PART - I

SULLABUS FOR ENVIRONMENTAL STUDIES* FOR UNDER GRADUATE

"इन्वाहरमेन्टल साईंसेस" के पाठ्यक्रम को स्नातक स्तर भाग-एक की कक्षाओं में विश्वविद्यालय अनुदान आयोग के निर्देशानुसार अनिवार्य रूप से शिक्षा सत्र 2003-2004 (परीक्षा 2004) से प्रभावशील किया गया है। स्वशासी महाविद्यालयों द्वारा भी अनिवार्य रूप से अंगीकृत किया जाएगा।

भाग 1, 2 एवं 3 में से किसी भी वर्ष में पर्यावरण प्रश्न-पत्र उत्तीर्ण करना अनिवार्य है। तभी उपाधि प्रदाय योग्य होगी।

पाठ्यक्रम 100 अंको का होगा, जिसमें से 75 अंकर सैद्धांतिक प्रश्नों पर होगे एवं 25 अंक क्षेत्रीय कार्य (Field Work) पर होगे।

सैद्धांतिक प्रश्नों पर अंक - 75 (सभी प्रश्न इकाई आधार पर रहेगे जिसमें आंतरिक विकल्प रहेगा)

(अ) लघु प्रश्नोत्तीर - 25 अंक

(ब) निबंधात्मक - 50 अंक

Field Work - 25अंकों का मूल्यांकन आंतरिक मूल्यांकन पद्धति से कर विश्वविद्यालय को प्रेषित किया जावेगा। अभिलेखों की प्रयोगिक उत्तर पुस्तिकाओं के समान संबंधित महाविद्यालयों द्वारा सुरक्षित रखेगे।

उपरोक्त पाठ्यक्रम से संबंधित परीक्षा का आयोजन वार्षिक परीक्षा के साथ किया जाएगा।

पर्यावरण विज्ञान विषय अनिवार्य विषय है, जिसमें अनुत्तीर्ण होने पर स्नातक स्तर भाग-एक के छात्र/छात्राओं को एक अन्य विषय के साथ पूरक की पात्रता होगी। पर्यावरण विज्ञान के सैद्धांतिक एवं फील्ड वर्क में संयुक्त रूप से 33% (तैंतीस प्रतिशत) अंक उत्तीर्ण होने के लिए अनिवार्य होगे।

स्नातक स्तर भाग-एक के समस्त नियमित/भूतपूर्व/अमहाविद्यालयीन छात्र/छात्राओं को अपना फील्ड वर्क सैद्धांतिक परीक्षा की समाप्ति के पश्चात 10 (दस) दिनों के भीतर संबंधित महाविद्यालय/परीक्षा केन्द्र में जमा करेगे एवं महाविद्यालय के प्राचार्य/केन्द्र अधीक्षकों/परीक्षकों की नियुक्ति के लिए अधिकृत रहेगे तथा फील्ड वर्क जमा होने के सात दिनों के भीतर प्राप्त अंक विश्वविद्यालय को भेजेंगे।

PART - I

SULLABUS FOR ENVIRONMENTAL STUDIES* FOR UNDER GRADUATE M.M.75

UNIT-I THE MULTI DISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES :

Definition, scope and importance

Need for public awarness.

Natural Resources :

Renewable and nonrenewable 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 explotation, 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 resources, land degradation, man induced landslides, soil erosion and desertification.

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- Role of an individual in conservation of natural resources.
- Equitable use of resources for sustainable life-styles.

(9 Lecture)

UNIT-II ECOSYSTEMS

Concept of an ecosystems.

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, oceans, estuaries)

(9 Lecture)

UNIT-III Biodiversity and its Conservation

- Introduction - Definition : genetic, species and ecosystem diversity.
- Blogeographical 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 mega-diversity nation.
- Hot-spots of biodiversity
- Threats to biodiversity : habitat loss, poaching of wildlife, manwildife conflicts.
- Endangered and endeml species of India.
- Conservation of biodiversity : In situ and Ex-situ conservation of biodiversity.

