



Maratha Vidya Prasarak Samaj's  
**ARTS AND COMMERCE COLLEGE, MAKHAMALABAD NASHIK**

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College Code: 0863

AISHE Code: C-41524

## **Criterion 1 : Curricular Aspects**

### **Key Indicator 1.3- Curriculum Enrichment**

#### **Metric No. 1.3.2**

**Average percentage of Courses include experiential through project work/field work/internship during last five years**

#### **DVV Requirement**

"Provide the Document showing the experimental learning through project work/ field work/internship as prescribed by the affiliating university/affiliating university curriculum. Provide Minutes of the Boards of Studies/Academic Council meetings with approvals for these courses for the year 2016-17, 2017-18, 2018-19, and 2019-20, 2020-21."

#### **DVV Response**

The required document for the period of assessment is attached below.



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# Environmental Science New Syllabus

## Syllabus for

### Ability Enhancement Compulsory Course (AECC – Environment Studies)(2 credit) for under graduate

#### (For All Faculties - Second Year - Semester III)

#### It is as per UGC guidelines and framing -

#### **Unit 1 : Introduction to environmental studies**

- Multidisciplinary nature of environmental studies;
- Scope and importance; Concept of sustainability and sustainable development.

(2 lectures)

#### **Unit 2 : Ecosystems**

- What is an ecosystem? Structure and function of ecosystem ; Energy flow in an ecosystem : food chains, food webs and ecological succession. Case studies of the following ecosystems :

a) Forest ecosystem

b) Grassland ecosystem

c) Desert ecosystem

d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

(8 lectures)

#### **Unit 3 : Natural Resources : Renewable and Non-renewable Resources**

- Land resources and land use change; Land degradation, soil erosion and desertification.
- Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.
- Water : Use and over-exploitation of surface and ground water, floods, droughts conflicts over water (international & inter-state).
- Energy resources : Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

(10 lectures)

#### **Unit 4 : Biodiversity and Conservation**

- Levels of biological diversity : genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots
- India as a mega-biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity : Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.
- Ecosystem and biodiversity services : Ecological, economic, social, ethical, aesthetic and Informational value.

(10 lectures)

#### **References :**

1. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
2. Gadgil, M., & Guha, R. 1993. This Fissured Land: An Ecological History of India. Univ. of California Press.

3. Gleeson, B. and Low, N. (eds.) 1999. *Global Ethics and Environment*, London, Routledge.
4. Gleick, P. H. 1993. *Water in Crisis*. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
5. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. *Principles of Conservation Biology*. Sunderland: Sinauer Associates, 2006.
6. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. *Science*, 339 : 36-37.
7. McCully, P. 1996. *Rivers no more: the environmental effects of dams* (pp. 29-64). Zed Books.
8. McNeill, John R. 2000. *Something New Under the Sun: An Environmental History of the Twentieth Century*.
9. Odum, E.P., Odum, H.T. & Andrews, J. 1971. *Fundamentals of Ecology*. Philadelphia: Saunders.
10. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. *Environmental and Pollution Science*. Academic Press.
11. Rao, M.N. & Datta, A.K. 1987. *Waste Water Treatment*. Oxford and IBH Publishing Co. Pvt. Ltd.
12. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. *Environment*. 8<sup>th</sup> edition. John Wiley & Sons.
13. Rosencranz, A., Divan, S., & Noble, M.L. 2001. *Environmental law and policy in India*. Tripathi 1992.
14. Sengupta, R. 2003. *Ecology and economics : An approach to sustainable development*. OUP.
15. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi.
16. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. *Conservation Biology : Voices from the Tropics*. John Wiley & Sons.
17. Thapar, V. 1998. *Land of the Tiger: A Natural History of the Indian Subcontinent*.
18. Warren, C. E. 1971. *Biology and Water Pollution Control*. WB Saunders.
19. Wilson, E. O. 2006. *The Creation: An appeal to save life on earth*. New York : Norton.
20. World Commission on Environment and Development. 1987. *Our Common Future*. Oxford University Press.

