविणे आवश्यक आहेत. अंतर्गत मूल्यमापनासाठी विद्यार्थ्यांनी उपरोक्त सूचीत केल्याप्रमाणे किमान पाच पृष्ठांचा प्रकल्प अहवाल संबंधित शिक्षकाकडे सादर करावयाचा आहे.

**PUNYASHLOK AHILYADEVI HOLKAR  
SOLAPUR UNIVERSITY, SOLAPUR**  
Centre: Shri Shivaji Mahavidyalaya, Barshi  
Add on Course in Botany  
March/April 2022

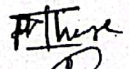
Name of the Course: Bioinstrumentation

Class: M. Sc. II

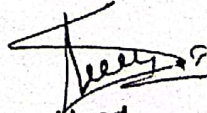
Marks: 100

Sr. No.	Exam Seat Number	PRN No	Full Name of Student	Max Marks	Obtained marks
1	18057	2020032500180570	Kawade Ujwala Digambar	100	78
2	18127	2020032500181270	Berde Ajinkya Namdev	100	67
3	18128	2020032500181280	Gujjenavar Nagaraj Gangadhar	100	68
4	418886	2014032500188860	Shinde Pooja Nanaso	100	67
5	419395	2014032500193950	Yadav Sanjivani Shrikant	100	76
6	504064	2015032500040640	Tamboli Kousar Mubarak	100	78
7	702557	2017032500025570	Gaikwad Sanjana Devidas	100	77
8	710929	2017032500109290	Tambile Aparna Achutrao	100	81
9	710947	2017032500109470	Waghmare Pooja Bhimrao	100	83
10	710955	2017032500109550	Bhosale Rohit Baburao	100	69
11	711034	2017032500110340	Mule Madhuri Satyawan	100	75
12	711115	2017032500111150	Doke Rutuja Rajendra	100	90
13	711165	2017032500111650	Bangar Ujwala Chandrakant	100	96
14	711969	2017032500119690	Chavan Sonali Pandurang	100	68
15	711997	2017032500119970	Shinde Meena Dattatraya	100	92
16	722939	2017032500229390	Kapase Akshay Pandurang	100	67
17	728218	2017032500282180	Jadhav Sham Bharat	100	69
18	729071	2017032500290710	Jadhav Onkar Prabhakar	100	66

Examiner:

1) Thonge P. N. 

2) Ganje P. B. 

  
Head  
Department of Botany  
Shri Shivaji Mahavidyalaya  
Barshi, Dist-Solapur



**PUNYASHLOK AHILYADEVI HOLKAR  
SOLAPUR UNIVERSITY, SOLAPUR**  
Centre: Shri Shivaji Mahavidyalaya, Barshi  
Add on Course in Botany  
March/April 2022

Name of the Course: Mushroom Cultivation

Class: B. Sc. III

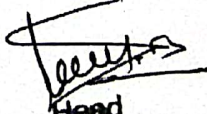
Marks: 100

Sr. No.	Exam Seat Number	PRN No	Full Name of Student	Max Marks	Obtained marks
1	909486	2019032500094866	Godage Akshay Shivaji	100	90
2	909495	2019032500094955	Khed Laxmi Kashinath	100	99
3	909500	2019032500095003	Bhange Pratiksha Sunil	100	92
4	909514	2019032500095146	Kharade Abhijeet Hanumant	100	88
5	909536	2019032500095363	Sirsat Prapti Maruti	100	90
6	909548	2019032500095483	Humbe Anjali Bapurao	100	91
7	909723	2019032500097234	Jadhav Ganesh Shivaji	100	89
8	909758	2019032500097586	Gaikwad Rutuja Satish	100	91
9	909771	2019032500097717	Sankpal Manoj Lahu	100	84
10	909840	2019032500098407	Tantak Sakshi Sanjaykumar	100	88

Examiner:

1) Patil P. A.

2) Dr. S. P. Gaikwad

  
Head  
Department of Botany  
Shri Shivaji Mahavidyalaya  
Barshi, Dist-Solapur

**Shri Shivaji Mahavidyalaya, Barshi**

**Department of Botany**

**Add On Course/ Skill Development Course**

**M.Sc. II (Sem III and IV)**

**Title of Course: Bioinstrumentation**

**Day: Friday**  
**Time: 12:00-02:00**

**Date: 17/06/2022**  
**Total Marks: 50**

---

**Q. 1 Multiple Choice Questions.**

**(10)**

1. HPLC stands for \_\_\_\_\_.

- a) High Performance Liquid Chromatography
- b) High Pressure Liquid Chromatography
- c) High Pressure Lipid Chromatography
- d) High Performance Lipid Chromatography.

2. In measure expression of RNA amongst gene \_\_\_\_\_ technique is used.

- a) Southern blotting
- b) Western blotting
- c) Eastern blotting
- d) Northern blotting.

3. Colorimeter is applied only in relation to \_\_\_\_\_.

- a) UV light.
- b) X- rays
- c) Visible light
- d) IR rays.

4. In genome southern blotting can be used to identify \_\_\_\_\_.

- a) Sequences
- b) Exact no. of sequences
- c) DNA fragments
- d) RNA sequences.

5. In flame emission photometer the measurement of \_\_\_\_\_ is used for quantitative analysis.

- a) Color
- b) Intensity
- c) Velocity
- d) Frequency.

6. The PCR is \_\_\_\_\_.

- a) DNA sequence technique
- b) DNA degradation technique
- c) DNA amplification technique
- d) All of the above.

7. In TLC the eluant filled in the closed jar is \_\_\_\_\_.

- a) Mixture of gases
- b) Mixture of lipids
- c) Mixture of solids
- d) Mixture of solids and lipids.

8. What is the shape of the graph of absorbance against concentration?

- a) Straight line
- b) Parabola

c) Sine wave

d) Cosine wave.

9. Ion exchange chromatography is used for the separation of\_\_\_\_\_.

a) Non polar molecules

b) Polar molecules

c) Both non polar and polar molecules

d) Amphipathic molecules.

10. In electrophoresis DNA will migrate towards\_\_\_\_\_.

a) Cathode or positive electrode

b) Anode or negative electrode

c) Cathode or negative electrode

d) Anode or negative electrode.

**Q. 2 Answer any five of the following.**

(10)

1. Write the principle of colorimeter.
2. Describe the working of flame photometry.
3. Give the applications TLC.
4. Write a short note on northern blotting.
5. Explain the basic principle of chromatography.
6. Write the applications of spectrophotometer.

**Q. 3 Answer any Two of the following.**

(10)

A. Describe in brief Ion Exchange Chromatography.

(04)

OR

A. Write a note on Agarose gel preparation.

(04)

B. Explain the principle of Flame photometry, and give its application.

(06)

OR

B. Write a note on southern blotting.

(06)

**Q. 4 Answer any Two of the following.**

(10)

A) Explain TLC with their applications.

(05)

B) Write a note on X-ray diffraction.

(05)

C) Explain principle and working of spectrophotometer.

(05)

**Q.5 Answer any One of the following.**

(10)

A) Explain working principle of HPLC and enumerate its applications.

(10)

B) Write a note on PCR with its applications.

(10)

**Shri Shivaji Mahavidyalaya, Barshi**

**Department of Botany**

**Add On Course/ Skill Development Course**

**M.Sc. II (Sem III and IV)**

**Title of Course: Bioinstrumentation**

**Practical Examination**

**Day: Friday**

**Time: 03:00-05:00**

**Date: 17/06/2022**

**Total Marks: 50**

---

**Q.1 Perform TLC and separate the amino acids from given plant sample. (10)**

**Q.2 To estimate chlorophyll content from given sample by using spectrophotometer (10)**

**Q.3 Identification. (20)**

A) Identify and Describe.

B) Identify and comment.

C) Identify and Describe.

D) Identify and list it's applications.

E) Identify and comment.

**Q. 4 Submission**

A) Visit report of laboratory at Sanghavi Industry. (05)

B) Viva-Voce. (05)

**PUNYASHLOK AHILYADEVI HOLKAR**  
**SOLAPUR UNIVERSITY, SOLAPUR**  
**M.A.II, Sem.-IV, History**  
**Skill Oriented Subject**  
**Historical Application in Tourism**  
Credit- Theory – 03 Project/Report-01,  
Total – 04, Total periods – 80

Preamble :-

This course is planned to introduce students to the study of Historical Tourism and Museums as an auxiliary subject of History. To provide professional knowledge for the field of History. To provide professional knowledge for the field of Historical tourism and museums. It gives theoretical and practical knowledge of historical monuments and sites. To motivate the students for conservation and preservation of Historical places, museums and historical sites.

Objective of the course :-

- 1) Students will develop an informed familiarity with multiple cultures.
- 2) Students will employ a full range of techniques and methods used to gain historical knowledge.
- 3) Students will develop an ability to convey verbally their historical knowledge.
- 4) To facilitate the students to take up the challenges of appearing for jobs.
- 5) To provide professional knowledge for the field of Tourism and Museum.
- 6) To explain the various important Historical places.

Outcomes of the course :-

- 1) Grasp about the importance of museums in understanding of historical legacy properly.
- 2) Understand about the historical tourism and its importance in grasping historical facts.
- 3) History knowledge Utilize for professional jobs.
- 4) Skill will be developed for History tourism Guide.
- 5) The students will understand the concept of the tourism and learn the basic principles of Museum.

## Historical Application in Tourism

### Unit-I - Tourism

- a) Definition and Nature of Tourism 10 periode
- b) Types of Tourism – Domestic, Regional, National and International
- c) Motivation of Tourism – Pleasure, Education, Culture, Social, Religious, Health and History.

### Unit-II - Economic Importance of Tourism

- a) Guide 10 periods
- b) Traveling and Lodging
- c) Catering and Marketing

### Unit-III - Museum.

- a) Definition and Importance of museum 10 periods
- b) Types of museum
- c) Important museum – Chh Shivaji Maharaj Museum, Mumbai, Salarjang Museum, Hydrabad.

### Unit- IV - Important Monuments, Religious Centers and History sites

- 10 periods
- a) Temple – Siddheshwar Temple (Solapur), Sun Temple (Konark)  
Stup Of sanchi, Golden Temple (Amrutsar)
- b) Forts – Raigad, Redfort (Delhi)
- c) Caves – Ajanta, Ellora.( Maharashtra)
- d) Need of Conservation and Preservation in Historical monuments and sites.

### Projectwork / Report writing :-

20 periods

Students should be visit any historical place and collect information and submit brief report of the work done to the concerned teacher.

### Evaluation Method :-

The University examination for this course will be of 80 marks. Nature of question paper and criteria for passing will be the same as other subjects for M.A.II sem - IV. Internal assessment is for 20 marks and a minimum of 08 marks is required for passing students should submit a project report of at least fire pages in writing to the concerned teacher for Internal Evaluation.

**List of Reference Books**

- 1) Chris Cooper and Fletcher, Tourism : Principles and Practices.
- 2) S. Wahab, Tourism Marketing.
- 3) James W. Morrison, Travel Agent and Tourism.
- 4) John Bakewell, The Complete Traveler.
- 5) Edward D. Mill's, Design for Holiday's and Tourism.
- 6) A. K. Bhatia, Tourism :Principles.
- 7) Douglas Pierce, Tourism Today : a Geographical Analysis.
- 8) Mujumdar R. C. (Gen. Ed.) for Arts Architecture Culture, Bhartiya Vidya Bhavan's All Volumes on Indian History, Mumbai, 1988

# **SKILL DEVELOPMENT COURSE**

## **SYLLABUS**

**Course : Skill Development Course on  
Alcoholic Beverages Technology**

**Subject: - Microbiology**

**Class: - M.Sc. II**

**Department of Microbiology  
D.B.F. Dayanand College of Arts and Science,  
Solapur  
Academic Year-2021-22**





## Skill Development Course

- **Title of the Course: Skill Development Course on Alcoholic Beverages Technology**
- **Class: - M.Sc. II**
- **Subject: - Microbiology**

- **Introduction:**

This course provides an overview of Alcoholic beverages and their production through the process of fermentation. The industrial alcoholic beverages field has experienced a burst of innovations encompassing applications of novel technologies for enhancing quality and shelf-life. The course structure is basic science-centric where students learn Fermentation Technology and are taught the necessary fundamental subject for that purpose.

- **Objectives of the course:**

The objectives of Skill Development Course of Alcoholic Beverages Technology for M.Sc. II Microbiology students are:

- 1) To impart knowledge concerning the subject and its practicable applicability.
- 2) To enhance understanding of basic and advanced concepts in industrial microbiology.
- 3) To develop an awareness of various emerging areas of Fermentation Technology.
- 4) To train the students for further studies helping in their bright career in the subject.
- 5) To expose the students to different processes used in industries and research fields.
- 6) To develop their ability to apply the knowledge of microbiology in day-to-day life.
- 7) To prepare the students to accept the challenges in life sciences.
- 8) To make students skillful to work in various industries.

- **Course outcome and Advantages:**

- 1) After completing the course students will be familiarized the with necessary beverages techniques and various tools used in Industrial microbiology .
- 2) Student will have expertise in fermentation technology and will be ready to

experiments in the R and D department of specific industry.

- 3) Student will be confident and having advantage and extra skills in there resume for the future career
- 4) Fermentation Technology has tremendous job potential, students will get various job opportunites for example in winery as Wine maker and quality control officer in pharmaceutical industry.
- 5) The successful students will be able well trained to get various microbiology related job.
- 6) Trained students can opt entraprenurship in alcohol beverages technology.

