



**3rd Cycle**

# **Assessment & Accreditation by NAAC**

## **CRITERION - I**

### **Curricular Aspects**

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

Shri Shivaji Education Society, Amravati's

## DR. H. N. SINHA ARTS & COMMERCE COLLEGE



PATUR - 444 501 (Dist. - Akola ) M.S.

NAAC Re-Accredited with 'B' Grade

Phone & Fax : 05754- 243250 Cell : +91 94216 75055

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Index No. Jr. College - 01.06.001 Sr. College - 208, H.S.C. Voc. 01.06.901



**Shri. Harshavardhan Deshmukh**

President  
Shri Shivaji Education Society, Amravati

**Prof. Dr. Kiran S. Khandare**

M.A., M.Phil., Ph.D.  
Principal

**Late Dr. Panjabrao Deshmukh**

M.A. D.Phil., L.L.D., Bar-at-Law  
Founder President

No. : HNS/P/ \_\_\_\_\_ / \_\_\_\_\_

Date \_\_\_\_\_


### Self Declaration

This is to certify that, the information, reports, true copies of the supporting documents, numerical data, and weblinks furnished in this file are verified by IQAC and the head of the institution and found correct.

Hence this certificate is issued.

  
**Dr. S. L. Khandel**  
IQAC Co-Ordinator  
Dr. H. N. Sinha Arts &  
Commerce College, Patur



  
**Principal**  
**Dr. K. S. Khandare**  
Dr. H. N. Sinha Arts &  
Commerce College, Patur

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

## Contents

Sr. No.	Content	Page No.
1	Self Declaration	2
<b>Syllabus</b>		
1	Syllabus on Professional Ethics,	4-10
2	Syllabus on Gender Sensitization	11-12
3	Syllabus on Human Values	13-21
4	Environment and Sustainability,	22-50
<b>Activities Conducted for the address</b>		
1	<b>Year 2021-22 to 2017-18</b>	
	Professional Ethics	} <b>51-75</b>
	Gender Sensitization	
	Human Values	
	Environment and Sustainability	



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

**English**  
**CLASS/SEM B.COM.-III SEM-V**  
**PROFESSIONAL ETHICS**  
**PROSE:1 RATAN TATA          2 STEVE JOBS**

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2019 - PART TWO - 135

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"> <li>✓ Paperless office</li> <li>✓ Video Conferencing</li> <li>✓ E-Banking</li> </ul>		
Communication Skills		
<ul style="list-style-type: none"> <li>✓ Public Speaking (Strategies for Effective Speaking, Types of Speeches)</li> </ul>		

**MARKING SCHEME**

**UNIT I: Prose** : Any THREE out of FOUR Questions (3 x 4 = 12 Marks )

**UNIT II: Poetry** : Any THREE out of FOUR Questions (3 x 4 = 12 Marks )

**UNIT III : Business Communication :**

Any TWO out of THREE Questions (2 x 4 = 8 Marks )

8 Multiple Choice Questions on Unit I & II (8 x 1 = 8 Marks)

**INTERNAL ASSESSMENT :**

Seminar Skill : 5 Marks

Home Assignment : 5 Marks

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B.Com.Part-II  
Examination 2014

Prospectus No.2014152

संत गाडगे बाबा अमरावती विद्यापीठ  
SANT GADGE BABA AMRAVATI UNIVERSITY

वाणिज्य विद्याशाखा  
(FACULTY OF COMMERCE)

अभ्यासक्रमिका  
वाणिज्य स्नातक भाग-२, परीक्षा २०१४  
(त्रिवर्षीय अभ्यासक्रम)

PROSPECTUS  
of  
The B.Com. Part-II Examination 2014  
(Three Year Degree Course)



Continued for Summer-2015 Exam  
(Along with Notification No.36/2014)

2013  
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**Commerce**  
**Professional**  
**Ethics**  
**ACCOUNTS**

35

**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 Sainath Prakashan, Nagpur.

**हिन्दी :**

- गुप्ता : एडवान्स् एकाउन्ट्स.
- जे.के. अग्रवाल : बृहत् लेखाकर्म.

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## PRINCIPALS OF ORGANISATION

### Professional Ethics

36

प्रा.लांजेवार, गुल्हाने, कडु : लेखाकर्म भाग-१ ; संगम प्रकाशन.

नाथ, लांजेवार, भागवत : उच्च लेखाकर्म भाग-१ ; महाराष्ट्र राज्य ग्रंथ निर्मिती मं.

प्रा.ए.एस.उखळकर : उच्च लेखाकर्म भाग-१ ; विद्या प्रकाशन.

रोडे, स्मार्थ, ढोन्बरे : प्रथम वर्ष जमाखर्च - खंड १ ; एस.चांद कं.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 & it's importance.
- 1.4 Development of Management Science- F. W. Taylor, Feyol'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, Maslaw 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.

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**Reference books:**

- \* Management Concept and Practices, by Manmohan Prasad, Himalaya Publishing House.
- \* Essentials of Management by Wehrich 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 सिध्दांत - Prof. S.M.Kolte, Pimpalapur & Co. Publishers, Nagpur.
- \* व्यवसाय प्रबंधनाची मुलतत्वे : डॉ. आनंद दत्तात्रय भोसले - नम 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.

<b>Unit-I</b>	<p><b>Fundamentals of Computer :</b>  <b>Introduction:</b> Definition of Computer, Evolution of Computer, Characteristics of Computer, Generations of Computer, Types of Computer (By Logic and By size).  <b>Basic Computer Organization :</b> Computer Block Diagram, Input Unit, Output Unit and CPU: Memory Unit, Arithmetic Unit, Control Unit.</p>
<b>Unit-II</b>	<p><b>Storage : Primary Storage :</b> Concept of Memory, RAM, Read-Write: SRAM, DRAM; Read-Only: ROM, PROM and EPROM.  <b>Secondary Storage :</b> 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.  <b>Software :</b> Concept of Software, Types of Software : Application Software &amp; System Software.  <b>Languages :</b> Concept of Computer Languages, Machine Language, Assembly Language, High Level Language, 4<sup>th</sup> Generational Languages.</p>

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<b>Unit-III</b>	<p><b>Operating System : Concept of Operating System.</b></p> <p><b>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.</b></p> <p><b>Window : Window XP/Vista : Introduction to Windows, Features of Windows, Types of Windows : Application Window, Document Window &amp; Dialog box, Desktop, Icons : My Computer, My Documents, Recycle Bin, Internet Explorer, Task Bar, Properties, Management of the Files &amp; Folders.</b></p>
<b>Unit-IV</b>	<p><b>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 &amp; Footer, Creating tables and chart, Inserting Clip Arts, Links, Text Box, Word Arts, Drop Cap, Mail Merge, Printing a Document.</b></p>
<b>Unit-V</b>	<p><b>Ms PowerPoint 2003/2007/Higher : Concept of Presentation, MS-PowerPoint Screen, Creating, Saving and Opening presentations, Adding text, Clips &amp; Word Art to Slides, Working with different Slide Views, Background features, Gallery, Color Layout, Slide Effects &amp; Slide Show, Saving and Printing.</b></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-Pimpalpure & Co. Pub., Nagpur.
10. संगणक मूलतत्वे आणि चलन प्रणाली- Prof. S.M. Kolte, Pimpalpure & Co. Publishers, Nagpur.