## Syllabus for

Ability Enhancement Compulsory Course (AECC – Environment Studies)(2 credit) for under graduate

(For All Faculties - Second Year - Semester IV)

It is as per UGC guidelines and framing -

### **Unit 5 : Environmental Pollution**

- Environmental pollution : types, causes, effects and controls; Air, water, soil and noise pollution
- Nuclear hazards and human health risks
- Solid waste management : Control measures of urban and industrial waste.
- Pollution case studies.

(10 lectures)

### **Unit 6 : Environmental Policies & Practices**

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture
- Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).
- Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.

(9 lectures)

### **Unit 7 : Human Communities and the Environment**

- Human population growth: Impacts on environment, human health and welfare.
- Resettlement and rehabilitation of project affected persons; case studies.
- Disaster management : floods, earthquake, cyclones and landslides.
- Environmental movements : Chipko, Silent valley, Bishnois of Rajasthan.
- Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- Environmental communication and public awareness, case studies (e.g. CNG vehicles in Delhi).

(6 lectures)

### **Unit 8 : Field work**

- Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc.

- Visit to a local polluted site-Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds and basic principles of identification.
- Study of simple ecosystems-pond, river, Delhi Ridge, etc.

(Equal to 5 lectures)

#### References :

1. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
2. Gadgil, M., & Guha, R. 1993. This Fissured Land: An Ecological History of India. Univ. of California Press.
3. Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.
4. Gleick, P. H. 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
5. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006.
6. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339 : 36-37.
7. McCully, P. 1996. Rivers no more: the environmental effects of dams (pp. 29-64). Zed Books.
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9. Odum, E.P., Odum, H.T. & Andrews, J. 1971. Fundamentals of Ecology. Philadelphia: Saunders.
10. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science. Academic Press.
11. Rao, M.N. & Datta, A.K. 1987. Waste Water Treatment. Oxford and IBH Publishing Co. Pvt. Ltd.
12. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. Environment. 8<sup>th</sup> edition. John Wiley & Sons.
13. Rosencranz, A., Divan, S., & Noble, M.L. 2001. Environmental law and policy in India. Tripathi 1992.
14. Sengupta, R. 2003. Ecology and economics : An approach to sustainable development. OUP.
15. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
16. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology : Voices from the Tropics. John Wiley & Sons.
17. Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent.
18. Warren, C. E. 1971. Biology and Water Pollution Control. WB Saunders.
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Environmental Science New  
Course Structure



## Ability Enhancement Compulsory Course (AEC)

- १ शैक्षणिक वर्ष २०२० - २१ पासून मानवविज्ञान विद्याशाखेतील S.Y.B.A. या वर्गातील सर्व विद्यार्थ्यांसाठी Ability Enhancement Compulsory Course (AEC) अंतर्गत Environment Awareness Programme (पर्यावरण जाणीव जागृती) हा विषय अनिवार्य आहे.
- २ हा विषय तिसऱ्या सत्रासाठी २ श्रेयांकाचा, तर चौथ्या सत्रासाठी २ श्रेयांकाचा आहे. १ श्रेयांक = १५ तास, म्हणजे एका सत्रासाठी ३० तासिकांचा स्वतंत्र कार्यभार आहे. (१ तास = घड्याळी ६० मिनिटे)
- ३ हा विषय २ श्रेयांकांचा असून त्यासाठी ५० गुण आहेत. यामध्ये २५ गुणांची विद्यापीठीय, तर २५ गुणांची महाविद्यालयीन परीक्षा असेल.
- ४ अभ्यासक्रमात नमूद केल्याप्रमाणे व्याख्यान आणि प्रात्यक्षिके होतील. या विषयाच्या प्रश्नपत्रिकेचे स्वरूप खालीलप्रमाणे :