**Syllabus in details**  
**(Contact Hours: - 65 (Theory 45L + Practical 20L) (Total Marks-100)**

**Course Structure**

**Theory Papers I :- Contact Hours 45 L**

**Practical course I:- Contact hours 20L**

**Industrial Visit/Project**

**Examination Pattern- Total 100 Marks**

- 1) Theory -50 Marks**
- 2) Practical -30 Marks**
- 3) Visit/Project- 20 Marks**

Theory Course

**Subject: - Alcoholic Beverages Technology**

		45 L
UNIT I	<b>Introduction</b> <ul style="list-style-type: none"> <li>• Introduction to Enology</li> <li>• Wine, definition, and terminologies.</li> <li>• Types of wine</li> <li>• Chemical composition of Wine</li> <li>• Introduction to Vine</li> <li>• Viticulture: Introduction to viticulture, definition, and terminologies.</li> <li>• Wine producing regions of the World and different practices of winemaking and viticulture.</li> </ul>	10
UNIT II	<b>Wine Making</b> <ul style="list-style-type: none"> <li>• Vinification classification and classification based on chemical constituents.</li> <li>• Biochemistry of Wine production</li> <li>• General Production of Red Wine and White Wine.</li> <li>• Production of Sparkling wine</li> <li>• Production of fortified wine</li> <li>• Flow charts of Production of Red wine and white wine</li> </ul>	12
UNIT III	<b>Production of Various types of wine and Wine Defects</b> <ul style="list-style-type: none"> <li>• Production of Sparkling wine</li> <li>• Production of Fortified wine</li> <li>• Production of Sherry</li> <li>• Introduction to Wine Defects</li> <li>• Post-fermentation spoilage of wines: Microbial and Non-microbial spoilage of wines</li> </ul>	12
UNIT IV	<b>Beer Production</b> <ul style="list-style-type: none"> <li>• Beer – Definition</li> <li>• Composition of beer</li> <li>• Types of Beer</li> <li>• General production of Beer</li> <li>• Production of Lager beer and Ales Beer.</li> <li>• Flowchart for the production of Lager beer and Ales Beer</li> </ul>	11

## Practical Course

### Alcoholic Beverage Technology Practicals

Sr. No.	Alcoholic Beverage Technology Practicals	20 L
1	Screening of microorganisms involved in alcoholic beverage production.	
2	Vital staining of yeast cultures with Methylene blue.	
3	Preparation and sterilization of Inoculum medium.	
4	Preparation and sterilization of Fermentation medium.	
5	Production of wine using grapes/ fruits/ jaggery.	
6	Determination of total yeast count microscopically during fermentation using call counting chamber.	
7	Estimation of total sugar after fermentation by DNSA method.	
8	Estimation of alcohol from fermented broth using $K_2Cr_2O_7$ method.	
9	Alcohol determination by specific gravity.	
10	Determination of tannins in wine.	
11	Principle and working of UV- Vis Spectrophotometer.	

**Project / Study Visit**

**Examinationa Pattern**

**Title of the Course: Skill Development Course on Alcoholic Beverages  
Technology**

**Class: - M.Sc. II**

**Subject: - Microbiology**

**Time : 2hours**

**Total Marks -50**

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<b>Q.1. Multiple Choice Questions</b> 1 to 10 ---- (Each question carries 1 Mark)	<b>10 Marks</b>
<b>Q.2. Short answer Questions</b> Solve any 5 from 7 questions (Each question carries 2 Marks)	<b>10 Marks</b>
<b>Q.3. Section A) and B)</b>	<b>10 Marks</b>
<b>Section A) Answer the following questions</b>  Attempt any two questions from 3 (Each question carries 3 Marks)	<b>(06 Marks)</b>
<b>Section B) Answer the following question</b> Attempt any one question from 2	<b>(04 Marks)</b>
<b>Q.4. Answer the following questions</b> Attempt any two questions from 3 (Each question carries 5 Marks)	<b>10 Marks</b>
<b>Q.5. Answer the following questions</b> Attempt any two questions from 3 (Each question carries 5 Marks)	<b>10 Marks</b>

**Examination Pattern**

**Practical Examination**

**50 Marks**

**Time 2.30 hrs**

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- |   |                 |
|---|-----------------|
| <b>Q. 1. Proceed following experiment and write results</b> | <b>20 Marks</b> |
| <b>Q. 2. Proceed following experiment and write results</b> | <b>10 Marks</b> |
| <b>Q. 3. Project report</b>                                 | <b>20 Mark</b>  |

• **Total Marks:**

- 1) Theory:- 50 Marks**
- 2) Practical:- 30 Marks**
- 3) Project:- 20 Marks**

## References

1. Principles of fermentation technology – Whitkar and Stanbury
2. Pharmaceutical Microbiology – Huggo
3. Biochemistry – Fox and Nelson
4. Industrial Microbiology – Prescott and Dunn
5. Microbial technology – Pepler
6. Advances in Biotechnology – S.W. Jogdand.
7. Textbook of Biotechnology – R.C. Dubey.
8. Biotechnology – B.D. Singh
9. Industrial Microbiology – Casida
10. Industrial Microbiology by A.H. Patel.
11. Food Microbiology: an Introduction by Adam and Dick
12. Food Microbiology by Frazier



# PAH Solapur University Solapur

## Department of Chemistry

(Add-On-Course)

Certificate course in Soil & Water Analysis.

### COURSE DETAILS

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**Objective:** To acquire skills for laboratory management in routine analysis of soil & water.

**Duration:** 12 months part time. Exams in June after University graduation exam.

**Eligibility:** H.S.C.(science) Pass or Fail, Diploma Agri, Diploma Engg., B.Sc., M,Sc.

**Medium of teaching:** Marathi, English.

**Scope:** The student after H.S.C. has one of the more exciting and rewarding turning time. Course is designed as a new non-conventional alternative for the future. The course can be completed either as a full time or as per part time along with the graduation. The certificate obtained will be for obtaining jobs in a various fields. the student can start his own business/ Laboratory or can associate with any kind of laboratory or associated jobs with confidence. There are opportunities in the field of analysis, analytical research, fundamental research, quality control appa, governmental and non-governmental organization etc. for technical laboratory personnel. In addition to this collage conducting this course can avail the service to general public and industries and raise funds for development.

#### Syllabus:

### PAPER I: Laboratory Management & Soil Analysis

1) Basic fundamental in analysis

a. Analysis Chemistry: titrimetric, gravimetric, instrumental analysis.

b. Analysis Biology: microscopic & microbiological analysis

2) Instrumentation-Types, principles, meintaince, operation & working

PH meter, EC meter, Flame Photometer, Spectrophotometer, A.A.S.

3) Fundamental in sampling method preparation of reagent, culture media

4) Mathematical calculations in analysis-Concentration of solution, pmm, mol/l, mmhos/cm  
 $\mu$ mhos/cm, Kg/ha, normal, molar,  $\mu$ g/100gm calculations

- 5) Quality control, management in laboratory, standardization of reagents, Solution cross analysis
- 6) Report presentation and interpretation of results.
- 7) Soil development and Chemical composition-Formation of clay minerals. Soil forming process, composition of earth crusts, minerals in soil. Contents of chemical elements of soil. Physical Chemistry of soil.
- 8) Soil organic matter, formation, importance of Organic fertilizers
- 9) Soil microbiology and soil biochemistry. Microorganisms in soil, biochemical activities of microorganisms, enzymatic reactions, role of soil ecology in geochemical cycles
- 10) Acidic, Alkali, Saline and sodic soil, cause & prevention measures
- 11) Trace elements in soil – biological importance. Effects due to deficiency and excess quantity
- 12) Standard or soil quality requires for various crops.
- 13) soil pollution cause and remedies
- 14) Soil prone plant diseases and pests, their control, biopesticides

### **Practical**

1. Collection and preservation of samples from general field, horticultural field and green house.
2. Study of instruments in analysis: PH meter EC meter, Flame Photometer, Spectrophotometer, Atomic Absorption Spectrophotometer, oven, bacteriological incubator, BOD incubator, centrifuge, Autoclave.
3. Determination of pH and electric Conductivity of soil
4. Determination of water holding capacity
5. Determination of Lime and Gypsum requirement
- 6) Determination of Nitrogen
- 7) Determination of Phosphorous
- 8) Determination of Organic Carbon
- 9) Determination of total and differential count of microorganisms
- 10) Microscopic identification of nematodes from soil

11) Determination of micro nutrients on AAS

13) Isolation of fungi from soil

## **PAPER II: Water and Waste Water Analysis**

1. Chemistry of water development, hydrology, precipitation, rain, snowfall, water availability, requirement of water.
2. Quality of surface water, ground water
3. Impurities in water, standards of water quality for various requirements like potable, domestic use industrial purpose and agricultural purpose .
4. Water treatment technologies- Household water treatment, Municipal water treatment, Industrial water treatment, softening of water disinfections of water
5. Water Chemistry
6. Water microbiology-types & sources of contamination, prevention of water born diseases
7. Water management, water harvesting, water recycling
8. Characteristics of waste water from industries-Sugar factory, pulp & paper mills, distillery, Textile, Engineering, Food industry, Domestic waste
9. Water pollution causes and remedies.

### **Practicals:**

1. Collection and preservation of samples from open well water, bore well water, river, water treatment plant, waste water treatment plants
2. Determination of pH of water
3. Determination of Electric conductivity of water
4. Determination of hardness (total, permanent, temporary)
5. Determination of calcium
6. Determination of magnesium
7. Determination of Chlorides
8. Determination of carbonates & bicarbonates
9. Determination of Chemical Oxygen Demand
10. Determination of Biological Oxygen Demand
11. Determination of MPN
12. Isolation of bacteria from water

### **Other**

- 1 Visit to different laboratories in the analytical field
- 2 Project work
- 3 Visit to exhibition, conference, workshop (optional)

## Course Evaluation

Theory Paper I Soil analysis	100 Marks
Paper II Water analysis	100 Marks
Practical	50 Marks
Visit report	25 Marks
Assignment	25 Marks
.....	
Total	300 Marks

## Work load

Two theory periods per week

One practical per week





















**Punyashlok Ahilyadevi Holkar Solapur University, Solapur**

**Shri Shivaji Mahavidyalaya Barshi**

**Department of Zoology**

**Name of the Faculty: Science and Technology**

**Syllabus: Zoology**

**Name of the Course: B. Sc. -III Sem -VI:**

**Add- on Course/Certificate course in**

**Vermicomposting Technology**

**(Syllabus Implemented w.e.f. June 2021)**

## **SYLLABUS**

### **UNIT 1**

**15hrs**

1. Introduction to vermiculture, definition, classification, history, economic important, their value in maintenance of soil structure.
2. Its role in bio transformation of the residues generated by human activity and production of organic fertilizers.
3. Choosing the right worm. Useful species of earthworms. Local species of earthworms. Exotic species of earthworms.
4. Biology of *Pheretima posthuma*. a) Taxonomy Anatomy, physiology and reproduction. b) Vital cycle of Pheretimaposthuma: alimentation, fecundity, annual reproducer potential.

### **UNIT 2**

**15hrs**

5. Limit factors (gases, diet, humidity, temperature, PH , light, and climatic factors).
6. Physio- chemical parameters of vermicompost
7. Different Methods of Vermicomposting: Small- and large-scale Bed method, Pit method Small Scale Earthworm farming for home gardens - Earthworm compost for home gardens
8. Conventional commercial composting - Earthworm Composting larger scale
9. Pest and diseases of earthworms. Frequent problems. How to prevent and fix them. Complementary activities of auto evaluation.
10. Nutritional Composition of Vermicompost for plants, comparison with other fertilizer.

### **UNIT 3**

**15hrs**

11. Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing. Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing.

12. Vermiwash

### **Unit 4**

**15hrs**

13. Small Scale Earthworm farming for home gardens.

14. Conventional commercial composting

15. Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing.

16. Harvesting, packaging, transport and storage of Vermicompost and separation

### **PRACTICAL**

1. Scientific classification of Earthworm (*Eisenia fetida*)

2. Study of external morphology of Earthworm.

3. Study of habit and habitat of Earthworm

4. Study of Digestive system of earthworm

5. Study of Reproduction of earthworm

6. Vermicomposting unit Pit method

7. Establishment of vermicomposting unit Bed method

8. Establishment of vermiwash unit

9. Vermicompost production, harvesting and packaging.

10. Study of cocoon and vermicast

11. Study of Pests and diseases of Earthworms

12. Field visit/ Study Tour



श्री शिवाजी शिक्षण प्रसारक मंडळ, वार्शी

श्री शिवाजी महाविद्यालय वार्शी

विषय- मराठी

बीए भाग- तीन सत्र- सहा (२०२२-२०२३)

कौशल्यावर आधारित आवश्यक अभ्यासपत्रिका (CBCS)

मराठी भाषा: संभाषण व लेखन कौशल्य

दिनांक- २६/०५/२०२३

वेळ स- ९.०० ते ११.००

गुण- ४०

सूचना -सर्व प्रश्न अनिवार्य आहेत.

उजवीकडील अंक गुण दर्शवितात.

प्रश्न -१ वस्तुनिष्ठ प्रश्न. योग्य पर्याय निवडा.

१) आवाजाचा मुलाधार कोणता आहे?

- अ) स्वरयंत्र                      ब) श्वास  
क) अन्ननलिका                  ड) प्राणवायू

२) स्वरयंत्र ही खुर्च्या आणि स्नायू यांची बनवलेली काय आहे?

- अ) झाकण                      ब) गोल डबी  
क) स्वरतंतू                      ड) ध्वनियंत्र

३) साहित्यातील आशय नानाविध आवर्तासह श्रोत्यांच्या मनात निर्माण करणे हे कोणाचे मोठे यश आहे ?

