



Shri Shivaji Education Society Amravati's
SHRI SHIVAJI SCIENCE AND ARTS COLLEGE
Chikhli, Dist. Buldana- 443201.
NAAC Reaccredited with 'B++' Grade (CGPA 2.82)
ISO: 9001-2015



Dr. Omraj S. Deshmukh
Principal

Hon'ble Shri Harshvardhan P. Deshmukh
President

1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

Content

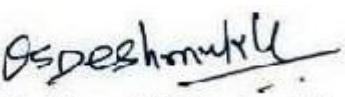
Syllabus

- Syllabus on Professional Ethics,
- Syllabus on Gender Sensitization
- Syllabus on Human Values
- Syllabus on Environment and Sustainability

Activities Conducted for the address cross cutting issues relevant to

- Environment and Sustainability,
- Gender Sensitization
- Human Values
- Professional Ethics




Dr. Omraj S. Deshmukh
Principal
Shri Shivaji Sci. & Arts
College, Chikhli, Dist. Buldana

Syllabus on
Professional Ethics

Criterion – I- Curricular Aspects [QIM – 1.3.1]

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प्रा.लांजेवार, गुल्हाने, कडु : लेखाकर्म भाग-१ ; संगम प्रकाशन.
नाथ, लांजेवार, भागवत : उच्च लेखाकर्म भाग-१ ; महाराष्ट्र राज्य ग्रंथ निर्मिती मं.
प्रा.ए.एस.उखलकर : उच्च लेखाकर्म भाग-१ ; विद्या प्रकाशन.
रोडे, स्मार्थ, ढोन्हरे : प्रथम वर्ष जमाखर्च - खंड १ ; एस.चौद क.लि.

(III) PRINCIPLES OF BUSINESS MANAGEMENT

TIME : 3 Hours

Marks : 70

Objective- To develop the basic managerial skills among the students to face domestic as well as global business challenges.

Unit I: INTRODUCTORY

- 1.1 Business – Meaning, Nature, Scope & objectives.
- 1.2 Management Concept – Nature, Importance and Process.
- 1.3 Managerial Role & its importance.
- 1.4 Development of Management Science- F. W. Taylor, Fayol's Contributions.

Unit II: PLANNING

- 2.1 Planning- Concept & process.
- 2.2 Types of Planning.
- 2.3 Strategic planning- Meaning and Formulation.
- 2.4 Decision Making- Definition & process.

Unit III: ORGANIZING

- 3.1 Organizing- Concept & nature.
- 3.2 Authority and Responsibility.
- 3.3 Centralization & Decentralization- Concept, Advantages & Disadvantages.
- 3.4 Organization structure- Forms and contingency factors.

Unit IV : DIRECTING

- 4.1 Motivation - Meaning, Importance, Type of Motivation, Maslow theory.
- 4.2 Incentive- Concept, Financial and Non financial Incentives.
- 4.3 Moral - Meaning and Importance.
- 4.4 Communication- Meaning, Verbal and Non verbal Communication, Barries to communication.

Unit V : CONTROLLING

- 5.1 Concept and process of control.
- 5.2 Techniques of controls.
- 5.3 Effective Control Systems
- 5.4 Leadership- Concept, Theories and style.

- * William Pickles : Accountancy.
- * A. Mukherjee, M. Hanif : Modern Accountancy ; Tata McGraw Hill Publishing Co. Ltd.
- * P.C.Tulsian : Accountancy ; Tata McGraw Hill Publishing Co. Ltd.
- * Monga, Gandhi, Kadu : Advanced Accounts ; National Publishing House.
- * S. Chakravorti : Advanced Accounting.
- * Fundamentals of Accounting : R.L.Gupta & V.K.Gupta, Sultanchand & Sons.
- * Fundamentals of Accounting : T.P.Ghosh, Sultanchand & Sons.
- * Financial Accounting : Payal Prakashan, Nagpur
- * Financial Accounting : V.R.Mohota, Rashi publication, Arni, Distt. Yavatmal.
- * Financial Accounting : Dr.Gajanan Patil, Dr.Shakil Sattar, Dr.Anil Bhawsar, Dr.Dattatraya Gujrathi-Das Ganu Prakashan, Nagpur
- * Financial Accounting : Dr.Kanetkar Medha, Dr. Baheti D.R.- Shri Sainath Prakashan, Nagpur.
- * Financial Accounting : L.N. Chopde, D.H. Choudhary, Dr. Raju, L. Rathi, Sheth Publishers Pvt. Ltd., Mumbai-31

हिन्दी

रूपराम गुप्त, विद्यासरन गुप्त : एडवांस्ड एकाउन्टेन्सी ; आगरा बुक स्टोअर्स.

डॉ. एस.एम.शुक्ला : अडव्हान्स अकॉन्टन्सी.

सक्सेना, वैश्य : उच्च लेखाकर्म

डॉ.एम.पी.खंडेलवाल : उच्चतक लेखाकर्म.

ए.एन.अग्रवाल : उच्चतर लेखाविज्ञान.

जे.के.अग्रवाल : बृहत लेखाकर्म.

गुप्ता, अग्रवाल : एडवान्सड एकाउन्ट्स ; एस.चान्द.

मराठी

डॉ. शुक्ल, डॉगरे, मोहता : लेखा तत्व आणि व्यवहार ; पिंपळापुरे ॲण्ड कं. पब्लिशर्स, नागपुर.

प्रा. अरविंद शेंडे, प्रा.अब्दुल बारी : वित्तिय लेखांकन भाग-१ ; अनुराधा प्रकाशन, नागपुर.

प्रा. अरविंद शेंडे, प्रा.अब्दुल बारी : आर्थिक लेखांकन भाग-१ ; अनुराधा प्रकाशन, नागपुर.

गजानन पाटील, भरत मेघे, विलास चोपडे : आर्थिक लेखांकन ; दत्त सन्स, सदर, नागपुर.

प्रा.भ.नी.गर्ग, प्रा.वि.द.पेंढारकर, ज.अ.पाठ्ये : उच्च लेखाकर्म ; मंगेश प्रकाशन.

1.2 Accounting Transactions : Classification of Accounts, Rules of debit & credit, Journal & ledger, Rules regarding posting and balancing of ledger Account, Sub-division of Journal, Trial Balance.

Unit-II 2.1 Final Accounts of Individuals: Manufacturing Account, Trading Account, Profit and loss Account, Balance sheet with adjustments.

2.2 Rectification of errors : Types of errors, Rectification entries and suspense Account.

Unit-III 3.1 Depreciation Methods : Concepts of depreciation, Different methods of depreciation. Problem on-

 I) Straight line Method.

 II) Reducing Balance Method.

3.2 Accounts of Non-trading Institutions.

Unit-IV 4.1 Special Accounting areas : Accounts of Co-operative Societies.

4.2 Accounting for Agriculture farms.

Unit-V Insolvency Account of and individuals : Law's of insolvency- Provisions for preferential creditors, Meaning of insolvency, Procedure of insolvency, Problems on Insolvency Accounts.

BOOKS RECOMMENDED

- * Anthony, R. N. and Reece, J. S. : Accounting Principles; Richard Irwin Inc.
- * Gupta, R. L. and Radhaswamy, M : Financial Accounting; Sultan Chand and Sons. New Delhi.
- * Monga J. R. Ahuja Girish, and Sehgal Ashok : Financial Accounting; Mayur Paper Back, Noida.
- * Shukla, M. C., Grewal T.S., and Gupta, S. C. : Advanced Accounts ; S Chand & Co New Delhi.
- * Compendium of Statement and Standards of Accounting ; The Institute of Chartered Accountants of India, New Delhi.
- * Agarwala A. N., Agarwala K. N. : Higher Sciences of Accountancy ; Kitab Mahal, Allahabad. (Hindi and English)
- * Ashok Banerjee : Financial Accounting ; Excel Books, New Delhi – 110028.
- * N. Vinayakam, P.L.Mani, K.L.Nagarajan : Principles of Accountancy ; Eurasia Publishing House (Pvt.) Ltd., New Delhi – 110 055.
- * R.R.Gupta : Advanced Accountancy.
- * Jain, Narang (Kalyanipulli) : Advanced Accountancy.

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Marginal Productivity theory and demand factors:
Nature of supply of factors inputs.

5.2 B) WAGES:

Determination of wage rates under perfect competition and monopoly. Exploitation of Labour.

5.3 C) RENT:

Concept, Ricardian and Modern Theories of Rent: Quasi-Rent.

5.4 D) INTEREST:

Concept and Time preference, Loanable funds and Liquidity Preference Theory of Interest.

5.5 E) PROFIT:

Concepts and dynamic and risk bearing theory of Profit

BOOKS RECOMMENDED :

1. Ahuja H.L. : Business Economics : S.Chand & Co. New Delhi.
2. Business Economics : Pimpalkar, Bapat, Joshi, Orient-Longmans.
3. Koustsoyianni A Modern Micro Economics: Macmillan New Delhi.
4. अर्थशास्त्राचे सिध्दांत - प्रा.जी.एन.ज्ञानरे, पिंपळापूरे प्रकाशन.
5. व्यावसायिक अर्थशास्त्र - डॉ.रा.य.माहोरे, अंशुल पब्लीकेशन, नागपूर.
6. अर्थशास्त्रके सिध्दांत - जोशी, सिंग, श्रीवास्तव, जयपूर.
7. आधुनिक सुक्ष्मअर्थशास्त्र - के.पी.एम.सुंदरम्.
8. व्यावसायिक अर्थशास्त्र - प्रा.एच.आर.तिवारी, डॉ.के.के.पाटील, डॉ.बी.बी.तायवाडे आणि वाय.पी.सिंग : अद्वैत प्रकाशन, अकोला.
9. Business Economics : Dr.Sudhir Bodhankar, Dr.Medha Kanetkar, Shri Sainath Prakashan, Nagpur.
10. Business Economics : Dr. (Mrs.) Pushpa Tayade- Shree Mangesh Prakashan , Ramdaspeth, Nagpur-10.
11. Business Economics (English Edition) :Dr.G.N. Zamare-Pimpalapure & Co. Publishers, Nagpur.
12. व्यावसायिक अर्थशास्त्र (मराठी आवृत्ती) :डॉ.जी.एन.ज्ञानरे-Pimpalapure & Co. Publishers, Nagpur.

(ii) FINANCIAL ACCOUNTING

Time : 3 Hours

Marks : 70

Objective : To impart basic Accounting knowledge as applicable to business.

Unit-I 1.1 Meaning and scope of Accounting Need, development and definition of Book keeping and Accounting, Branches of Accounting, Objective of Accounting, Accounting principles, concepts and conventions.

Unit-II: DEMAND:

- 2.1 Law of Demand, Elasticity of Demand :
- 2.2 Concept, Importance and Measurement of Elasticity of Demand.
- 2.3 Determinants of Elasticity of Demand.
- 2.4 Average Revenue, Marginal Revenue and Elasticity of Demand.
- 2.5 Price income and cross Elasticities.
- 2.6 Concept and Characteristics of Indifference Curve.

Unit-III: PRODUCTION FUNCTION:

- 3.1 Law of Variable Proportions.
- 3.2 Concept of ISO-quants.
- 3.3 Economic regions and optimum factor Combination.
- 3.4 Internal and External economics and diseconomics.

THEORY OF COST:

- 3.5 Short-run and long-run cost curves.
- 3.6 Traditional and Modern approaches.

Unit-IV: MARKET STRUCTURES:

- 4.1 Meaning & classification of Markets.
Decisions of Business.
- 4.2 A) **Perfect Competition :**
Meaning and Characteristics.
- 4.3 B) **Monopoly :** Determination of price under monopoly.
Equilibrium of a firm, Comparison between competition and monopoly. Multi-plant monopoly.
Price discrimination, Practical applications,
- 4.4 C) **Monopolistic Competition :**
Meaning and characteristics, Price and output determination under monopolistic competition.
Product differentiations selling cost, Comparison with perfect competition. Excess capacity under monopolistic competition.
- 4.5 D) **Oligopoly:**
Characteristics, indeterminate pricing and output.
Classical Models of Oligopoly; Price leadership; Collusive Oligopoly; Kinked demand curve.

Unit-V: 5.1 A) FACTOR PRICING:

Distribution of Marks

Unit-I Practical English prose and verse – edited by G.E.B. COE

Q. 1) Long Answer Questions	10 Marks
(One to be attempted out of two)	
Q. 2) Short Answer Questions	15 Marks
(Any three to be attempted out of five)	

Unit-II

Q. 3) Poetry section	20 Marks
Short Answer Question	
(Four to be attempted out of Six)	

Unit-III

Q. 4) Precis Writing.	5 Marks
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Unit-IV

Q. 5) Comprehension of an unseen passage	5 Marks
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Unit-V

Q. 6) An essay of about 250 words to be attempted out of the given five Topics.	15 Marks
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70 Marks

2. COMMERCE DISCIPLINE

(i) BUSINESS ECONOMICS

Time:3 Hours

Marks : 70

Unit-I : NATURE AND SCOPE OF ECONOMICS:

- 1.1 Definition of Economics : Adam Smith, Marshall, Robbins & J.K. Mehata.
- 1.2 Nature of Economic Law Types, Limitations and importance.
- 1.3 Micro & Macro Economics, Meaning, Merits and Demerits.
- 1.4 Managerial Economics: Concept and objectives.
- 1.5 Basic problems of an Economy.
- 1.6 Working of Price Mechanism

Reference books:

- * Management Concept and Practices, by Manmohan Prasad, Himalaya Publishing House.
- * Essentials of Management by Weihrich and Koonts. Tata McGraw Hill.
- * Management Concept & Principles, by Manmohan Prasad, Himalaya Publication.
- * Management by Stonel & Foceman. Prentice Hall of India.
- * Fundamentals of Management by Robbins. Pearson Education.
- * Management Principles and Practices, by Prasad, Lallan & Gulshan.S.Chand.
- * व्यवसाय व्यवस्थापनाचे सिद्धांत – Prof. S.M.Kolte, Pimpalpure & Co. Publishers, Nagpur.
- * व्यवसाय प्रबंधनाची मुलतत्वे : डॉ. आनंद दत्तात्रय भोसले – नम्ब प्रकाशन, शाम नगर, अमरावती.
- * Principles of Business Management : L.N. Chopde, D.H. Choudhary, Dr. Raju L. Rathi - Sheth Publishers Pvt. Ltd. Mumbai-31

(IV) COMPUTER FUNDAMENTALS AND OPERATING SYSTEM

Time:3 Hours

Marks:100

(60 Marks for theory + 40 Marks for Practical)

Objective: The objectives of this course are to provide basic information of computer, Word Processing and Presentation.

Unit-I Fundamentals of Computer :

Introduction: Definition of Computer, Evolution of Computer, Characteristics of Computer, Generations of Computer, Types of Computer (By Logic and By size).

Basic Computer Organization : Computer Block Diagram, Input Unit, Output Unit and CPU: Memory Unit, Arithmetic Unit, Control Unit.

Unit-II Storage : Primary Storage : Concept of Memory, RAM: Read-Write: SRAM,DRAM; Read-Only: ROM, PROM and EPROM.

Secondary Storage : Concept of Secondary Storage, Secondary Storage, Devices: Magnetic Tape, Magnetic Disk, Floppy Disk, Hard disk, Compact disk, Optical Disk, Pen drive, Memory card, Data Card.

Software : Concept of Software, Types of Software : Application Software & System Software.

Languages : Concept of Computer Languages, Machine Language, Assembly Language, High Level Language, 4th Generational Languages.

B.Com-II

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card, Credit card, Agencies services, E-Banking, Core-Banking.

Unit-V

- 5.1 RBI- History, Importance, Functions & Credit Control.
- 5.2 Various Rates- Bill, Bonds, Deposit, Administrative Rate & Market determined rate, Bank Rate, Repo rate.
- 5.3 Regulatory Authority of Money & Finance Market.
- 5.4 Stock Exchange- Concept, Features & Role in Indian Economy.

Books Recommended-

1. Gupta S.B. : Monetary planning of India, S.Chand, New Delhi.
2. G.N.Halm : Monetary theory.
3. K.N.Garg : Money Banking
4. R.B.I. : Bulletins
5. Report of Currency & Finance.
6. Khan M.Y : Indian Financial System, Theory & Practice, Tata McGraw Hill, New Delhi.
7. पैसा आणि वित्त : डॉ.जितेंद्र अहिरराव
8. मुद्रा आणि वित्तीय पद्धत : डॉ.जी.एन.झामरे
9. भारतीय बँकिंग प्रणाली : डॉ.सुधीर बोधनकर, डॉ.मेधा कानेटकर, साईनाथ प्रकाशन, नागपुर
10. मौद्रिक अर्थशास्त्र, माधव शेळके

(V) INFORMATION TECHNOLOGY AND BUSINESS DATA PROCESSING

Time:3 Hours

Marks:100

(60 Marks for Theory + 40 Marks for Practical)

Unit-I **Information Technology:**

Introduction to Information Technology, Data: Data concept, Use of Data in Computing.

Information : Concepts of Information, Characteristics of Information, Uses of Information within the Organization and outside the Organization. Data Processing : concept of Data processing, Advantage of Data processing, Applications Data Processing in business, Uses of IT in business and various fields.

Unit-II **Database :** Introduction, Database Concept, Need of Database, Advantages and Disadvantages of Database, Basic Concept of Database Design, Data Warehouse and Data Mining.

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10. Principles and Practice of Auditing: By T.R.Bottliboi.
11. Auditing Principles, Practice & Problems - T.Prakash.
12. Auditing : A.S.Ukhalkar- Pimpalapure & Co. Publishers, Nagpur.
13. Income Tax & Auditing : Dr. Vijay Upgrade, Dr. Arvind Shende-
Anuradha Prakashan, Nagpur-24
14. अंकेक्षण: डॉ. अरविंद शेंडे, डॉ. वसंतराव रुपनवार, डॉ. मार्टिं खुपसे- अनुराधा
प्रकाशन, नागपूर-२४

(iv) MONEY AND FINANCIAL SYSTEM

Time: 3 Hours

Marks:70

Unit-1 : MONEY.

- 1.1 Meaning, Nature, Functions & Importance of Money.
- 1.2 Currency Chesis- Paper currency, Method of Note issue, Types of Money.
(Commodity money, Metalic money, paper money, credit money, E-Money)
- 1.3 Supply & Value of money, Fisher's Quantity theory of money.
- 1.4 Inflation & Deflation- Causes, effects & measures.

Unit-II MONEY MARKET.

- 2.1 Meaning, Nature, Objectives & Features.
- 2.2 Indian Money Market- Structure & components.
- 2.3 Indian Capital Market- Meaning, Features &Components.
- 2.4 Current Trends in money & capital market, Role of SEBI in money & capital market.

Unit-III FINANCE.

- 3.1 Meaning, Kind's & Importance.
- 3.2 Financial system & It's role in Indian Economy.
- 3.3 Monetary Policy- Meaning, Objectives & Limitations.
- 3.4 Fiscal Policy- Meaning, Objectives & Role in Economy.

Unit-IV INDIAN FINANCIAL SYSTEM.

- 4.1 Brief History, Structure.
- 4.2 Commercial Bank, its function & credit creation.
- 4.3 Financial Institutions- Meaning, Main features & Role in Financial system.
- 4.4 Current Trends in Banking Services in India- (ATM, Debit

Verification and Valuation of Assets and liabilities.

Unit-V : Company Auditor: Appointment, Power, Duties, Liabilities;

Divisible Profits and dividend;

Audit Report : Standard and Qualified Report.

Unit-VI : Special Audit of Banking, Insurance Companies and Educational Institutions.

Investigation : Audit of non-profit Companies.

a) When fraud is suspected.

b) When a running Business is proposed.

Notes :- Allocation of Marks for Section A : Income Tax.

1) One long answer type Question on any Marks 15
one of the three Units of Section A.

2) Two short answer type Question on Marks 20
remaining two units of Section A having
two sub Questions of 5 Marks each.

Total 35

Allocation of Marks for Section B Auditing

1) One long answer type Question on any Marks 15
one of the three Units of Section B

2) Two short answer type Question on Marks 20
remaining two Units of this Section having
two sub Questions of 5 Marks each.