विद्यापीठ सत्र परीक्षा		गुण : २५
वेळ : २ तास	घटकनिहाय प्रश्न तपशील	गुण
प्रश्न क्रमांक		
प्रश्न १ ला	दोन पैकी एका प्रश्नाचे उत्तर लिहा.	१०
प्रश्न २ रा	दोन पैकी एका प्रश्नाचे उत्तर लिहा.	१०
प्रश्न ३ रा	दोन पैकी एका प्रश्नाचे उत्तर लिहा.	५
	एकूण गुण	२५
अंतर्गत मूल्यमापन		
लेखी परीक्षा, गृहपाठ, चर्चासत्र सादरीकरण, समूह चर्चा, प्रकल्प कार्य, अभ्यास भेट यापैकी कोणत्याही दोन प्रकारांतून अंतर्गत मूल्यमापन करावे. (१५+१०)		२५
एकूण गुण		५०
विशेष सूचना :		
<ul style="list-style-type: none"><li>अंतर्गत मूल्यमापनाचे नियोजन महाविद्यालयाने करावे.</li><li>विद्यार्थ्यांचे अंतर्गत मूल्यमापनविषयक लेखन / तपशील विद्यापीठाच्या निर्देशानुसार, विहित कालावधीपर्यंत महाविद्यालयाकडे जमा असणे आवश्यक आहे.</li><li>विद्यापीठाच्या निर्देशानुसार विहित मुदतीत गुण विद्यापीठाकडे पाठवावे.</li></ul>		



**Environmental Science Old  
Syllabus with Structure**

**CORE MODULE SYLLABUS FOR ENVIRONMENTAL STUDIES**  
**FOR UNDER GRADUATE COURSES OF ALL BRANCHES**  
**OF HIGHER EDUCATION**

**Unit 1: The multidisciplinary nature of environmental studies**

Definition, scope and importance

(2 lectures)

Need for public awareness

**Unit 2: Natural Resources:**

**Renewable and non-renewable resources:**

Natural resources and associated problems.

- (a) Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
  - (b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
  - (c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
  - (d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
  - (e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.
  - (f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
- Role of an individual in conservation of natural resources.
  - Equitable use of resources for sustainable lifestyles.

**(8 Lectures)**

**Unit 3: Ecosystems**

- Concept of an ecosystem
- Structure and function of an ecosystem

- Producers, consumers and decomposers
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids
- Introduction, types, characteristic features, structure and function of the following ecosystem:
  - a. Forest ecosystem
  - b. Grassland ecosystem
  - c. Desert ecosystem
  - d. Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)

**(6 Lectures)**

#### **Unit 4: Biodiversity and its conservation**

- Introduction – Definition: genetic, species and ecosystem diversity
- Biogeographical classification of India
- Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values
- Biodiversity at global, national and local levels
- India as a mega-diversity nation
- Hot-spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts
- Endangered and endemic species of India
- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity

**(8 Lectures)**

#### **Unit 5: Environmental Pollution**

Definition

- Causes, effects and control measures of:
  - a. Air pollution
  - b. Water pollution
  - c. Soil pollution
  - d. Marine pollution
  - e. Noise pollution

- f. Thermal pollution
- g. Nuclear pollution
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution
- Pollution case studies
- Disaster management: floods, earthquake, cyclone and landslides

**(8 Lectures)**

### **Unit 6: Social Issues and the Environment**

- From unsustainable to sustainable development
- Urban problems and related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns. Case studies.
- Environmental ethics: Issues and possible solutions
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- Wasteland reclamation
- Consumerism and waste products
- Environmental Protection Act
- Air (Prevention and Control of Pollution) Act
- Water (Prevention and control of Pollution) Act
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation
- Public awareness

**(7 Lectures)**

### **Unit 7: Human Population and the Environment**

- Population growth, variation among nations
- Population explosion – Family Welfare Programmes
- Environment and human health

- Human Rights
- Value Education
- HIV / AIDS
- Women and Child Welfare
- Role of Information Technology in Environment and Human Health
- Case Studies

**(6 Lectures)**

### **Unit 8: Field Work**

- Visit to a local area to document environmental assets- river/forest/grassland/hill/mountain
- Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
- Study of common plants, insects, birds
- Study of simple ecosystems-pond, river, hill slopes, etc (Field work equal to 5 lecture hours)



  
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## SIX MONTHS COMPULSORY CORE MODULE COURSE IN ENVIRONMENTAL STUDIES FOR UNDERGRADUATES

### **Teaching Methodologies**

The Core Module Syllabus for Environmental Studies includes class room teaching and field work. The syllabus is divided into eight units covering 50 lectures. The first seven unit will cover 45 lectures which are class room based to enhance knowledge skills and attitude to environment. Unit eight is based on field activities which will be covered in five lectures hours and would provide students first hand knowledge on various local environmental aspects. Field experience is one of the most effective learning tools for environmental concerns. This moves out of the scope of the text book mode of teaching into the realm of real learning in the field, where the teacher merely acts as a catalyst to interpret what the student observes or discovers in his/her own environment. Field studies are as essential as class work and form an irreplaceable synergistic tool in the entire learning process.