- अ) अभिवाचन                      ब) मूकवाचन  
क) प्रगट वाचन                      ड) आवाज

४) कोणते माध्यम सार्वत्रिक संवाद माध्यम म्हणून लोकप्रिय आहे ?

- अ) टेलिफोन                      ब) भ्रमणध्वनी  
क) वर्तमानपत्र                      ड) रेडीओ

५) घोड्याच्या रेषमध्ये घोडी पळविणाऱ्याला कोणता शब्दप्रयोग रूढ आहे?

- अ) जाँकी                      ब) रॉकी  
क) ऑकी                      ड) यापैकी नाही

६) कोणत्या प्रसारमाध्यमाच्या कार्यक्रमाची सुरुवात उद्घोषणेने होते?

- अ) दूरदर्शन                      ब) आकाशवाणी

क) वृत्तपत्र

ड) इंटरनेट

७) रेडिओजॉकी हा शब्दप्रयोग कोणत्या प्रसारमाध्यमात वापरला जातो?

अ) इंटरनेट

ब) टेलिव्हिजन

क) वृत्तपत्र

ड) आकाशवाणी

८) व्यक्तीच्या ज्ञानाच्या आकलनाचे व प्रकटीकरणाचे माध्यम कोणते आहे?

अ) शब्द

ब) भाषा

क) आवाज

ड) वाक्य

१२

प्रश्न-२ थोडक्यात उत्तरे लिहा. (६ पैकी ४)

१) घसनाचे प्रमुख कार्य कोणते आहे?

२) भाषिक कौशल्ये कोणकोणती आहेत?

३) मुलाखतीचे प्रकार लिहा.

४) पटकथेचे घटक लिहा.

५) महाराष्ट्रातील कथाकथनाची परंपरा कोणकोणत्या लोककलेद्वारे सादर केली जाते?

६) इंटरनेटवरील वर्तमानपत्रांची नावे सांगा.

१०

प्रश्न-३ खालील प्रश्नांची उत्तरे सविस्तर लिहा. (२ पैकी १)

१) आकाशवाणी या प्रसारमाध्यमावरील उद्घोषणेचे स्वरूप लिहा.

२) मोबाईलवरील संभाषणाद्वारे संवाद कशाप्रकारे केला जातो?

१०

प्रश्न-४) खालील प्रश्नाचे उत्तर सविस्तर लिहा.

मुलाखतीची पूर्वतयारी कशी करावी ते लिहा.

  
**Prof. & Head**  
**Deptt. of Marathi (UG & PG)**  
**Shri Shivaji Mahavidyalaya, Barshi.**

*Department of Physics*  
*Certificate course in Electrocardiogram Basics*  
*Total marks: 25*

Select correct alternative:

- 1) Find the force that exists in an electromagnetic wave.
  - a) Electrostatic force
  - b) Magnetostatic force
  - c) *Lorentz force*
  - d) Electromotive force
- 2) The magnetization is defined by the ratio of
  - a) Magnetic moment to area
  - b) *Magnetic moment to volume*
  - c) Magnetic flux density to area
  - d) Magnetic flux density to volume
- 3) The torque expression of a current carrying conductor is
  - a)  $T = BIA \cos \theta$
  - b)  $T = BA \cos \theta$
  - c)  $T = BIA \sin \theta$
  - d)  $T = BA \sin \theta$
- 4) Calculate the emf of a coil with turns 100 and flux rate 5 units.
  - a) 20
  - b) -20
  - c) 500
  - d) -500
- 5) The induced emf in a material opposes the flux producing it. This is
  - a) Faraday law
  - b) Ampere law
  - c) *Lenz law*
  - d) Curie law
- 6) The curl of the electric field intensity is
  - a) Conservative
  - b) *Rotational*
  - c) Divergent
  - d) Static
- 7) What happens to the current in a coil while accelerating a magnet inside it?
  - a) *Increases*
  - b) Decreases

- c) Remains constant
  - d) Reverses
- 8) The total number of magnetic field lines passing through an area is termed as?
- a) Voltage
  - b) EMF
  - c) *Magnetic flux*
  - d) Magnetic flux density
- 9) According to Faraday's laws of electromagnetic induction, an emf is induced in a conductor whenever?
- a) The conductor is perpendicular to the magnetic field
  - b) Lies in the magnetic field
  - c) *Cuts magnetic lines of flux*
  - d) Moves parallel to the magnetic field
- 10) Direction of induced emf is determined by \_\_\_\_\_
- a) Fleming's left hand rule
  - b) *Fleming's right hand rule*
  - c) Faraday's law
  - d) Right hand thumb rule
- 11) The emf induced in a coil having N turns is?
- a)  $e = \phi/t$
  - b)  $e = N * \phi/t$
  - c)  $e = N * \phi * t$
  - d)  $e = N^2 * \phi * t$
- 12) North pole induces \_\_\_\_\_
- a) Clockwise current
  - b) *Anti-clockwise current*
  - c) Zero current
  - d) Infinite current
- 13) What is the definition of the cardiac cycle?
- a) The contraction of the atria
  - b) Circulation of the blood in the heart
  - c) The contraction and relaxation of the ventricles
  - d) *It is a sequence of event that occurs during one complete heartbeat*
- 14) Cardiac output is determined by \_\_\_\_\_
- a) heart rate
  - b) stroke volume
  - c) blood flow
  - d) *heart rate and stroke volume*
- 15) Heart beat initiates from \_\_\_\_\_
- a) Purkinji fibers
  - b) *SA node*

- c) Bundle of HIS
  - d) Auriculo ventricular node
- 16) A heart murmurs indicates a defective \_\_\_\_\_
- a) *Heart valves*
  - b) Bundle of HIS
  - c) SA node
  - d) AV node
- 17) Blood pressure is the pressure exerted by blood against \_\_\_\_\_
- a) kidneys
  - b) *artery walls*
  - c) brain
  - d) stomach
- 18) A normal heart rate in an adult at rest is \_\_\_\_\_
- a) 110
  - b) 125
  - c) 60
  - d) 75
- 19) The phase difference between voltage and current in case of resistor is?
- a) *in phase*
  - b) out of phase
  - c)  $45^\circ$  out of phase
  - d)  $90^\circ$  out of phase
- 20) The current in the pure capacitor?
- a) lags behind the voltage by  $90^\circ$
  - b) is in phase with the voltage
  - c) lags behind the voltage by  $45^\circ$
  - d) *leads the voltage by  $90^\circ$*
- 21) The total area under the complete AC sine curve divided by the distance of the curve is called?
- a) peak to peak value
  - b) RMS value
  - c) *average value*
  - d) effective value
- 22) In capacitor, the energy delivered by source is \_\_\_\_\_ by capacitor.
- a) returned to source
  - b) dissipated in the form of heat
  - c) *stored as electric field*
  - d) stored as magnetic field
- 23) In purely resistive circuit, energy delivered by source is \_\_\_\_\_ by resistance.
- a) *dissipated in the form of heat*
  - b) stored as electric field

- c) stored as magnetic field
  - d) returned to source
- 24) Which among the following is a unit for electrical energy?
- a) V(volt)
  - b) kWh(kilowatt-hour)
  - c) Ohm
  - d) C(coloumb)
- 25) The resistance of pure metals \_\_\_\_\_
- a) *Increases with an increase in temperature*
  - b) Decreases with an increase in temperature
  - c) Remains the same with an increase in temperature
  - d) Becomes zero with an increase in temperature

# CERTIFICATE COURSE IN OPERATION THEATRE ASSISTANT

1. Duration of course :- One year
2. Eligibility :- 12<sup>th</sup> Pass (Any Faculty)
3. Medium of course:- Marathi
4. Course fee:- 5,000/-
5. Teaching Staff Qualification: - Surgeon, Anesthesiologist, and Microbiologist.
6. Examination Pattern
  1. Theory Paper-I 80 Marks
  2. Theory Paper-II 80 Marks
  3. Theory Paper-III 80 Marks
  4. Theory Paper-IV 80 Marks
7. Practical:- 80 Marks
  1. Journal 40 Marks
  2. Seminar/Conference 20 Marks
  3. Computer Practical 20 Marks
  4. Oral 20 Marks
8. Project Reports 100 Marks
9. Institute Eligibility to conduct course: - Institute should have Minimum 30 bedded working Hospital with well-equipped major and Minor operation theatre.

# Paper I

## Applied Anatomy & physiology

### I) Applied Anatomy

#### Introduction of terms used

1. Organization of Human Body
2. Skin
3. Skeletal System
4. pulmonary System
5. Nervous System
6. Alimentary System
7. Unary System
8. Genital System
9. Cardio-Vascular System
10. Special areas in Anatomy
  - a. Abdominal Wall
  - b. Inguinal region
  - c. Scalp
  - d. Perianal region
  - e. Palm
  - f. Neck

### II) Applied Physiology

1. Wound healing
2. Respiratory System
3. Cardio Vascular System
4. Liver
5. Kidneys
6. Nervous System
7. Blood Clotting Mechanism
8. Blood Transfusion
9. pregnancy



## **Paper – II**

### **Microbiology & Pharmacology, Radiology, Pathology**

1. Types of Microbes
2. Classification
3. Pathogenic & Non-Pathogenic Organisms
4. Organisms Inside the Human Body
5. Environmental Organisms
6. Effect of Organisms
7. Modes of growth of organisms
8. Pathology of Infection
9. Nosocomial Infection
10. Bacteriostatic & Bacteriocidal Agents
11. Disinfectants
12. Sterilization
13. Cleaning Sterilization & care of Rubber goods, Enamel wares, Instruments, Glasswares  
S.S. goods, Linen, Furniture, etc.
14. Cap, Mask, Scrubbing, Washing, Wearing of gown, gloves etc.
15. Setting of Drums, Autoclaving
16. Antibiotics

# **Paper III**

## **Surgery & Operation Theatre Technique**

### **I) Introduction to operations**

1. What is Health?
2. What is Disease? –modalities of treat of Disease
3. What is operation?
4. What is the need for operation?
5. Types of Operation
6. Procedure of Operation

### **II) Design & contents of O.T.**

1. What is Operation Theatre?
2. General Design of O.T.
3. Special Design & contents of O.T.
4. Introduction to Instruments, Equipments, Materials Lamps, Linen etc. in an O.T.
5. Details, Uses & Functioning of Instruments, Equipments etc. & Storage of them.

### **III) Sterilization**

1. Technique
2. Equipments
3. Agents
4. Disinfection of O.T.

### **IV) Anesthesia**

1. An Introduction
2. Types of anesthesia
3. Equipments, Materials, Drugs
4. Hazards

## **Paper – IV**

### **Pre-operation Method**

1. Preparation of Theater for Operation
2. Preparation of Patient for Operation
3. Preparation for Anesthesia
4. Duties of Nurses & Other Staff
5. Papers, Consent forms & Registers
6. Checking of drum, trolleys, Instruments before operation
7. Positions of the patient
8. Helping the Anesthetist for Induction
9. Setting & Trolley
10. Painting & Draping
11. Arranging the Instruments

#### **I. The operation proper**

1. Assisting the surgeon

#### **II The Immediate Post-operation period**

1. Post operation catheter, R.T, Tubes Fixations Dressing
2. Plastering
3. Helping the Anesthetist for bringing the patient out
4. Preservation of Specimens
5. Disposal of wastes
6. Special Instruments – special care
7. Preparation for next case.

#### **III. Some special Cases**

1. Management of Intra-Operative Emergencies
2. Preparation of some special trays e.g. – Venesection, Suturing I & D, Tracheostomy, etc

## Practical Training One Year in following depart

- 1) Eye & ENT
- 2) General sur
- 3) Gynaec
- 4) Pediatric
- 5) Dental
- 6) Orthopedic

श्री. शिवाजी महाविद्यालय, वार्शी

अर्थशास्त्र विभाग

बी. ए. भाग - तिन अर्थशास्त्र

Certificate course on Financial Markets

8 त 9. अंतर्गत परीक्षा (जून 2022)

सुन - 40

- 1) दीर्घांश प्रश्न ( कोणतेही चार )
  - 1) वित्तीय बाजार अर्थ व रचना स्पष्ट करा.
  - 2) बांडव्य बाजाराची भूमिका स्पष्ट करा.
  - 3) वस्तू बाजार स्पष्ट करा.
  - 4) शेअर बाजाराची कार्ये स्पष्ट करा.
  - 5) मुंबई शेअर बाजार
  - 6) सेबिचि भूमिका स्पष्ट करा.

—XOX—

अतगत मूल्यमापन परीक्षा फेब्रुवारी 2024 (सेमिस्टर 4)

- सर्व प्रश्न आवश्यक आहेत
- प्रत्येकी 20 गुण आहेत

^ स्थूल आर्थिक विश्लेषण

1] मिलटन फ्रिडमनचा चलनसंखयामान सिद्धांत स्पष्ट करा.

^ सार्वजनिक अर्थशास्त्र

1] आर्थिक विकासातील राजकोषीय धोरणाची भूमिका स्पष्ट करा.

^ भारतातील कृषी विकास

1] कृषी उद्योगांची भूमिका स्पष्ट करा.

^ आंतरराष्ट्रीय व्यापार व वित्त

1] जागतिक व्यापार संघटना- रचना, उद्दिष्टे व कार्ये स्पष्ट करा.

[सर्व गृहपाठ उत्तरपत्रिका 1 मार्च 2024 पर्यंत अर्थशास्त्र विभागात जमा करणे आवश्यक आहे.]