Total 35

BOOKS RECOMMENDED :

1. Income Tax Law and practice : Mehrotra and Goyal.
2. Income Tax Law and practice : Bhagawati Prasad.
3. A Systematic Approach to Income Tax : Gupta & Ahuja.
4. आयकर तत्त्व और व्यवहार : मेहरोत्रा और गोयल
5. अंकेक्षणाधी मूलसत्त्व : ए.एस्. उखलकर
6. अंकेक्षण : जे.सी.गांधी
7. अंकेक्षण : दलाल नाथ
8. अंकेक्षण : एस्.एस्.शुक्ला
9. अंकेक्षण के सिद्धांत : सुरेशचंद्र सक्सेना

- R.K.Sawlikar, Dr.R.P.Ingole, S.B.Kishor : Basic of Computer and Statistical Techniques -Das Ganu Prakashan, Nagpur.
- Dr.Gore C.V. : Business Mathematics; Pimpalapure & Co. Publishers, Nagpur.
- Dr.Sukhadeve Varsha S. : A Text Book of Modern Approach to Statistics- Sugawa Prakashan, Pune - 30

मराठी - हिन्दी :

- सु.ना.बोधनकर : सांख्यिकी.
- लांजेवार, कद्रेकर : सांख्यिकी.
- एलहान्स : सांख्यिकी के सिध्दांत.
- नी.मा.डोंगरे : व्यापार गणित.
- शुक्ल सहाय : सांख्यिकी के सिध्दांत.
- मंगळगीरी, देशकर, देशपांडे : व्यावसायिक गणित व सांख्यिकी.
- रा.जा.गजके : व्यापार अंकगणित.
- जे.के.अग्रवाल : व्यापारिक अंकगणित.

(iii) INCOME TAX AND AUDITING

Time: 3 Hours

Marks: 70

SECTION -A

INCOME TAX

Unit-I : Basic Concept: Income Tax, Agricultural Income, Casual Income, Assessment Year; Gross total Income, Total Income, Person, Tax Planning; Residence and Tax liability; Income which does not from part of total Income,

Unit-II : Income from salaries head; Income from House Property; Profits and Gains from Business and Profession; Capital Gain.

Unit-III : Deductions to be made from Gross Income in computing total Income; Computation of total Income of Individual, Income from other sources.

Tax Management: Assessment Procedure.

Tax Administration : Authorities, Appeals; Penalties.

SECTION -B

AUDITING

Unit-IV : Auditing : Meaning, Objectives and Advantages of Auditing, Types of Audit; Internal check system, Audit Programme; Audit Books, Routine checking and Vouching;

Unit-V

Analysis of Bivariate Data :

- a) Co-efficient of correlation karl Pearson's Formula. Calculation of Co-efficient of correlation in grouped and ungrouped data. Probable error.
- b) Inter Pollution - Newton's Method.

BOOKS RECOMMENDED

- Allen R.G.D. : Basic Mathematics ; Macmillan, New Delhi.
- Dowling, E.T. : Mathematics for Economics ; Schaum Series, McGraw Hill London.
- Loomba, Paul : Linear Programming ; Tata McGraw Hill, New Delhi.
- Vohra, N.D. : Quantitative Techniques in Management ; Tata McGraw Hill New Delhi.
- Soni, R.S. : Business Mathematics ; Pitamber Publishing House.
- Kapoor, V.K. : Business Mathematics ; Sultan Chand & Sons, Delhi.
- Holden : Mathematics for Business and Economics ; Macmillan India, New Delhi.
- Ghosh and Basu : Commercial Mathematics.
- Suranjan Saha : Elementary Business Mathematics ; Kitab Mahal, Allahabad.
- Hooda, R.P. : Statistics for Business and Economics ; Macmillan, New Delhi.
- Ya-Lun Chou : Statistical Analysis with Business and Economic Applications, Holt ; Rinehart & Winster, New York.
- Lewin and Rubin : Statistics for Management ; Prentice – Hall of India, New Delhi.
- Hoel & Jesson : Basic Statistics for Business and Economics ; John Wiley and Sons, New York.
- Elhance D.N. : Fundamentals of Statistics.
- Asthana B.N. : Applied Statistics in India.
- Shrivastava S.S. : Introduction to Statistics.
- Gupta S.P. : Statistical Methods.
- Johnson, Bhattacharya (Wiley) : Statistics – Principles and Methods.

- ए.एन.अग्रवाल : उच्चतर लेखाविज्ञान.

मराठी :

- नाथ, लांजेवार, भागवत, दलाल : उच्च लेखाकर्म
- लांजेवार, गुल्हाने, कडु : उच्च लेखाकर्म - भाग-२
- उखळकर : उच्च लेखाकर्म - खंड-२.
- रोडे, स्मार्ट, कडु, पांडे : कंपन्यांची खाती.
- प्रा.अब्दूल बारी, डॉ.अरविंद शेंडे, प्रा.माधव हाते, डॉ.सुभाष जाधव : निगमिय लेखांकन -अनुराधा प्रकाशन, नागपूर-२४

(ii) BUSINESS MATHEMATICS AND STATISTICS

Time : 3 Hours

Marks : 70

Objectives : The objective of this course is to enable the students to have such minimum knowledge of Mathematics and to gain understanding of Statistical techniques as are applicable to business and economic situations.

Unit-I	1.1	a) Natural Numbers, Integers, H.C.F. & L.C.M on two or more integers.
	1.2	b) Linear Equation in one and two variables method with application.
	1.3	Ratio and percentage. Concept of proportion. Simple and Compound proportion, Direct and inverse proportion.
		Mathematics of Finance : Simple Interest, Compound Interest, Concept of present value and amount of a sum, Annuities, Types of annuities, Present value and amount of an annuity including the case of continuous compounding.
Unit-II		Introduction : Statistics as a subject, Descriptive Statistics- Compared to Inferential Statistics, Types of data, Collection, Tabulation and presentation of statistical data. Index numbers. Construction of Index Number.
Unit-III		Analysis of Univariate Data : Construction of a frequency distribution, Concept of central tendency- and their measures, Arithmetic average, Geometric average, Harmonic average and weighted average, Median and Mode.
Unit-IV		Concept of dispersion, Absolute and Relative measures of dispersion skewness and measures.

2. COMMERCE DISCIPLINE

(i) CORPORATE ACCOUNTING

Time : 3 Hours

Marks : 70

Objective: This course enable the students to develop awareness about corporate accounting in conformity with the provisions of Companies Act.

Unit-I Issue, Forfeiture and Re-issue of shares.

Unit-II Final Accounts of Company : Manufacturing Account, Trading Account, Profit & Loss Account, Profit & Loss Appropriation Account & Balance sheet with Adjustment.

Unit-III 3.1 Liquidation of Company.

1.2 Valuation of Goodwill and shares.

Unit-IV 4.1 Amalgamation and Absorption of Companies.

1.2 Profit prior to incorporation.

Unit-V Funds Flow Statement : Concept of Fund, What is flow of Fund, Rules of Fund flow statement, Schedule of changes in working capital, Statement of sources and Application of Fund.

BOOKS RECOMMENDED :

- Gupta R.L., Radhaswamy M : Company Accounts; Sultan Chand and Sons, New Delhi.
- Maheshwari S. N. : Corporate Accounting; Vikas Publishing House, New Delhi.
- Monga J. R., Ahuja, Girish, and Sehgal Ashok : Financial Accounting; Mayur Paper Back, Noida.
- Shukla M. C., Grewal T. S. and Gupta S. C. : Advanced Accounts; S. Chand & Co., New Delhi.
- Moore C. L. and Jaedicke R. K. : Managerial Accounting; South Western Publishing Co., Cincinnati, Ohio.
- R.R. Gupta : Advanced Accountancy.
- Dr. Medha Kanetkar, Dr. D.R. Baheti : Corporate Accounting -Shri Salinath Prakashan, Nagpur.

हिन्दी :

- गुप्ता : एडवान्स एकाउन्ट्स.
- जे.के. अग्रवाल : बृहत लेखाकर्म.

(IV) COMPUTER FUNDAMENTALS AND OPERATING SYSTEM

Time:3 Hours

Marks:100

(60 Marks for theory + 40 Marks for Practical)

Objective: The objectives of this course are to provide basic information of computer, Word Processing and Presentation.

Unit-I

Fundamentals of Computer :

Introduction: Definition of Computer, Evolution of Computer, Characteristics of Computer, Generations of Computer, Types of Computer (By Logic and By size).

Basic Computer Organization : Computer Block Diagram, Input Unit, Output Unit and CPU: Memory Unit, Arithmetic Unit, Control Unit.

Unit-II

Storage : Primary Storage : Concept of Memory, RAM: Read-Write: SRAM,DRAM; Read-Only: ROM, PROM and EPROM.

Secondary Storage : Concept of Secondary Storage, Secondary Storage, Devices: Magnetic Tape, Magnetic Disk, Floppy Disk, Hard disk, Compact disk, Optical Disk, Pen drive, Memory card, Data Card.

Software : Concept of Software, Types of Software : Application Software & System Software.

Languages : Concept of Computer Languages, Machine Language, Assembly Language, High Level Language, 4th Generational Languages.

Unit-III	<p>Operating System : Concept of Operating System.</p> <p>MS-DOS : Introduction to MS-DOS, MS-DOS Commands : Internal Commands : DIR, COPY, DEL, TYPE, REN, CD, MD, RD, PROMPT, COPY CON; External Commands : FORMAT, DISKCOPY, X-COPY, BACK UP, RESTORE, CHKDSK, PATH, ATTRIB, EDIT.</p> <p>Window : Window XP/Vista : Introduction to Windows, Features of Windows, Types of Windows : Application Window, Document Window & Dialog box, Desktop, Icons : My Computer, My Documents, Recycle Bin, Internet Explorer, Task Bar, Properties, Management of the Files & Folders.</p>
Unit-IV	<p>MS Word 2003/2007/Higher : Concept of Word processing, Working With MS-WORD: MS-Word Screen, Working with Menus, Creating and Saving Document, Formatting Text and Document Setup, Header & Footer, Creating tables and chart, Inserting Clip Arts, Links, Text Box, Word Arts, Drop Cap, Mail Merge, Printing a Document.</p>
Unit-V	<p>Ms PowerPoint 2003/2007/Higher : Concept of Presentation, MS-PowerPoint Screen, Creating, Saving and Opening presentations, Adding text, Clips & Word Art to Slides, Working with different Slide Views, Background features, Gallery, Color Layout, Slide Effects & Slide Show, Saving and Printing.</p>

BOOKS RECOMMENDED:

1. Fundamentals of Computers-V Rajarman (PHI)
2. Computer Fundamentals- B.Ram (WE)
3. Introduction to IBMPC & Applications-Taxali.
4. MS-OFFICE (PHI)
5. MS-OFFICE (BPB)
6. MS-OFFICE (TMH)
7. Yeats: Systems Analysis & Design; Macmillan India, New Delhi.
8. Basics of Computer and Business Mathematics, By Dr. Rajiv Ashtikar, Dr.Santosh Sadar and Prof. Vilas Chopade: Payal Prakashan, Nagpur.
9. Computer Fundamentals & Operating System : Supriya Bhagade-Pimpalapure & Co. Pub., Nagpur.
10. संगणक मूलतत्वे आणि चलन प्रणाली- Prof. S.M. Kolte, Pimpalapure & Co. Publishers, Nagpur.

CLASS: B.Com- III SEM-V

PROSE: 1 RATAN TATA

2 STEVE JOBS

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Appendix - A

***B.Com. III
Semester- V
Compulsory English***

Time: 2 Hours

Marks: 40

Prescribed Textbook : Horizons by Board of Editors Published by Orient Blackswan.

CONTENTS

UNIT I : PROSE		
SR.NO	PROSE	AUTHOR
1	Ratan Tata	
2	Steve Jobs	
3	Vijay Bhatkar	
4	Black Money and the Black Economy	C. Rammanohar Reddy
UNIT II : POETRY		
1	A Red, Red Rose	Robert Burns
2	It is needless to ask the saint the caste to which he belongs	Kabir
3	Love's Philosophy	P.B. Shelly
4	The Garden	Andrew Marvell
UNIT III : BUSINESS COMMUNICATION		
Computer Technology & Recent Concepts in Business		
<ul style="list-style-type: none"> ✓ Paperless office ✓ Video Conferencing ✓ E-Banking 		
Communication Skills		
<ul style="list-style-type: none"> ✓ Public Speaking (Strategies for Effective Speaking, Types of Speeches) 		

MARKING SCHEME

UNIT I: Prose : Any THREE out of FOUR Questions ($3 \times 4 = 12$ Marks)

UNIT II : Poetry : Any THREE out of FOUR Questions ($3 \times 4 = 12$ Marks)

UNIT III : Business Communication :

Any TWO out of THREE Questions ($2 \times 4 = 8$ Marks)

8 Multiple Choice Questions on Unit I & II ($8 \times 1 = 8$ Marks)

INTERNAL ASSESSMENT :

Seminar Skill : 5 Marks

Home Assignment : 5 Marks

**Syllabus on
Gender Sensitization**

internal assessment	20
2) Practical:	50
Total:	150 Marks

ZOOLOGY Paper 4S
ADVANCED GENETICS AND ANIMAL ECOLOGY

UNIT I : Concept of genes.

Mendel's laws of heredity – Monohybrid – Laws of dominance, law of segregation. Dihybrid cross – Law of independent assortment. Interactions of genes: , Supplementary factor, complementary factor, duplicates factor, inhibitory factors, and lethal factors – dominant and recessive.

UNIT II : Linkage - Types of linkage, linkage group, arrangement of linked genes, and significance of linkage.

Crossing over – Mitotic and meiotic crossing over, Mechanism of crossing over, theories of crossing over – Darlington's theory, breakage and exchange theory, and copy choice theory. Types of crossing over – Single, double and multiple crossing overs. Factors affecting crossing over, Significance of crossing over.

Multiple alleles. Multiple alleles in relation to eye color in Drosophila. Blood group in man, Erythroblastosis foetalis

UNIT III : Sex determination: Autosomes and sex chromosomes, Sex determination in animals, Chromosomal Theory, Genic Balance Theory. Environmentally and hormonally controlled sex determination, Gynandromorphs.

Genetic disorders; Sickle cell anemia, Huntington's chorea, Diabetes mellitus. Non-disjunction: Turner's syndrome, Klinefelter's syndrome, Down's syndrome. Edward's

UNIT IV : Genetic Screening and parental diagnosis: - Parental, Carrier, Predictive, CVS (Chorionic Villous Sampling), Amniocentesis, Gene probe and DNA analysis. Genes in Human Heredity. - Inheritance of eye color. Skin color. Recessive genes and consanguineous marriages. Genetic counseling. - Risk of marriages in affected family. Birth control measures (male and female).

Kinds of twins: - Identical, Fraternal, Siamese twins. Significance of twins study

UNIT V : Ecology: concept and scope:

Abiotic factors:

Water: Properties, water problem in terrestrial and aquatic habitat. Temperature: Temperature range, Temperature tolerance, Effects of temperature on animals. Homeotherms, poikilotherms. Dormancy, hibernation, aestivation & diapause. Light: Spectral

distribution, Biological effects of light on aquatic and terrestrial animals: Reproduction, Metamorphosis, pigmentation, vision, photo kinesis, phototropism, photoperiodism, migration.

Biotic factors:

Intra specific and interspecific associations, Predation, parasitism, Antagonism, , commensalisms, mutualism, competition, (Gause's Principle).

UNIT VI : Ecosystem: *Relationship between habitat and ecological niche* - Autotrophic and heterotrophic producer, consumer - trophic level - energy flow in an ecosystem - food chain - food web - pyramids - Ecotypes. Homeostasis of ecosystem.

Terrestrial ecosystem: Classification and Biomes, Aquatic ecosystem: Fresh water ecosystem-Lentic and lotic ecosystem,

BA-II SEM -IV

स्त्री –पुरुष तलना (Man-Woman Comparison)

Criterion – I- Curricular Aspects [QIM – 1.3.1]

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विभाग ब) ललित

१)	आज्ञापत्र	रामचंद्रपंत अमात्य
२)	माझे दत्तक वडील	चिं. वि. जोशी
३)	दिवस असे होते	दया पवार

विभाग क) कविता

१)	संतवाणी	अ) चौखामेळा ब) सोयराबाई
२)	अखेर कमाई	कुसुमाग्रज
३)	पाखरे	केशव मेश्राम
४)	जातं	श्रीकात देशमुख
५)	सात बाराची नोंद	लक्षण महाडिक
६)	शांतता	सिद्धार्थ भगत

विभाग ड) व्यावहारिक मराठी

१)	वकृत्व कला	संदर्भ ग्रंथ : 'उपयोजित मराठी' मधील प्रकरण २२ वे	संपा. केतकी मोडक व इतर, पद्मगंधा
२)	सूत्रसंचालन	संदर्भ ग्रंथ : 'उपयोजित मराठी' मधील प्रकरण २३ वे	प्रकाशन, पुणे

बी. ए. भाग २ - मराठी (आवश्यक)
सत्र - ४

विभाग अ) वैचारिक

१)	स्त्री-पुरुष तुलना	ताराबाई शिंदे
२)	आरसा	डॉ. बाबासाहेब आंबेडकर
३)	विज्ञानयुगात भारत	जयंत नारळीकर

विभाग ब) ललित

१)	गाडगेबाबांच्या कीर्तनातले तत्त्वज्ञान	प्रबोधनकार के.सी. ठाकरे
२)	समशानातील सोनं	अण्णा भाऊ साठे
३)	स्त्रीवादी चळवळीने आम्हाला आमच्या अस्तित्वाची जाणीव दिली	विद्युत भागवत

विभाग क) कविता

१)	संतवाणी	अ) एकनाथ ब) कान्होपात्रा
२)	सारेच दीप करो मंदावले आता	अनिल
३)	जिवलगा	शांता शेळके
४)	जागजागी	भ.मा. परसावळे
५)	पेटवू नका देश	भिजारा रफी अहमद बेग
६)	माती	राजेश महल्ले

विभाग ड) व्यावहारिक मराठी

१)	माहितीपत्रक	संदर्भ ग्रंथ : 'उपयोजित मराठी' मधील प्रकरण ९ वे	संपा. केतकी मोडक व इतर, पद्मगंधा
२)	निमंत्रणपत्रिका व कार्यक्रमपत्रिका	संदर्भ ग्रंथ : 'उपयोजित मराठी' मधील प्रकरण १० वे	प्रकाशन, पुणे

B.Com-II SEM-IV

Criterion – I- Curricular Aspects [QLM – 1.3.1]
PROSE 2 : FLORENCE NIGHTINGALE : LYTTON STRACHEY

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Unit V Formulas, Functions and Chart in Excel:

Introduction to Formulas, Functions and Categories of Functions.

Working with Common Excel Functions: TODAY, DATEDIF, NOW, UPPER, LOWER, PROPER, CONCATENATE, AVERAGE, MAX, MIN, COUNT, COUNTBLANK, COUNTIF, SUM, SUMIF, AUTOSUM, IF

Chart in Excel: Introduction, Types, Creating and formatting a Chart Displaying, Saving & Printing.

Books Recommendation:

- * Microsoft Office Excel 2007 Free Text Book at BOOKBOON.COM
- * Curtis D. Fry "Microsoft Excel 2007 Step by Step" Published by Microsoft Press
- * MS OFFICE (BPB)
- * Pradeep K. Sinha and Priti Sinha's "Fundamentals of Computing" BPB Publication.
- * Alexis Leon and Mathews Leon's Fundamentals of Information Technology "Published by Leon Vikas.
- * **Practical Based on Microsoft Excel**

Appendix - M

**B.Com Part-II
SEMESTER-IV
ENGLISH (COMPULSORY)**

Time :- 2 Hours

Marks :- 40

I) Text Prescribed -

Impressions

(An Anthology of Prose and Poetry) Published by Raghav Publishers & Distributors, Nagpur.

Unit- I :- Prose

1) The Town Week	-	E.V. Lucas
2) Florence Nightingale	-	Lyttton Strachey
3) The Gift of Magi	-	O Henry
4) Three Hermits	-	Leo Tolstoy

Unit-II :- Poetry

1) On His Blindness	-	John Milton
2) Solitude	-	Alexander Pope
3) Still I Rise	-	Maya Angelou
4) Money Madness	-	D.H.Lawrence

2) Book Prescribed :-

'Synergy'

(Communication in English and Study Skills Ed. by Orient Black Swan.