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# English

CLASS/SEM B. COM. II

SEM IV

**GENDER**

## 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        | - | F.V. Lucas      |
| 2) Florence Nightingale | - | Lytton 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.

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**Gender  
Sensitization**

**UNIT 5 : I) WOMEN PARTICIPATION IN PANCHYATRAJ OF MAHARASHTRA**

- 79 -

19. महाराष्ट्रातील पंचायत राजची वाटचाल : ले. डॉ.सुभाष गवई, प्रशांत विघ्ने व प्रा. सुनिल चकवे, वेदमुद्रा प्रकाशन, अमरावती.
20. भारतीय संविधानिक तरतुदी 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**
- Election Commission of India : Structure, Function and Powers.
  - Electoral Reform, Recognition of Political Parties.
  - Eligibility of Voter – Lok Sabha, Vidhan Sabha and Vidhan Parishad.

**Unit-II State Executive**

- Governor : Appointment, Powers and Role.
- Chief Minister : Appointment, Role and Function
- Council of Ministers : Formation, Role and Function

**Unit-III State Legislature of Maharashtra :**

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

**Unit-IV Local Self Government of Maharashtra :**

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

**Unit-V**

- Women's Participations in Panchayati Raj of Maharashtra.
- Nagpur Pact for Sanyukta Maharashtra State.
- Right to Information and its Importance

**Distribution of Internal Marks**

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

**Reference Books :**

- D.D. Basu : "An introduction to the Constitution of India : New Delhi Prentice Hall, 1994
- Joshi, G.N. : The Constitution of India
- PyLee, M.V. : Indian Constitution
- D.C. Gupta : Indian Government and Politics : Vikas Publication, Bombay.
- प्रा.बी.टी. देशमुख : भारतीय संविधान
- डॉ.प.ल. जोशी : भारतीय संविधान
- प्रा.भ.श्रृंगारपुरे : भारतीय संविधान
- प्रा.भ.म.घांगरेकर : भारतीय राज्यघटना, स्वरूप आणि राजकारण
- डॉ.भा.ल. भोळे : भारतीय राज्यव्यवस्था.
- प्रा.राम मुठाळ : भारतीय राजकीय व्यवस्था, अंशुल प्रकाशन, नागपूर.
- प्रा.रा.ज. लोटे : भारतीय शासन आणि राजकारण, पिंपळापूर अँड कॅ. पब्लिशर्स.
- प्रा. बी.टी. देशमुख : भारतीय संविधान व स्वातंत्र्य आंदोलन.
- भारताचे शासन आणि राजकारण : प्रा.शे.हाशम, डॉ. जोगेंद्र गवई.

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# Marathi

CLASS/SEM B.A.-II SEM-IV

Gender Sensitization

STRI PURUSH TULANA

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2018 - PART TWO - 153

विभाग ब) ललित

१)	आशापत्र	रामचंद्रपत अमात्य
२)	माझे दस्तक वडील	शि. वि. जोशी
३)	दिवस असे होते	दया पवार

विभाग क) कविता

१)	संतवाणी	अ) चौखामेळा ब) सोयराबाई
२)	अखेर कमाई	कुसुमाप्रज
३)	पाखरे	केशव भैराम
४)	जात	श्रीकांत देशमुख
५)	सात बाराची नोंद	लक्ष्मण महाडिक
६)	शांतता	सिध्दार्थ भगत

विभाग ड) व्यावहारिक मराठी

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

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

विभाग अ) वैचारिक

१)	स्त्री-पुरुष तुलना	ताराबाई शिंदे
२)	आरसा	जयंत नारळीकर
३)	विज्ञानयुगात भारत	जयंत नारळीकर

विभाग ब) ललित

१)	गाडगेबाबांच्या कीर्तनातले तत्त्वज्ञान	प्रबोधनकार के.सी. ठाकरे
२)	स्मशानालील सोन	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 कसे मंदावले आता	अनिल
३)	जिवलग	शांता शेळके
४)	जागजागी	म.मा. परसावळे
५)	पेटवू नका देश	मिर्झा रफी अहमद बेग
६)	माती	राजेश महल्ले

विभाग ड) व्यावहारिक मराठी

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

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# ENGLISH

## HUMAN VALUES

### CLASS/SEM B.A.-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 15<sup>th</sup> 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>B.A. Part-I Semester – I &amp; II</b>		
1.	English	The Syllabi prescribed for the subject Compulsory English, English Literature, Functional English & Supplementary English which is appended herewith as <b>Appendix-A</b>
2.	Marathi	The Syllabi prescribed for the subject Compulsory Marathi, Marathi Literature, which is appended herewith as <b>Appendix-B</b>
3.	Hindi	The Syllabi prescribed for the subject Compulsory Hindi, Hindi Literature, & Prayojanmulk Hindi which is appended herewith as <b>Appendix-C</b>
4.	Sanskrit	The Syllabi prescribed for the subject Compulsory Sanskrit & Sanskrit Literature, which is appended herewith as <b>Appendix-D</b>
5.	Urdu	The Syllabi prescribed for the subject Compulsory Urdu & Urdu Literature, which is appended herewith as <b>Appendix-E</b>
6.	Persian Literature	The Syllabi prescribed for the subject Persian Literature which is appended herewith as <b>Appendix-F</b>
7.	Pali & Prakrit	The Syllabi prescribed for the subject Compulsory Pali & Prakrit & Pali Literature which is appended herewith as <b>Appendix-G</b>
8.	Music	The Syllabi prescribed for the subject Indian Music which is appended herewith as <b>Appendix-H</b>

Sd/-  
Registrar  
Sant Gadge Baba Amravati University

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2017 - PART TWO-76

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

CLASS/SEM B.A.-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 15<sup>th</sup> 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>B.A. Part-I Semester - I &amp; II</b>		
1.	English	The Syllabi prescribed for the subject Compulsory English, English Literature, Functional English & Supplementary English which is appended herewith as <b>Appendix-A</b>
2.	Marathi	The Syllabi prescribed for the subject Compulsory Marathi, Marathi Literature, which is appended herewith as <b>Appendix-B</b>
3.	Hindi	The Syllabi prescribed for the subject Compulsory Hindi, Hindi Literature, & Prayojanmulk Hindi which is appended herewith as <b>Appendix-C</b>
4.	Sanskrit	The Syllabi prescribed for the subject Compulsory Sanskrit & Sanskrit Literature, which is appended herewith as <b>Appendix-D</b>
5.	Urdu	The Syllabi prescribed for the subject Compulsory Urdu & Urdu Literature, which is appended herewith as <b>Appendix-E</b>
6.	Persian Literature	The Syllabi prescribed for the subject Persian Literature which is appended herewith as <b>Appendix-F</b>
7.	Pali & Prakrit	The Syllabi prescribed for the subject Compulsory Pali & Prakrit & Pali Literature which is appended herewith as <b>Appendix-G</b>
8.	Music	The Syllabi prescribed for the subject Indian Music which is appended herewith as <b>Appendix-H</b>

Sd/-  
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SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2017 - PART TWO-76

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-7-  
YSLLAHUS  
PRESCRIBED FOR  
B. A. - Part I EXAMINATION  
Semester I  
Compulsory English

TIME : 3 HOURS

MAX MARKS THEORY : 80 MARKS

MAX MARKS INTERNAL ASSESSTMENT : 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 - M. J. Akbar