अर्थशास्त्र विभाग प्रमुख

डॉ शशिकांत शिंदे

12:13 pm ✓

पुस्तके ग्रंथालयात उपलब्ध आहेत. 12:14 pm ✓

# अँड ऑन कोर्स इन ईकॉनॉमिक्स ऑफ इन्शुरन्स  
20 गुण आहेत

1) विम्याचे विविध प्रकार स्पष्ट करा. 12:19 pm ✓

Shri Shivaji Mahavidyalaya, Barshi

Department of English

B.A.III (Special English)

Add-On-Course (Content Writing) Examination, 2022

Time: 10:00 am –12:00 pm

Date:17.06.2022

Marks: 40 Marks

Q. 1 Choose the correct answer.

8 Marks

1. ----- is the full form of SEO.

a) Search Engine Organizer

b) Search Engine Optical

c) Search Engine Order

d) Search Engine Optimisation

2. To organize a content into an E-book is nothing but to -----a novel or textbook structure.

a) print

b) mimic

c) read

d) publish

3. The following font/s is/are industry standard and read easily.

a) Times New Roman

b) Courier

c) Both a and b

d) None of these

4. ----- is not a critical skill necessitated to write quality content.

a) Adaptability

b) Quality

c) Quantity

d) Strong research skills

5. The marketing plan is focused on knowing -----.

a) the general audience

b) the target audience

c) the present audience

d) the absent audience

6. In content writing, each paragraph has a key concept known as -----.

a) principal idea

b) core identification

c) definition of paragraph

d) None of these

7. Content marketing is a/an ----- designed to develop and deliver useful appropriate and trustworthy content.

- a) business strategy
- b) marketing strategy
- c) promotional strategy
- d) export-import strategy

8. ----- is the final step in the pre-publication editorial process.

- a) formatting
- b) documents style
- c) type file
- d) proof reading

Q.2. Answer any four of the following.

12 Marks

- i) Write a short note on topic identification.
- ii) Write in brief on the speed of the platform.
- iii) What is an audience centric writing?
- iv) Write a brief note on academic writing.
- v) Explain in brief the concept of content marketing.
- vi) What is a website content writing?

Q. 3. Answer any one of the following.

10 Marks

- a) What are the brainstorming strategies helpful for writers?
- b) Write in detail about critical skills required to write quality content.

Q. 4. Write a blog on 'how to earn better grade'.

10 marks



Shri Shivaji Mahavidyalaya Barshi  
Department of English  
BA III (Special English)  
Add-on- Course (Content writing) 2023

Time: 10.00 am to 12.00 pm

Marks: 40

Date: 23/05/2023

Q.1 Choose the correct alternative.

08

- 1) ..... is the full form of E-Book.
- a) Electronic Book                      b) Electoral Book  
c) Electrical Book                        d) Educational Book
- 2) ... is a formal writing style that is used in universities and academic publication.
- a) Academy writing                        b) Academic writing  
c) Advocates writing                       d) Architectures writing
- 3) Creating a target audience is key to knowing where to focus your ... efforts during content writing.
- a) academic & evaluative                b) promotional & Primitive  
c) marketing & sales                        d) program & programming
- 4) While identifying a topic a content writer is not just merely expected to collect data, but to build and show his ....
- a) recognizing powers                      b) sensing powers  
c) ruling powers                              d) reasoning powers
- 5) A consistent delivery of good writing by a content writer leads to gain more clients and ....
- a) higher paying jobs                        b) lower paying jobs  
c) average paying jobs                       d) belong average paying jobs
- 6) Creating a ... by a content writer is a way of arrangement the data & details visually.
- a) Google map                                b) mind map  
c) GPRS network                              d) satellite image
- 7) Generally, writing blogs involve ... types of blogs.
- a) six    b) seven    c) eight    d) nine
- 8) Press release is a ... device that lets a firm spread the word about the next event to the publish data.
- a) provisional                                b) preoperational                                c) progressive                                d) promotional

**Q.2 Answer any four of the following.**

- i) What are the key tasks a content writer performs for the website owners?
- ii) What is the quality essential to be a good SEO author?
- iii) What aspects of the audience a content writer should know to understand a target audience?
- iv) How much money a freelance author can earn through content writing?
- v) What is E-Book writing?
- vi) What is an audience centric writing?

**Q.3 Attempt any one of the following.**

- a) Documentation formatting
- b) Proofreading techniques

**Q.4. Write a blog on 'New Year's Resolutions'.**

SHRI SHIVAJI MAHAVIDYALAYA, BARSHI.  
DEPARTMENT OF ENGLISH

MA II English (ADD-ON COURSE) Semester IV

Paper: Linguistic Competence in Advertising: Marketing and Public Relations

DATE: 23-05-2023

Time: 11.00 am to 2.00 pm

Mark: 80

- Q.1 Discuss in brief the Socio-Communicative Context of Foreign Languages in Advertising. 16
- Q.2 Discuss the Role of Comprehension in use of foreign language and advertising practice. 16
- Q.3 Discuss in brief the use of English Language in Advertising. 16
- Q.4 What is the role of Ethnicity and Ethnic Adaptation in Advertising? 16
- Q.5 Draft an Advertisement to sell a Car. 16

**SHRI SHIVAJI MAHAVIDYALAYA, BARSHI.**  
**DEPARTMENT OF ENGLISH**

**MA II English (ADD-ON-COURSE) Semester IV**

**Paper: Linguistic Competence for Advertising: Marketing and Public Relations**

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**SHRI SHIVAJI MAHAVIDYALAYA, BARSHI.**  
**DEPARTMENT OF ENGLISH**

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Shri Shivaji Mahavidyalaya Barshi  
Department of English  
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# PAH Solapur University Solapur

## Department of Chemistry

(Add-On-Course)

Certificate course in Soil & Water Analysis.

### COURSE DETAILS

---

**Objective:** To acquire skills for laboratory management in routine analysis of soil & water.

**Duration:** 12 months part time. Exams in June after University graduation exam.

**Eligibility:** H.S.C.(science) Pass or Fail, Diploma Agri, Diploma Engg., B.Sc., M,Sc.

**Medium of teaching:** Marathi, English.

**Scope:** The student after H.S.C. has one of the more exciting and rewarding turning time. Course is designed as a new non-conventional alternative for the future. The course can be completed either as a full time or as per part time along with the graduation. The certificate obtained will be for obtaining jobs in a various fields. the student can start his own business/ Laboratory or can associate with any kind of laboratory or associated jobs with confidence. There are opportunities in the field of analysis, analytical research, fundamental research, quality control appa, governmental and non-governmental organization etc. for technical laboratory personnel. In addition to this collage conducting this course can avail the service to general public and industries and raise funds for development.

#### Syllabus:

### PAPER I: Laboratory Management & Soil Analysis

1) Basic fundamental in analysis

a. Analysis Chemistry: titrimetric, gravimetric, instrumental analysis.

b. Analysis Biology: microscopic & microbiological analysis

2) Instrumentation-Types, principles, meintaince, operation & working

PH meter, EC meter, Flame Photometer, Spectrophotometer, A.A.S.

3) Fundamental in sampling method preparation of reagent, culture media

4) Mathematical calculations in analysis-Concentration of solution, pmm, mol/l, mmhos/cm  
 $\mu$ mhos/cm, Kg/ha, normal, molar,  $\mu$ g/100gm calculations

- 5) Quality control, management in laboratory, standardization of reagents, Solution cross analysis
- 6) Report presentation and interpretation of results.
- 7) Soil development and Chemical composition-Formation of clay minerals. Soil forming process, composition of earth crusts, minerals in soil. Contents of chemical elements of soil. Physical Chemistry of soil.
- 8) Soil organic matter, formation, importance of Organic fertilizers
- 9) Soil microbiology and soil biochemistry. Microorganisms in soil, biochemical activities of microorganisms, enzymatic reactions, role of soil ecology in geochemical cycles
- 10) Acidic, Alkali, Saline and sodic soil, cause & prevention measures
- 11) Trace elements in soil – biological importance. Effects due to deficiency and excess quantity
- 12) Standard or soil quality requires for various crops.
- 13) soil pollution cause and remedies
- 14) Soil prone plant diseases and pests, their control, biopesticides

### **Practical**

1. Collection and preservation of samples from general field, horticultural field and green house.
2. Study of instruments in analysis: PH meter EC meter, Flame Photometer, Spectrophotometer, Atomic Absorption Spectrophotometer, oven, bacteriological incubator, BOD incubator, centrifuge, Autoclave.
3. Determination of pH and electric Conductivity of soil
4. Determination of water holding capacity
5. Determination of Lime and Gypsum requirement
- 6) Determination of Nitrogen
- 7) Determination of Phosphorous
- 8) Determination of Organic Carbon
- 9) Determination of total and differential count of microorganisms
- 10) Microscopic identification of nematodes from soil



11) Determination of micro nutrients on AAS

13) Isolation of fungi from soil

## **PAPER II: Water and Waste Water Analysis**

1. Chemistry of water development, hydrology, precipitation, rain, snowfall, water availability, requirement of water.
2. Quality of surface water, ground water
3. Impurities in water, standards of water quality for various requirements like potable, domestic use industrial purpose and agricultural purpose .
4. Water treatment technologies- Household water treatment, Municipal water treatment, Industrial water treatment, softening of water disinfections of water
5. Water Chemistry
6. Water microbiology-types & sources of contamination, prevention of water born diseases
7. Water management, water harvesting, water recycling
8. Characteristics of waste water from industries-Sugar factory, pulp & paper mills, distillery, Textile, Engineering, Food industry, Domestic waste
9. Water pollution causes and remedies.

### **Practicals:**

1. Collection and preservation of samples from open well water, bore well water, river, water treatment plant, waste water treatment plants
2. Determination of pH of water
3. Determination of Electric conductivity of water
4. Determination of hardness (total, permanent, temporary)
5. Determination of calcium
6. Determination of magnesium
7. Determination of Chlorides
8. Determination of carbonates & bicarbonates
9. Determination of Chemical Oxygen Demand
10. Determination of Biological Oxygen Demand
11. Determination of MPN
12. Isolation of bacteria from water

### **Other**

- 1 Visit to different laboratories in the analytical field
- 2 Project work
- 3 Visit to exhibition, conference, workshop (optional)

## Course Evaluation

Theory Paper I Soil analysis	100 Marks
Paper II Water analysis	100 Marks
Practical	50 Marks
Visit report	25 Marks
Assignment	25 Marks
.....	
Total	300 Marks

## Work load

Two theory periods per week

One practical per week

**CBCS Pattern Syllabus: SEC 3  
B.Sc. III (Statistics) Semester-V  
MS-EXCEL**

- **Course outcomes**

1. To enable student to understand importance of MS-Excel in day-to-day life.
2. To motivate student to judiciously use MS-Excel for facilitation for their own development and development of the society.
3. To help student to construct knowledge using MS-Excel and become a lifelong learner.
4. To empower student to become responsible citizens of the modern technology-based world.

**Unit -1** Microsoft Excel: Introduction to MS-EXCEL. (5)

**Unit-2** Data manipulation using EXCEL: sort and filter, find and replace,  
text to columns. (06)

**Unit-3** Charts and Diagrams (10)

**Unit-4** Built-in mathematical and statistical functions for obtaining descriptive statistics, computing PMF/PDF, CDF and quantiles of the well-known distributions, rand function (10)

**Unit-5** Logical functions: if, true, false, and, or, not etc (06)

**Unit-6** Excel add-ins: analysis tool pack. Pivot tables and charts. ( 08)

- **References:**

1. Help manual of EXCEL.

**Shri Shivaji Mahavidyalaya, Barshi**  
**Department of Physics**

**Carrier oriented Program**  
**On**  
**Electrocardiogram**  
**Marks: - 100**

<b>Syllabus</b>	<b>Periods (Total=40)</b>
<p style="text-align: center;"><b>Chapter:1</b></p> Introduction to Electrocardiogram (ECG, EKG); History of Electrocardiogram; Cardiac Electrical Activity: ECG (Electrocardiogram); Anatomic orientation of heart; Cardiac cycle; Cardiac impulse formation & Conduction; Recording long axis cardiac electrical activity; Recording short axis cardiac electrical activity;	<b>7</b>
<p style="text-align: center;"><b>Chapter:2</b></p> Circuits and Units: Simple electron theory of conduction; Resistance; The Joule; The watt; Properties of electric charge; Capacitor; Electronic potential/potential difference (PD); Type of AC/DC; and Basics of AC Circuits	<b>7</b>
<p style="text-align: center;"><b>Chapter:3</b></p> Electro Magnetism: Magnetism/ Electro Magnetism/Electromagnetic Induction; Magnetic poles/ fields/ flux and influx density; Magnetic field due to a straight and circular coil wire; Relationship of the electrocardiogram to the electrical events of the heart; Relationship of the electrical events to the mechanical events of the cardiac cycle; Waveform components (P, Q, R, S, T and U); Definitions and normal ranges of PR interval and QRS duration; Measurement of QT interval and calculation of corrected QT interval (QTc) by Bazett's formula; Calculation of the heart rate from the electrocardiogram	<b>10</b>
<p style="text-align: center;"><b>Chapter:4</b></p> ECG Diagnosis: Complete heart block; Left bundle branch block; Right bundle branch block; Ventricular fibrillation; Atrial fibrillation;	<b>6</b>
<b>Practical Laboratory</b>	<b>10</b>

## **Objectives**

- To create skilled ECG Technicians
- To assist the Cardiologist in TMT (Treadmill Test) lab
- To assist the Cardiologist in Echocardiogram lab
- To conduct a survey on heart disease
- To acquire self employment



Shri Shivaji Mahavidyalaya, Barshi

Department of Zoology

M.Sc-II

ADD-ON COURSE ON APPLICATIONS OF SERICULTURE

(2022-2023)

TEST

Date- 25.05.2023

Marks- 25

Q.1) Multiple Choice Questions-

- 1) 1. What is sericulture----
  - a) Rearing of fishes
  - b) Rearing of silkworm
  - c) Rearing of birds
  - d) Rearing of cockroach
- 2) Which of the following varieties of silk is not produced in India
  - a) Muga Silk
  - b) Mulberry Silk
  - c) Tassar Silk
  - d) **American Silk**
- 3) Which of the following silk is mainly produced in Assam?
  - a) Arundi silk
  - b) Natural silk
  - c) **Muga silk**
  - d) Tassar silk
- 4) How many stages are there in the life cycle of a silkworm?
  - a) 3
  - b) **4**
  - c) 5
  - d) 6
- 5) Sericulture is native of ----
  - a) Japan
  - b) China
  - c) India
  - d) Korea
- 6) Silk contains protein known as-----
  - a) Caesin
  - b) Fibrin

**Punyashlok Ahilyadevi Holkar Solapur University, Solapur**

**Shri Shivaji Mahavidyalaya Barshi**

**Department of Zoology**

**Name of the Faculty: Science and Technology**

**Syllabus: Zoology**

**Name of the Course: B. Sc. -III Sem -VI:**

**Add- on Course/Certificate course in**

**Vermicomposting Technology**

**(Syllabus Implemented w.e.f. June 2021)**



## SYLLABUS

### UNIT 1

15hrs

1. Introduction to vermiculture, definition, classification, history, economic important, their value in maintenance of soil structure.
2. Its role in bio transformation of the residues generated by human activity and production of organic fertilizers.
3. Choosing the right worm. Useful species of earthworms. Local species of earthworms. Exotic species of earthworms.
4. Biology of *Pheretima posthuma*. a) Taxonomy Anatomy, physiology and reproduction. b) Vital cycle of Pheretimaposthuma: alimentation, fecundity, annual reproducer potential.