(9 Lecture)

UNIT-IV Environmental Pollution

Definition

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

Human Population and the Environment

- Population growth, variation among nations,
- Population explosion - Family Welfare Programme.
- Environment and human health.
- Human Rights.

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(9 Lecture)

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Social Issues and the Environment

- From Umsustainable to Sustainable development.
- Urban problems related to energy.
- Water conservation, rain water harvesting, watershed management.
- Resettlement and rehabilitation of people, its problems and concerns. Case studies.
- Environmental ethies : 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.
- Environment Protection Act
- Air (Prevention and Control of Pollution) Act.
- Water (Pervention and Control of Pollution) Act.
- Wildlife Protection Act.
- Forest Conservation Act.
- Issues Involved in enforcement of environmental legislation.
- Public awareness.
- Value Education
- HIV/AIDS
- Women and Child Welfare.
- Role of Information Technology in Environment and Human Health.
- Case Studies.

(9 Lecture)

IELD WORK

Visit to a local area to document environmental assets-river/forest/grassland/hill/mountain.
Visit to local polluted site : Urban/Rural/Industrial/Agriculture.
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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SANT GHIRA GURU VISHWAVIDYALAYA SARGUJA AMBIKAPUR (C.G.)

CHOICE BASED CREDIT SYSTEM (CBCS) 2018-19

Syllabus

M.Sc. Botany

प्रस्तावित अकादमिक भवन

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9.5. Seminar (SEM):

The aim of the seminar is to give students an exposure to recent developments and advance topic of research interests. The seminar preparations can be undertaken only after the prior approval of the CMC of the Department. The CMC will allot Seminar Credits on merit basis out of desiring students. The said preparations will be undertaken under the guidance and supervision of a teacher of the parent department. No teacher will be allowed to guide more than three students at a time in a semester. The guiding teacher will make continuous internal assessment of the seminar. At the end of the 'Semester End Examination' the seminar will be conducted and credits will be awarded by a Board of three examiners consisting of the Head of the Department, guide and one faculty member other than a guide.

9.6. Project Work (PRJ) or Field Study (FST):

The aim of the Project Work or Field Work is to introduce students with the research methodology in the subject and to prepare them for pursuing research in theoretical, experimental or computational areas of the subject. The Project Work or Field Study has to be conducted under the guidance of a teacher of the concerned department or a scientist or any other suitable person with proven research excellence in the concerned field of study. One can conduct the Project Work or Field Work in an outside institution of national or international repute on the prior approval by the CMC of the department concerned.

The CMC will allot the Credits Project Work or Field Study to the desirous depending on their capacity and subject to the availability of the resources on the basis of their merit. The guiding teacher will make continuous assessment of the Project Work or Field Study of a candidate under his/her supervision. SEE for the said Project Work or Field Study will be held at the unit where the study has been under taken by a Board of three examiners consisting of the concerned Head, Guide/Supervisor and one other senior faculty.

9.7. Education Study Tour (EST):

Subject to the provisions of the syllabus of the concerned Master degree Programme, the concerned Department may arrange educational tour/study tour. It will be compulsory on the part of student to join the same and on completion of tour; he/she will be required to submit its report to the University Department. The time spent for the purpose will be considered for computation of attendances in the respective semester/term. The Department may design & arrange the educational tour considering nature, scope & requirement of the respective subject.
The requirement of the tour has to be incorporated in the respective syllabus.
The university will determine the university contribution for toufor each student and escorting staff by administrative decision approved by the Finance Committee.

9.8. Research Publications in Journals (RPJ).

One research publication as a coauthor in a journal above impact factor 1.0 will be assigned two credits and that in other ISSN bearing journals will be assigned one credits.

10. A Master Degree study is a regular fulltime programme. Therefore, no student admitted in the said programme will be allowed to join any other programme of study during this period. This will be obligatory for the student to ensure that he has not sought admission in any other programme during this period.

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Nayak Nityanand Sal
Govt. College, AARA
Dist.- Jashpur (C.G.)

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