Course material provided by UGC for classroom teaching and field activities be utilized.

The universities/colleges can also draw upon expertise of outside resource persons for teaching purpose.

Environmental Core Module shall be integrated into the teaching programmes of all undergraduate courses.

**Annual System:** The duration of the course will be 50 lectures. The exam will be conducted along with the Annual Examination.

**Semester System:** The Environment course of 50 lectures will be conducted in the second semester and the examinations shall be conducted at the end of the second semester.

**Credit System:** The core course will be awarded 4 credits.

**Exam Pattern:** In case of awarding the marks, the question paper should carry 100 marks.

The structure of the question paper being:

Part-A, Short answer pattern – 25 marks

Part-B, Essay type with inbuilt choice – 50 marks

Part-C, Field work – 25 marks

**S4: Psychology Practical: Test  
and Experiments Syllabus**



## **S4: PSYCHOLOGY PRACTICAL: TESTS AND EXPERIMENTS**

**(To be implemented from 2015-16)**

### **OBJECTIVES:**

1. To familiarize the students with the use of elementary statistical techniques,
2. To give practical experience to the students in administering and scoring psychological tests and interpreting the scores,
3. To acquaint the students with the basic procedure and design of psychology experiments,
4. To encourage and guide the students to undertake a small-scale research project.
5. To encourage students to learn practical application through study tour and visit.

### **SECTION A: STATISTICS**

Statistics is a part of Practical paper. Teachers should conduct one lecture per week throughout the year for Statistics. See the “Guidelines for S4 Paper” for other details.

#### **Objectives:**

1. To acquaint the students with the basic statistical concepts
2. To train them in solving simple statistical problems.

#### **Topics to be covered:**

1. Frequency distribution
2. Measures of central tendency: Mean, Median, Mode for grouped and ungrouped data
3. Measures of variability: Range, Standard Deviation and Quartile Deviation (Q1, Q3 and Q) for grouped data.
4. Rank Difference Correlation.

### **SECTION B: TESTS**

### **SECTION C: GROUP TESTING / PROJECT / STUDY TOUR**

### **SECTION D: EXPERIMENTS**

**TERM I: SECTION B & C****I] GENERAL AND SPECIAL ABILITY TESTING (any two)**

1. Malin's Verbal OR Performance Scale
2. Standard Progressive Matrices (SPM)
3. Binet Kamath Test
4. Test of Creativity
5. Differential Aptitude Tests (DAT)- Any two sub tests
6. Dexterity test

**II] PERSONALITY (any three)**

1. Eysenck Personality Questionnaire
2. NEO-FFI
3. Sentence Completion Test
4. 16 PF
5. Introversion-Extraversion Test
6. Interest inventory
7. Type A and Type B personality test.

**IV] ADJUSTMENT (any one)**

1. Family
2. School
3. Marriage
4. Expectations from the Life partner Scale

**V] TESTING OF ATTITUDE (any one)**

1. Marriage
2. Religion
3. Optimism-pessimism
4. Attitude towards the mother scale.

**VI] VALUES (any one)**

1. Differential values test
2. Value orientation

## **SECTION C: GROUP TESTING OR PROJECT OR STUDY TOUR**

### **GUIDELINES FOR GROUP TESTING / PROJECT / STUDY TOUR**

#### **GROUP TESTING:**

1. For group testing, a small sample (n=30 at least) should be taken.
2. Any one standardized psychological test should be administered to the sample.
3. Responses should be scored as per the instructions given in the manual.
4. Report for group testing should be structured as follows:
  - a. Purpose of the group testing
  - b. Description of the test, e.g. author, psychometric properties, uses of test.
  - c. Tabular presentation of scores and results
  - d. Qualitative analysis, if applicable
  - e. Interpretation at group level
  - f. Any other relevant finding
  - g. Conclusion
  - h. References