### UNIT 2

15hrs

5. Limit factors (gases, diet, humidity, temperature, PH , light, and climatic factors).
6. Physio- chemical parameters of vermicompost
7. Different Methods of Vermicomposting: Small- and large-scale Bed method, Pit method Small Scale Earthworm farming for home gardens - Earthworm compost for home gardens
8. Conventional commercial composting - Earthworm Composting larger scale
9. Pest and diseases of earthworms. Frequent problems. How to prevent and fix them. Complementary activities of auto evaluation.
10. Nutritional Composition of Vermicompost for plants, comparison with other fertilizer.

### **UNIT 3**

**15hrs**

11. Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing. Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing.

12. Vermiwash

### **Unit 4**

**15hrs**

13. Small Scale Earthworm farming for home gardens.

14. Conventional commercial composting

15. Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing.

16. Harvesting, packaging, transport and storage of Vermicompost and separation

### **PRACTICAL**

1. Scientific classification of Earthworm (*Eisenia fetida*)

2. Study of external morphology of Earthworm.

3. Study of habit and habitat of Earthworm

4. Study of Digestive system of earthworm

5. Study of Reproduction of earthworm

6. Vermicomposting unit Pit method

7. Establishment of vermicomposting unit Bed method

8. Establishment of vermiwash unit

9. Vermicompost production, harvesting and packaging.

10. Study of cocoon and vermicast

11. Study of Pests and diseases of Earthworms

12. Field visit/ Study Tour

**Punyashlok Ahilyadevi Holkar Solapur University, Solapur**

**SHRI SHIVAJI MAHAVIDYALYA BARSHI**

**DEPARTMENT OF ZOOLOGY**

**ADD ON COURSE SYLLABUS**

**B.Sc. III**

**w.e.f.2021-22**

**Vermicomposting Technology**

**\*\*Course Title:\*\* Vermicomposting Technology**

**\*\*Course Duration:\*\* 30 Hours (Lectures)**

**\*\*Course Description:\*\***

This course provides an in-depth understanding of vermicomposting technology, its principles, processes, benefits, and applications. Students will learn about the biology of earthworms, the design and management of vermicomposting systems, and the utilization of vermicompost in sustainable agriculture.

**\*\*Course Objectives:\*\***

1. To understand the fundamentals of vermicomposting and its ecological significance.
2. To gain knowledge about the biology and ecology of composting earthworms.
3. To learn the methods and techniques of setting up and managing a vermicomposting system.
4. To explore the applications and benefits of vermicompost in agriculture and waste management.

**\*\*Course Outline:\*\***

**Module 1: Introduction to Vermicomposting (4 Hours)**

Lecture 1: Overview of Vermicomposting Technology - Definition and history, importance and benefits, vermicomposting vs. traditional composting.

Lecture 2: Principles of Vermicomposting - Ecological principles, role in waste management, environmental impact.

**Module 2: Biology of Earthworms (6 Hours)**

Lecture 3: Earthworm Anatomy and Physiology - Structure and function, digestive, reproductive, and nervous systems.

Lecture 4: Types of Composting Earthworms - Common species used in vermicomposting, habitat and ecological preferences.

Lecture 5: Life Cycle and Reproduction of Earthworms - Reproduction process, life cycle stages, growth and development.

**Module 3: Setting Up a Vermicomposting System (8 Hours)**

Lecture 6: Designing a Vermicomposting Unit - Selection of site and container, bedding materials, ideal environmental conditions.

Lecture 7: Sourcing and Introducing Earthworms - Procurement and introduction, initial setup and monitoring.

Lecture 8: Feeding and Maintaining the System - Types of feedstock, feeding rates and schedules, maintenance and troubleshooting.

Lecture 9: Harvesting and Processing Vermicompost - Harvesting techniques, processing and curing, quality control and testing.

#### **Module 4: Applications of Vermicompost (6 Hours)**

Lecture 10: Vermicompost in Agriculture - Soil health and fertility, crop yield and quality.

Lecture 11: Vermicompost in Horticulture and Landscaping - Application methods, benefits to ornamental plants.

Lecture 12: Vermicompost in Waste Management - Organic waste reduction, integration with other waste management systems.

#### **Module 5: Case Studies and Practical Applications (6 Hours)**

Lecture 13: Successful Vermicomposting Projects - Case studies and success stories, lessons learned and best practices.

Lecture 14: Hands-on Demonstrations and Field Visits - Practical demonstrations, visits to vermicomposting sites.

Lecture 15: Project Work and Presentations - Student projects and presentations, discussion and feedback.

#### **\*\*Recommended Reading:\*\***

1. "Vermiculture Technology: Earthworms, Organic Wastes, and Environmental Management" by Clive A. Edwards, Norman Q. Arancon, and Rhonda Sherman
2. "Earthworms in Waste and Environmental Management" by Clive A. Edwards and Edward F. Neuhauser
3. "The Worm Farmer's Handbook: Mid- to Large-Scale Vermicomposting for Farms, Businesses, Municipalities, Schools, and Institutions" by Rhonda Sherman

**\*\*Practical Sessions: Vermicomposting Technology\*\***

**\*\*Total Duration:\*\* 30 Hours**

**Practical 1: Introduction to Vermicomposting (2 Hours)**

- **\*\*Objective:\*\*** Familiarize students with the basic concepts of vermicomposting.

- **\*\*Activities:\*\***

- Introduction to vermicomposting materials and equipment.
- Demonstration of a small-scale vermicomposting unit.
- Observation of different stages of the vermicomposting process.

**Practical 2: Earthworm Identification and Handling (3 Hours)**

- **\*\*Objective:\*\*** Learn to identify and handle different species of composting earthworms.

- **\*\*Activities:\*\***

- Identification of common species (e.g., *Eisenia fetida*, *Lumbricus rubellus*).
- Handling and observing earthworm anatomy under a microscope.
- Setting up and maintaining earthworm habitats.

**Practical 3: Setting Up a Vermicomposting System (4 Hours)**

- **\*\*Objective:\*\*** Learn to design and set up a vermicomposting system.

- **\*\*Activities:\*\***

- Selection of appropriate containers and bedding materials.
- Setting up a vermicomposting bin.
- Introduction of earthworms to the bin.
- Initial monitoring of environmental conditions (temperature, moisture, pH).

**Practical 4: Feeding and Maintenance (4 Hours)**

- **\*\*Objective:\*\*** Understand the feeding habits and maintenance requirements of a vermicomposting system.

- **Activities:**

- Preparation of different types of feedstock (kitchen waste, garden waste, paper).
- Feeding earthworms and monitoring consumption rates.
- Regular maintenance tasks (turning, moisture control, pH adjustment).

**Practical 5: Monitoring and Troubleshooting (3 Hours)**

- **Objective:** Develop skills in monitoring and troubleshooting vermicomposting systems.

- **Activities:**

- Regular monitoring of bin conditions (moisture, temperature, odor).
- Identifying and solving common problems (pests, odors, excess moisture).
- Recording observations and data for analysis.

**Practical 6: Harvesting Vermicompost (4 Hours)**

- **Objective:** Learn the techniques for harvesting and processing vermicompost.

- **Activities:**

- Techniques for separating earthworms from compost (light method, manual sorting).
- Harvesting finished vermicompost.
- Processing and curing vermicompost for use.

**Practical 7: Quality Control and Testing (3 Hours)**

- **Objective:** Conduct quality control tests on vermicompost.

- **Activities:**


- Physical and chemical analysis of vermicompost (texture, color, pH, nutrient content).
- Testing for contaminants and pathogens.
- Comparing vermicompost quality with traditional compost.

**Practical 8: Application of Vermicompost (4 Hours)**

- **Objective:** Understand the practical applications of vermicompost in agriculture and horticulture.

- **Activities:**

- Application of vermicompost in soil and potting mixes.
- Evaluating plant growth responses to vermicompost.
- Field visits to farms or gardens using vermicompost.



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**Punyashlok Ahilyadevi Holkar Solapur University, Solapur**

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**DEPARTMENT OF ZOOLOGY**

**ADD ON COURSE SYLLABUS**

**B.Sc. III**

**w.e.f.2021-22**

**SERICULTURE**

**\*\*Course Title:\*\* Sericulture Technology**

**\*\*Course Duration:\*\* 30 Hours (Lectures)**

**\*\*Course Description:\*\***

This course offers an in-depth study of sericulture technology, encompassing the biology of silkworms, the process of silk production, and the management of sericulture enterprises. Students will explore the scientific and practical aspects of sericulture, from silkworm breeding to silk processing.

**\*\*Course Objectives:\*\***

1. To understand the biological and ecological aspects of silkworms.
2. To learn the techniques involved in silkworm rearing and silk production.
3. To gain knowledge of the management practices in sericulture.
4. To explore the economic and commercial aspects of the sericulture industry.

**\*\*Course Outline:\*\***

**Module 1: Introduction to Sericulture (4 Hours)**

Lecture 1: Overview of Sericulture Technology - History and importance of sericulture, types of silk and silk-producing species.

Lecture 2: Principles of Sericulture - Ecological and economic significance, comparison with other textile fibers.

**Module 2: Biology of Silkworms (6 Hours)**

Lecture 3: Anatomy and Physiology of Silkworms - Structure and function, life cycle stages (egg, larva, pupa, adult).

Lecture 4: Silkworm Genetics and Breeding - Genetic principles, breeding techniques, hybrid vigor and its importance.

Lecture 5: Silkworm Diseases and Pest Management - Common diseases, pest control methods, integrated pest management strategies.

**Module 3: Silkworm Rearing Techniques (8 Hours)**

Lecture 6: Rearing House and Equipment - Design and construction of rearing houses, required equipment and materials.

Lecture 7: Rearing Practices - Rearing methods for different stages, environmental conditions, feeding and care.

Lecture 8: Harvesting and Processing Cocoons - Harvesting techniques, cocoon processing methods, quality control.

Lecture 9: Silk Reeling and Spinning - Reeling techniques, spinning methods, quality assessment of silk yarn.

**Module 4: Sericulture Management (6 Hours)**

Lecture 10: Mulberry Cultivation - Varieties of mulberry, cultivation practices, pest and disease management.

Lecture 11: Sericulture Economics - Cost analysis, marketing strategies, value addition in sericulture products.

Lecture 12: Government Schemes and Policies - Supportive schemes, policies for sericulture development, global scenario.

**Module 5: Case Studies and Practical Applications (6 Hours)**

Lecture 13: Successful Sericulture Projects - Case studies, best practices, innovative approaches.

Lecture 14: Hands-on Demonstrations and Field Visits - Practical demonstrations, visits to sericulture farms and research centers.

Lecture 15: Project Work and Presentations - Student projects and presentations, discussion and feedback.

**\*\*Recommended Reading:\*\***

1. "Sericulture and Pest Management" by M. K. Dhawan and H. M. Bhardwaj
2. "Handbook of Practical Sericulture" by S. R. Ullal and M. N. Narasimhanna
3. "Silkworm Rearing: Procedures and Techniques" by M. Madan Mohan Rao

## Practical Sessions: Sericulture Technology

Total Duration: 30 Hours

### Practical 1: Introduction to Sericulture (2 Hours)

- **Objective:** Familiarize students with the basic concepts and equipment used in sericulture.
- **Activities:**
  - Overview of sericulture materials and equipment.
  - Demonstration of a small-scale sericulture setup.
  - Observation of the different stages of silk production.

### Practical 2: Identification and Handling of Silkworms (3 Hours)

- **Objective:** Learn to identify and handle different species of silkworms.
- **Activities:**
  - Identification of common silkworm species (e.g., *Bombyx mori*).
  - Handling and observing silkworm anatomy under a microscope.
  - Maintaining silkworm habitats.