Following chapters from Communication Skills are prescribed :-

- 1) Interview and Interviewing skills.
- 2) Meeting skills
- 3) Nonverbal Communication.

BA-I SEM-I

UNIT 5 : I) WOMEN PARTICIPATION IN PANCHYATRAJ OF MAHARASHTRA

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19. भाराष्ट्रातील पंचायत राजाची वाटचाल : ले. डॉ.सुभाष गवई, प्रशांत विघे व प्रा. सुनिल चक्रवे, वेदमुद्रा प्रकाशन, अमरावती.
 20. भारतीय संविधानिक सरचुदी आणि स्थानिक स्वशासन : डॉ.शांताराम चव्हाण, वेदमुद्रा प्रकाशन, अमरावती

**Semester-II (B.A.-I)
Indian Constitutional Provisions and Local Self Government**

Theory : 80
Int.Ass.: 20

Unit-I i) Election Commission of India : Structure, Function and Powers.
 ii) Electoral Reform, Recognition of Political Parties.
 iii) Eligibility of Voter – Lok Sabha, Vidhan Sabha and Vidhan Parishad.

Unit-II State Executive

i) Governor : Appointment, Powers and Role.
 ii) Chief Minister : Appointment, Role and Function
 iii) Council of Ministers : Formation, Role and Function

Unit-III State Legislature of Maharashtra :

i) Legislative Assembly (Vidhan Sabha) – Structure, Powers and Function.
 Speaker of Vidhan Sabha – Powers and Function
 ii) Legislative Council (Vidhan Parishad) – Structure, Powers and Function

Unit-IV Local Self Government of Maharashtra :

i) Types of Local Self Government (Urban and Rural)
 ii) Municipal Corporation - Structure and Power
 iii) Gram Panchayat – Structure and Function.
 iv) Gram Sabha - Structure and Function.

Unit-V

i) Women's Participations in Panchayati Raj of Maharashtra.
 ii) Nagpur Pact for Sanyukta Maharashtra and its recommendations.
 iii) Right to Information and its Importance

Distribution of Internal Marks

i) Seminar	...	10 Marks
ii) News Papers Cutting Collection	...	10 Marks

Reference Books :

1. D.D. Basu : "An introduction to the Constitution of India : New Delhi Prentice Hall, 1994
2. Joshi, G.N. : The Constitution of India
3. PyLee, M.V. : Indian Constitution
4. D.C. Gupta : Indian Government and Politics : Vikas Publication, Bombay.
5. प्रा.बी.टी. देशमुख : भारतीय संविधान
6. डॉ.प.ल. जोशी : भारतीय संविधान
7. प्रा.भ.श्रींगारपुरे : भारतीय संविधान
8. प्रा.भ.ग.घांगरेकर : भारतीय राज्यघटना, स्वरूप आणि राजकारण
9. डॉ.भा.ल. भोळे : भारतीय राज्यव्यवस्था.
10. प्रा.राम मुठाळ : भारतीय राजकीय व्यवस्था, अंशुल प्रकाशन, नागपूर.
11. प्रा.रा.ज. लोटे : भारतीय शासन आणि राजकारण, पिंपळापूरे अऱ्ड कं. पब्लीशर्स.
12. प्रा. बी.टी. देशमुख : भारतीय संविधान व सचातंत्र्य आंदोलन.
13. भारताचे शासन आणि राजकारण : प्रा.शे.हाशम, डॉ. जोगेंद्र गवई.

**Syllabus on
Human Values**

ENGLISH

BA- I SEM-I

1. PROSE: 3 SPEECH ON INDIAN INDEPENDENCE
7. MIDDLE AGE

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE



Official Publication of Sant Gadge Baba Amravati University

PART – TWO

Thursday, the 15th June, 2017

NOTIFICATION

No. 40/2017

Date: 15 June, 2017

Subject : Implementation of Syllabi of Various Courses / Subjects as per Semester and Credit Grade System in the Faculty of Humanities from the session 2017-2018 and onwards.

It is notified for general information of all concerned that, the authorities of the University has accepted of Semester & Credit Grade System syllabi of various Courses/ Subjects of B.A. Part-I Semester-I & Semester-II mentioned in column No.2 and which is to be implemented stagewise from the session 2017-2018 and onwards, with appendices as shown in column No.3 of the following table.

TABLE

Sr.No.	Course / Subjects	Appendices of the New Syllabi
1	2	3.
B.A. Part-I Semester – I & II		
1.	English	The Syllabi prescribed for the subject Compulsory English, English Literature, Functional English & Supplementary English which is appended herewith as Appendix-A
2.	Marathi	The Syllabi prescribed for the subject Compulsory Marathi, Marathi Literature, which is appended herewith as Appendix-B
3.	Hindi	The Syllabi prescribed for the subject Compulsory Hindi, Hindi Literature, & Prayojanmulak Hindi which is appended herewith as Appendix-C
4.	Sanskrit	The Syllabi prescribed for the subject Compulsory Sanskrit & Sanskrit Literature, which is appended herewith as Appendix-D
5.	Urdu	The Syllabi prescribed for the subject Compulsory Urdu & Urdu Literature, which is appended herewith as Appendix-E
6.	Persian Literature	The Syllabi prescribed for the subject Persian Literature which is appended herewith as Appendix-F
7.	Pali & Prakrit	The Syllabi prescribed for the subject Compulsory Pali & Prakrit & Pali Literature which is appended herewith as Appendix-G
8.	Music	The Syllabi prescribed for the subject Indian Music which is appended herewith as Appendix-H

Sd/-
Registrar
Sant Gadge Baba Amravati University

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SYLLABUS

PRESCRIBED FOR

B. A. - Part I EXAMINATION

Semester I

Compulsory English

TIME : 3 HOURS

MAX MARKS THEORY : 80 MARKS

MAX MARKS INTERNAL ASSESSMENT : 20 MARKS

Prescribed Textbook : Blooming Buds by Board of Editors & published by Orient Blackswan.

UNIT I

PROSE –

1. Education Provides a Solid Foundation - A.P.J Abdul Kalam
2. Love Story - Maneka Gandhi
3. Speech on Indian Independence - Jawaharlal Nehru
4. Film Making - Satyajit Ray

UNIT II

POETRY –

5. In the Bazaar of Hyderabad - Sarojini Naidu
6. She Walks in Beauty - Lord Byron
7. Middle Age - Kamala Das

UNIT III

GRAMMAR –

8. Parts of Speech
9. Tenses

UNIT IV

COMMUNICATION SKILLS –

10. Unseen Passage
11. Letter Writing (Personal & Business Letters)
12. Curriculum Vitae (CV)

UNIT V

MULTIPLE CHOICE QUESTIONS –

Based on the prescribed text Unit I & II only.

INTERNAL ASSESSMENT

i) Viva- Voce

a) Personal Interview

b) Seminar

ii) Assignments

a) Making Introduction

b) Greeting People

c) Talking about Family

d) Describing People, Places & Animals

e) Expressing Feelings

f) Inviting, Suggesting, Accepting & Refusing

BA-I SEM-II
PROSE 4 :VALUES IN LIFE

SYLLABUS
PRESCRIBED FOR
B. A. – Part I EXAMINATION
Semester II
Compulsory English

TIME : 3 HOURS

MAX MARKS THEORY : 80 MARKS

MAX MARKS INTERNAL ASSESSMENT : 20 MARKS

Prescribed Textbook : Blooming Buds by Board of Editors & published by Orient Blackswan.

UNIT I

PROSE –

1. Appro JRD - Sudha Murthy
2. Packing - Jerome K. Jerome
3. How I became a Public Speaker – G. B. Shaw
4. Values in Life - Rudyard Kipling

UNIT II

POETRY –

5. Money Madness - D.H Lawrence
6. No men are foreign - James Kirkup
7. Another's sorrow - William Blake

UNIT III

GRAMMAR –

8. Subject, Verb, Agreement
9. Verbs : Forms of to be, do, have and modal auxiliaries

UNIT IV

COMMUNICATION SKILLS –

- 10 . Story building
- 11 . E-Communication : E-Mail, Fax
- 12 . Notices / Agenda / Minutes

UNIT V

MULTIPLE CHOICE QUESTIONS –

Based on the prescribed text Unit I & II only.

F) Internal Assessment

i) Viva- Voce

a) Reading Skills (Reading aloud – Individual of a passage of about 100 words from the prescribed text)

b) Group Discussion

ii) Assignments

a) Asking for & Giving Information

b) Giving Directions

c) Making Request

d) Making Offers

e) Getting & Giving Permissions

f) Talking about Past Events

BA-I SEM-II

Criterion – I- Curricular Aspects [QLM – 1.3.1]
POETRY 5 MONEY MADNESS

(3)

..9..

SYLLABUS
PRESCRIBED FOR
B. A. – Part I EXAMINATION
Semester II
Compulsory English

TIME : 3 HOURS

MAX MARKS THEORY : 80 MARKS

MAX MARKS INTERNAL ASSESSMENT : 20 MARKS

Prescribed Textbook : Blooming Buds by Board of Editors & published by Orient Blackswan.

UNIT I

PROSE –

1. Appro JRD - Sudha Murthy
2. Packing - Jerome K. Jerome
3. How I became a Public Speaker – G. B. Shaw
4. Values in Life - Rudyard Kipling

UNIT II

POETRY –

5. Money Madness - D.H Lawrence
6. No men are foreign - James Kirkup
7. Another's sorrow - William Blake

UNIT III

GRAMMAR –

8. Subject, Verb, Agreement
9. Verbs : Forms of to be, do, have and model auxiliaries

UNIT IV

COMMUNICATION SKILLS –

- 10 . Story building
- 11 . E-Communication : E-Mail, Fax
- 12 . Notices / Agenda / Minutes

UNIT V

MULTIPLE CHOICE QUESTIONS –

Based on the prescribed text Unit I & II only.

F) Internal Assessment

i) Viva- Voce

- a) Reading Skills (Reading aloud – Individual of a passage of about 100 words from the prescribed text)

- b) Group Discussion

ii) Assignments

- a) Asking for & Giving Information
- b) Giving Directions
- c) Making Request
- d) Making Offers
- e) Getting & Giving Permissions
- f) Talking about Past Events

B A- I SEM-II PROSE 4: VALUES IN LIFE

(2)

--9--

SYLLABUS
PRESCRIBED FOR
B. A. – Part I EXAMINATION
Semester II
Compulsory English

TIME : 3 HOURS

MAX MARKS THEORY : 80 MARKS

MAX MARKS INTERNAL ASSESSMENT : 20 MARKS

Prescribed Textbook : Blooming Buds by Board of Editors & published by Orient Blackswan.

UNIT I

PROSE –

1. Appro JRD - Sudha Murthy
2. Packing - Jerome K. Jerome
3. How I became a Public Speaker – G. B. Shaw
4. Values in Life - Rudyard Kipling

UNIT II

POETRY –

5. Money Madness - D.H Lawrence
6. No men are foreign - James Kirkup
7. Another's sorrow - William Blake

UNIT III

GRAMMAR –

8. Subject, Verb, Agreement
9. Verbs : Forms of to be, do, have and model auxiliaries

UNIT IV

COMMUNICATION SKILLS –

10. Story building
11. E-Communication : E-Mail, Fax
12. Notices / Agenda / Minutes

UNIT V

MULTIPLE CHOICE QUESTIONS –

Based on the prescribed text Unit I & II only.

F) Internal Assessment

i) Viva- Voce

- a) Reading Skills (Reading aloud – Individual of a passage of about 100 words from the prescribed text)

- b) Group Discussion

ii) Assignments

- a) Asking for & Giving Information

- b) Giving Directions

- c) Making Request

- d) Making Offers

- e) Getting & Giving Permissions

- f) Talking about Past Events

B. A. II SEM III

3. PROSE: THE HAPPY PRINCE

HUMAN VALUES

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2018 - PART TWO - 139

Appendix-A

**SYLLABUS
PRESCRIBED FOR
B.A – PART II EXAMINATION
SEMESTER III
COMPULSORY ENGLISH**

TIME : 3 HOURS

**MAX MARKS THEORY : 80 MARKS
MAX MARKS INTERNAL ASSESSMENT : 20 MARKS**

Prescribed Textbook : Blossoming Flowers by Board of Editors, Published by Orient Blackswan.

UNIT I

PROSE -

1. India's Message to the World – Swami Vivekanand
2. The Pleasure of Ignorance – Robert Lynd
3. The Happy Prince – Oscar Wilde
4. The Three Questions – Leo Tolstoy

UNIT II

POETRY -

5. Sonnet 116 – William Shakespeare
6. Dirge – James Shirley
7. Leisure – W H Davies
8. A Baby Asleep After Pain – D.H Lawrence

UNIT III

GRAMMAR :

9. Clauses:
 - ✓ Main Clause
 - ✓ Subordinate Clause (Noun Clause , Adverb Clause , Adjective Clause)
10. Types of Sentences :
 - ✓ Assertive/ Affirmative Sentences
 - ✓ Exclamatory Sentences
 - ✓ Negative Sentences
 - ✓ Interrogative Sentences
 - ✓ Simple Sentences
 - ✓ Compound Sentences
 - ✓ Complex Sentences
 - ✓ Compound Complex Sentences

UNIT IV

COMMUNICATION SKILLS :

11. Telephone Conversation
 - ✓ Answering the Telephone and Asking for Someone
 - ✓ Taking and Leaving Messages
 - ✓ Making Enquiries on the Phone
12. Interpersonal Conversation
 - ✓ Getting People's Attention and Interrupting
 - ✓ Making Requests and Responding to Them
 - ✓ Asking for Directions and Giving Directions

UNIT V

MULTIPLE CHOICE QUESTIONS

Based on prescribed text Unit I & II only

Internal Assessment :

Viva- Voce

A) Personal Interview

B) Seminar - Presentation (Based on prescribed text : Prose & Poetry)

CLASS/SEM

B. A. III SEM VI PROSE 1. QUALITY HUMAN VALUES

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2019 - PART TWO - 183

UNIT III (16 Marks)

C) POETRY: Prescribed Text *Sands of Time* by Board of Editors & published by Orient Blackswan
i) The students shall have to answer TWO out of THREE questions in Two or Three sentences of 3 marks each. = 6 Marks
ii) The students shall have to answer TWO out of THREE questions in about 100 words of 5 marks each = 10 Marks

UNIT IV (16 Marks)

WRITING SKILLS

1. **Précis Writing :** i) The students shall have to write a précis of the given paragraph with suitable title for 08 marks
2. **Developing a Thought:** i) The students shall have to develop a thought, choosing one of the two in about 250 words for 08 marks

UNIT V (16 Marks)

E) Multiple Choice Questions (MCQ)

Based on Unit I, II & III: The students shall have to attempt multiple choice questions= 16 Marks

F) Internal Assessment

i) **Viva- Voce = 20 Marks**
a) Personal Interview = 10Marks
b) Seminar - Presentation = 10 Marks

**SYLLABUS
PRESCRIBED FOR
BA – PART III EXAMINATION
SEMESTER VI
COMPULSORY ENGLISH**

TIME : 3 HOURS

**MAXIMUM MARKS THEORY : 80 MARKS
MAXIMUM MARKS INTERNAL ASSESSMENT: 20 MARKS**

Prescribed Textbook: *Sands of Time* by Board of Editors, Published by Orient Blackswan.

UNIT I

SHORT STORIES:

1. Quality – John Galsworthy
2. Miss Brill – Catherine Mansfield

UNIT II

ESSAYS:

1. My Financial Career -Stephen Leacock
2. Socrates and the Schoolmaster – FL Brayne

UNIT III

POETRY:

1. The Solitary Reaper- William Wordsworth
2. Stay Calm -Grenville Kleiser

UNIT IV

WRITING SKILLS:

1. **Report Writing :** i) The students shall have to write a Report on the given topic in about 250 words for 08 marks
2. **Essay :** i) The students shall have to write an essay, choosing from the four given topics in about 250 words for 08 marks

UNIT V

MULTIPLE CHOICE QUESTIONS

Based on Prescribed Text: Unit I, II & III

Internal Assessment:

Viva- Voce

A) Personal Interview

B) Seminar - Presentation (Based on Prescribed Text : Short Stories, Essay & Poetry)

POLITICAL SCIENCE
CLASS/SEM B. A. I SEM I
UNIT 1 II) PREAMBLE – NATURE AND IMPORTANCE

HUMAN RIGHTS

-78-

(H)

Syllabi for B.A. Part-I
Semester-I

Subject : Political Science

(Implemented From 2017-2018 Session)
Indian Constitutional Provisions and Local Self Government

Marks : Theory – 80
In Ass – 20

Unit-I

- i) Salient features of the Indian Constitution.
- ii) Preamble – Nature and Importance.
- iii) Fundamental Rights – Types and Importance.

Unit-II

- i) Directive Principles of State Policy – Nature and Importance
- ii) Fundamental Duties.
- iii) Methods to acquire Citizenship.

Unit-III

- i) President of India : Election Process, Powers and Function.
- ii) Vice President : Role and Function.
- iii) Prime Minister – Appointment, Role and Function.

Unit-IV

- i) Parliament : Lok Sabha and Rajya Sabha – Structure and Powers
- ii) Speaker of Lok Sabha - Powers & Function.

Unit-V

- i) Structure of Indian Judiciary. Types of Court, Characteristics of Indian Judiciary
- ii) Supreme Court of India – Structure, Powers and Function
- iii) High Court - Structure, Powers and Function.