3. Speech on Indian Independence - Jawaharlal Nehru

4. Interviewing - Gayatri Jay

UNIT II

POETRY -

5. In the Bazaar of Hyderabad - Sarojini Naidu

6. She Walks in Beauty - Lord Byron

7. Middle Age - Kamala Das

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

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**CLASS/SEM B. A.-I**  
**SEM-II**  
**HUMAN VALUES**  
**PROSE 4 VALUES IN LIFE**

--9--  
SYLLABUS  
PRESCRIBED FOR  
B. A. - Part I EXAMINATION  
Semester II  
Compulsory English

TIME : 3 HOURS

MAX MARKS THEORY : 80 MARKS

MAX MARKS INTERNAL ASSESTMENT : 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

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

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**CLASS/SEM B.A.-I**  
**SEM-II**  
**HUMAN VALUES**  
**POETRY 5 MONEY**  
**MADNESS**

..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 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

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# English

## Human Values

CLASS/SEM B.A.-I SEM-II

### PROSE 4: VALUES IN LIFE

--9--

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

**TIME : 3 HOURS**

**MAX MARKS THEORY : 80 MARKS  
MAX MARKS INTERNAL ASSESTMENT : 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. ... ..
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

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CLASS/SEM B.A.-II  
SEM-III

**HUMAN VALUES**  
**3. PROSE : THE HAPPY PRINCE**

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 ASSESMENT : 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

3. The Happy Prince - Oscar Wilde

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)

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**CLASS/SEM B. A.-III  
SEM-VI  
HUMAN VALUES  
PROSE 1. QUALITY**

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**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  
MAXIMU MARKS INTERNAL ASSESSTMENT: 20 MARKS**

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

**UNIT I**

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)

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## POLITICAL SCIENCE

### Human Rights

### CLASS/SEM

### B.A.-I SEM-I

## UNIT 1 ii) PREAMBLE – NATURE AND IMPORTANCE

- 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.म.श्रृंगारपुरे : भारतीय संविधान
8. प्रा.म.ग.घांगरेकर : भारतीय राज्यघटना, स्वरूप आणि राजकारण
9. डॉ.भा.ल. भोळे : भारतीय राज्यव्यवस्था.
10. प्रा.राम मुळाळ : भारतीय राजकीय व्यवस्था, अंशुल प्रकाशन, नागपूर.
11. प्रा.रा.ज. लोटे : भारतीय शासन आणि राजकारण, पिंपळापूरे अॅन्ड कंपनी, पब्लीशर्स.
12. प्रा. बी.टी. देशमुख : भारतीय संविधान व स्वातंत्र्य आंदोलन.
13. भारताचे शासन आणि राजकारण : प्रा.शे.झाराम, डॉ. जोगेंद्र गवई.
14. भारतीय शासन आणि राजकारण : प्रा.डॉ. अल्का देशमुख
15. भारतीय राजकारणाची संवैधानिक निमांसा : ले. डॉ. वामन गवई.
16. भारतीय संविधान व शासन व्यवस्था : लेखक - डॉ. शांताराम घव्हाण
17. भारतीय संविधानात्मक तरतुदी आणि वारतव : लेखक - डॉ. सुभाष गवई
18. भारतीय राज्यव्यवस्था : ले. डॉ. शांताराम घव्हाण व डॉ. सुभाष गवई, वेदभुद्रा प्रकाशन, अमरावती

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# PHYSICS

## Environment And Sustainability

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

UNIT VI:

ATMOSPHERE & GEOPHYSICS

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 OF  
B.Sc. Part-II

Continued for Semester-III  
Winter-2013  
Semester-IV Summer 2020  
(As it is)

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  
& 4/2018)  
Continued for Semester-III-Winter 2015  
Semester-IV- Summer-2016  
(Along with Dir. No.5 of 2015 & Notf.  
No.52 of 2015)

2014 (Along with Dir. No.5 of 2015 & Notf.  
No.52 of 2015)

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Contd. for Semester-III  
Winter-2016  
Semester-IV Summer-2017  
(Along with Notf. No.37 of 2016)  
Notf. No.56 of 2016

(Price-Rs. 26/-)



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**Reference Books :**

1. T. M. Karade, M. S. Bendre : Lectures on Mechanics, Sonu-Nilu Publication, Nagpur.
2. H. Goldstein : Classical Mechanics ( 2<sup>nd</sup> edition), Narosa Publishing House, New Delhi.
3. S. L. Loney : Statics, Mc-Millan and co., London.
4. R. S. Verma : A Text Book on Statics, Pothishala Pvt. Ltd. , Allahabad.
5. S. L. Loney : An Elementary Treatise on the Dynamics of a particle and of rigid bodies, Cambridge University Press, 1956.
6. D. K. Daftari, V. N. Indurkar : Elements of Statics, Published by Dattsons, J. Neharu Marg, Nagpur.
7. M. A. Pathan : A modern Text Book of Statics, Pragati Prakashan, Nagpur.

## 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

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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  $\alpha$  and  $\beta$ , their relation; CB & CE characteristics; JFET- construction & working, characteristics of FET; Basic concept of Difference amplifier, IC-OP AMP, electrical parameters of OP AMP, 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.

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
<b>Total</b>	<b>50 marks</b>

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# PHYSICS

## Environment and Sustainability

CLASS/SEM B. SC. S. Y.

SEM (IV)

### UNIT VI: RENEWABLE ENERGY SOURCES

9

21. To draw the BH curve of iron by using a Solenoid and to determine the energy loss due to Hysteresis.

**Reference Books:--**

1. Solid state Electronics Devices- B.G.Streetman (PHI)
2. Electronics Devices & Circuits – A. Mottershead (PHI)
3. Integrated Electronics—J.Millman ; C.Halkias (TMH)
4. Electronics Devices & circuits – Sanjeev Gupta (Dhanpat Rai Pub.)
5. Electronics Devices & circuits-I & II – Godse & Bakshi ( Tech. Pub. , Pune)
6. Solid State Devices & Electronics—Kamal Singh & S.P.Singh (S. Chand & Co.)
7. Electromagnetic theory and holography – satya parakash
8. A text book of geology – G.B. mahapatra
9. Engineering and general geology – parbin singh.
10. The atmosphere – Richard A. Anthes, Hans A. Panotsky, Jhon J Cahir, Albert Rango.
11. Relativity—Goyal and Gupta
12. Text book of Physics --- V. K. Sewane
13. Elements of Special theory of relativity—S.P.Singh and M.K.Bagde
14. A course in Electromagnetic field by S.W.Anwane, B.P.B. Publication, New Delhi.

#### 4SPHY

**Unit I : Geometrical optics and interference (12)**

Cardinal points of an optical system, equivalent focal length and power of coaxial lens system, Interference in thin films due to reflected and transmitted light, interference in wedge shaped thin film, Newton's ring by reflected light, measurement of wavelength of monochromatic light by Newton's, ring, determination of refractive index of liquid by Newton's rings.

**Unit II : Diffraction (12)**

Fresnel and Fraunhofer Diffraction, Fresnel half period zone, zone plate construction and theory. Double slit diffraction,

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.**

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**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
<b>Total</b>	<b>50 marks</b>

- A student will have to perform at least ten experiments per semester.
- The semester examination will be of Four Hour duration and student will have to perform one experiment in the semester examination.
- 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.