### Practical 3: Silkworm Rearing Techniques (5 Hours)

- **Objective:** Learn the techniques involved in rearing silkworms.
- **Activities:**
  - Preparation of rearing houses and equipment.
  - Rearing practices for different life cycle stages (egg, larva, pupa, adult).
  - Feeding silkworms and monitoring their growth and development.
  - Environmental condition control (temperature, humidity).

### Practical 4: Silkworm Breeding and Genetics (3 Hours)

- **Objective:** Understand the principles of silkworm breeding and genetics.
- **Activities:**
  - Silkworm breeding techniques.
  - Observation of genetic traits and hybrid vigor.
  - Recording breeding data and analyzing outcomes.

### Practical 5: Disease and Pest Management (3 Hours)

- **Objective:** Learn to identify and manage common silkworm diseases and pests.
- **Activities:**

- Identification of common silkworm diseases and pests.
- Disease prevention and treatment methods.
- Pest control techniques and integrated pest management strategies.

**Practical 6: Harvesting and Processing Cocoons (4 Hours)**

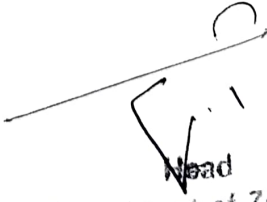
- **Objective:** Learn the techniques for harvesting and processing cocoons.
- **Activities:**
  - Harvesting cocoons at the appropriate time.
  - Sorting and grading cocoons based on quality.
  - Processing cocoons to extract silk fibers.
  - Quality control and assessment of silk.

**Practical 7: Silk Reeling and Spinning (4 Hours)**

- **Objective:** Understand the processes involved in silk reeling and spinning.
- **Activities:**
  - Demonstration of silk reeling techniques.
  - Spinning silk fibers into threads.
  - Evaluating the quality of silk yarn.
  - Practical experience with reeling and spinning equipment.


**Practical 8: Mulberry Cultivation (4 Hours)**

- **Objective:** Learn the methods of mulberry cultivation and maintenance.
- **Activities:**
  - Identification of mulberry varieties suitable for sericulture.
  - Planting and cultivation techniques.
  - Pest and disease management in mulberry cultivation.
  - Harvesting mulberry leaves for silkworm feeding.

  
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**SHRI SHIVAJI MAHAVIDYALYA BARSHI**  
**DEPARTMENT OF ZOOLOGY**  
**Add on Course - Timetable**  
**2022-23**

Class	Day and Date	Time	Add on Course Title
B.Sc. III	Friday - 26/05/2023	12.00-1.00	Vermiculture Technology
M.Sc. II	Thursday - 25/05/2023	12.00-1.00	Sericulture

  
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**SHRI SHIVAJI MAHAVIDYALYA BARSHI**  
**DEPARTMENT OF ZOOLOGY**  
**B.Sc. III**  
**Add on Course -Vermicomposting Technology**  
**2022-23**

**Date: 26/5/2023**

**Time:12.00-1.00**

**Marks: 50**

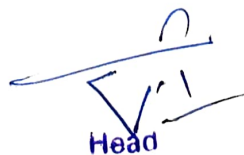
1. What is vermicomposting?
  - a) Composting using fungi
  - b) Composting using bacteria
  - c) Composting using earthworms
  - d) Composting using chemicals
2. Which of the following is a key difference between vermicomposting and traditional composting?
  - a) Vermicomposting produces more heat
  - b) Traditional composting is faster
  - c) Vermicomposting uses earthworms
  - d) Traditional composting requires less maintenance
3. Which country is known to have first used vermicomposting on a large scale?
  - a) India
  - b) China
  - c) USA
  - d) Australia
4. One of the main benefits of vermicomposting is:
  - a) Increased use of chemical fertilizers
  - b) Decrease in soil quality
  - c) Reduction of organic waste
  - d) High production of methane gas
5. Vermicomposting primarily helps in:
  - a) Increasing non-biodegradable waste
  - b) Enhancing soil fertility
  - c) Promoting deforestation
  - d) Increasing water pollution
6. What is one advantage of vermicomposting over traditional composting?
  - a) Requires higher temperatures
  - b) Uses non-organic materials
  - c) Produces vermicast, a rich organic fertilizer
  - d) Slower decomposition process
7. Vermicomposting is most beneficial for:
  - a) Increasing chemical fertilizer usage
  - b) Reducing soil pH
  - c) Organic waste management
  - d) Producing fossil fuels
8. Vermicompost is also known as:
  - a) Worm castings
  - b) Compost tea
  - c) Mulch
  - d) Biochar
9. Vermicomposting is most commonly used for:
  - a) Managing electronic waste
  - b) Degrading plastic
  - c) Recycling organic waste
  - d) Increasing metal content in soil
10. Which of the following is NOT a product of vermicomposting?
  - a) Vermicast
  - b) Worm tea
  - c) Biofuel
  - d) Worm biomass
11. Which of the following systems is NOT found in earthworms?
  - a) Circulatory system
  - b) Respiratory system
  - c) Digestive system
  - d) Nervous system
12. The digestive system of earthworms includes:
  - a) Stomach
  - b) Crop

- c) Gizzard  
d) All of the above
13. Which of these is the primary function of the earthworm's clitellum?  
a) Digestion  
b) Reproduction  
c) Movement  
d) Respiration
14. Earthworms breathe through:  
a) Lungs  
b) Gills  
c) Skin  
d) Trachea
15. The common species used in vermicomposting is:  
a) *Lumbricus terrestris*  
b) *Eisenia fetida*  
c) *Pheretima posthuma*  
d) *Perionyx excavatus*
16. *Eisenia fetida* is commonly known as:  
a) Nightcrawler  
b) Earthworm  
c) Red wiggler  
d) Flatworm
17. What is the typical lifespan of an earthworm in a vermicomposting system?  
a) 6 months  
b) 1-2 years  
c) 5-7 years  
d) 10 years
18. Earthworms are classified as:  
a) Insects  
b) Mollusks  
c) Annelids  
d) Arachnids
19. Which of the following describes the reproductive system of earthworms?  
a) Hermaphroditic  
b) Gonochoristic  
c) Asexual  
d) Viviparous
20. Earthworm cocoons typically contain:  
a) One egg  
b) Two to three eggs  
c) Five to ten eggs  
d) Over ten eggs
21. Earthworms help in improving soil structure by:  
a) Increasing soil compaction  
b) Enhancing soil aeration  
c) Decreasing water retention  
d) Increasing soil temperature
22. The habitat preference of *Eisenia fetida* is:  
a) Dry sandy soils  
b) Moist organic-rich environments  
c) Arid desert regions  
d) High-altitude cold areas
23. The average size of a mature *Eisenia fetida* earthworm is:  
a) 1-2 cm  
b) 3-5 cm  
c) 7-10 cm  
d) 12-15 cm
24. Earthworm reproduction typically occurs:  
a) Asexually  
b) Through budding  
c) Sexually, with mutual copulation  
d) Via external fertilization
25. The term "vermicompost" refers to:  
a) Composting with microorganisms  
b) Worm castings produced from organic waste  
c) The habitat of earthworms  
d) The process of composting leaves
26. The ideal pH range for a vermicomposting system is:  
a) 3-4  
b) 5-6  
c) 6.5-7.5  
d) 8-9
27. Which of the following is NOT suitable bedding material for a vermicomposting system?  
a) Shredded newspaper  
b) Straw  
c) Gravel  
d) Coconut coir
28. Vermicomposting units should be kept in:  
a) Direct sunlight  
b) A dry, cool place  
c) A warm, moist, and dark environment  
d) A well-ventilated, open area
29. The primary purpose of bedding material in a vermicomposting system is to:  
a) Retain moisture  
b) Provide a breeding ground



- c) Create a barrier for predators  
d) Decrease decomposition rate
30. How often should a vermicomposting system be monitored?  
a) Daily  
b) Weekly  
c) Monthly  
d) Bi-annually
31. Which of the following is a common sign that a vermicomposting system is functioning well?  
a) Presence of foul odors  
b) High temperatures  
c) Earthworms actively feeding and moving  
d) Excessive moisture build-up
32. Earthworms in a vermicomposting system are typically fed:  
a) Fresh meat scraps  
b) Dairy products  
c) Fruit and vegetable scraps  
d) Inorganic waste
33. The best way to introduce earthworms to a new vermicomposting system is to:  
a) Place them directly on top of the bedding  
b) Mix them into the feedstock  
c) Leave them in the sun before adding  
d) Place them in a separate container first
34. Overfeeding in a vermicomposting system can lead to:  
a) Faster composting  
b) Increased earthworm population  
c) Foul odors and pest problems  
d) Higher quality vermicompost
35. How long does it typically take to harvest vermicompost from a well-maintained system?  
a) 1-2 weeks  
b) 4-6 weeks  
c) 3-6 months  
d) 1 year
36. Which method is commonly used to separate earthworms from finished vermicompost?  
a) Drying and sieving  
b) Using light to drive worms to the bottom  
c) Flushing with water  
d) Freezing and thawing
37. The ideal moisture content for a vermicomposting system is around:  
a) 10%  
b) 20%  
c) 60-70%  
d) 90%
38. A good indicator of vermicompost maturity is:  
a) Presence of visible food scraps  
b) Dark, crumbly texture with an earthy smell  
c) Excessive moisture content  
d) High number of visible worms
39. To prevent overfeeding, one should:  
a) Add more worms  
b) Increase the temperature  
c) Feed small amounts at regular intervals  
d) Add more bedding material
40. Which of the following is not a recommended practice in vermicomposting maintenance?  
a) Regularly turning the bedding  
b) Keeping the system in a shaded area  
c) Ensuring adequate drainage  
d) Adding citrus fruits regularly
41. Vermicompost is particularly beneficial for:  
a) Reducing soil fertility  
b) Increasing soil salinity  
c) Enhancing soil structure and fertility  
d) Reducing crop yield
42. In agriculture, vermicompost is used primarily to:  
a) Decrease soil pH  
b) Replace chemical fertilizers  
c) Increase pesticide usage  
d) Increase soil compaction
43. Vermicompost can help in:  
a) Decreasing water retention in soil  
b) Increasing nutrient availability for plants  
c) Making the soil infertile  
d) Reducing organic matter content in soil
44. Which of the following is a benefit of using vermicompost in horticulture?  
a) Slower plant growth

- b) Reduced flowering
  - c) Improved plant health and resilience
  - d) Decreased water retention
45. Vermicompost is often used in landscaping because:
- a) It is highly acidic
  - b) It improves soil structure and plant growth
  - c) It repels insects
  - d) It slows down the growth of plants
46. In waste management, vermicomposting helps by:
- a) Increasing landfill usage
  - b) Reducing the volume of organic waste
  - c) Promoting the accumulation of waste
  - d) Decreasing the rate of decomposition
47. The use of vermicompost in agriculture can lead to:
- a) Reduced soil biodiversity
  - b) Increased use of chemical inputs
  - c) Enhanced soil fertility and crop yield
  - d) Soil degradation
48. Which of the following is an advantage of integrating vermicomposting into other waste management systems?
- a) Slower processing of waste
  - b) Lower quality of compost
  - c) Enhanced efficiency of organic waste recycling
  - d) Increased production of toxic waste
49. In horticulture, vermicompost is often used as:
- a) A primary pesticide
  - b) A soil conditioner and fertilizer
  - c) A growth inhibitor
  - d) An herbicide
50. Vermicompost contributes to sustainable agriculture by:
- a) Increasing the dependency on chemical fertilizers
  - b) Promoting soil erosion
  - c) Reducing the need for synthetic inputs
  - d) Decreasing organic matter in soil



**SHRI SHIVAJI MAHAVIDYALYA BARSHI**  
**DEPARTMENT OF ZOOLOGY**  
**M.Sc. II**  
**Add on Course -Sericulture**  
**2022-23**

Date: 25/05/2023

Time: 12.00-1.00

Marks: 50

- 
1. **What is sericulture?**
    - a) The cultivation of silk-producing plants
    - b) The cultivation of silkworms for silk production
    - c) The study of insects
    - d) The production of synthetic fibers
  2. **Which of the following countries is considered the birthplace of sericulture?**
    - a) India
    - b) China
    - c) Japan
    - d) Brazil
  3. **The most commonly produced type of silk is:**
    - a) Muga silk
    - b) Tussar silk
    - c) Eri silk
    - d) Mulberry silk
  4. **Which species is primarily used in commercial silk production?**
    - a) Bombyx mori
    - b) Antheraea mylitta
    - c) Philosamiaricini
    - d) Samia cynthia
  5. **The history of sericulture dates back to:**
    - a) 500 BC
    - b) 2700 BC
    - c) 1500 AD
    - d) 2000 AD
  6. **Which type of silk is produced by Antheraea mylitta?**
    - a) Mulberry silk
    - b) Tussar silk
    - c) Eri silk
    - d) Muga silk
  7. **Muga silk is primarily produced in which part of India?**
    - a) Assam
    - b) Karnataka
    - c) Tamil Nadu
    - d) Gujarat
  8. **Eri silk is also known as:**
    - a) Vanya silk
    - b) Ahimsa silk
    - c) Wild silk
    - d) Peace silk
  9. **Which of the following is not a silk-producing species?**
    - a) Bombyx mori
    - b) Antheraea assamensis
    - c) Apis mellifera
    - d) Philosamiaricini
  10. **Sericulture primarily contributes to:**
    - a) Steel production
    - b) Textile industry
    - c) Plastic manufacturing
    - d) Chemical industry
  11. **The life cycle of a silkworm includes the following stages:**
    - a) Egg, larva, pupa, adult
    - b) Egg, nymph, adult
    - c) Egg, larva, adult
    - d) Nymph, pupa, adult
  12. **The larval stage of the silkworm is known as:**