#### **PROJECT:**

1. For project, a sample of at least 30 subjects should be taken
2. Project report should be structured as follows
  - a. Introduction and definition of basic concepts
  - b. Rationale/significance of the study
  - c. Hypothesis
  - d. Sample
  - e. Tools for data collection
  - f. Statistical analysis
  - g. Results, discussion and conclusion
  - h. Limitations and suggestions
  - i. References

#### **STUDY TOUR REPORT: Observational report**

##### ***Note:***

1. *Group testing or project or study tour is mandatory (any one)*
2. *Decision to allow students to conduct group testing or project will be at the discretion of the head of the department*
3. *The report of group testing or project should be submitted separately.*

**TERM II: SECTION A and D****I] PSYCHOPHYSICS (any two)**

1. Method of Limits- RL or DL
2. Method of Constant Stimuli- RL or DL
3. Method of Average Error: PSE and CE

**II] ATTENTION (any one)**

1. Divided attention
2. Span of attention
3. Stroop effect

**III] PERCEPTUAL PROCESSES (any two)**

1. Illusion
2. Size constancy
3. Retinal color zones
4. Reaction time
5. Depth perception

**IV] THINKING AND PROBLEM SOLVING (any one)**

1. Effect of mental set on problem solving
2. Maze learning
3. Problems solving- Pyramid puzzle / Wiggly Blocks / Heart-and-Bow puzzle

**V] LEARNING (any one)**

1. Bilateral transfer
2. Effect of knowledge of results
3. Habit interference
4. Serial learning

**VI] MEMORY (any one)**

1. Recall and recognition
2. Retroactive inhibition / Proactive inhibition
3. Short Term Memory

## **GUIDELINES FOR S-4 PAPER**

### **GUIDELINES FOR THE CONDUCT OF PRACTICAL**

1. Each batch of students should consist of 12 students.
2. If the number of students exceeds even by 1, a separate batch should be formed for conduct of practical.
3. Each batch will conduct practical twice per week with three lecture periods per session.
4. Total workload per batch will be 6 lecture periods.
5. In addition 1 separate lecture will be held for Statistics per week for the entire class.
6. Practical examination will be held annually.
7. Students should visit an industry, mental hospital, general hospital, central jail, remand home, ashram, or correctional institute / organization. The teacher accompanying the students can claim TA/DA as per the University rules.
8. The concerned teacher should verify the completion of practical journal as well as group testing or project report and issue a completion certificate signed by the head of the department.

### **GUIDELINES FOR ASSESSMENT (ANNUAL EXAMINATION)**

1. While preparing the programme for final examination, the number of students in any given batch should not exceed 8.
2. The examiners should set paper on the spot.
3. Three subsets of question papers should be set per batch. These subsets should be considered as one set for billing purpose.
4. Before conducting the examination the external examiner should confirm that all the guidelines mentioned in the syllabus were strictly followed while teaching and conducting the practical. The examiner should also see whether the numbers of practicals are conducted as per the specifications given in the syllabus.
5. While appearing for the final examination, students must produce the fair journal containing the report of the practical duly completed and signed by the concerned teacher and head of the department. Group Testing report or Project report or Study Tour Report (whichever is applicable) should be submitted separately.
6. External Examiner should allow students to appear for final examination only on producing the Completion Certificate.
7. The structure of the question paper for S-4 will be as follows:
  - Statistics (any two problems- each problem has 10 marks)
  - Question paper/ preference sheet for practical
    - i. The question paper will contain 2 sections – section I & section II.
    - ii. Section I will contain 4 questions based on tests.
    - iii. Section II will contain 4 questions based on experiments.
    - iv. The student will give 2 preferences for each section.
    - v. Out of the four preferences given by the student, the final choice of the question to be attempted will be of the external examiner.
  - Group Testing or Project Assessment

**i. Group testing-** The examiner should assess group testing report and conduct viva on the following points:

- a. Purpose of the group testing
- b. Name of the test used
- c. Statistics used
- d. Results
- e. Conclusion