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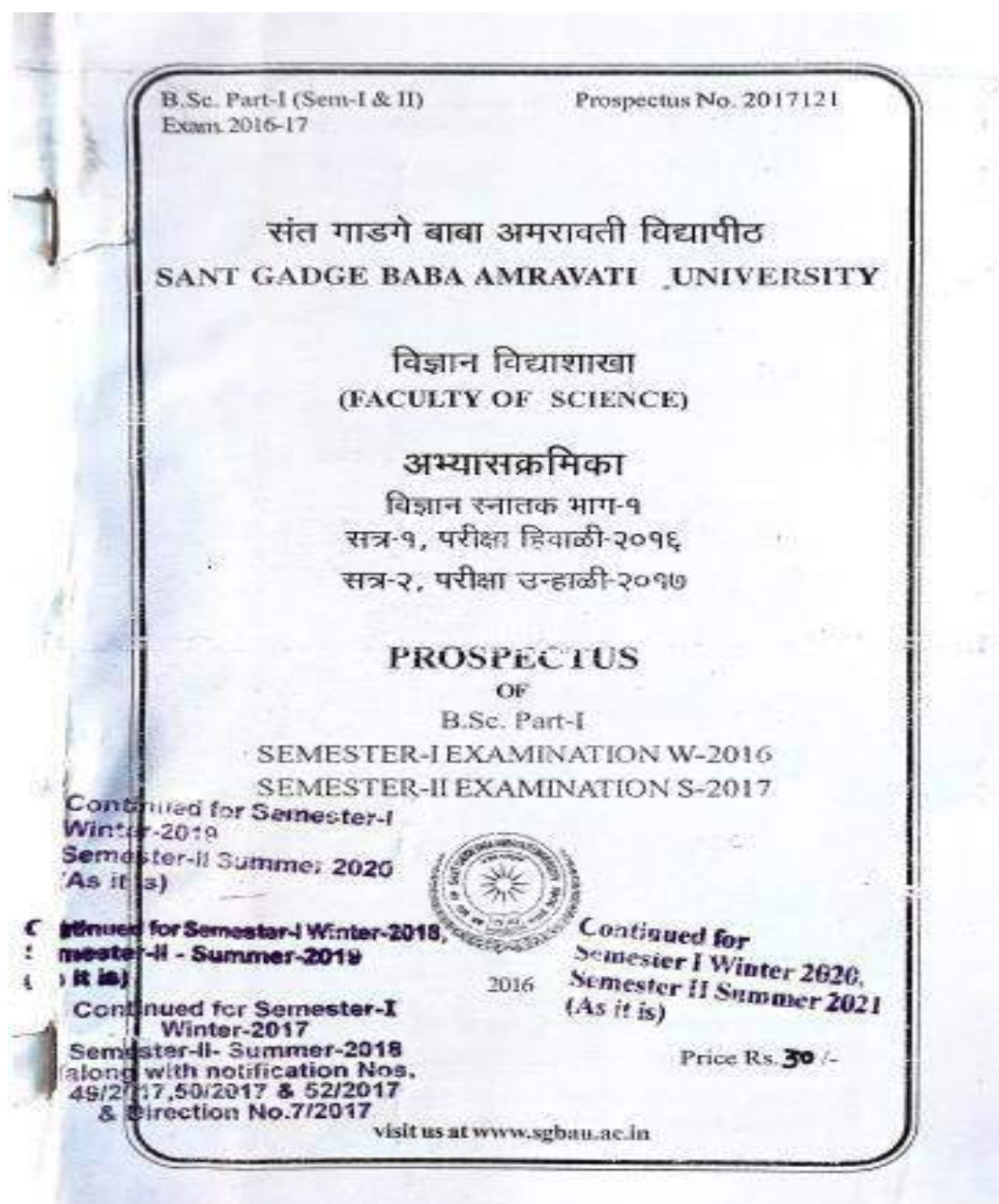
# BOTANY

CLASS/SEM B.

SC. F. Y. SEM (I)

UNIT 1

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



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

### 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.

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

### 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

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**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-
  - 1.2.1. Hepaticopsida – Marchantia
  - 1.2.2. 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 sps.)
- 6.5. Economical and Ecological Importance of Bryophytes

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# BOTANY

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

UNIT 1 CONCEPT OF BIODIVERSITY ENVIRONMENT ENVIRNMENT

45

## 7. BOTANY

### 3S- BOTANY

#### ANGIOSPERMSYSTEMATICS,ANATOMY & EMBRYOLOGY

**UNIT I:** Angiosperm Systematics and Biodiversity.

- 1.1 Angiosperms: Origin and Evolution (Pteridospermean and Bennittitalean 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

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**BOTANY**  
**CLASS/SEM B. SC. T. Y.**  
**SEM (V) UNIT 05: ECOLOGY**  
**& ENVIRONMENT**

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, VVP 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).

**5S - 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 - Carrier Concept, Passive uptake - Ion Exchange.

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**Unit - II: Metabolism-**

- 2.1 Photosynthesis - Introduction, Role of Light, Photosynthetic Apparatus and Pigments, Two Pigment Systems, Photophosphorylation, C<sub>3</sub> and C<sub>4</sub> cycle, CAM Pathway.
- 2.2 Respiration - Introduction, Mitochondria as a Respiratory centre, Types of Respiration - Aerobic and Anaerobic, Mechanism of aerobic respiration- Glycolysis, Krebs 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,

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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 CO<sub>2</sub> 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 CO<sub>2</sub> 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)



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# MICROBIOLOGY

CLASS/SEM B. SC. T. Y. SEM (V) ENVIRONMENTAL  
MICROBIOLOGY & BIOINSTRUMENTATION  
ENVIRONMENT

B.Sc. Final (Sem-V & VI) Prospectus No. 2016123  
Exam. 2015-16

संत गाडगेबाबा अमरावती विद्यापीठ  
SANT GADGE BABA AMRAVATI UNIVERSITY

विज्ञान विद्याशाखा  
(FACULTY OF SCIENCE)

अभ्यासक्रमिका  
विज्ञान स्नातक अन्त्य परिक्षा  
सत्र ५- हिवाळी - २०१५  
सत्र ६ - उन्हाळी - २०१६

PROSPECTUS  
OF  
The Examination for the Bachelor of Science  
Semester-V, Winter- 2015, and  
Semester-VI, Summer-2016  
& Onwards

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-2019  
Semester-VI Summer-2020  
(Along with notification No.56/2019)

Contd. for Semester-V  
Winter-2016  
Semester-VI Summer-2017  
(Along with Notf. No.57 of 2016)

2015  
View us at [www.sgbau.ac.in](http://www.sgbau.ac.in)

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

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**MISCELLANEOUS:-**

1.	Pipettes	Any make	Able to hold any pipettes from 0.1 ml to 10 ml capacity Rubber or Plastic.	5 Nos.
2.	Test tube Stands	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 conical flasks of all capacity.	20 each
5.	Porcelain Glazed tiles	---	6x6"	20 Nos.
6.	Mortar 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 divided 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).

**5S 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.

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**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 : CO<sub>2</sub> 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) Planktons : Definition, types, factors affecting growth of planktons, methods of enumeration, beneficial and harmful activities of planktons.

- 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

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

**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

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- 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

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<b>Total</b>	<b>- 50 marks</b>
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**List of Reference Books for 5S Microbiology:**

1. Introduction to Soil Microbiology : Alexander Martin
2. Soil Microbiology : Subbaroa 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.SC. 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 divided 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).