Distribution of Internal Marks

i) Seminar	...	10 Marks
ii) News Papers Cutting Collection	...	10 Marks

Reference Books :

1. D.D. Basu : "An introduction to the Constitution of India : New Delhi Prentice Hall, 1994
2. Joshi, G.N. : The Constitution of India
3. PyLee, M.V. : Indian Constitution
4. D.C. Gupta : Indian Government and Politics : Vikas Publication, Bombay.
5. प्रा.बी.टी. देशमुख : भारतीय संविधान
6. डॉ.प.ल. जोशी : भारतीय संविधान
7. प्रा.भ.शृंगारपुरे : भारतीय संविधान
8. प्रा.भ.ग.धांगरेकर : भारतीय राज्यघटना, स्वरूप आणि राजकारण
9. डॉ.भा.ल. भोळे : भारतीय राज्यव्यवस्था.
10. प्रा.राम. मुठाळ : भारतीय राजकीय व्यवस्था, अंशुल प्रकाशन, नागपूर.
11. प्रा.रा.ज. लोटे : भारतीय शासन आणि राजकारण, पिंपळापूरे ऑन्ड कॅ. पट्टीशर्स.
12. प्रा. बी.टी. देशमुख : भारतीय संविधान व राजांत्र्य ऑंडोलन.
13. भारताचे शासन आणि राजकारण : प्रा.शे.हाशम, डॉ. जोगेंद्र गवई.
14. भारतीय शासन आणि राजकारण : प्रा.डॉ. अलका देशमुख
15. भारतीय राजकारणाची संवैधानिक मिर्मांसा : ले. डॉ. वामन गवई.
16. भारतीय संविधान व शासन व्यवस्था : लेखक - डॉ. शांताराम चव्हाण
17. भारतीय संविधानात्मक तरतुदी आणि वास्तव : लेखक - डॉ. सुभाष गवई
18. भारतीय राज्यव्यवस्था : ले. डॉ. शांताराम चव्हाण व डॉ. सुभाष गवई, वेदमुद्रा प्रकाशन, अमरावती

**Syllabus on
Environment and Sustainability**

B.Sc. Part-II (2014-15)
(Semester-III & IV)

Prospectus No. 2015122

संत गाडगेबाबा अमरावती विद्यापीठ
SANT GADGE BABA AMRAVATI UNIVERSITY

विज्ञान विद्याशाखा
(FACULTY OF SCIENCE)

अभ्यासक्रमिका
विज्ञान स्नातक भाग-२
सत्र-३ व ४, परीक्षा

PROSPECTUS Continued for Semester-III
Winter-2018
Semester-IV Summer 2020
(As It Is)

B.Sc. Part-II Continued for Semester-III Winter-2018
Semester-IV - Summer-2019
Along with Notification Nos. 38/2017
54/2018)

Semester-III Examination Winter-2014, and
Continued for Semester-IV Examination Summer-2015

Semester-III Winter 2020,
Semester-IV Summer 2021
(As It Is)

Continued for Semester-III
Winter-2017

Semester-IV- Summer-2018
(along with notification Nos.
53/2017)

Continued for Semester-III Winter-2018
Semester-IV - Summer-2019
Along with Notification Nos. 38/2017
54/2018)

Continued for Semester-III-Winter 2015
Semester-IV- Summer-2016
2014 (Along with Dir. No.5 of 2015 & Nott.
No.52 of 2015)

Visit us at www.sgbau.ac.in

Contd. for Semester-III
Winter-2016
Semester-IV Summer-2017
(Along with Nott. No.37 of 2016)
Nott. No.58 of 2016

(Price-Rs. 34/-)



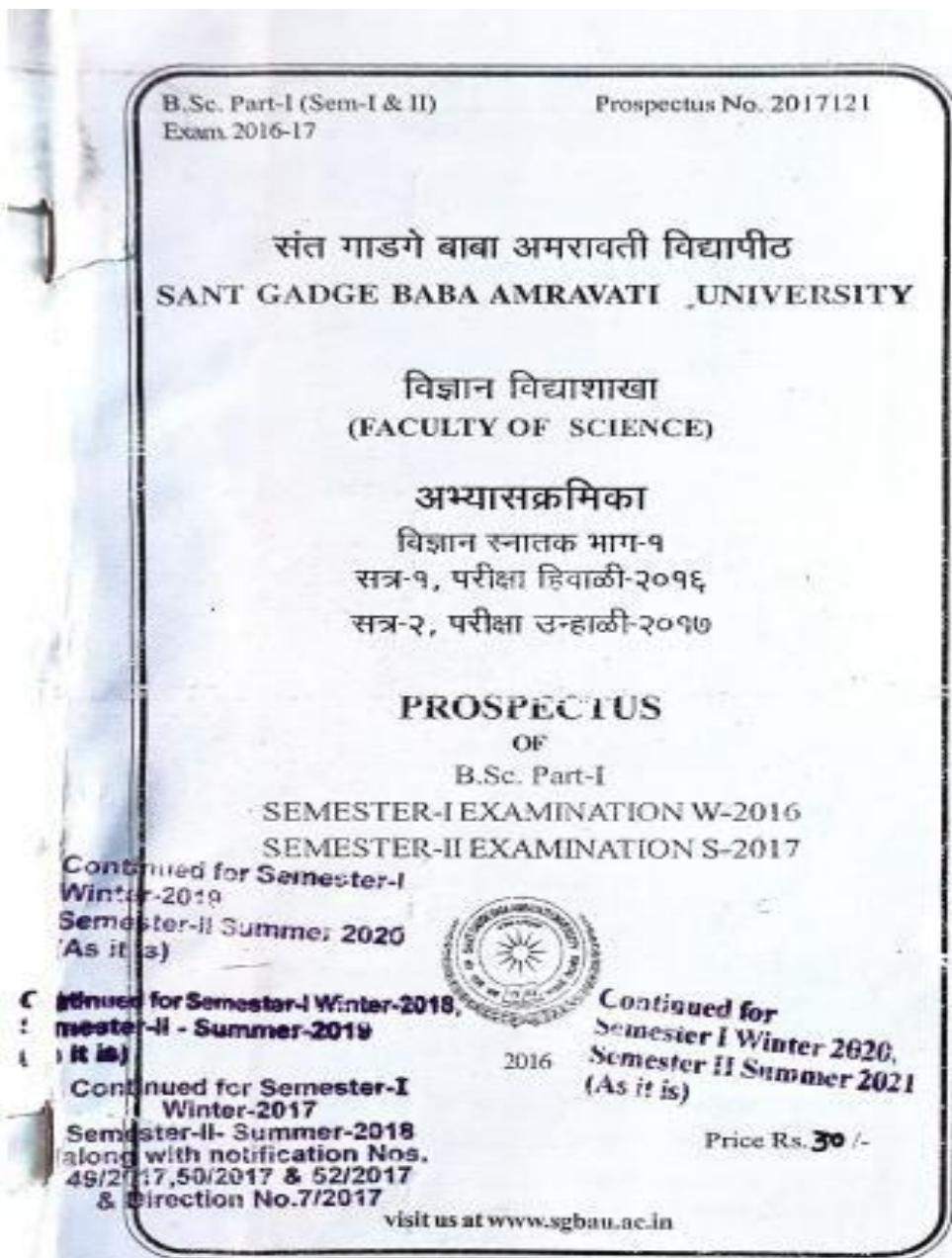
BOTANY

CLASS/SEM B. SC. F. Y. SEM

(I) UNIT 1

1.3 DIVERSITY OF PLANTS WITH RESPECT TO HABITAT NUTRITION & ECOLOGICAL SYSTEM

ENVIRONMENT



13. BOTANY

There shall be following paper and practical for B. Sc. Part – I Semester one examination. The syllabus is based on six theory periods and six practical periods per week (Total 75 – 80 theory sessions and 25 practical sessions per complete semester). There shall be one compulsory paper of 3 hours duration, in theory as stated below and practical examination extending for 4 hours. Every examinee shall offer the following paper of 100 marks (out of which 80 marks will be for written examination and 20 marks for internal assessment) and practical examination of 50 marks. Candidates are required to pass separately in theory and practical examination.

		Marks
1.	Paper – 1	
a.	Theory	80
b.	Internal Assessment	20
2.	Practical	50
	Total	150 Marks

1S – BOTANY**Diversity & Applications of Microbes and Cryptogams****UNIT-I : Plant Diversity (15)**

- 1.1 Cyanobacteria and its impact on origin of life
- 1.2 Introduction to Plant Kingdom: Cryptogams
- 1.3 Diversity of plants with respect to habitat, form, nutrition and ecological status
- 1.4 General Account of Viruses and structure of TMV and HIV
- 1.5 Bacteria: structure, Nutrition and reproduction
- 1.6 Role of microbes in Agriculture, Medicine and Industries

UNIT-II: Algae (15)

- 2.1. Classification according to F. E. Fritsch and G. M. Smith up to classes
- 2.2. General characters of algae with reference to Habitat, Thallus organization, Pigmentation, Reserve food and Reproduction
- 2.3. General characters of following classes with special reference to examples mentioned –
 - 2.3.1. Chlorophyta - Oedogonium
 - 2.3.2. Charophyta – Chara (Thallus structure and reproduction)
 - 2.3.3. Phaeophyta – Sargassum (Thallus structure and reproduction)
 - 2.3.4. Rhodophyta – Batrachospermum

UNIT-III : Fungi

(15)

- 3.1. Classification according to Ainsworth (1973)
- 3.2. General characteristics of following classes with special reference to examples mentioned –
 - 3.2.1. Mastigomycotina : *Albugo* (*Cystopus*)
 - 3.2.2. Ascomycotina : *Aspergillus*
 - 3.2.3. Basidiomycotina : *Puccinia graminis-tritici*
 - 3.2.4. Deuteromycotina : General characters
- 3.3. Lichen-Types & Economic importance

Unit-IV : Bryophyte

(15)

- 4.1. Classification according to G. M. Smith
- 4.2. General characters, thallus organization and life cycle of –
 - 4.2.1. Hepaticopsida – *Marchantia*
 - 4.2.2. Bryopsida – *Funaria*
- 4.3. Evolution of sporophyte in bryophytes
- 4.4. Affinities of bryophytes with algae and pteridophytes
- 4.5. Brief Account on some Indian Bryologist.

Unit-V : Pteridophyte

(15)

- 5.1. Pteridophytes as First Vascular Plants.
- 5.2. Classification according to G. M. Smith
- 5.3. General characters of the following classes with special reference to examples mentioned –
 - 5.3.1. Sphenopsida – *Equisetum*
 - 5.3.2. Filicopsida – *Marsilea*
- 5.4. Stele types in pteridophytes
- 5.5. Heterospory and Seed Habit in Pteridophytes

Unit-VI :

Application of Microbes Cryptogams

(15)

- 6.1. Economic Importance of Algae with special reference to Food, Industries, Agriculture and Harmful aspects
- 6.2. Mycorrhiza – Types and Application
- 6.3. Role of Fungi in Industries, Medicine, Food & Agriculture
- 6.4. Plant Diseases –
 - 6.4.1. Viral – TMV
 - 6.4.2. Bacteria – Black arm of cotton (*Xanthomonos malvacearum*)
 - 6.4.3. Fungal – Tikka disease of groundnut (*Cercospora* spp.)
- 6.5. Economical and Ecological Importance of Bryophytes

BOTANY

CLASS/SEM B. SC. S. Y. SEM (III)

UNIT 1 CONCEPT OF BIODIVERSITY ENVIRONMENT ENVIRNMENT

45

7. BOTANY

3S - BOTANY

ANGIOSPERM SYSTEMATICS, ANATOMY & EMBRYOLOGY

UNIT I: Angiosperm Systematics and Biodiversity.

- 1.1 Angiosperms: Origin and Evolution (Pteridospermian and Bennititalean Theory)
- 1.2 Botanical Nomenclature: Principles of rules, Taxonomic Ranks, Type concept, Valid publication.
- 1.3 Herbarium – Concept & significance, Royal Botanical Garden, Kolkata.
- 1.4 Concept of biodiversity, Ex situ and In situ conservation
- 1.5 Concept & importance of Biodiversity.

UNIT II: Angiosperm Systematics

- 2.1 Systems of Classification: Bentham and Hooker's System, Engler and Prantle's system.
- 2.2 Systematic studies & economic importance of following Families
Dicotyledons (Polypetalae) : Malvaceae, Brassicaceae, Leguminosae, Apiaceae,

UNIT III: Angiosperm Systematics

- 3.1 Systematic studies & economic importance of following Families
Dicotyledons (Gamopetalae): Asteraceae, Asclepiadaceae, Apocynaceae, Solanaceae, Verbenaceae, Lamiaceae.
- 3.2 Dicotyledons (Monoclamydeae): Euphorbiaceae.
- 3.3 Monocotyledons: Liliaceae, Poaceae.

UNIT IV: Anatomy

- 4.1 Types of Tissues:
Meristematic – Types of meristems
Permanent – Simple and complex.
- 4.2 Characteristics of growth rings, Sapwood and heartwood.
- 4.3 Anatomy of root: Primary structure in dicot and monocot root, normal secondary growth in dicot root.

UNIT V: Anatomy

- 5.1 Anatomy of stem: Primary structure in monocot and dicot

BOTANY

CLASS/SEM B. SC. T. Y. SEM (V)

UNIT 05: ECOLOGY & ENVIRONMENT

ENVIRNMENT

46

22. Dynamic Earth - Skinner Potter - Pub. John, Wiley.
23. Text Book of Physical Geology - G.B. Mahapatra - Pub. C.B.S., New Delhi.
24. Dynamic Earth - Patwardhan A.M., E E E Publications, New Delhi.
25. Physical Geology - A. Holmes, Orient Longman Publications.
26. Concepts in Geology - Chakranarya, Kulkarni, Pub. Scientific Publication, Pune.
27. Dynamic Earth - Wiley, John Wiley and Sons, New York.
28. Radhakrishnan N. General Geology, V.V.P. Pub, Vellore.
29. Text Book of Engineering Geology - Parbin Singh, Katson Publishing, Ludhiana.

B.Sc. Final Year, Semester-V 7: BOTANY

The examination in Botany of fifth Semester shall comprise of one theory paper, internal assessment and practical examination. Theory Paper will be of 3 Hrs. duration and carry 80 marks. The internal assessment will carry 20 marks. The practical examination will be of 4 hours duration and carry 50 marks.

The following syllabi is prescribed on the basis of six lecturers per week and 6 practical periods per batch per week. Each theory paper has been divided into 6 units. There shall be one question in every unit with internal choice for each of 12 marks & one compulsory question covering all the syllabus of Semester-V (8 marks).

SS - BOTANY

PLANT PHYSIOLOGY AND ECOLOGY

Unit - I: Plant Water Relations

- 1.1 Importance of water to plant life.
Imbibition, Diffusion, Osmosis, Plasmolysis.
- 1.2 Active and passive Absorption of water.
- 1.3 Ascent of sap - Root Pressure and Transpiration Pull Theory.
- 1.4 Transpiration - Types of transpiration, Stomatal movements, Mechanism of transpiration (Starch) sugar hypothesis), Significance. Antitranspirant, Guttation.
- 1.5 Mineral uptake - Active uptake - Caspary Concept, Passive uptake - Ion Exchange.

Unit - II: Metabolism-

- 2.1 Photosynthesis - Introduction, Role of Light, Photosynthetic Apparatus and Pigments, Two Pigment Systems, Photophosphorylation, C₃ and C₄ cycle, CAM Pathway.
- 2.2 Respiration - Introduction, Mitochondria as a Respiratory centre, Types of Respiration - Aerobic and Anaerobic, Mechanism of aerobic respiration- Glycolysis, Kreb cycle, Electron transport system and Chemiosmotic ATP generation, Respiratory Quotient.

Unit - III: Metabolism and growth

- 3.1 Nitrogen Metabolism- Sources of nitrogen, Symbiotic nitrogen fixation, Role of Nitrate reductase.
- 3.2 Growth - Phases of growth, Growth curve, Physiological role of growth hormones (Auxins, Gibberellins, Cytokinins, Abscisic acid, and Ethylene).
- 3.3 Physiology of Senescence and Abscission.

Unit – IV: Plant responses

- 4.1 Photoperiodism - Concept of Florigen, Role of Phytochrome,
- 4.2 Vernalization- Concept and Significance.
- 4.3 Plant movement- Tropic (Phototropic and Geotropic) and Nastic (Epinasty, Hyponasty and Seismonasty)
- 4.4 Stress physiology- Concept, Types of stress, Water and Salinity stress.

Unit – V: Ecology and Environment:

- 5.1 Concept of environment, Concept and scope of ecology.
- 5.2 Ecological factors- Climatic- Light, Temperature and Water.
- 5.3 Atmosphere and its composition.
- 5.4 Edaphic factor- Process of soil formation, soil profile, soil biota and their role.
- 5.5 Ecological Adaptations - Morphological and Anatomical adaptation in Hydrophytes, and Xerophytes.

Unit – VI: Ecosystem:

- 6.1 Population Ecology- Natality and Mortality, Community characteristics – Frequency, Density and Abundance
- 6.2 Ecological Succession - Hydrosere and Xerosere
- 6.3 Ecosystem – Definition, Structure and Function,

Food chain, Food web, Energy flow model (Single channel model)

6.4 Types of Ecosystem- Pond ecosystem, Desert ecosystem.

LABORATORY EXERCISE :

Plant Physiology: Major experiment (Any Seven)

1. To study the effect of temperature and organic solvent on permeability of plasma membrane.
2. To study osmotic pressure of cell sap by plasmolytic method.
3. To determine water potential of plant tissue.
4. To determine the path of water (ascent of sap)
5. To determine the rate of transpiration by Ganongs photometer.
6. To determine rate of photosynthesis under varying quality of light and CO₂ concentration.
7. To study the rate of photosynthesis in terrestrial plants with the help of Ganongs Photosynthometer.
8. Separation of chloroplast pigments by paper chromatography/ solvent extraction method.
9. Separation of amino acids by paper chromatography method.
10. To determine R.Q. using different substrates.
11. To determine the rate of respiration by Ganongs respirometer.
12. To study antagonism of salts.
13. To study phenomenon of adsorption.
14. To study effect of IAA and Gibberellins on seed germination.
15. Test for secondary metabolites- Alkaloid, Phenolics, Tannin, Flavonoids and Lignin
16. To study Endo and Exo-osmosis by egg membrane osmoscope

Plant Physiology: Minor experiment- (Any Three)

1. To demonstrate fermentation.
2. To demonstrate exo and endosmosis
3. To demonstrate transpiration by Bell jar.
4. To demonstrate light is necessary for photosynthesis
5. To demonstrate anaerobic respiration in germinating seeds.
6. To demonstrate the evolution of CO₂ in respiration.
7. To demonstrate the phenomenon of nastic movement with help of *Mimosa pudica* / or *Biophytum sensitivum*.

Ecology: Major experiment (Any Three)

1. Study of morphological and anatomical adaptations in hydrophytes – *Hydrilla*, *Eichhornia*, *Typha*, *Vallisneria* and *Nymphaea* (any two)

MICROBIOLOGY

CLASS/SEM B. SC. T. Y. SEM (V)

**ENVIRONMENTAL MICROBIOLOGY & BIOINSTRUMENTATION
ENVIRONMENT**

B.Sc. Final (Sem-V & VI)
Exam. 2015-16

Prospectus No. 2016123

**संत गाडगेबाबा अमरावती विद्यापीठ
SANT GADGE BABA AMRAVATI UNIVERSITY**

**विज्ञान विद्याशाखा
(FACULTY OF SCIENCE)**

अभ्यासक्रमिका

विज्ञान स्नातक अन्त्य परिक्षा
सत्र ५- हिंदूकी - २०१५
सत्र ६ - उन्हाळी - २०१६

**PROSPECTUS
OF**

The Examination for the Bachelor of Science

Semester-V, Winter- 2015, and

Semester-VI, Summer-2016 *Continued for Semester-V
Winter-2017
Semester-VI, Summer-2018
& Onwards*

*Continued for
Semester V Winter 2020,
Semester VI Summer-2021
(As it is)*

*Continued for Semester-V
Winter-2019
Semester-VI Summer 2020
(Along with notification No.56/2019)*



2015

Contd. for Semester-V
Winter-2016

Semester-VI Summer-2017
(Along with Notf. No.57 of 2016)

*Continued for Semester-V
Winter-2017
Semester-VI, Summer-2018
(along with notification Nos.
28/2017, 54/2017 &
Direction No.15/2017)*

**Continued for Semester-V Winter-2018, (Price-Rs.30/-)
Semester-VI - Summer-2019
(As it is)**

MISCELLANEOUS:-

1.	Propipettes	Any make	Able to hold any pipettes from 0.1 ml to 10 ml capacity	5 Nos.
2.	Test tube	Tarson	To hold 12 Tubes	20 Nos.
3.	Burette stands	---	Metal rod and base with tarson clamp.	20 Nos.
4.	Rubber Crock		To fit in concial flasks of all capacity.	20 each
5.	Procelain Glazed tiles		6x6"	20 Nos.
6.	Mortor and Pestal	---	6" diameter	1 Nos.

**B.SC. FINAL (SEMESTER-V)
17 : MICROBIOLOGY**

The examination shall comprise of two theory papers, one in each semester and one practical in each Semester. Each theory paper will be of 3 hours duration and carry 80 marks. The internal assessment will carry 20 marks. The following syllabi is prescribed on the basis of six lectures per week and 6 practical periods per batch per week. Each theory paper have been devided into 6 units. There shall be one question on each unit, will internal choice and for each of 12 marks and one compulsory question covering all the syllabus of semester V(8 marks).

**SS MICROBIOLOGY
(Environmental Microbiology and Bioinstrumentation)**

Unit-I : Microbial Associations and Air Microbiology

A. Microbial Associations : Definition and examples of positive(Mutualism, Commensalism, Synergism), negative (Antagonism, Competition, Parasitism) and neutral association.

B. Air Microbiology

- a) The atmosphere and its layers.
- b) Different types of microorganisms in air.
- c) Techniques for microbiological analysis of air:
 - i) Solid impingement devices
 - ii) Liquid impingement devices.
- d) Airborne diseases : Etiology, symptoms and prevention.
- e) Control of microorganisms in air.

Unit-II : Microbiology of Soil.

- a) Microorganisms in soil.
- b) Rhizosphere.
- c) Decomposition of plant and animal residues in soil.
- d) Definition, formation, function and microbiology of humus and compost.
- e) Biological Nitrogen fixation : Type of nitrogen fixing microorganisms, factors affecting and mechanism of symbiotic and non-symbiotic nitrogen fixation. Process of nodulation, nitrogenase complex, recombinant DNA and nitrogen fixation, legume inoculants.
- f) Cycles of elements in nature :
 - i) Carbon cycle : CO₂ fixation, organic carbon degradation.
 - ii) Nitrogen cycle : Proteolysis, amino acid degradation, Nitrification, Denitrification, Degradation of nucleic acids.
 - iii) Sulphur cycle
- iv) Phosphorus cycle.
- v) Biofertilizers, biological pest control.