**ii. Project-** The examiner should assess project report and conduct viva on the following points:

- a. Hypothesis
- b. Sample
- c. Tools for data collection
- d. Method/s for statistical analysis
- e. Results
- f. Conclusion

**iii. Study tour report-** Complete observation and behavioral analysis

8. Break up of marks will be as follows: (See the Marksheet in Appendix)

- Statistics : 20 marks
- Instructions and conducting : 10 marks
- Practical Report : 15 marks
- Journal : 20 marks
- Practical Viva : 20 marks
- Group Testing or Project
- i. Report : 10 marks
- ii. Viva : 05 marks

**TOTAL MARKS: 100 marks**

9. The duration for practical examination will be of **three and a half** clock hours per batch.
10. Assessment of **statistics** and **practical report** should be done by the **external** examiner only.
11. Instructions & conducting, journal, viva, groups testing or project report should be assessed by the internal and external examiners. **Average** marks of the two examiners should be taken as final assessment.
12. Difference of more than 25% marks between the internal and external examiners in assessment on any of the items mentioned above should be settled mutually.
13. The following items should be considered for billing purpose, as per the revised rates of examiners' remuneration of S P Pune University.

(Rates as per university booklet- these rates are current rates - in future rates will be changed)

Sr. No.	Head	Rate	Page no.
1	Paper Setting (Per Paper per batch)	410	1
2	Remuneration (Evaluation) Per Candidate, Each Examiner	20	1
3	Model Answer (Statistics) (Per Paper per batch)	300	15
4	Scheme of marking (Per Paper per batch)	100	15
5	Marathi Translation- per paper per batch	150	15

Sr. No.	Head	Rate	Page no.
1	Lab Supervisor	100 (150 if two batches in a day)	23
2	Expert Assistant	80 (125 if two batches in a day)	23
3	Peon	30 Rs. per student	25/26

14. Total remuneration for the examination should be equally divided between the two examiners.

### Books for Reading:

- Anastasi, A. & Urbina, S. (2009). *Psychological testing*. N.D.: Pearson Education.
- Chadha N.K.(2009),*Applied Psychometry*, Sage Publication Pvt Ltd. New Delhi.
- D'Amato, M.R. (2009). *Experimental psychology: Methodology, psychophysics and learning*. N.D.: Tata McGraw-Hill.
- Desai, B. and Abhyankar, S.C. (2001). *Prayogik Manasashastra ani Samshodhan Paddhati*. Pune: Narendra Prakashan.
- Galloti, K. M. (2004). *Cognitive psychology in and out of the laboratory*. USA: Thomson Wadsworth.
- Jalota, S. (1962). *Experiments in psychology*. Asia Publishing House.
- Kaplan R. M. & Saccuzzo D.P.(2005) *Psychological Testing, Principles, Applications and Issues*. Sixth Ed. Cengage Learning India, Pvt Ltd.
- Mohanthy. *Experiments in psychology*.
- Mohsin, S. M. (1975). *Experiments in psychology*. Orient Longman.
- Parameshwaran, E. G. & Rao, B. T. (1968). *Manual of experimental psychology*. Bombay: Lalvani Publishing House.
- Postman, L. & Egan, J.P. (1949), reprint 2009. *Experimental psychology: An introduction*. ND: Kalyani Publication.
- Ranjit Kumar (2014). *Research Methodology: A step by step guide for beginners*. Pearson
- Rajamanickam, M. (2005). *Experimental Psychology: with Advanced Experiments*, Volume 1 & 2. New Delhi: Concept Publishing Company.
- Tinker, M.A. & Russell, W.A. *Introduction to methods in experimental psychology*. Appleton – Century Crofts.
- Woodworth, R.S. & Schlosberg, H. (reprint 2008, 6th ed.), *Experimental Psychology*. ND: Oxford & IBH Publishing Co. Pvt. Ltd.