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## 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 - Voce	05
7. Submission of study tour report.	05

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**Total Marks: 50**

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### 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.

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

## Semester IV

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

**ZOOLOGY Paper 4 S**  
**ADVANCED GENETICS AND ANIMAL ECOLOGY**

**UNIT I : Concept of genes.**

Mendel's laws of hereditary – 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

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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, (Gauze'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,

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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.

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**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 CO<sub>2</sub>, 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  
PRACTICE EXAMINATION.**

1. Ecological: Estimations -/Analysis	10
2. Spotting. (2 Spot 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
<hr/>	
<b>Total Marks :</b>	<b>50</b>
<hr/>	

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CLASS/SEM B. A. I SEM I

PROSE : SPEECH ON INDIAN INDEPENDENCE : JAWAHARLAL NEHRU

PROSE 4: VALUES IN LIFE

ENVIRONMENT

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2017 - PART TWO -77

Appendix-A

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

TIME : 3 HOURS

MAX MARKS THEORY : 80 MARKS

MAX MARKS INTERNAL ASSESSTMENT : 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

Recommended Books:

1. Spoken English : A Foundation Course Part 1 (With Audio CD) by Kamlesh Sadanand & Susheela Punitha (Revised Edition) Published by Orient Blackswan.
2. Spoken English : A Foundation Course Part 2 (With Audio CD) by Kamlesh Sadanand & Susheela Punitha (Revised Edition) Published by Orient Blackswan.

Compulsory English

TIME : 3 HOURS

MAX MARKS THEORY : 80 MARKS

MAX MARKS INTERNAL ASSESSMENT: 20 MARKS

MIN PASSING MARKS : 32 MARKS

MIN PASSING MARKS : 08 MARKS

Distribution of Marks

- A) Prose i) The students will have to answer THREE out of FOUR short answer questions of 2 marks each. = 6 Marks  
ii) The students will have to answer TWO out of FOUR long answer questions of 5 marks each. = 10 Marks
- B) Poetry i) The students will have to answer TWO out of THREE short answer questions of 3 marks each. = 6 Marks  
ii) The students will have to answer TWO out of THREE long answer questions of 5 marks each. = 10 Marks

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

# English

## CLASS/SEM B.Sc.-I

### Environment And Sustainability

#### PROSE 4: WATER THE ELIXIR OF LIFE – C. V. RAMAN

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2017 - PART TWO -199

#### Communication Skills:

##### For I Semester

- 1) Everyday English Part I
- 2) Preparing Curriculum Vitae
- 3) Letter Writing (Applications, Business, Formal letters)

##### For II Semester

- 1) Everyday English Part II
- 2) Report Writing
- 3) Paragraph Writing

#### COMPULSORY ENGLISH IS Compulsory English

- |                         |          |
|-------------------------|----------|
| i) Theory               | 40 marks |
| ii) Internal Assessment | 10 marks |
| Total                   | 50 marks |

i) Theory : Time : 2 Hours

Total marks : 40

#### Prose Section :

- |                              |             |
|------------------------------|-------------|
| 1. The Child                 | - Premchand |
| 2. A Simple Philosophy       | - Seethal   |
| 4. Water- The Elixir of Life | - C.V.Raman |

#### Poetry Section :

- |   |                      |
|---|----------------------|
| 1. Say Not the Struggle Naught Availeth | - Arthur Hugh Clough |
| 2. God's Grandeur                       | - GM Hopkins         |
| 3. Ode to Autumn                        | - J Keats            |
| 4. Bangle Sellers                       | - S Naidu            |
| 5. Stay Calm                            | - G. Kleiser         |

#### Grammar : For Sem-I

- 1) Parts of Speech.
- 2) Use of Articles, Prepositions and Tense.
- 3) Transformation.

#### Communication Skills : For Sem-I

- 1) Everyday English Part I
- 2) Preparing Curriculam Vitae
- 3) Letter Writing (Applications, Business, Formal letters)

#### Distribution of Marks.

Maximum Marks : 40

Time : Two Hours

- |       |   |          |
|-------|---|----------|
| Q.1 : | There shall be five short answer questions based on prescribed prose.   | 05 marks |
| Q.2 : | There shall be four long answer questions based on prescribed prose. Out of these, students will have to answer any two questions of five marks each.                     | 10 marks |
| Q.3 : | There shall be four long answer questions based on prescribed poems. Out of these, students will have to answer any two questions of five marks each.                     | 10 marks |
| Q.4 : | There shall be five questions of one mark each, for Do as directed from Grammer - Parts of Speech, Use of articles and Prepositions, Tenses, Transformation of Sentences. | 05 marks |
| Q.5 : | There shall be five questions of one mark each, from Everyday English   | 05 marks |
| Q.6 : | There shall be one question on Preparing a Curriculam Vitae or Letter Writing .   | 05 marks |

#### ii) Internal Assessment –

- |                    |            |
|--------------------|------------|
| i) One Unit Tests  | - 06 marks |
| ii) One Assignment | - 04 marks |
| Total              | 10 marks   |

#### 2S Compulsory English

- |                         |          |
|-------------------------|----------|
| i) Theory               | 40 marks |
| ii) Internal Assessment | 10 marks |
| Total                   | 50 marks |

i) Theory : Time : 2 Hours

Total Marks : 40

#### Prose Section :

- |                                  |           |
|----------------------------------|-----------|
| 6. What is courage?              | - W. Slim |
| 7. The Hazards of Food Colouring | -         |

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# Marathi

CLASS/SEM B.A.-II SEM-  
III

**Environment And  
Sustainability**

**ADNYAPATRA**

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2018 - PART TWO - 153

विभाग ब) ललित

१)	आज्ञापत्र	रामचंद्रपंत अमात्य
२)	दिवस असे होते	दया पवार

विभाग क) कविता

१)	संतवाणी	अ) चौखामेळा ब) सोयराबाई
२)	अखेर कमाई	कुसुमाग्रज
३)	पाखरे	केशव मेन्नाम
४)	जात	लीकॉल देशमुख
५)	सात बाराची नोंद	लक्ष्मण महाडिक
६)	शांतता	सिध्दार्थ भगत

विभाग ड) व्यावहारिक मराठी

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

बी. ए. भाग २ - मराठी (आवश्यक)

सत्र - ४

विभाग अ) वैद्यारिक

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

विभाग ब) ललित

१)	गाऊगेबाबांच्या कीर्तनातले तत्त्वज्ञान	प्रबोधनकार के.सी. ठाकरे
२)	स्मशानातील सोन	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 कसे मंदावले आता	अनिल
३)	जिवलग	शांता शेळके
४)	जागजागी	म.मा. परसावळे
५)	पेटवू नका देश	मिर्झा 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, पद्मगंगा प्रकाशन, पुणे
२)	निमंत्रणपत्रिका व कार्यक्रमपत्रिका	संदर्भ ग्रंथ : 'उपयोजित मराठी' मधील प्रकरण १० वे	