Unit III : Water Microbiology

- a) Plankton : Definition, types, factors affecting growth of plankton, methods of enumeration, beneficial and harmful activities of plankton.

- b) Control of plankton problems
- c) Eutrophication and its control.

Unit IV : Assessment of Water Quality and Treatment

Bacteriological analysis of water:

- i) Significance of bacteriological analysis of water.
- ii) Collection and handling of water sample from various sources.
- iii) Indicators of excretal pollution.
- iv) Multiple tube dilution technique, MPN.
- v) IMViC classification of coliform.
- vi) Membrane filter technique for coliform and faecal Streptococci.
- vii) ICMR and WHO Bacteriological standards of drinking water.

Unit V : A) Water Treatment

- a) Self purification of water : Various zones and factors responsible for self purification.
- b) Treatment of water : Aeration, Coagulation, Flocculation, Sedimentation and Filtration.
- c) Slow and Rapid sand filters : Construction, mechanism of filtration, differences.
- d) Methods of chlorination : Plain, super chlorination, ammoniachlorine treatment, Break-point chlorination

B) Waste Water Treatment

- a) Aims of sewage treatment, composition of sewage.
- b) Municipal sewage treatment plant.
- c) Preliminary treatment (seiving and Grit chamber)
- d) Primary treatment(sedimentation)
- e) Secondary treatment (Aerobic)
 - i) Trickling filter
 - ii) Activated sludge process
 - iii) Oxidation pond
- f) Anaerobic sludge digestion

- g) Domestic sewage treatment by septic tank and Imhoff tank.
- h) Concept of COD, BOD.
- i) Outline of bio-gas production

Unit VI : Bio-Instrumentation

- a) Spectroscopy- Definition, Principle, types (UV&IR) & its applications.
- b) Electrophoresis- Definition, Principle, types (Paper&Gel) & its applications.
- c) Chromatography- Definition, Principle, types (Paper&TLC) & its applications.
- d) Isotopic Tracer Techniques - Definition, Principle & applications.

Microbiology Practicals.

1. Bacteriological analysis of water and Waste Water.
 - a) Standard plate Count.
 - b) Multiple tube dilution technique (MPN for Coliform)
 - i) Presumptive test
 - ii) Confirmatory test
 - iii) Completed test.
 - c) IMViC test for coliform
 - d) Multiple tube dilution technique for faecal strepto cocci.
 - e) Membrane filter technique for coliforms & faecal streptococci.
 - f) BOD estimation.
 - g) Isolation of Bacteriophage from Sewage.
 - h) Determination of Chlorine demand and residual chlorine.

2. Study of Soil Microbiology

- a) Enumeration of Soil microorganisms.
- b) Isolation of Azotobacter from Soil.
- c) Isolation of Rhizobium from Soil

d) Isolation of Antibiotic producers from soil

3. Effect of Ultra-violet/Filtration on micro-organism present in water
4. Separation of amino acids and sugars by paper chromatography.

Distribution of marks for Microbiology practical Examination:

1. Major Experiment	- 15 marks
2. Minor Experiment	- 10 Marks
3. Viva Voce	- 10 marks
4. Spotting	- 10 marks
5. Laboratory Journals	- 05 Marks

Total - 50 marks

List of Reference Books for 5S Microbiology:

1. Introduction to Soil Microbiology : Alexander Martin
2. Soil Microbiology : Subbarao N.S.
3. Introduction to environmental Microbiology: Mitchell, Ralph
4. Sewage & Waste treatment : Hammer
5. Water Pollution : Zajic J.E.
6. Water Pollution Microbiology : Mitchell R.
7. Air Pollution : Perlins H.L.
8. Aquatic Microbiology : Stainer & Shewan
9. Introduction to Waste Water Treatment processes: Ramalhr R.S.

**B.S.C. FINAL (SEMESTER-VI)
6 S. MICROBIOLOGY**

The examination shall comprise of two theory papers, one in each semester and one practical in each Semester. Each theory paper will be of 3 hours duration and carry 80 marks. The internal assessment will carry 20 marks. The following syllabi is prescribed on the basis of six lectures per week and 6 practical periods per batch per week. Each theory paper have been devided into 6 units. There shall be one question on each unit, will internal choice and for each of 12 marks and one compulsory question covering all the syllabus of semester VI(8 marks).

ZOOLOGY

CLASS/SEM B. SC. S. Y. SEM (IV)

UNIT 05 ECOLOGY

UNIT 06 ECOSYSTEM ENVIRONMENT

ENVIRONMENT

70

E) Histological Slides :- Amphioxus, Frog, Rat

Slides :

Amphioxus : T.S, Oral hood, Pharynx, Tail

Frog :- T.S. lung, Stomach, Kidney, T.S. Intestine,

Rat:- T.S. Liver, Pancrease, Ovary, Testies, Pituitary, Thyroid, Adrenal

DISTRIBUTION OF MARKS FOR PRACTICAL EXAMINATION.

1. Dissection: -	10
2. Permanent stained micro preparation.	05
3. Spotting. (Specimens, Slides, bones, fossil)	10
4. Practical on evolution -	10
5. Class record	05
6. Viva - Vöce	05
7. Submission of study tour report.	05

Total Marks: 50

BSc.II Semester IV

ZOOLOGY

There shall be the following paper and practical for B.Sc. Part-II Semester IV examination. The syllabus is based on 6 theory periods and six practical periods per week (Total 75-80 theory sessions and 25 practical sessions) during the complete semester. There shall be one compulsory theory paper of 3 hours duration the semester, as stated below and a practical examination extending for four hours. Every examinee shall offer the following paper of 100 marks (80 for written examination and 20 marks for internal assessment) and a practical examination of 50 marks. Candidates are required to pass separately in theory and practical examination.

Semester IV

D Paper-I:	Marks Allotted
Advanced Genetics and Animal Ecology.	
Written examination	80
Internal assessment	20
2 Practical:	50
Total:	150 Marks

ZOOLOGY Paper 4 S**ADVANCED GENETICS AND ANIMAL ECOLOGY****UNIT I** : Concept of genes.

Mendel's laws of heredity – Monohybrid – Laws of dominance, law of segregation. Dihybrid cross – Law of independent assortment. Interactions of genes: , Supplementary factor, complementary factor, duplicates factor, inhibitory factors, and lethal factors – dominant and recessive.

UNIT II : Linkage - Types of linkage, linkage group, arrangement of linked genes, and significance of linkage.

Crossing over – Mitotic and meiotic crossing over, Mechanism of crossing over, theories of crossing over – Darlington's theory, breakage and exchange theory, and copy choice theory. Types of crossing over – Single, double and multiple crossing overs. Factors affecting crossing over, Significance of crossing over.

Multiple alleles. Multiple alleles in relation to eye color in *Drosophila*. Blood group in man, Erythroblastosis foetalis

UNIT III : **Sex determination:** Autosomes and sex chromosomes, Sex determination in animals, Chromosomal Theory. Genic Balance Theory. Environmentally and hormonally controlled sex determination, Gynandromorphs.

Genetic disorders; Sickle cell anemia, , Huntington's chorea. Diabetes mellitus. Non-disjunction: Turner's syndrome, Klinefelter's syndrome, Down's syndrome. Edwrd's

Syndrome, Biochemical genetics:; Cystic fibrosis, Phenylketonuria, Albinism, Alkaptonuria, Goiters, cretinism. Sex linked genetic disorders and their inheritance in man; Hemophilia and color blindness.

UNIT IV : Genetic Screening and parental diagnosis: - Parental, Carrier, Predictive, CVS (Chorionic Villous Sampling), Amniocentesis, Gene probe and DNA analysis. **Genes in Human Heredity:** - Inheritance of eye color. Skin color. **Recessive genes and consanguineous marriages** **Genetic counseling:** - Risk of marriages in affected family. Birth control measures (male and female).

Kinds of twins: - Identical, Fraternal, Siamese twins.
Significance of twins study

UNIT V : Ecology: concept and scope:

Abiotic factors:

Water: Properties, water problem in terrestrial and aquatic habitat. **Temperature:** Temperature range, Temperature tolerance, Effects of temperature on animals. Homeotherms, poikilotherms. **Dormancy, hibernation, aestivation & diapauses.** **Light:** Spectral distribution, Biological effects of light on aquatic and terrestrial animals: Reproduction, Metamorphosis, pigmentation, vision, photo kinesis, phototropism, photoperiodism, migration.

Biotic factors:

Intra specific and interspecific associations, Predation, parasitism, Antagonism, commensalisms, mutualism, competition, (Gause's Principle).

UNIT VI : Ecosystem: Relationship between habitat and ecological niche - Autotrophic and heterotrophic producer, consumer - trophic level - energy flow in an ecosystem - food chain - food web - pyramids - Ecotypes. Homeostasis of ecosystem.

Terrestrial ecosystem: Classification and Biomes, **Aquatic ecosystem:** Fresh water ecosystem-Lentic and lotic ecosystem,

B.Sc. Part II, Semester III
Marine ecosystem: Characteristics, salinity, temperature - pressure, zonation and stratification. Estuarine ecology: Characteristics types, fauna and their adaptations.

REFERENCE BOOKS:

1. Cell Biology, Genetics, Molecular Biology, Evolution & Ecology – P.S.Verma & V.K.Agrawal.
2. Principles of Genetics – S.K.Jain
3. Genetics – P.K.Gupta
4. Applied Genetics – C.Pmmanuol.
5. Genetics: M.W.Strickberger, New York.
6. Principles of Genetics: Sinnott, Dunn and Dobzansky.
7. Principles of Genetics: Edidon Gardner.
8. Genetics. Verma, P.S. and V.K. Agarwal.. S.Chand & co. New Delhi
9. Gene VI .Lewin, B. 1998. Wiley Eastern Ltd., New Delhi.
10. Human Genetics. Rothwell, N.V.1979. Prentice Hall of India, New Delhi

Practical:-

Two practical per week of 3 periods duration. Examination shall be of 5 Hrs. duration and of 50 marks.

A) Genetic experiments:

1. Recording of Mendelian traits in man.
2. Detection of monohybrid and dihybrid cross with the help of plastic beads.
3. Culturing *Drosophila* using standard methods .*Drosophila* – male and female identification, Mutant forms (from pictures)
4. Demonstration of bar bodies.
5. Preparation of human Karyotypes from Xerox pictures.
6. Photo slides for, Turner's syndrome, Klinefelter's syndrome, Down's syndrome
7. Detection of syndrome from chromosome spread picture.
8. Study of following human genetic traits and application of Hardy-Weinberg Principle to them – Baldness, length of index and ring Finger, attached and free earlobes, rolling of tongue, PTC taste. Other notable traits.

B) Ecology

1. Use of pH meter for estimation of pH in soil samples, b. Use of pH meter for estimation of pH in water samples
2. Estimation of Dissolved oxygen, salinity, pH, free CO₂, carbonates and bicarbonates, calcium in water samples.
3. Adaptations of aquatic and terrestrial animals based on a study of museum specimens. Such as rocky, sandy, muddy shore animals, flying and burrowing animals.
4. Study of natural ecosystem and field report of the visit.
5. Field collection methods;
6. Identification of common animals - Soil invertebrate diversity, diversity of birds and mammals in parks / botanical gardens, threats to local biodiversity.
7. Construction of a food web diagram based on a field visit.
8. Mounting of plankton.
9. Qualitative analysis of fresh water plankton

C) General:-

1. Visit to a National park or sanctuary, and submission of report.

DISTRIBUTION OF MARKS FOR PRACTICAL EXAMINATION.

1. Ecological: Estimations -/Analysis	10
2. Spotting. (2Spot from Sec.A & 3 Spot from Section B of 2 Marks each)	10
3. Micro preparation.	05
4. Genetic experiment -	10
5. Class record	05
6. Viva - Voce	05
7. Submission of study tour report.	05

Total Marks : 50

PHYSICS

CLASS/SEM B. SC. S. Y. SEM

(III)

UNIT VI: ATMOSPHERE & GEOPHYSICS

ENVIRONMENT

2. PHYSICS 3S PHY

Unit I : Mathematical background and Electrostatics (12)

Gradient, divergence and curl of a vector fields and their physical significance, line surface and volume integral. Gauss divergence theorem, Stocks theorem. Work done on charge in electrostatic field, flux of electric field, force on moving charge, Lorentz force equation and definition of B. Ampere's force law, Ampere's Law and its applications.

Unit II : Magnetostatics and Maxwell's Equations (12)

Faraday's Law, Integral and differential form of faraday's law, displacement current and Maxwell's Equation, wave Equation satisfied by E and B. Plane electromagnetic wave in vacuum, Poynting vector and Poynting theorem.

Unit-III : Solid State Electronics Devices-I – (12)

Physics of semiconductors : Introduction to semiconductors ; Charge carriers & electrical conduction through semiconductors ; Doping, extrinsic semiconductors ; Fermi level & energy level diagrams ; Drift current in

semiconductor , mobility, conductivity ; Hall effect, Hall coefficient, Semiconductor diode & its biasing, LED, Varactor diode.

Unit-IV : Solid State Electronics Devices-II – (12)

Introduction to BJT ; working of BJT ; modes of operation; Current gains α and β , their relation ; CB & CE characteristics ; JFET- construction & working , characteristics of FET ; Basic concept of Difference amplifier, IC-OPAMP , electrical parameters of OPAMP, inverting & noninverting modes ; OP AMP as adder, subtractor, differentiator & integrator.

Unit: V : Special Theory of Relativity (12)

Postulates of Special Theory of Relativity, Lorentz transformations, Length contraction, Time dilation, relativistic addition of velocities, relativity of mass, Einstein's Mass - energy relation, Numericals.

Unit: VI : Atmosphere and Geophysics (12)

Structure of earth – The crust, mantle, core.

Part of the earth – As a planet; The Atmosphere, The lithosphere, The Hydrosphere Composition of Atmosphere

Earthquakes – Causes, terminologies associated with earthquakes. Type of earthquakes scale of intensity, recording of earthquakes.

Radiation in the atmosphere, Propagation of energy through vacuum, Intensity of radiation, Scattering, absorption and reflection of solar radiation by the atmosphere. Moisture and clouds: mechanism that produces clouds ,Cloud produced by mixing and by cooling.

Practical : The distribution of marks for practical examination will be as follows:

Record Book	10 marks
Viva-voce	10 marks
Experiment	20 marks
Assignment	10 marks
Total	50 marks

Plane diffraction grating; construction and elementary theory, determination of wavelength of monochromatic light by using grating. Resolution of images, Rayleigh's criteria for resolution, R. P. of grating.

Unit III : Polarization

(12)

Concept of polarization, optic axis, double refraction, polarization by double refraction, phase retardation plate :- Quarter wave plate, half wave plate, (Nicol prism-production and analysis of polarized light). Theory of production of elliptically and circularly polarized light, production and detection of elliptically and circularly polarized light. Half shade polarimeter, blue of the sky.

Unit IV : Laser

(12)

Introduction to Maser, Absorption, spontaneous and stimulated emission, population inversion, pumping characteristics of laser beam. Main components of laser system, three level and four level laser system. Ruby laser, He-Ne laser, semiconductor laser, application of laser. Holography-principle.

Unit V : Fiber optics

(12)

introduction of fiber optics, total internal reflection, structure and classification of optical fiber. Propagation of light wave in an optical fiber, Acceptance angle and numerical aperture, dispersion, fiber losses, fiber optic communication. Advantages and Disadvantages of optic fibers, application of fiber optics.

Unit VI : Renewable Energy Sources

(12)

Introduction to various renewable energy sources – Solar energy, Wind energy, ocean energy- Waves & tides, geothermal energy, Hybrid Systems, Hydrogen energy systems, Fuel cells.

Solar energy - Solar radiations on earth - availability and seasonal variations, Solar constant, Spectral distribution, Measurement of solar radiation and sun shine.



Solar Energy Storage :- Methods of storage, properties of storage materials. Principle of Solar Thermal Applications, Solar water heater, Solar concentrating collectors - Types , applications.

Solar Photovoltaic systems -- Operating principle, Photovoltaic cell concepts , power of a solar cell and solar PV panel ; Applications.

Practical : The distribution of marks for practical examination will be as follows:

Record Book	10 marks
Viva-voce	10 marks
Experiment	20 marks
Assignment	10 marks
Total	50 marks

- a) A student will have to perform at least ten experiments per semester.
- b) The semester examination will be of Four Hour duration and student will have to perform one experiment in the semester examination.
- c) In assignment, every student should be asked to submit the detailed report on one of experiments he or she has performed. The detailed report should include the theoretical background of the experiment..

Evaluation of the student during the semester:

The teacher should explain, discuss and demonstrate one experiment per turn in the first twelve turns of the semester. At the same time in every turn; a teacher will have to conduct a test in the first period of the turn, based on the experiment; he or she has

explained in the previous turn. The test is to be carried out with the interest to make the student aware of the basics of the experiments. This will enhance the viva voce competence of the student. A record of these tests is to be maintained in the department duly signed by the teacher in-charge and head of the department. The record is to be maintained in the following format. Each assignment should be of at least 15 marks. Find the average and assign it in the end Semester practical examination.

Activities Conducted for the address cross cutting issues relevant to Environment and Sustainability, Gender Sensitization, Human Values and Professional Ethics

BOTANY ECOFRIENDLY RAKHI CELEBRATION ENVIRONMENT



Eco-friendly
Rakshabandhan

Eco-friendly Rakshabandhan celebrated on 22/08/21

Postal Reg.No. BLD/131/2018-2020
RNI Reg. No. MAHMAR/2015/63437

शेतकऱ्यांच्या हक्काचं विचारपीठ.....

दैनिक कैरान सभा

मानद संपादक : गुलाबराव खेडेकर

य संपादक: संजयकुमार खेडेकर

कार्यकारी संपादक: गजानन खेडेकर

kisansabha2015@gmail.com

गुरुवार ६ मे २०२१ पृष्ठे : ४ किंमत २ रुपये

श्री शिवाजी महाविद्यालयात ऑनलाईन राज्यस्तरीय निबंध स्पर्धा संपन्न

विख्याली/प्रतिनीधी: स्थानिक श्री शिवाजी महाविद्यालयात दर्शकर्ता २२ एप्रिल रोजी जागतिक वसुंधरा दिन साजरा करण्यात येतो. यावर्षी वनस्पतीशास्त्र विभागातील राज्यस्तरीय निबंध स्पर्धा आयोजित करण्यात आली.

वंचमहाभूते हा आपल्या संस्कृतीचा पाया आहे आणि पृथ्वी यापेकी एक आहे. आज म्होळव्यायायक्षेत्रशनद्या काळात आपल्याकडून कळत नकळत पृथ्वीला विनाशकाती अस्या काही गोटी केल्या जातात पृथ्वीचा समस्तोल राखण्यासाठी आपल्याला अधिक सज्ज राहून आपल्याच जीवन तीलीत सकारातमक बदल घडवून आणण्याची वेळ आली आहे. त्यासाठीच जागतिक वसुंधरा दिनाच्या माध्यमातून समाजात अधिक जनजागृती निर्माण करण्यासाठी राज्यस्तरीय निबंध स्पर्धेचे आयोजन करण्यात आले. या स्पर्धेसाठी युक्तसंवर्धन काळाची गरज, जलप्रदूषण, वायुप्रदूषण, जलपुनर्भरण, असे केंगवेगळे विषय देण्यात आले. या विषयावरील निबंध दिनांक २२ ते ३० एप्रिल यादम्यान ऑनलाईन लिंकावरै चौंकाविण्यात आले. यामध्ये पुणे, नाशिक, अमरावती, मुंबई यांची जिल्हातील ४८ निबंध प्राप्त झाले. त्यात कु. आरली चंद्रशेखर मिटकरी बी एड प्रथम वर्ष भाऊसाहेब पाटील कॉलेज बीड यांना प्रथम क्रमांक रु ७०० रोख बक्षीस प्राप्त झाले. द्वितीय क्रमांक रणधंवर राजेंद्र साळवे वर्ग ११वा श्री शिवाजी विज्ञान व कला महाविद्यालय विख्याली याला रु ५०० रोख बक्षीस प्राप्त झाले.