- a) Caterpillar
  - b) Pupa
  - c) Nymph
  - d) Chrysalis
13. **Silkworms primarily feed on:**
- a) Oak leaves
  - b) Mulberry leaves
  - c) Bamboo leaves
  - d) Mango leaves
14. **The silkworm spins its cocoon during which stage?**
- a) Egg
  - b) Larva
  - c) Pupa
  - d) Adult
15. **The silk gland in silkworms is responsible for producing:**
- a) Fibroin and sericin
  - b) Chitin and keratin
  - c) Collagen and elastin
  - d) Cellulose and lignin
16. **Which part of the silkworm's body is responsible for silk production?**
- a) Antennae
  - b) Silk gland
  - c) Spinneret
  - d) Proboscis
17. **The duration of the larval stage in *Bombyx mori* is typically:**
- a) 3-5 days
  - b) 10-14 days
  - c) 20-30 days
  - d) 40-50 days
18. **Which stage of the silkworm's life cycle is the most critical for silk production?**
- a) Egg
  - b) Larva
  - c) Pupa
  - d) Adult
19. **The scientific name for the domestic silkworm is:**
- a) *Bombyx mori*
  - b) *Antheraea mylitta*
  - c) *Philosamiaricini*
  - d) *Attacus atlas*
20. **Silkworm breeding is primarily aimed at:**
- a) Increasing cocoon size
  - b) Producing more eggs
  - c) Enhancing silk quality and quantity
  - d) Reducing the number of life cycle stages
21. **Hybrid vigor in silkworms refers to:**
- a) The increase in disease resistance
  - b) The reduction in silk production
  - c) The improved performance of hybrids over purebreds
  - d) The decrease in cocoon quality
22. **Silkworm breeding techniques are primarily used to:**
- a) Produce different colors of silk
  - b) Increase the production of silk
  - c) Reduce the number of life cycle stages
  - d) Decrease the size of silkworms
23. **Which of the following is a common disease affecting silkworms?**
- a) Pebrine
  - b) Rust
  - c) Blight
  - d) Mildew
24. **Pebrine disease in silkworms is caused by:**
- a) Bacteria
  - b) Virus
  - c) Fungus
  - d) Protozoa
25. **Integrated pest management (IPM) in sericulture focuses on:**
- a) Using chemical pesticides only

- b) Combining biological, cultural, and chemical control methods  
 c) Reducing silk production  
 d) Eliminating all pests using chemicals
26. **One of the common pests that affect silkworms is:**  
 a) Red spider mite  
 b) Uzi fly  
 c) Aphids  
 d) Whitefly
27. **Uzi fly infestation in silkworms primarily affects which stage?**  
 a) Egg  
 b) Larva  
 c) Pupa  
 d) Adult
28. **The primary focus of silkworm genetics is to:**  
 a) Produce new colors of silk  
 b) Improve silk quality and yield  
 c) Decrease the lifespan of silkworms  
 d) Increase the feeding capacity of silkworms
29. **Silkworm breeding often involves:**  
 a) Crossbreeding between different species  
 b) Genetic modification  
 c) Crossbreeding within the same species to enhance desired traits  
 d) Inbreeding to maintain pure lines
30. **The practice of managing silkworm diseases and pests primarily aims to:**  
 a) Increase silk production  
 b) Reduce labor costs  
 c) Decrease the quality of cocoons  
 d) Shorten the life cycle of silkworms
31. **The ideal temperature range for rearing silkworms is:**  
 a) 10-15°C  
 b) 20-25°C  
 c) 25-30°C  
 d) 35-40°C
32. **A rearing house for silkworms should have:**  
 a) High humidity and low temperature  
 b) Good ventilation and controlled temperature  
 c) Low ventilation and high temperature  
 d) No light and high humidity
33. **The primary function of rearing equipment is to:**  
 a) Provide warmth  
 b) Maintain hygiene and optimal rearing conditions  
 c) Increase the size of silkworms  
 d) Decrease the rearing time
34. **The most crucial factor for silkworm rearing success is:**  
 a) Temperature control  
 b) Lighting  
 c) Rearing tray size  
 d) Quantity of feed
35. **During which stage of rearing is the environment most critical?**  
 a) Egg stage  
 b) Young larval stage  
 c) Mature larval stage  
 d) Pupal stage
36. **Feeding silkworms primarily involves providing them with:**  
 a) Synthetic feed  
 b) Mulberry leaves  
 c) Fruit pulp  
 d) Rice husks
37. **Harvesting cocoons should be done:**  
 a) Immediately after the larva spins

- the cocoon
- After the pupa has fully developed
  - After the adult moth emerges
  - Before the larva begins spinning
38. **Silk reeling is the process of:**
- Feeding silkworms
  - Unwinding silk fibers from cocoons
  - Breeding silkworms
  - Spinning silk yarn
39. **Cocoon processing primarily aims to:**
- Increase cocoon size
  - Extract the maximum silk from cocoons
  - Breed more silkworms
  - Reduce the silk quality
40. **Which of the following is a key quality assessment parameter for silk yarn?**
- Length of the yarn
  - Color consistency
  - Fiber fineness and strength
  - Cocoon size
41. **Which method is often used to process cocoons for silk reeling?**
- Freezing
  - Boiling
  - Drying
  - Steaming
42. **The main purpose of spinning in sericulture is to:**
- Produce synthetic fibers
  - Convert silk fibers into yarn
  - Increase cocoon size
  - Improve mulberry cultivation
43. **Mulberry is cultivated primarily for:**
- Textile production
  - Feed for silkworms
  - Medicinal purposes
  - Fiber extraction
44. **Which of the following is NOT a variety of mulberry?**
- Morus alba
  - Morus nigra
  - Morus indica
  - Morus tinctoria
45. **Pest management in mulberry cultivation primarily involves:**
- Using only chemical pesticides
  - A combination of cultural, mechanical, and chemical methods
  - Ignoring pest issues
  - Removing affected leaves manually
46. **The economic significance of sericulture is primarily due to:**
- High production costs
  - Export potential of silk products
  - Minimal market demand
  - Limited job creation
47. **Which of the following is a common value addition in sericulture products?**
- Dyeing and printing of silk fabrics
  - Reducing silk quality
  - Shortening the rearing cycle
  - Limiting cocoon production
48. **Which government scheme focuses on sericulture development in India?**
- MNREGA
  - Krishi Vikas Yojana
  - National Silk Mission
  - Sarva Shiksha Abhiyan
49. **Global sericulture development is supported by:**
- Decreasing silk production
  - Increasing use of synthetic fibers
  - Promotion of sustainable silk practices
  - Limiting the availability of silk

50. **Sericulture contributes to rural development by:**

- a) Reducing employment opportunities
- b) Increasing rural incomes and providing livelihoods
- c) Promoting urbanization
- d) Decreasing agricultural productivity



**Head**  
**Department of Zoology**  
**Shri Shivaji Mahavidyalaya**  
**Barsi Dist Solapur**

श्री शिवाजी शिक्षण प्रसारक मंडळ, बार्शीचे

# श्री शिवाजी महाविद्यालय, बार्शी.

पा. नं. 969

दिनांक: 92/04/2022

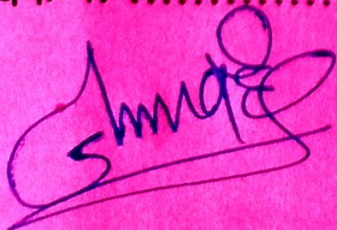
## फी व्यतिरिक्त जमा

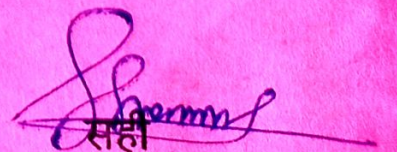
विद्यार्थ्याचे नांव डॉ. श्रीराम वेद्य

आपणाकडून खालील बाबींसाठी खालीलप्रमाणे रक्कम जमा झाली.

त प शी ल	रक्कम	
	रूपये	पैसे
अॅडव्हान्स ग्रँड चेक रू. इतर जमा लायब्ररी पुस्तके ओळखपत्र विक्री	हिंदी अनुवाद प्रमाणपत्र कोर्स 94 विद्यार्थी प्रत्येकी रू. 1000/- प्रमाण अन्य	90400 00
एकूण -	90400 00	

वरीलप्रमाणे रक्कम रूपये - ९०४ हजार पाचशे पचास  
रोख आले / खर्चापोटी अॅडजस्ट केले, ते जमा  
चेक नं. .... ने आले ते जमा



  
सही



Shri Shivaji mahavidyalay Barshi  
Certificate course in translation proficiency  
Department of Hindi

Date

To,  
The principal,  
Shri Shivaji mahavidyalay,  
Barshi dist Solapur

Sub:- regarding approval for expenditure

R/Sir/Madan,

The Hindi department of our college run certificate course in Hindi translation since 2010, under career oriented program of UGC. This is with regard to allotment of remuneration to conductor theory lectures and project of same course of academic year 2021-2022.

Intake capacity-15.

Exam fee- Rs 300/-per Student

Admission fee- Rs.700/-per Student.

Duration. – 1 years

Sr.No	Particulars	Remuneration
1	Lectures	5000
2	Project	3600
3	Co-director	2000
	Total of Rs	10,600

( In words Rs Ten Thousand Six hundred only)

Examination remuneration as per University rules.

The allotment of amount will be enough to conduct the course. I expect that this will be taken in to consideration.

Thanking you,

Yours Faithfully



Dr. Arachana Kambale

( Director)

Certificate course in translation  
proficiency

Dr. Arachana Kambale  
23/04/2022

तिथि- 20 अप्रैल, 2022

सेवा में,  
प्रधानाचार्य,  
श्री शिवाजी महाविद्यालय, बारशी

विषय- हिंदी अनुवाद प्रमाण-पत्र कोर्स की फी जमा करने हेतु....

महोदय,

उपर्युक्त विषय के अनुरूप अपने श्री शिवाजी महाविद्यालय की ओर से सी.ओ.पी के अंतर्गत हिंदी अनुवाद प्रमाण-पत्र कोर्स लिया जाता है। सन 2021-22 इस शैक्षणिक वर्ष में १५ छात्रों ने प्रवेश लिया है। उनकी प्रवेश फी महाविद्यालय के लेखापाल विभाग में जमा करने हेतु आपकी अनुमति अपेक्षित है।

1५x७००=१०,५००/-

हमें आशा है कि आपकी अनुमति जल्द मिलेगी।

  
सह-संयोजक

डॉ श्रीराम वैदय।

हिंदी अनुवाद प्रमाण-पत्र कोर्स।



संयोजक

डॉ अर्चना कांबले

हिंदी अनुवाद प्रमाण-पत्र कोर्स

Dr. Archana Kambale

हिंदी विभागाध्यक्ष

Shri. Shivaji Mahavidyalaya, Barshi  
श्री शिवाजी महाविद्यालय बारशी

श्री. कांबले  
Recd

# श्री शिवाजी महाविद्यालय बारशी

हिंदी विभाग

एवं

पुण्यश्लोक अहिल्यादेवी होलकर सोलापुर विश्वविद्यालय, सोलापुर  
के संयुक्त तत्वावधान में

हिंदी अनुवाद पाठ्यक्रम के लिए प्रवेश लेने वाले छात्रों की सूची।

अ.क्र	छात्र एवं छात्राओं का नाम	प्रवेश फी
१	रामगुडे संतोष पांडुरंग	७००
२	मुलानी सलमा अजीज	७००
३	गव्हाणे अजित बापूराव	७००
४	अतार बुशरा युसुफ	७००
५	सय्यद अब्दुलभाई नज़रुद्दीन	७००
६	वास्टर मिनाक्षी महादेव	७००
७	लोहकरे राणी अर्जुन	७००
८	खोत सुनील प्रकाश	७००
९	कवितके शोभा शिवाजी	७००
१०	शेख आयेशा एजाज	७००
११	पटेल जावेद सतार	७००
१२	मुलानी इस्माईल रज्जाक	७००
१३	शिकलकर सुलताना गफूर	७००
१४	जाधव सुसंजा सुब्राव	७००
१५	जाधव सुबोध सुब्राव	७००
	कुल फी	१०५००

  
सह-संयोजक

डॉ श्रीराम वैद्य

हिंदी अनुवाद प्रमाण-पत्र कोर्स

  
संयोजक

डॉ अर्चना कांबले

हिंदी अनुवाद प्रमाण-पत्र कोर्स

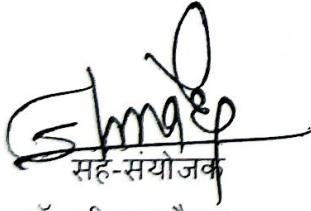
Dr. Archana Kamble

श्री शिवाजी महाविद्यालय बारशी  
Shri Shivaji Mahavidyalaya, Barshi

श्री. क. व. ड.  
Rend

श्री शिवाजी महाविद्यालय बारशी  
हिंदी विभाग  
एवं  
अहिल्यादेवी होलकर सोलापुर विश्वविद्यालय, सोलापुर  
हिंदी अनुवाद प्रमाणपत्र पाठ्यक्रम  
तासिका समय-सारणी

समय	गुरुवार	शुक्रवार	शनिवार
04.00 से 05.00	प्रश्नपत्र क्र.1 वैद्य एस एच	प्रश्नपत्र क्र.2 कांबले ए एस	प्रश्नपत्र क्र.3 प्रोजेक्ट वैद्य एस एच
05.00 से 06.00	प्रश्नपत्र क्र.1 वैद्य एस एच	प्रश्नपत्र क्र.2 कांबले ए एस	प्रश्नपत्र क्र.3 प्रोजेक्ट वैद्य एस एच

  
सह-संयोजक

डॉ. श्रीराम वैद्य  
हिंदी अनुवाद प्रमाण-पत्र कोर्स

  
संयोजक

डॉ. अर्चना कांबले  
हिंदी अनुवाद प्रमाण-पत्र कोर्स  
Dr. Archana Kamble  
Head Dept. of Hindi  
श्री शिवाजी महाविद्यालय, बारशी  
Shri Shivaji Mahavidyalaya, Barshi

श्री. क. व. ड.  
Rend

पुण्यश्लोक अहिल्यादेवी होलकर सोलापुर विश्वविद्यालय, सोलापुर

एवं

श्री शिवाजी महाविद्यालय, बारशी

हिंदी विभाग

Translation proficiency course

हिंदी अनुवाद प्रमाणपत्र कोर्स 2021-22

प्रश्नपत्र का नाम : व्यावहारिक अनुवाद स्वरूप और समस्याएं

Paper No- 2

समय : सुबह 11.00 बज तिथि : 25/06/2022

अंक - 100

प्राप्त अंक-

छात्र का नाम:-.....