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



Sr.No	DEPARTMENT	SYLLABUS	CATEGORY	EVENTS
1	CHEMISTRY	NIL		Soil & water analysis
2	COMPUTER SCIENCE	NIL	Professional Ethics	Cryptocurrency
3	ELECTRONICS	NIL		
4	MATHEMATICS	NIL		
5	PHYSICS	1. B. SC. S. Y. SEM (III) UNIT VI ATMOSPHERE & GEOPHYSICS 2. B. SC. S. Y. SEM (IV) UNIT VI: RENEAWABLE ENERGY SOURSES	ENVIRONMENT	
6	BOTANY	1. F. Y. SEM (I) UNIT 1.3 DIVERSITY OF PLANTS WITH RESPECT TO HABITAT NUTRITION & ECOLOGICAL SYSTEM 2. S. Y. (III) UNIT 1 CONCEPT OF BIODIVERSITY 3. T. Y. (V) ECOLOGY & ENVIRONMENT	ENVIRONMENT	Ecofriendly rakhi preparation and celebration, Tree Plantation, Ecofriendly Ganesh idol Making, Seed Ball Preparation, Medicinal Plant Exhibition, Ecofriendly Colors Preparation, Field Visits
7	MICROBIOLOGY	1. B. SC. T. Y. SEM V ENVIRONMENTAL MICROBIOLOGY	ENVIRONMENT	World Tuberculosis Day
8	ZOOLOGY	1. B. SC. II (IV) UNIT 05 ECOLOGY 2. B. SC. II (IV) UNIT 06 ECOSYSTEM	ENVIRONMENT	World Tiger Day, World Ozone Day, Wildlife Week, World Sparrow Day, Birds Week, National Science Day
9	ENGLISH	1. B. A. I (I) PROSE 3 SPEECH ON... 2. B. A. I (I) POETRY 7 MIDDLE AGE 3. B. A. I (II) PROSE 4 : VALUES IN LIFE 4. B. A. I (II) POETRY 5: MONEY MADNESS B. COM. III SEM. V PROSE : 1. RATAN TATA 2. STEVE JOBS	HUMAN VALUES HUMAN VALUES HUMAN VALUES HUMAN VALUES PROFESSIONAL ETHICS	

		B. COM. II SE. IV PROSE 2 : FLORENCE NIGHTINGALE : LYTTON STRACHEY	GENDER	
		B. A. I PROSE : SPEECH ON INDIAN INDEPENDENCE : JAWAHARLAL NEHRU PROSE 4: VALUES IN LIFE B. A. II 3. PROSE : THE HAPPY PRINCE B. A. III PROSE 1. QUALITY B.SC. I PROSE 4.: WATER THE ELIXIR OF LIFE – C. V. RAMAN	ENVIRONMENT	
10	ECONOMICS	NIL		World Population Day
11	MARATHI	1. B. A. II (IV) STRI PURUSH TULANA	GENDER	Gandhian Thought Exam, Mahanubhav Workshop, Exhibition of Saint Liturature
		3. B. A. II (III) ADNYAPATRA	ENVIRONMENT	
12	HISTORY		NIL	History Department Celebrated Hiroshima Day Every Year
13	POLITICAL SCIENCE	B. A. (I) UNIT 1 PREAMBLE – NATURE & IMPORTANCE	HUMAN VALUES	HUMAN VALUES Voters Awareness Rally,
		B. A. (I) UNIT WOMEN PARTICIPATION IN PANCHATRAJ OF MAHARASHTRA	GENDER	
	COMMERCE	B.COM. II SEM (I) ACCOUNTS	HUMAN VALUES	Computer Science Department organized workshop on Ethical Hacking, Cryptocurrency and Workshop on Cyber Security
		PRINCIPALS OF ORGANIZATION	ENVIRNMENT	
		COMPUTER AND FUNDAMENTAL SYSTEMS	PROFESSIONAL ETHICS	

**Activities Conducted for the Address cross cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum**

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

**Academic Session**

**2017-18 to 2021-22**

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

## **Activities Conducted for the Address to Gender Sensitization**

### **Activities Conducted for the Address to Human Values**

## **Activities Conducted for the Address to Environment & Sustainability**

**2017-2018 to 2021-2022**

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

### Drinking water arrangement for birds



Organized on the behalf of NSS Department at Dr. H. N. Sinha College here. On this occasion a program was organized to sensitize students regarding birds and nature conservation. The theme of the program was to install clay water pots for sparrow and other urban birds



Blood Donation Camp- was organized at college campus by NSS

# Matdan Jan Jagruti



**Voter Awareness camp and introduction of EVM Machine was organized at college campus by NSS**



# Making Seeds Rakhi



To celebrate the spirit of Raksha Bandhan, the Department of NSS, Dr.H.N.Sinha Arts and Commerce College Patur , organized an Eco-friendly Rakhi making competition in the college campus. All the students showcased their artistic skills to weave magic with colorful threads and eco-friendly materials.

# Making Ecofriendly Ganpati Bappa



Making  
EcoFriendly  
Ganpati  
&  
Awareness  
Programme



To

create awareness about water pollution and soil pollution 'Eco-friendly Ganesh Idol Preparation Workshop' was organized .

## दिल्लीतुन-दत्तकग्राम



## संजयजीवन-महाविद्यालय परिसर



## Cleanliness Activities, Swacha Bharat Abhiyan

NSS students actively participated in Swachhha Bharat Abhiyan and Holi Celebrations waste material like Ghutaka, Khaine, Pan masala and other bad habits.

# Street Play /Poster Competition



**NSS students actively participated in Street Play**

# Rallies



Tree plantation and tree plantation awareness rally was organized under Mazi Vasundhara (My Earth) Campaign by NSS This Campaign was organized To make students aware of environmental issues and enrich their thought process regarding environmental issues. Saplings of Neem, Peepal, Gulmohor, Palm has been planted at campus. Students were participated in rally.

# Health, Eye Checkup Camp



Health checkup camp was organized under PAC (Prathmik Arogya Kendra) Campaign by NSS.

# Plantation Program

वृक्ष रोपण



Tree

plantation was organized under Mazi Vasundhara (My Earth) Campaign by NSS This Campaign was organized To make students aware of environmental issues and enrich their thought process regarding environmental issues. Saplings of Neem, Peepal, Gulmohor, Palm has been planted at campus. Students were participated in Mazi Vasundhara Campaign



**Rain Water Harvesting project. Conducted by NSS, Department.**



# Tree Plantation



**Tree plantation program conducted every year by NSS, Department.**

# Diwali calibration without crackers



Streate Presentation

# NSS Actitivities

सर्व शिक्षा अभियान शाळा बाह्य विद्यार्थी सर्वे (पातुर तालुका)