तृतीय क्रमांक कू. आचल सुरेशराव बंसले महात्मा फुले महाविद्यालय वरुड यांना रु ३०० रोख बक्षीस प्राप्त झाले. कु. सानवी नारखेड वर्ग ९वा सरस्वती झंगाजी शाळा नाशिक हिला प्रोत्साहन पर कापये २०० बक्षीस प्राप्त झाले. या स्पर्धेसाठी प्रा. डॉ. गणेश मालटे मराठी विभागमुख, प्रा. डॉ. इन्हीज जुकाळकर झंगाजी विभाग, प्रा. योगिनी सुरडकर पर्यावरक यांनी परीक्षक म्हणून काम पाहिले. या स्पर्धेसाठी प्राचार्य डॉ. अनिल गारोडे यांचे मार्गदर्शन लाभले. प्रा. डॉ. विनिता पोद्धांडी स्पर्धा समन्वयक, प्रा. मुकुद कोलते, प्रा. दिलीप गावडे, प्रा. डॉ. अंकित काळे यांनी आयोजन सचिव म्हणून काम केले.

On the occasion of Earth Day online Essay Competition was organized

On 22 April 21 Botany Department organized State Level Essay Competition

Winners are

First Winner: Ms. Arti Chandrashekhar Mitkari. Bausaheb BEd College, Beed

Second Winner: Randhvir Rajendra Salve Shri Shivaji Science And Arts College, Chikhli

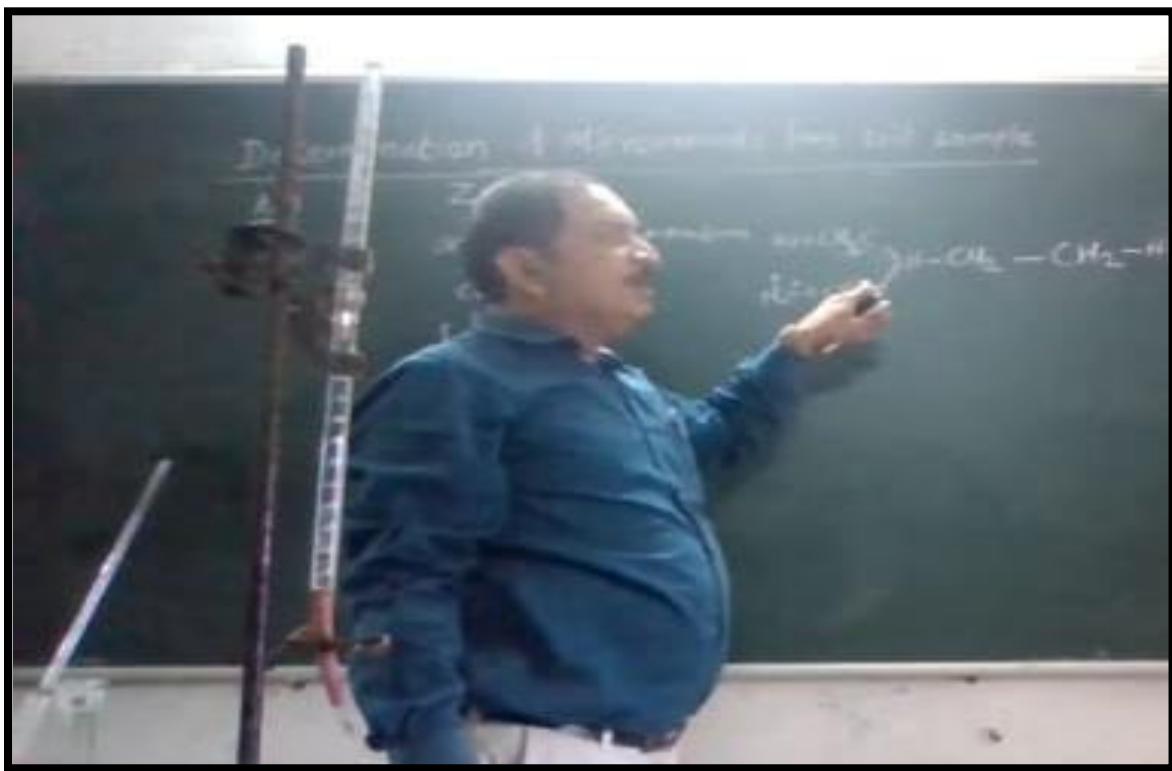
Third Winner: Anchal Sureshrao Bansale, MF College, Warud

Consolation Prize: Sanvi Narkhede Class-9 th Sarswati English School, Nasik.

 Shri Shivaji Education Society, Amravati's
Shri Shivaji Science & Arts College
Chikhli, Dist. Buldana
NAAC Reaccredited with B++ Grade (CGPA-2.82)
We Educate, Inspire and Empower

Department of Chemistry
Cordially invite you to join
ONLINE 6 DAYS CERTIFICATE COURSE
On
Soil and Water Analysis
16 September - 21 September 2021
Time: 12.00 to 5.00 PM





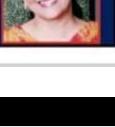
Chemistry Department organized a add on course on “Soil & water analysis”

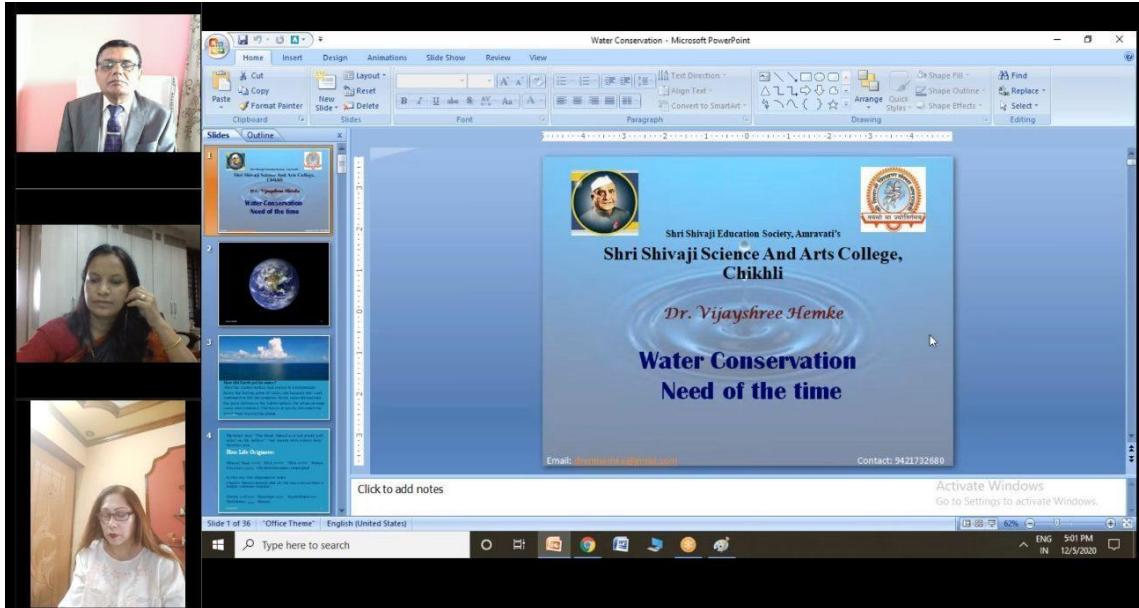


NSS Department developed Oxygen Park in the campus



Tulsi Plants in Oxygen Park

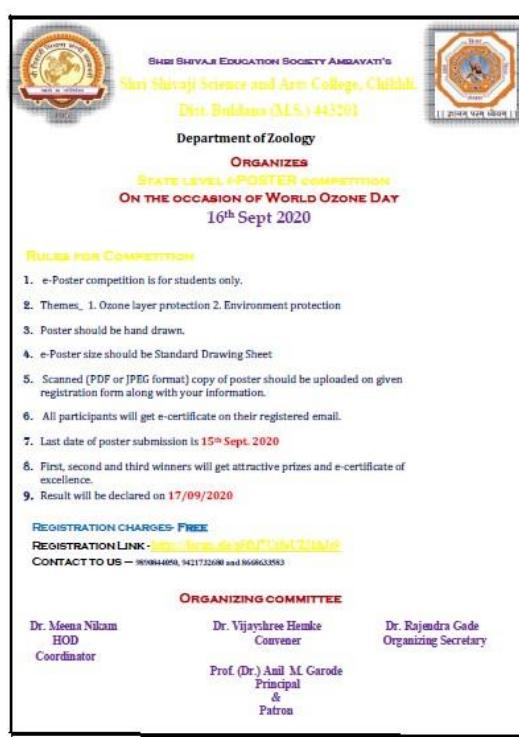
Date	Resource Person	Title of Speech	05:00 pm
1	Dr. Aruna Chaudhari, University Law College, Rajasthan	A social awareness for Child Labour prevention	
2	Dr. Namrata Girish Mahajan, Moolji Jaitha College Jalgaon.	Ornamental fish opportunity for sustainable development.	
3	Dr. Reeta Dwivedi, MIER College of Education Jammu, J&K.	Challenging Gender Inequality: Role of Teacher, School & Society	
4	Mrs. Neetu Sharma Guru Nanak College of Arts, Science Commerce, Mumbai.	Effect of climate change on human life	
5	Dr. Vijayshree Milind Hemke, Shri Shivaji S&C College, Chikhli.	Water conservation: Need of time	
6	Dr. Megha K. Juvekar, Nirmala Memorial Foundation A&C College, Mumbai.	NSS and Social Development	
7	Prof. Ritu Kashyap, Balbharati's M.J.P. College of Commerce, Mumbai.	Social media and today's youth	



Dr. Vijayshree Hemke delivered guest Lecture (GoTOMeeting App) on Water Conservation: Need of Time. This event is hosted by NSS Department, Shri Kumarswami Mahavidyalaya, Ausa Di: Latur M.S. on The occasion of Golden Jubilee of the college on 05th December, 2020



To raise awareness of Ozone Layer wrote Newspaper Article on
 “ Save Ozone Layer” by Dr. V. M. Hemke on 16/09/2020



Ozone Day Celebration by Department of Zoology

Brochure of Ozone Day Celebration by organizing competitions (Online)


SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI
SHRI SHIVAJI SCIENCE AND ARTS COLLEGE, CHIKHILI
DIST. BULDANA (M.S.) 443201
DEPARTMENT OF ZOOLOGY, BOTANY AND MICROBIOLOGY
ORGANIZES
NATIONAL WEBINAR
ON 28/07/2020 ON 10:45 A.M.






Registration charges- Free
 Registration Link- <https://forms.gle/4SWuDQjGjzvpZcac8>
 Link for Telegram group - <https://t.me/joinchat/SDdtXhmxuD27b0Nx02WYCW>

SCHEDULE OF WEBINAR		
Time	Program/Topic	Resource Person
Sessions-I		
10.45 AM	Welcome Address	Dr. V U Pochhi IQAC Coordinator
10.50 AM	Inaugural Address	Dr. A M Garode Principal Shri Shivaji Science And Arts College, Chikhli
10.55 AM	Introduction of Resource Person	Dr. V M Hemke Convenor
11.00 AM	Resource Person-I Topic-Bird flowers and Flower Birds Ornithophily	Dr. Raju Kasambe Assistant Director Education Bombay Natural History Society Mumbai.
12:00 Noon	Vote of Thanks	Dr. M T Nikam HOD Zoology Department
Sessions -II		
12.05 AM	Introduction of Resource Person	Dr. V M Hemke Convenor
12.10 PM	Resource Person-II Topic is- Yes! We are Healthy!	Dr. Satish Kale Joint Replacement Surgeon, Lokmanya Hospitals, Pune.
1:10 PM	Vote of Thanks	Prof. S N Mendhe Microbiology Department

The webinar will be conducted on Zoom app
 All participants are requested to kindly download zoom app in your PC/Mobile.
 Kindly join the webinar before 10 minutes by clicking on given link in telegram group.
 E-certificate will be provided to the participants after successful completion of webinar.
 Feedback link will be share after completion of the webinar

Organizing committee
 Prof. Anil Garode- Principal,SSAAC Chikhli Dr.V M Hemke (Dept. of Zoology) -Convenor
 Dr.V U Pochhi- IQAC Coordinator & HOD Botany Mr. D L Gavande(Botany) Organizing Secretary
 Dr. M T Nikam-HOD Zoology-Convenor Mr. M D Kolte (Botany)-Organizing Secretary
 Mr. S N Mendhe- Dept. of Microbiology Dr. R B Gade Dept. of Zoology
 Organizing Secretary Organizing Secretary
 For More Details Contact to:
 Dr. V. M. Hemke. Mr. D. L. Gavande. Mr. M. D. Kolte
 Convenor Organizing Secretary Organizing Secretary
 9421732680 9011138879 8888154099



Bird flowers and flower birds

(Ornithophily)



Dr Raju Kasambe
Assistant Director – Education
BNHS, Mumbai



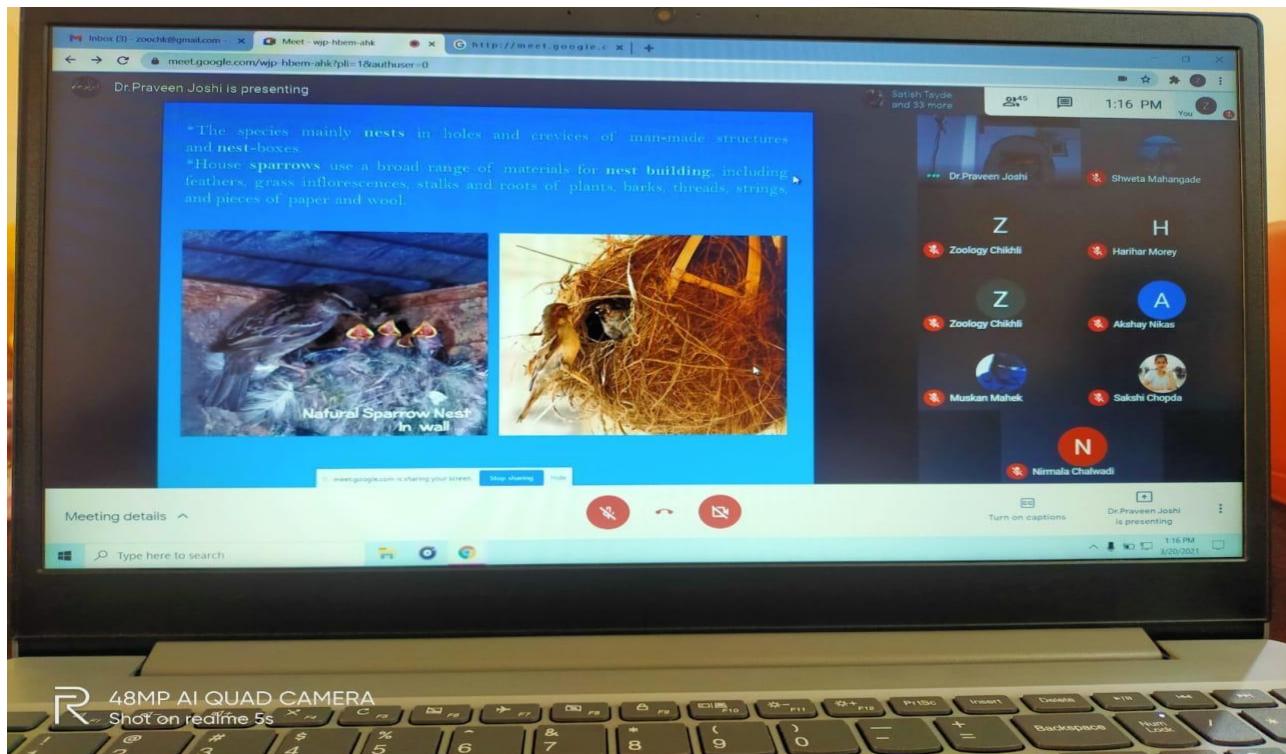
Organizes National Webinar on 1) Bird Flower And Flower Bird and
Resource person: Dr. Raju Kasambe



2) On “Yes, We are healthy!” to raise awareness regarding Covid-19 on 28/07/2020

Resource person is Dr. Satish Kale

Joint Replacement Surgeon, Lokmanya Hospitals Pune.



श्री शिवाजी महाविद्यालयात जागतिक चिमणी दिवस साजरा

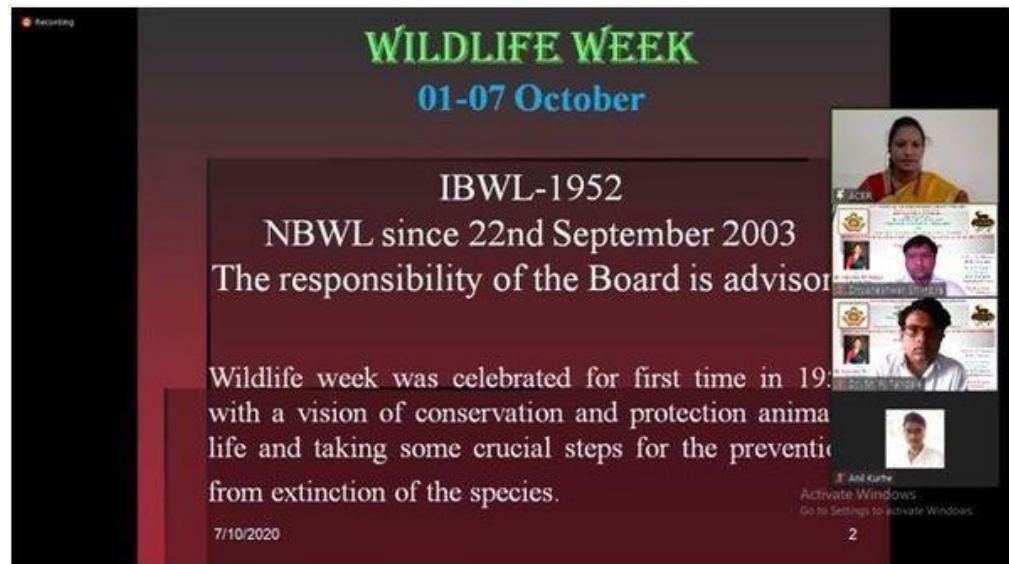


चिखली, २१ मार्च (गुड फ्रिन्ग सिटी) : येथील श्री शिवाजी महाविद्यालयामध्ये २० मार्च २०२१ रोजी जागतिक चिमणी दिनाचे आयोजन करण्यात आले. या निमित्ताने पक्षीतज्ज्ञ प्रा.डॉ.प्रवीण जोशी, अमोलकचंद महाविद्यालय, यवतमाळ यांचे आभासी पद्धतीने व्याख्यान आयोजित करण्यात आले होते.