Test manuals



  
**Principal**  
 Arts, and Commerce College,  
 Makhmalabad, Nashik



## Appendix:

### 1: Question Paper Pattern: for theory papers

#### B.A. Pattern of Examination (Term End Exam) from Academic Year 2013-2014.

##### A) Setting of Question papers /pattern of question paper :

Term end exam : Maximum marks 60 Time: Two hours

Q1 Answer the following questions in 100 words each ( any three)

Ask five questions each questions for 5 marks  $5 \times 3 = 15$

Q2 Answer the following questions in 200 words each ( any two)

Ask four questions each questions for 10 marks  $10 \times 2 = 20$

Q3 Answer the following questions in 300 words each ( any one)

Ask two questions each questions for 15 marks  $15 \times 1 = 15$

Q4 write short notes ( any two)

Ask four short notes each short notes for 5 marks  $5 \times 2 = 10$

##### Pattern of question papers Annual Examination

Maximum marks 80 Time three hours

Q1 Answer the following questions in 100 words each ( any four)

Ask six questions each questions for 5 marks  $5 \times 4 = 20$

Q2 Answer the following questions in 200 words each ( any two)

Ask four questions each questions for 10 marks  $10 \times 2 = 20$

Q3 Answer the following questions in 400 words each ( any one)

Ask two questions each questions for 15 marks  $20 \times 1 = 20$

Q4 write short notes ( any four)

Ask six short notes each short notes for 5 marks  $5 \times 4 = 20$

B) Verification /Revaluation : As per University Rules

#### 1. Structure of the course

- a) Compulsory papers : All papers are compulsory
- b) Optional papers : No optional papers
- c) Question paper & papers etc. Given in the 5F
- d) Medium of instructions : English / Marathi

## 1: Question Paper Pattern: for practical

SAVITRIBAI PHULE PUNE UNIVERSITY  
Programme of Practical Examination in Psychology (S-4)  
At T. Y. B. A. Examination March / April-

Set: A / B / C

Model Question Paper

Seat No. -

Centre:.....

Batch No. -

Date:

Time:

### Instructions:

- 1- Student should give two preferences for any two tests in section I and two preferences for any two experiments in section II.  
विद्यार्थ्यांनी विभाग एक मधील कोणत्याही दोन मनोमापन चाचण्यांना प्रथम व द्वितीय असा पसंतीक्रम द्यावयाचा आहे तसेच विभाग दोन मधील कोणत्याही दोन मानसशास्त्रीय प्रयोगांना पुन्हा प्रथम व द्वितीय असा पसंतीक्रम द्यावयाचा आहे.
- 2- Students should conduct one test or experiment as allotted by the examiner and should prepare detailed report for it.  
परीक्षकांनी दिलेली चाचणी अथवा प्रयोग यापैकी एक अहवाल आपण तपशीलवार तयार करावयाचा आहे.
- 3- Draw neat diagrams or graphs if necessary  
आवश्यक तेथे आकृती रेखाटा अथवा आलेख जोडा.
- 4 – Attach this question paper to your answer sheet, don't take it home.  
सदरची प्रश्नपत्रिका तुमच्या उत्तरपत्रिकेला जोडा, घरी घेऊन जाऊ नका.

Preference	Sr. No.	Section I
	1	
	2	
	3	
	4	
		Section II
	1	
	2	
	3	
	4	

Required material for test/ experiment:

चाचणी अथवा प्रयोगासाठी आवश्यक साहित्य

1-

2-

3-

4-

5-

Signature :

Signature :

Name:

Name:

Internal Examiner

External Examiner

**SAVITRIBAI PHULE PUNE UNIVERSITY**  
**Programme of Practical Examination in Psychology (S-4)**  
**At T. Y. B. A. Examination March / April-**

Name of the college: ..... Date: March/ April

Examination Centre: ..... Batch: .....

Sr. No.	Seat No.	Instructions and conduction (10)				Journal (20)				Practical Viva (20)				Grp. Testing / Project report/ Tour Report and Viva (10+5=15)				Stat. (20)	Pra. Report Writing (15)	Total (100)
		Int. (10)	Ext. (10)	Total (20)	Average (10)	Int. (20)	Ext. (20)	Total (40)	Average (20)	Int. (20)	Ext. (20)	Total (40)	Average (20)	Int. (15)	Ext. (15)	Total (30)	Average (15)	20	15	
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				

**Internal Examiner**

**Sign.:**

**Name:**



**External Examiner**

**Sign.:**

**Name:**

  
**Principal**  
 Arts, and Commerce College,  
 Makhamalabad, Nashik