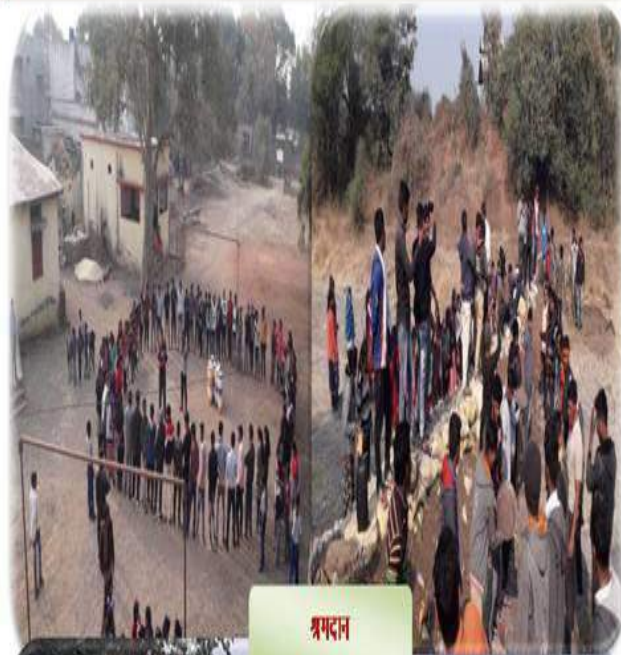


केंद्रप्रमुख पातुर तालुका

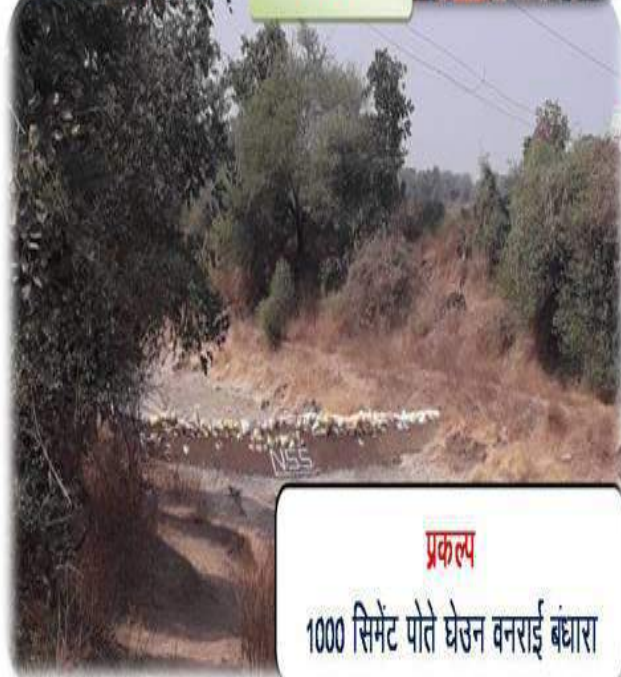
- |                                    |                               |                              |
|------------------------------------|-------------------------------|------------------------------|
| Babhulgaon<br>Shri.Rafat Khan      | Chodhi<br>Shri.Anil Soni      | Khanapur<br>Shri.Sk.Tousif   |
| Malsur<br>Shri.Niwas Chavan        | Pimpalkhutta<br>Shri.M.M.Khan | Shirla<br>Shri.Sk.Tousif     |
| Malrajura<br>Shri.Vasudev Shegokar | Alegaon<br>Shri.Niwas Chavan  | Digras Bk<br>Shri.Rafat Khan |
| Patur<br>Shri.Babnanrao            |                               |                              |



# Special Camp Target



**श्रमदान**



**प्रकल्प**  
1000 सिमेंट पोते घेरुन बनराई बंधारा

**लोकमत समाचार**  
सिन्हा कॉलेज के छात्रों ने श्रमदान से किया बांध

**दिव्य मराठी**  
श्रमदानाने बांधला बंधारा

**राष्ट्रीय सेवा योजना**  
श्रमदान से बांध का निर्माण

**दर्शन**  
एच.एन.सिन्हा महाविद्यालयात श्रमदानाने बांधला बंधारा

**दत्तक ग्राम भंडारज दु. येथे राष्ट्रीय सेवा योजनेच्या विरिष रिठिराचा समारोप**

**वर्तमान पत्र कात्रण**

# DEPARTMENTAL OTHER ACTIVITIES



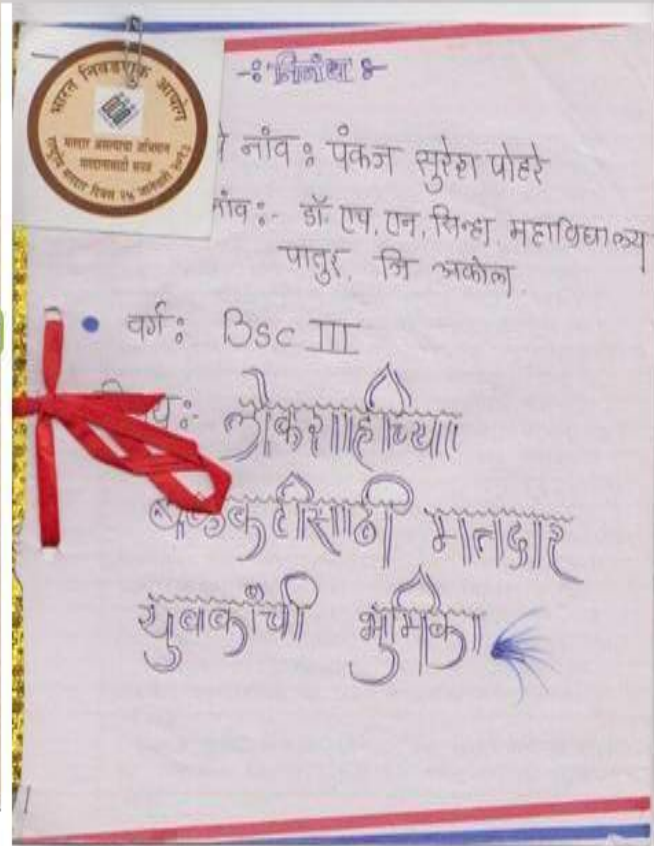
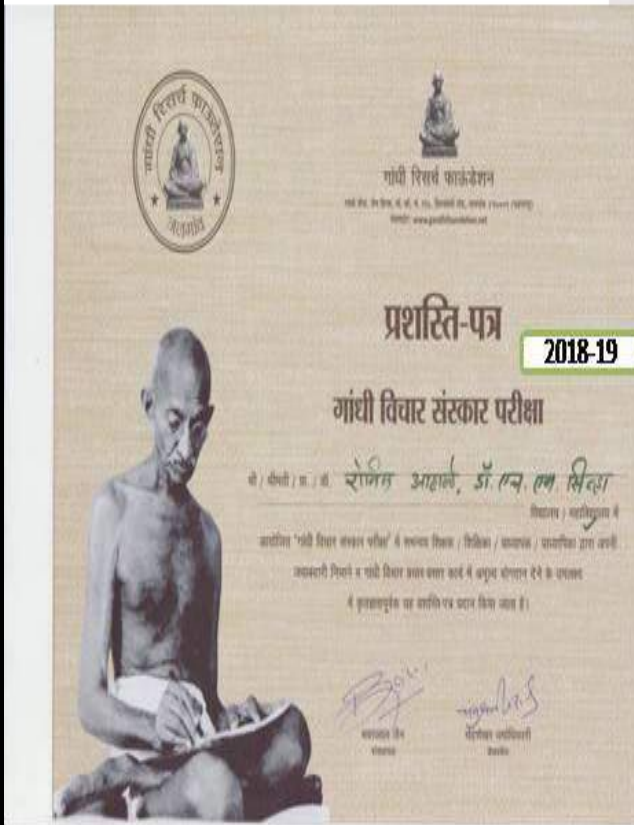
Zenda Bachav Abhiyan

Tree Raksha Bandhan



New Scheme Vichar Sabha

# Certificate



# Street Play /Poster Competition



आत्मिकता सुखी-सुखी सुखी-सुखी



सुखी-सुखी सुखी-सुखी सुखी-सुखी



सुखी-सुखी सुखी-सुखी सुखी-सुखी



सर्वनाशाचं  
तन-मन-धन

# Street Play /Poster Competition



**सावधान !**  
नशा विनाशकारी आहे

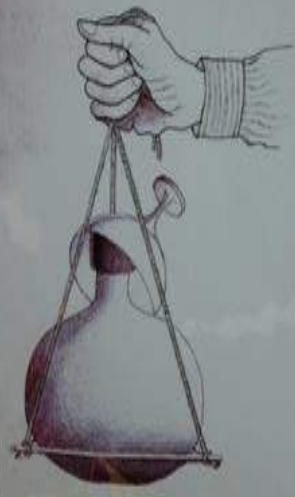


बाबा,  
दाकच्या नशेत बिंगता तुम्ही.  
दुःख, दारिद्र्याचे चटके डोरतो आम्ही.  
बराबरी मंडळ महाराष्ट्र राज्य



बराबरी मंडळ महाराष्ट्र राज्य

14  
आम्ही जातो बीसर बारा...  
आमुचा राम राम घ्यावा...