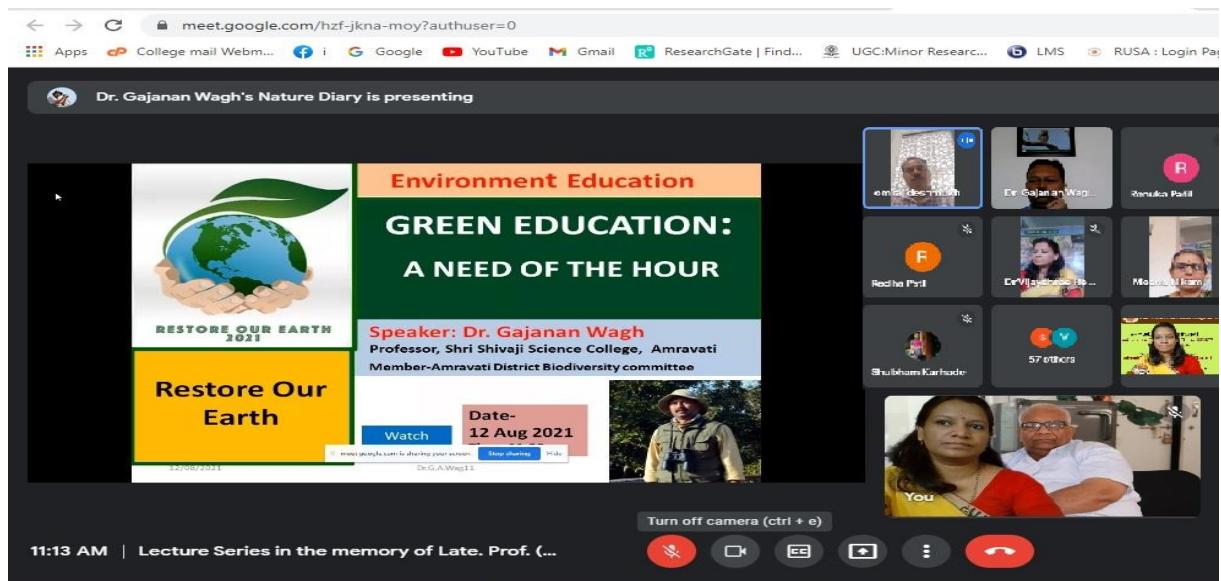
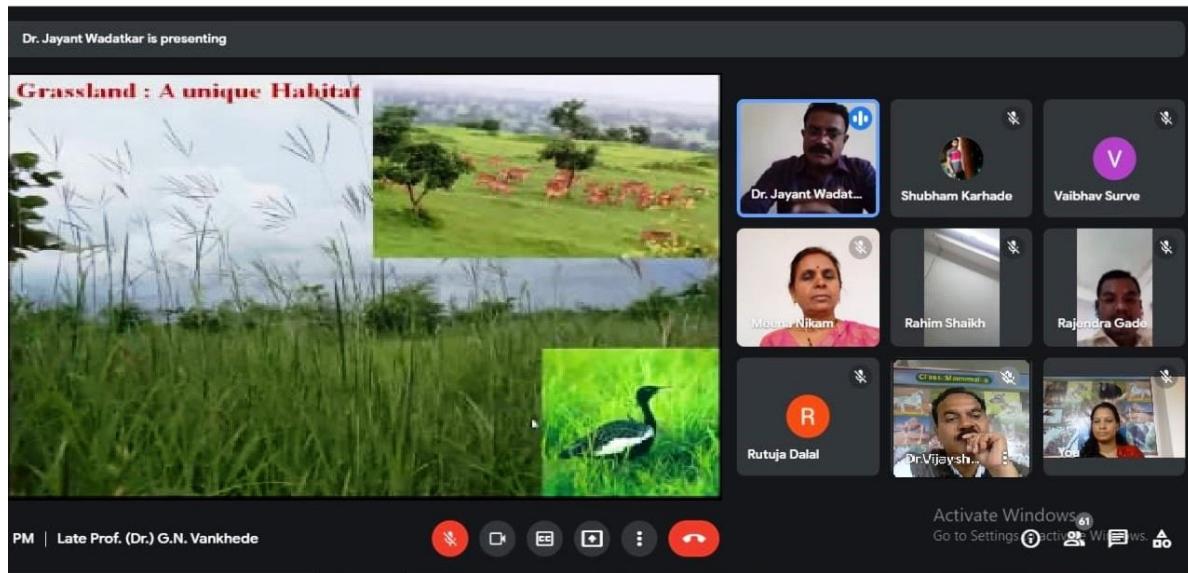
व्याख्यानाचा विषय, जागतिक चिमणी दिनाचे आयोजन- काळावी गरज हा होता. कार्यक्रमाच्या अध्यक्षस्थानी महाविद्यालयाचे प्राचार्य डॉ.अनिल गारीडे होते. आपल्या अध्यक्षीय भाषणातून बोलताना त्यांनी मानवी जीवनासाठी पक्ष्यांचे अविभाज्य महत्व विषद केले. कार्यक्रमाचे प्रास्ताविक प्राणीशास्त्र विभागप्रमुख प्रा.डॉ.मीना निकम यांनी केले. आपल्या प्रास्ताविकात बोलताना डॉ.निकम यांनी चिमणी व काही पक्ष्यांच्या प्रजाती वेगाने नष्ट होत आहेत याची जाण विद्यार्थीद्वयोतत्त्व व्हावी तसेच पक्ष्यांच्या संवर्धनासाठी अशा प्रकारचे उपक्रम

राबविणे गरजेचे असल्याचे स्पष्ट केले. आपल्या उद्घाटनपर भाषणात महाविद्यालयाच्या खट-उ समवयक प्रा.डॉ.वनिता पोच्छी यांनी कार्यक्रमाचे उद्घाटन करून शुभेच्छा दिल्या. आपल्या व्याख्यानात बोलताना प्रा.डॉ.प्रवीण जोशी यांनी जागतिक चिमणी दिनाचे महत्व तसेच दुर्मिळ होत जाणाऱ्या पक्ष्यांच्या प्रजातीकडे लक्ष वेधले आणि पक्षी संवर्धनासाठी विद्यार्थ्यांची महत्वाची भूमिका विश्व केली. प्रमुख वर्के प्रा.डॉ.प्रवीण जोशी यांनी पक्षीतज्ज्ञ म्हणून केलेले कार्य व त्यांचा परिचय प्रा.डॉ.विजयश्री हेमके यांनी करून दिला. तसेच प्रा.डॉ.विजयश्री हेमके यांनी कार्यक्रमाचे आभारप्रवर्द्धनाही केले. या कार्यक्रमाला विद्यार्थीठ स्तरावर विद्यार्थ्यांचा भरघोस प्रतिसाद लाभला. सदर कार्यक्रमाच्या यशस्वीतेसाठी विश्वनाथ सावळे व रहीम शेख यांनी परिश्रम घेतले. कार्यक्रमासाठी प्रा.डॉ.गणेश थोरात, प्रा.दिनीप गावंडे, प्रा.मुकुंद कोलते व प्रा.डॉ.सोनाली गायकवाड यांनी तंत्र संहार्य केले.

Department of Zoology organized a Guest Lecture on “World Sparrow Day” of Prof. Dr. Praveen Joshi Amolakchand Mahavidyalaya, Yevatmal on 20th March 2020



Dr. Vijayshree Hemke delivered guest Lecture (Zoom App) on “Celebration of Wildlife Week” This event is hosted by Zoology Department, Shri Vyanktesh Mahavidyalaya, D. Raja on The occasion of Wildlife Week on 7th Oct 2020



Department of Zoology organized a Five Lectures series on, “Environment Education” on 12, 17,27 August, 18 and 21 Sept 2021. Online Mode.

Criterion – I- Curricular Aspects [QLM – 1.3.1]



Lecture Series in the memory of Late Prof.(Dr.) G N Vankhede

Theme: Environment Education



Form/ Group	G-form link
Registration link	https://forms.gle/Ey9JeHAnPvbpwLA17
WhatsApp group link	https://chat.whatsapp.com/CiHsPrCfZx65xBNFbPB1J4

Our Valuable Participants

Lecture	Date	Google meet link	participants
I st	12 Aug 2021	https://meet.google.com/hzf-jkna-mov	72
II nd	17 Aug 2021	https://meet.google.com/vmj-pbaa-unb	61
III rd	27 Aug 2021	https://meet.google.com/gzq-jnir-gog	74
IV th	18 Sept 2021	https://meet.google.com/bro-qpti-jix	41
V th	21 Sept 2021	https://meet.google.com/ffb-dbnj-yvc	46

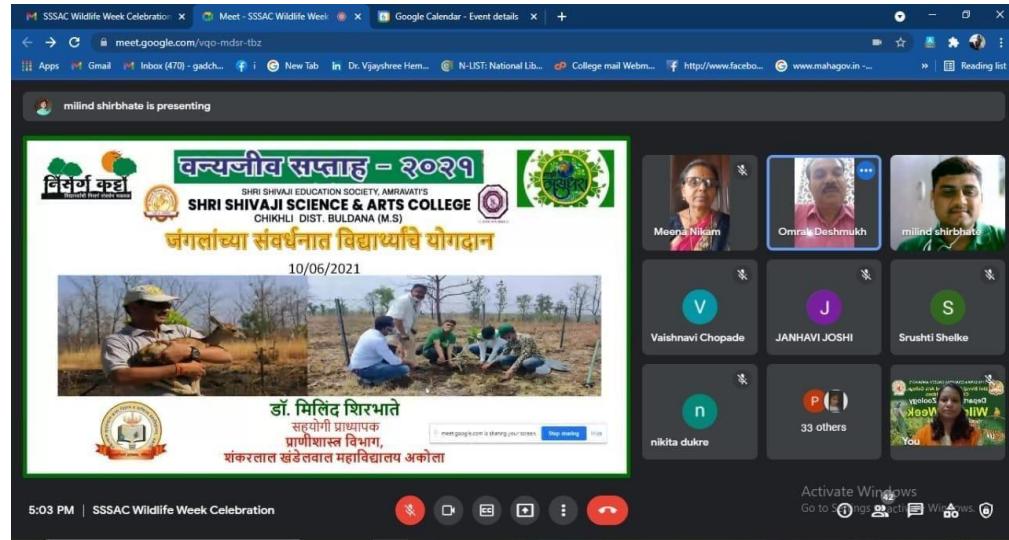
Shri Shivaji Science And Arts College, Chikhli Dist. Buldana



Five Eminent Naturalist was the Resource person for Guest Lectures

Sr. No	Name of Resource Person	Designation	Date
1	Dr. Gajanan A. Wagh	Professor in Zoology	12/08/2021
2	Dr. Jayant Wadatkar	SGBAU, Amravati	17/08/2021
3	Dr. Manjusha Wath	Professor in Botany. GVISH, Amravati	27/08/2021
4	Dr. Shrikant Warhekar	Well known Naturalist	18/09/2021
5	Shri. Kiran More	Livestock Supervisor, Govt. of MS	21/09/2021

Criterion – I- Curricular Aspects [QLM – 1.3.1]



Wildlife Week (02-08 Oct) celebrated by organizing Guest Lectures

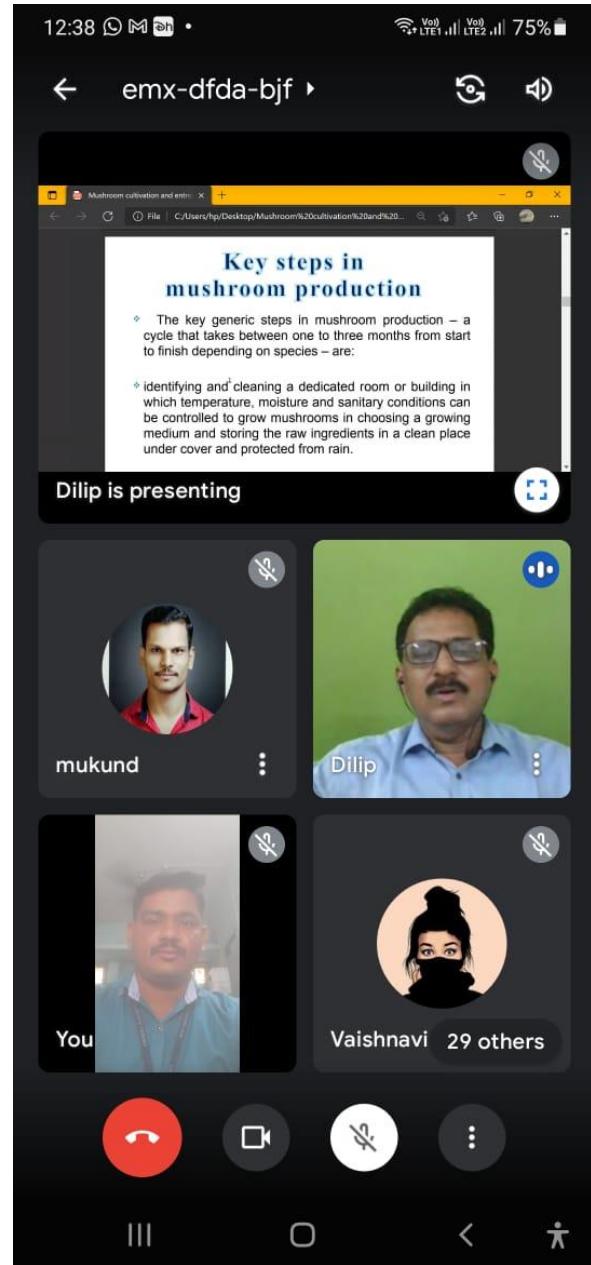
Topics 1) Role of Students & Teachers in conservation of Jungle on 06/10/2021

Resource Person was Dr.Milind Shirbhate Asso. Prof. S. K. College, Akola.

2) Deforestation & Human-Animal Conflict on 08/10/2021

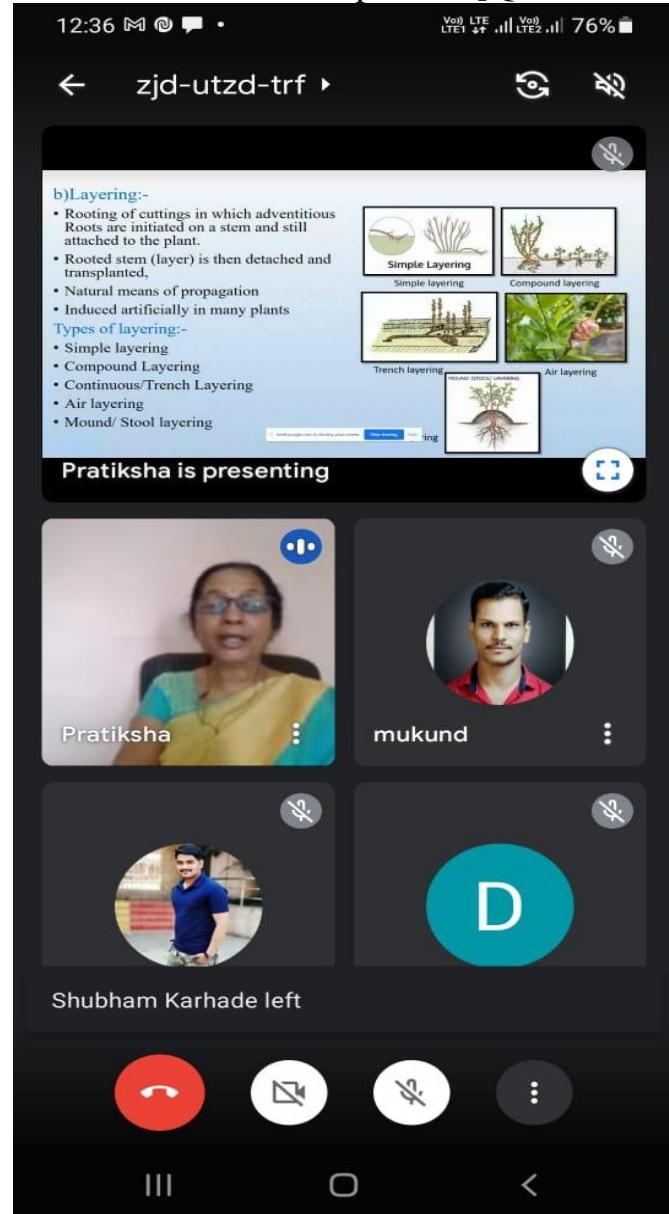
Resource Person was Shri. Kishor Padol Range Forest Officer, Khamgaon

Criterion – I- Curricular Aspects [QLM – 1.3.1]



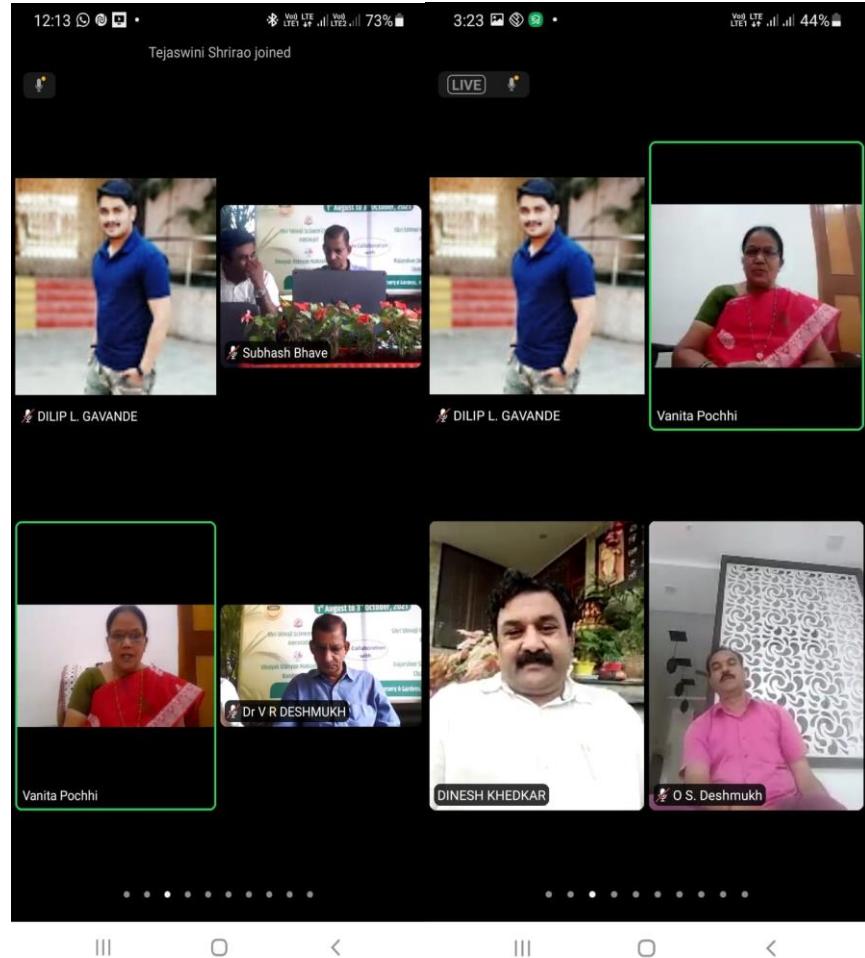
A workshop is organized by Botany Department on Mashroom Cultivation on 23/09/2021

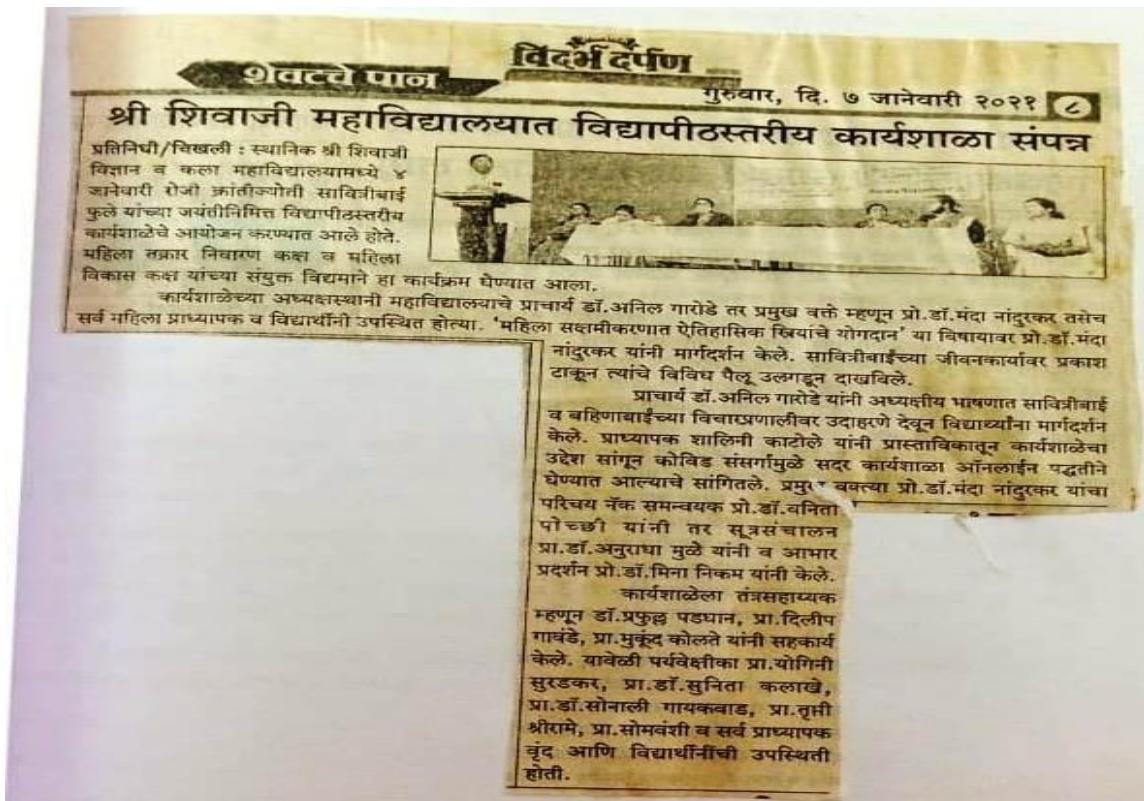
Criterion – I- Curricular Aspects [QlM – 1.3.1]



A lecture series organized by Botany Department on Nursery Management and Plant Propagation

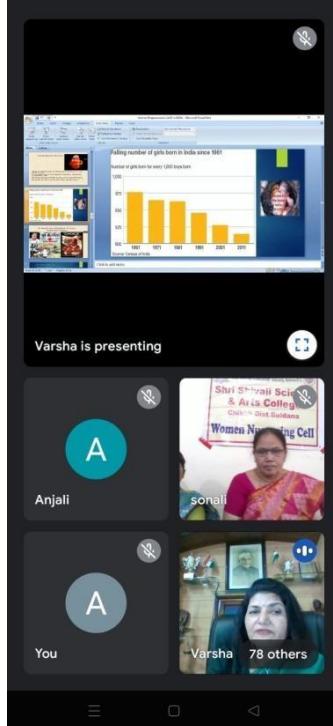
Criterion – I- Curricular Aspects [QIM – 1.3.1]
Department of Botany organized Guest Lectures on Garden Revitalizing Ideal Necessities
Activity under MoU on dated 01/08/2021





ICC Cell of the College And Women Development Cell organized a Workshop on “Contribution of historic Great Women in Women Empowerment” on 4th Jan 2021





Varsha is presenting

देशोन्नती

महिला - सांस्कृतिक

श्री शिवाजी महाविद्यालयात महिला सक्षमीकरण आणि भारतीय कायदे या विषयावर कार्यशाळा

विचारी ■ स्वामिनी श्री शिवाजी महाविद्यालयात 'women Nurturing cell & IQAC' यांच्या संपुर्ण विवराने 'महिला सक्षमीकरण आणि मार्हीय कायदे' या विषयावर कार्यशाळा संपर्क आण्यावित करण्याचा आवाज.