महाविद्यालय का नाम:-.....

परिक्षा केंद्र:-.....

परिक्षक का हस्ताक्षर

पर्यवेक्षक का हस्ताक्षर

छात्र का हस्ताक्षर

सूचना :- 1. निम्नलिखित 55 प्रश्नों में से 50 प्रश्नों के उत्तर लिखना अनिवार्य है।

2. निम्नलिखित विकल्पों में से सही विकल्प चुनकर रिक्त स्थानों की पूर्ति कीजिए।

3. एक वस्तुनिष्ठ प्रश्न 2 अंकों के लिए है।

प्रश्न 1. निम्नलिखित विकल्पों में से सही विकल्प चुनकर रिक्त स्थानों की पूर्ति कीजिए।

1 वाणिज्य अनुवाद में .....और संरचना प्रमुख होती हैं।

अ. शब्द            ब. पद            क. वाक्य            ड. रूप

2. ....अनुवाद में विषय वस्तु और प्रकृति विशिष्ट भूमिका निभाती हैं।

2. ....अनुवाद में विषय वस्तु और प्रकृति विशिष्ट भूमिका निभाती हैं।

अ. आशु ब. वाणिज्य क. काव्य ड. नाटक

3. .... अनुवाद में व्यापार और कारोबार के साथ-साथ बैंकिंग और बीमा व्यवस्था की महत्वपूर्ण भूमिका होती है।

अ. संचार ब. न्यायालय क. विज्ञापन ड. वाणिज्य

4. वाणिज्य साहित्य के विशिष्ट व्यक्तियों का अनुवाद करते हुए उनके .....अर्थ ग्रहण किया जाता है।

अ. संदर्भ ब. वाक्य क. शब्द ड. वर्तनी

5. वाणिज्यिक साहित्य की भाषा प्रायः .....और अर्थ तकनीकी और गैर तकनीकी होती हैं।

अ. सरल तकनीकी ब. क्लिष्ट क. तकनीकी ड. सरल

6. वाणिज्यिक साहित्य में .....विन्यास भी होता है।

अ. वाक्य ब. संदर्भ क. छंद ड. पद

7. वाणिज्य अनुवाद में मुहावरेदार या पदबंधिय अभिव्यक्तियां .....अनुकूल अर्थ प्रदान करती हैं।

अ. परिस्थिति ब. विषय क. अभिव्यक्ति ड. कल्पना

8. वाणिज्य अनुवाद की भाषा सहज और .....परख होती है।

अ. शब्द ब. व्यंजना। क. लक्षणा। ड. अभिधा

9. ड्राइडन के अनुसार 'अनुवाद एक प्रकार से .....की अनुकृति हैं।'

अ. जीवन ब. साहित्य क. व्यवसाय ड. अर्थ

10. वाणिज्य अनुवाद में अनुवादक से .....ज्ञान की अपेक्षा रहती है।

अ. वैज्ञानिक ब. कला क. अर्थ ड. विषय

11. ....साहित्य में विज्ञापन का भी विशेष महत्व है।

अ. न्यायालय ब. वाणिज्य क. काव्य ड. उपन्यास

12. वाणिज्य संबंधी .....के अनुवाद अनुसृजन होते हैं।

अ. बिमा ब. विधी क. संचार ड. विज्ञापन

13. वाणिज्य का महत्वपूर्ण अंग..... है।

- अ. संचार ब रेल क बैंक ड ऋण
14. ....में भारतीय रिजर्व बैंक की स्थापना हुई।  
अ. 1936 ब 1938 क 1935 ड 1934
15. संचार माध्यमों का अनुवाद शाब्दिक ना होकर .....अधिक होता है।  
अ. अर्थपरक ब भावात्मक क कलात्मक ड संदर्भपरक
16. ....माध्यमों में डबिंग भी अनुवाद का महत्वपूर्ण आयाम है  
अ.संचार ब पर्यटन क समाचार ड रेल
17. प्रत्येक भाषा भाषी समाज के अनुभवों का अपना एक विशिष्ट.....  
सांस्कृतिक धरातल होता है।  
अ.आर्थिक ब राजनीतिक क सामाजिक ड संगठन
18. भारतीय मुद्रित संचार माध्यमों में अनुवाद अधिकांशतः .....से हिंदी  
में होता है।  
अ. तमिल ब कन्नड क हिंदी ड अंग्रेजी
19. भोलानाथ तिवारी के अनुसार समाचार माध्यमों के अनुवाद में संक्षिप्तियों,  
शिर्षको के अनुवाद काफी .....होते हैं।  
अ.दुष्कर ब आसान क सुकर ड काल्पनिक
20. ....के अनुवाद में तात्कालिकता की बाधा होती है।  
अ.कार्यालय ब साहित्य क समाचार ड विज्ञापन
21. जनसंचार की भाषा सामान्य एवं..... होती है।  
अ. कठोर ब मुहावरेदार क क्लिष्ट ड आसान
22. ....की भाषा विशेष रूप से सर्जनात्मक होती है।  
अ. विज्ञापन ब न्यायालय क बैंक ड जनसंचार
23. साहित्यिक पत्रिकाओं की भाषा में अनुवाद की .....सिद्धांतों का  
प्रतिपादन किया जा रहा है।  
अ. वर्तमान ब आधुनिक क पारंपरिक ड प्राचीन
24. बाल साहित्य में अनुवाद के माध्यम से प्राचीन भारतीय साहित्य और विश्व  
साहित्य की श्रेष्ठ रचनाओं का .....हो रहा है।

- अ.नाट्यानुवाद ब. अनुवाद क. छायानुवाद ड. काव्यानुवाद
25. सीताकांत महापात्र के अनुसार साहित्य का अनुवाद उसकी..... का अनुवाद होता है।
- अ. रूढ़ियों ब.परंपराओं क संस्कृति ड. भाषा
26. ....भाषा को अंग्रेजी में official language शब्द का प्रयोग मिलता है।
- अ.कार्यालयीन ब सामाजिक क.संगठीत ड. सामुहिक
27. कार्यालय अनुवाद के .....भेद माने जाते हैं।
- अ. 5 ब. 2 क. 3 ड. 4
28. ....अनुवाद के अंतर्गत संविधान, अधिनियम अध्यादेश बिल का अनुवाद किया जाता है।
- अ. साहित्यिक ब.सांविधिक क कार्यालयीन ड.असांविधिक
29. ....के अनुवाद में भाषा की जटिलता होती है।
- अ. नाटक ब. संचार क.कानून ड.विधि
30. विधि शब्दावली के एक एक शब्द अपने विशिष्ट....., विशिष्ट संकल्पना से ओत प्रेत होते हैं।
- अ.अर्थ ब शब्द क. वाक्य ड. संदर्भ
31. केंद्र और राज्य सरकार के दस्तावेजों और अन्य लेखकों की मानक प्रारूप हिंदी में तैयार करने का काम .....मंत्रालय का है।
- अ. शिक्षा ब.विधि क. अर्थ ड.संरक्षण
32. असांविधिक अनुवाद के अंतर्गत भारत सरकार की ..... से संबंधित साहित्य को छोड़कर शेष सभी विधितर साहित्य का अनुवाद किया जाता है।
- अ. कार्यालय ब. सामाजिक व्यवस्था क. न्याय व्यवस्था ड. अर्थ व्यवस्था
33. केंद्रीय अनुवाद ब्यूरो की स्थापना मार्च ..... में हुई।
- अ.1971 ब 1972 क.1974 ड.1975
34. भारत सरकार के कार्यालयों के अतिरिक्त भारत सरकार के अधीन काम करने वाले उपक्रमों निगमों तथा कंपनियों की विजिटर सामग्री का अनुवाद .....ही करता है।



- अ. संगठन ब. एजेन्सी क. मंत्रालय ड. ब्यूरो
35. सांविधिक सामग्री को .....भागों में विभाजित किया है।  
अ.1 ब. 3 क.4 ड.5
36. ....सामग्री के अनुवाद के अंतर्गत सामान्य नियमावली, फार्म तथा रजिस्टर आदि आते हैं जिसका अनुवाद संबंधित विभाग द्वारा किया जाता है।  
अ. गैरतकनीकी ब. तकनीकी क. सरकारी ड. संस्थागत
37. राजभाषा आयोग के अनुसार .....की भाषा सुनिश्चित संक्षिप्त और सुस्पष्ट होनी चाहिए।  
अ. उपन्यास। ब. बोलचाल। क. कानून ड. साहित्य
38. विधि भाषा की शब्दों का प्रयोग विशेष .....के प्रतीक के रूप में किया जाता है।  
अ. शब्द ब. प्रांत क. समाज ड. अर्थ
39. विधि एवं न्यायालय भाषा के ..... एक ही अर्थ के बोधक होते हैं।  
अ. अर्थ ब. वाक्य क. शब्द ड. संरचना
40. आचार्य .....के अनुसार "कविता का अनुवादक कवि विधि का अनुवादक विधिवेत्ता और संविधान का अनुवाद और संविधान का ज्ञाता होना चाहिए।"  
अ. रघुवीर ब. भोलानाथ तिवारी क. सुरेश कुमार ड. भरतमुनी
41. विधि में सामान्य बोलचाल के कुछ शब्दों के विशेष अर्थ होते हैं जैसे Assurance का अर्थ बीमा न होकर .....पत्र है।  
अ. ऋण ब. संरक्षण क. हस्तांतरण ड. अहस्तांतरण
42. विधि अनुवाद में अर्थ के सटीक अभिव्यक्ति के साथ-साथ .....का भी विशेष महत्व है।  
अ. सरलता ब. छंद क. कल्पना ड. शैली
43. विधि और न्यायालय अनुवाद मुख्यतः .....ही होता है।  
अ. शब्दानुवाद ब. भावानुवाद क. छाया अनुवाद ड. काव्यानुवाद
44. विधि और न्यायालय अनुवाद में .....को विशेष महत्व दिया जाता है।  
अ. अभिव्यक्ति ब. संदर्भ क. प्रतिभा ड. शब्द

45. विधि या न्यायालयीन अनुवाद करते समय भारत सरकार के विधि मंत्रालय द्वारा प्रकाशित .....का प्रयोग किया जाता है।

अ.दस्तावेजो ब. विधि शब्दावली क.विधी मुहावरे कोश ड. शब्दकोश

46. स्रोत भाषा और लक्ष्य भाषा में .....गत और संरचनात्मक अनेक भिन्नता होती हैं जो अनुवादक के समक्ष चुनौतियां बनकर खड़ी हो जाती हैं।

अ. भाषा ब. अर्थ क. प्रकृति ड. शब्द

47. ....स्रोत भाषा की विषय वस्तु को लक्ष्य भाषा में रूपांतरित कर के एक महत्वपूर्ण दायित्व का निर्वाह करता है।

अ.अनुवादक ब. कोश क. सूचि ड. मशिन

48. अनुवादक से अपेक्षा की जाती है कि उसे .....का ज्ञान होना चाहिए।

अ. विषयानूकूल ब.संकुचित विषय क विशिष्ट विषय ड. विभिन्न विषयों

49. अनुवादक को सर्वप्रथम पाठक के रूप में स्रोत भाषा के मूल पाठ का .....करना पड़ता है।

अ.अर्थ ग्रहण ब.विश्लेषण क. अंतरण ड. समायोजन

50. वाक्योपरि स्तर को .....कहते हैं जिसमें वाक्य संयोजन के धरातल पर अर्थ की प्रतीति होती है।

अ. परिवृत्ति ब.अनुवाद क. प्रोक्ति ड.प्रयुक्ति

51. अनुवादक संस्कृति का .....है संस्कृति का अग्रदूत है।

अ.नायक ब.वाहक क.अध्यापक ड. उपभोक्ता

52. ....ही संस्कृतियों की पहचान का सार्थक उपकरण है।

अ.परंपरा ब अनुवाद क. राजनीति ड भाषा

53. विधी साहित्य के अनुवाद में जो एक ही वाक्य में कई .....होते हैं।

अ. शब्द ब उपवाक्य क.वाक्य ड अर्थ

54. अनुवादक केवल भाषा के व्यवधान को हटाकर दो भिन्न सांस्कृतिक परिवेशों में रहने वाले व्यक्तियों के बीच संपर्क .....बनकर खड़ा होता है।

अ. मशिन ब सेतु क व्यवधान ड व्यक्ति

55. अनुवादक दो भाषाओं की सांस्कृतिक, सूक्ष्मताओ और..... की बारीकियों को समझ कर ही अनुवाद के साथ न्याय कर सकता है।

अ. धार्मिकता ब व्यक्तित्व क प्रतिभा ड अभिव्यक्तियों