बराबरी मंडळ महाराष्ट्र राज्य



# Special Camp Target



श्री.शिवाजी शिक्षण संस्था अमरावती द्वारा संचालित  
संत गाडगे बाबा अमरावती विद्यापीठ संलग्नित



डॉ.एच.एन.सिन्हा कला व वाणिज्य महाविद्यालय,पातुर जि.अकोला

## राष्ट्रीय सेवा योजना आपले हार्दिक स्वागत

कार्यक्रम अधिकारी  
प्रा.डॉ.रोहित आहाले

कार्यक्रम अधिकारी  
प्रा.डॉ.एम.जे.इंगोले

प्राचार्य  
डॉ.वि.एन.जायले



श्री.शिवाजी शिक्षण संस्था अमरावती द्वारा संचालित  
संत गाडगे बाबा अमरावती विद्यापीठ संलग्नित



डॉ.एच.एन.सिन्हा कला व वाणिज्य महाविद्यालय,पातुर जि.अकोला

## राष्ट्रीय सेवा योजना वृक्षारोपन

कार्यक्रम अधिकारी  
प्रा.डॉ.रोहित आहाले

कार्यक्रम अधिकारी  
प्रा.डॉ.एम.जे.इंगोले

प्राचार्य  
डॉ.वि.एन.जायले



श्री.शिवाजी शिक्षण संस्था अमरावती द्वारा संचालित  
संत गाडगे बाबा अमरावती विद्यापीठ संलग्नित



डॉ.एच.एन.सिन्हा कला व वाणिज्य महाविद्यालय,पातुर जि.अकोला

### राष्ट्रीय सेवा योजना

**वायरस फैलने से कैसे रोके**

हाथों को साबुन-पानी से अच्छे से धोना और पानी से छींका कर सुखाना।	खाने और पीने के वक़्त फ़ैसलेजबान फ़ैसल का इस्तेमाल करें।
इस्तेमाल किए गए पियूज को फेंक दें (इसके बाद हाथ धो लें)।	पीपू, नसी में जो छींकन और ख़ासतें वक़्त अपने माँसू का इस्तेमाल करें।
क्लिन हाथ सैनिटाइज़र का इस्तेमाल करें।	जो बीमार हैं उनके साथ में न आने की पूरी कोशिश करें।

स्रोत: स्वास्थ्य और परिवार कल्याण विभाग, दिल्ली।

कार्यक्रम अधिकारी  
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श्री.शिवाजी शिक्षण संस्था अमरावती द्वारा संचालित  
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## राष्ट्रीय सेवा योजना रक्तदान जिवनदान

कार्यक्रम अधिकारी  
प्रा.डॉ.रोहित आहाले

कार्यक्रम अधिकारी  
प्रा.डॉ.एम.जे.इंगोले

प्राचार्य  
डॉ.वि.एन.जायले



श्री.शिवाजी शिक्षण संस्था अमरावती द्वारा संचालित  
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डॉ.एच.एन.सिन्हा कला व वाणिज्य महाविद्यालय,पातुर जि.अकोला

## राष्ट्रीय सेवा योजना

**कोरोना वायरस: 3 ज़रूरी बातें**

अपने हाथ धोएं	खांसते वक़्त टीशू का इस्तेमाल करें	अपने हाथ से अपना चेहरा न छुएं
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कार्यक्रम अधिकारी  
प्रा.डॉ.रोहित आहाले

कार्यक्रम अधिकारी  
प्रा.डॉ.एम.जे.इंगोले

प्राचार्य  
डॉ.वि.एन.जायले



# स्वच्छ सर्वेक्षण २०१९ अंतर्गत प्रशस्तीपत्र

प्रशस्तीपत्र देण्यात येते की, श्री./सौ. डॉ. एच. एन. सिंहा शता /  
महाविद्यालय न.प. पातुर यांनी स्वच्छ सर्वेक्षण २०१९ अंतर्गत माहे सप्टेंबर मध्ये साफ सफाई बाबतचे  
उत्कृष्ट काम केल्याबद्दल प्रशस्तीपत्र गौरव करण्यात येत आहे.

दि. २ ऑक्टोबर २०१८

सौ. प्रभाताई कोथळकर  
अध्यक्षा न.प.पातुर



श्री. प्रमोद वानखडे  
मुख्याधिकारी न.प.पातुर

NSS students actively participated in Swachchha Bharat Abhiyan .



**देशोन्नती**  
अकोला  
पुढार २६ एप्रिल २०१९

**महाविद्यालयातील विद्यार्थ्यांना रिती ई-टीएम मधील खांब्यात माहिती**

पुढार येथे मतदान जनजागृती कार्यक्रम  
पुढार येथे मतदान जनजागृती कार्यक्रम  
पुढार येथे मतदान जनजागृती कार्यक्रम

**नातिक शेख (प्रतिनिधि)**  
**दिव्य मराठी**  
27-Sep-2019  
अकोला सिटी पे

**पातूर येथे मतदान जनजागृती**  
महाविद्यालयातील विद्यार्थ्यांना रिती ई-टीएम मधील खांब्यात माहिती



प्रतिनिधि / पुढार  
पातूर येथे मतदान जनजागृती कार्यक्रम  
महाविद्यालयातील विद्यार्थ्यांना रिती ई-टीएम मधील खांब्यात माहिती

**दैनिक सुफळा**  
पुढार येथे मतदान जनजागृती  
डॉ. एच. एन. सिन्हा महाविद्यालय  
में राष्ट्रीय सेवा योजना दिन संपन्न

**डॉ. सिन्हा महाविद्यालयात रक्तदान शिबीर**

**नवभारत**

**छात्रां को दी EVM की जानकारी**

विद्यार्थ्यांना रिती ई-टीएम मधील खांब्यात माहिती  
पातूर येथे मतदान जनजागृती कार्यक्रम

**लोकमत**

**पातूर येथे मतदान जनजागृती कार्यक्रम**

महाविद्यालयातील विद्यार्थ्यांना रिती ई-टीएम मधील खांब्यात माहिती  
पातूर येथे मतदान जनजागृती कार्यक्रम

**दैनिक राज्योन्नती**

**पातूरच्या डॉ. एच. एन. सिन्हा महाविद्यालयात भव्य रक्तदान शिबीर**



उत्स्फूर्तपणे रक्तदान  
पातूर येथे मतदान जनजागृती कार्यक्रम