कार्यशाळेच्या अध्यक्षसाठी महाविद्यालयाचे प्राचार्य डॉ. ओमांग देशमुख होते. त्यांनी आपल्या अध्यक्षीय मायणातून आजीही जगातील महिलांना विविध सेवात असे सामाजिक, धार्मिक, शैक्षणिक, आर्थिक व सांस्कृतिक निर्माण घेण्यास त्याना दुख्यम खान दिले जाते. महिलांना स्वतंत्र कठनद्य आणि समाज आणि राष्ट्राभाला बदलावान करू शकतो...

कार्यशाळेचे प्रमुख कर्ते प्राचार्य डॉ. वर्षा देशमुख, डॉ. पंजाबराव देशमुख वैष्णव महाविद्यालय, अमरावती यांनी या कार्यशाळेला मार्हीदर्दन करताना मार्हीय राज्यपटनेनील महिलांना मिळालेले

आवाहन केले. डॉ. विनिता योद्धी यांनी IQAC समन्वयक वर्षी आपल्या स्वामतप्रभ मायणातून महाविद्यालयाचा महिला क्षेत्राचा आणि IQAC वर्तीने महिला सक्षमीकरणासाठी विविध उपक्रमांचे असेयोग्य नेतृत्व घेता याते. डॉ. निमित्त यांनी आपल्या प्रासादातिक मायणातून कार्यशाळेची तीव्र स्पष्ट केला. डॉ. अनुराग युंडे यांनी कायदेलेच्या प्रमुख वर्ती प्राचार्य डॉ. वर्षा देशमुख यांचा परिचय करून दिला.

कार्यशाळेचे संचालन डॉ. सुनिता कलांस्थे यांनी केले तर आमर प्रांगीन डॉ. पलकीव नवले यांनी केले. तंत्रज्ञानाच्यक म्हजुन डॉ. सोनारी गायकवाड, प्रा. विलीय शावह व डॉ. घनेश भोपर काम पहिले कार्यक्रमाचा यशस्वीततेसाठी प्रा. शाळिनी काटोले यांनी प्रकऱ्य केले. या कार्यशाळामध्ये २५० मोहिला, विद्यार्थी व विद्यार्थींनी सहमाग घेतला. ही कार्यशाळा आमांतरी पदवीने पैण्यात आली. (ता.प्र.)

Women Empowerment and Laws workshop organized on 21/07/21 by Women Nurturing Cell & IQAC of the College.

Criterion – I- Curricular Aspects [QIM – 1.3.1]

आंबेंडकर यांच्या स्मारकाला वाचन करण्यात आले.

श्री शिवाजी विज्ञान व कला महाविद्यालया- मध्ये फिटनेस शिविराचे उद्घाटन

चिखली प्रति.: स्थानिक श्री शिवाजी विज्ञान व कला महाविद्यालयामध्ये महिला विकास कक्ष, आय क्यू.ए.सी.सेल व शारीरिक शिक्षण विभागातील फिटनेस शिविराचे उद्घाटन झाले असून 25 ते 30 नोव्हेंबर या दरम्यान महिला व विद्यार्थिनी साठी या शिविराचे आयोजन करण्यात आले आहे. आजच्या धावपलीच्या प्रचंड ताणताणावाच्या परिस्थितीमध्ये आपले शारीरिक, मानसिक, सामाजिक स्वास्थ्य विघडत चालले आहे. सोबतच चुकीची जीवनशैली व खानपान यापूळे आपली रोगप्रतिकार शक्ती कमी झाली आहे. आपले आयोग्य स्वस्थ ठेवण्यासाठी, निरोगी ठेवण्यासाठी आयुष्याचा मूलमंत्र देणारे पाच दिवसीय फिटनेस शिविराचे आयोजन केले आहे. वेटलेस कोव सौ. बंदना राजपूत, सौ. सुजाता मराठे, सौ. कोंचन ठेंग व प्राचार्य डॉ. ओमराज एस. देशमुख यांच्या अध्यक्षतेत या शिविराचे उद्घाटन झाले या शिविराचे आयोजक डॉ. अनुराधा या. मुळे (समन्वयक, महिला विकास कक्ष) डॉ. विनिता पोळ्ही (समन्वयक, आय क्यू.सी.सेल), प्रा. सचिन कोकोडे (शारीरिक शिक्षण विभाग) यांनी विशेष परिश्रम घेतले, तसेच प्रा. योगिनी सुरडकर, प्रा. शालिनी काटोले, डॉ. मीना निकम, डॉ. सुनिता कलांडे, डॉ. मुकी जाधव, डॉ. पल्लवी नल्ले, डॉ. सोनाली गायकवाड, डॉ. पुषा दहिकर, प्रा. तृष्णा श्रीरामे, कु. खिल्लोरे व विद्यार्थिनींनी उम्हूर्त प्रतिसाद दिला.



Fitness camp organized for Female Students & Staff on 25/11/2021 by Women Nurturing Cell of the College.

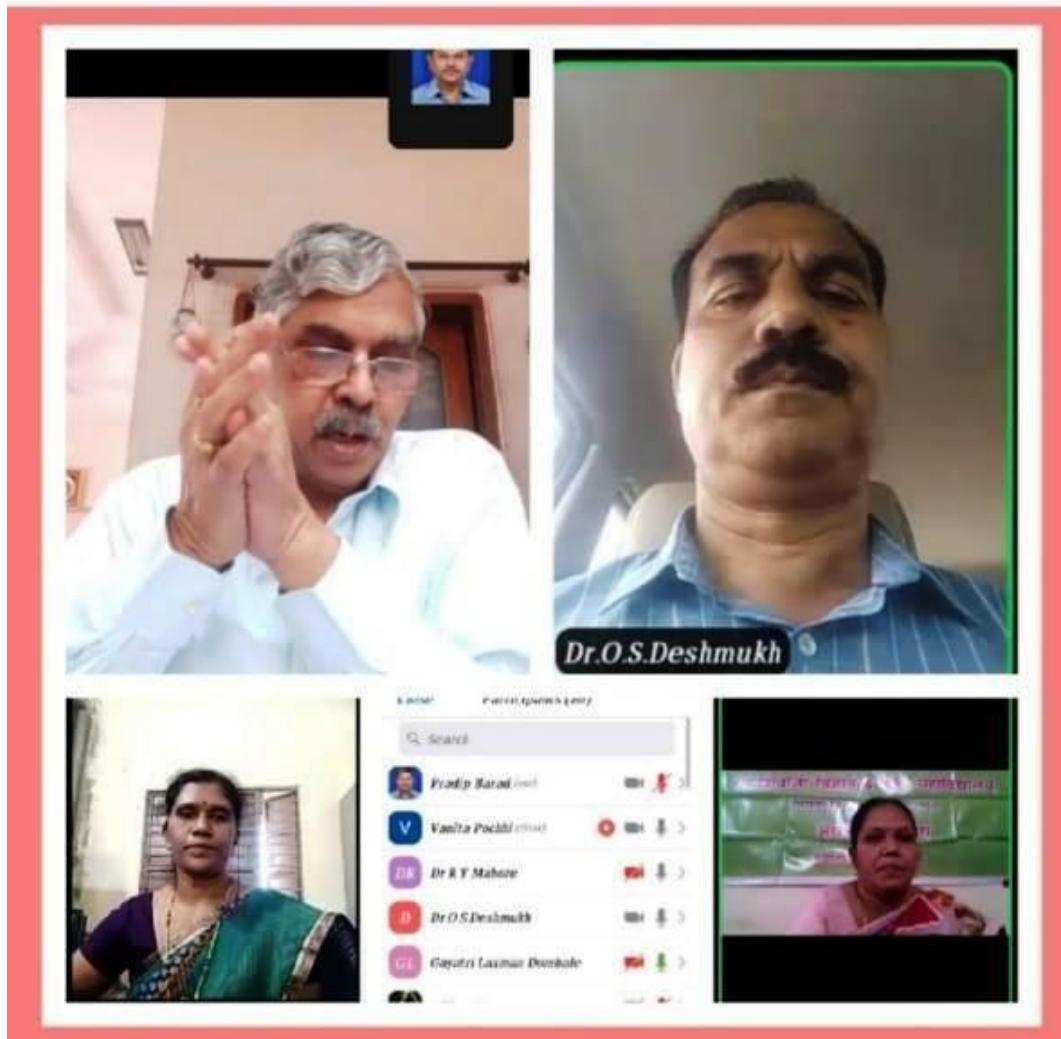


Savitribai Fule (First Lady Teacher of Maharashtra) birth Anniversary celebrated on 03/01/2022

By Internal Complaint Committee And Women Nurturing Cell.



NCC students actively participated in Swachchha Bharat Abhiyan on 27/12/21



Department of Economics organized online guest Lecture on Celebration of World Population Day (Human Values) on 11 July 2021. Resource person was Dr. R. Y. Mahore

COMPUTER CRYPTOCURRENCY PROFESSIONAL ETHICS

GeoTag Photo on National Level Workshop on Big Data



Convener Address by Dr. A.B.Kadam

मंगळवार ३० मार्च २०२१ पृष्ठे : ४

श्री शिवाजी विज्ञान व कला महाविद्यालयामध्ये Cryptocurrency या विषयावर राष्ट्रस्तरीय कार्यशाळा

चिखली/प्रतिनिधी: स्थानिक श्री शिवाजी विज्ञान व कला महाविद्यालय चिखली येथे दि. २६/०३/२०२१ शुक्रवारी Cryptocurrency या विषयावर राष्ट्रस्तरीय कार्यशाळा घेण्यात आली. या कार्यशाळेला मार्गदर्शक म्हणून एन. डी. ए. खडकवासला, पुणे येथील प्रो. विज्ञा देसाई यांनी मार्गदर्शन केले. कार्यशाळेचे अध्यक्षस्थानी प्राचार्य डॉ. अनिल एम. गारोडे होते. कार्यशाळेच्या उद्घाटक IQAC Coorinator प्रो. वनिता पोद्धवी उपस्थित होत्या. या कार्यशाळेसाठी १९७ लोकांनी सहभाग घेतला. त्यात महाराष्ट्रासोबतच भारताच्या इतर राज्यांतील लोकांनी सुदूर सहभाग नोंदविला. प्रो. विज्ञा देसाई मैडम यांनी मार्गदर्शनामध्ये modern cryptography, डिजिटल Signature, Blockchain, यांचे महत्व संगोल त्याच बरोबर Bitcoin चे महत्व सांगताना त्या म्हणाल्या की. क्रिप्टो कर्सरी म्हणजे आभासी चलन. अल्नी नोटांना पर्याय असणारी एक हिंजीटल वा व्हर्टुअल कर्सरी. म्हणजे हे चलन भारतीय रूपया, अमेरिकन डॉलर वा ब्रिटीश पौंडसारखे नसत. कोणत्याही देशाचे सरकार वा बैंक हे चलन यछापतळ नाही. क्रिप्टोकर्सरीसाठी ब्लॉकचेन हे तंत्रज्ञान वापरले जाते. ब्लॉकचेन म्हणजे सोप्या भाषेत Chain of Blocks किंवा रेकॉर्डची लिस्ट. परिणामी हे व्यवहार अतिशय सुरक्षित होतात आणि ही यंत्रणा हेक करणं शक्य नसत. पण जमेची बाजू म्हणजे हिंजीटल कर्सरी असल्याने फसलवर जाप्याची शक्यता उत्तर नाही. बिटकॉइन, लाईटकॉइन, रिपल, इथेरियम आणि डोड वेंग नामाच्या काही क्रिप्टोकर्सरीज प्रसिद्ध आहेत. बिटकॉइन ही एक प्रकारची क्रिप्टोकर्सरी आहे. बिटकॉइन हे रूपया, डॉलर किंवा इतर कुठल्याही चलनांमध्ये एक चलन असत. फक्त ते ऑनलाईन असत. आणि एका कम्प्युटर कॉडद्वारे एनक्रिप्ट म्हणजे लॉक केलेल असत. जशा आपल्याला बैंकांमधून नोटा मिळतात तसेच इथेही ऑनलाईन साईट्सवर हे चलन तुम्हाला तुमच्याकडच्या पैशातून खरेदी करता येत.

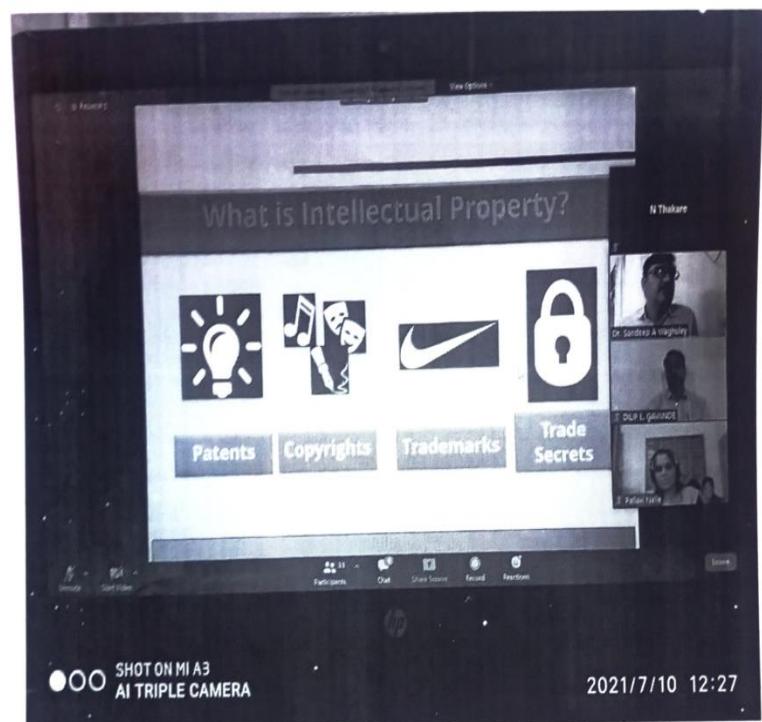
संगणक विभागाचे प्रमुख डॉ. अविनाश कदम वैज्ञानिक कार्यशाळेचे संयोजक होते. कार्यशाळेच्या समन्वयक डॉ. मुक्ती जाधव त्या होत्या. तात्रिक संचिव डॉ. सोनाली गायकवाड यांनी आमार प्रदर्शन केले. प्रा. दिलीप गावडे, श्री. सचिन चव्हाण, श्री. राहुल भटकर यांनी मोलाये सहकार्य केले.



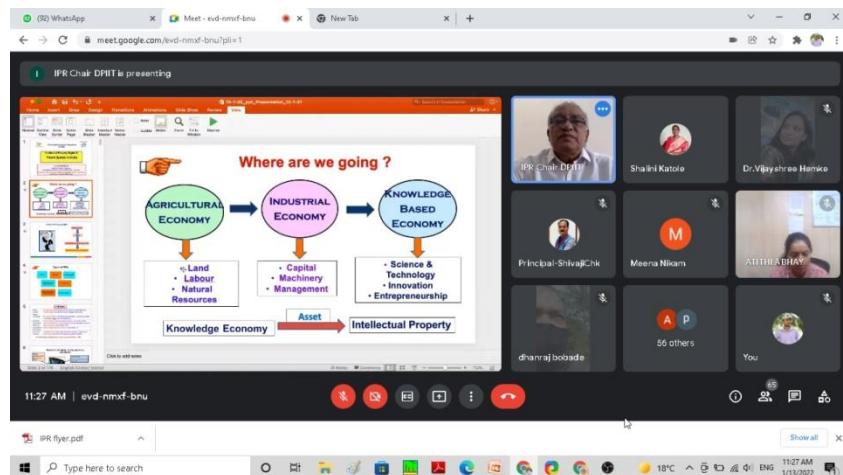
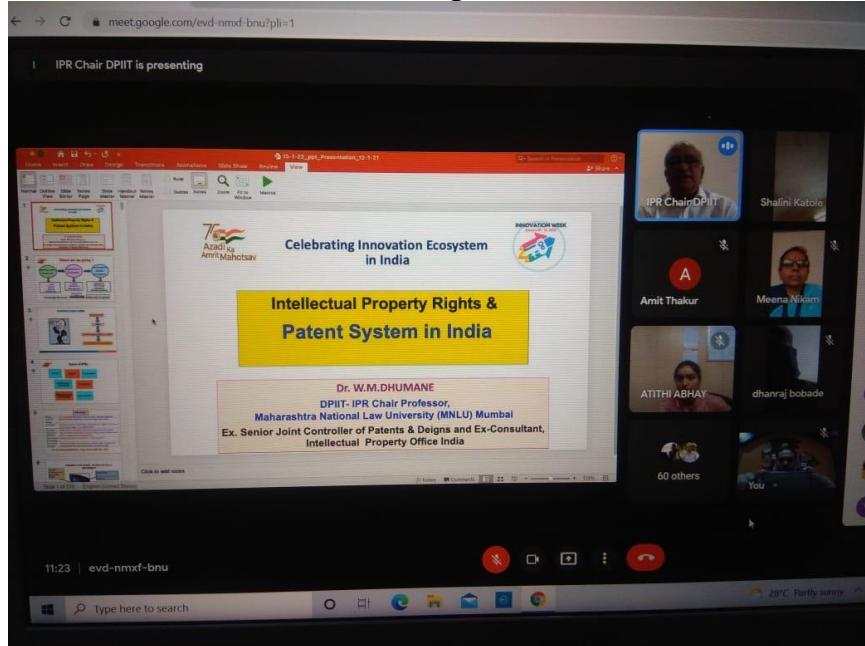
Department of Political Science organized program on “Human Rights”

Department of Political Science also celebrated, Constitution Day, Voters Awareness Programs, National Voters’ Day and Established student body for Election Literacy

Criterion – I- Curricular Aspects [QlM – 1.3.1]

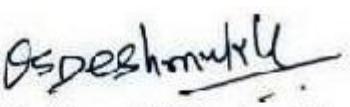


Criterion – I- Curricular Aspects [QIM – 1.3.1]



Workshops on IPR organized regularly for students to teach Professional Ethics




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