NOTIFICATION

No. 33/2021 Date : 01/04/2021

Subject : Implementation of the Syllabus of the compulsory subject Environmental Studies exclusively for Engineering & Technology Group (Excluding Architecture) in the Faculty of Science & Technology from the session 2020-21 and onwards .....

It is notified for general information of all concerned that the auhorities of the University have accepted to implement the syllabus of the compulsory subject Environmental Studies exclusively for Engineering & Technology Group (Excluding Architecture) in the Faculty of Science & Technology from the session 2020-21 and onwards as per **Appendix 'A'** .

Sd/-
(Dr.H.R.Deshmukh)
I/c Registrar
Sant Gadge Baba Amravati University

Appendix 'A' .

Syllabus of the Subject Environmental Studies [Exclusively for Engg. & Technology Group]

Course Title : ENVIORNMENTAL STUDIES (Total : 100 Marks)

(A) Course Contents : [80 Marks]

Unit I: **(a) The Multidisciplinary nature of environmental studies:**
Definition, Principles, Scope and importance, Man and Environment, Need for public awareness.

(b) Natural Resources: Renewable and non renewable resources:

Availability, use, overexploitation and associated environmental problems related to following Natural resource:

- Forest resources:
- Water resources:.
- Mineral Resources:
- Food Resources:
- Energy Resources:
- Land Resources:
- Role of individual in conservation of natural resources'

Unit II: **Ecosystems :**

- Concept and components of an ecosystem.
- Types of ecosystem
- Structure and function of forest and pond ecosystem.
- Energy flow in the ecosystems.
- Food chains, food webs and ecological pyramids.
- Ecological succession: General mechanism

UNIT III : **Biodiversity and it's Conservation** :

- Introduction, definition and types of biodiversity.
- Bio-geographical classification of India.
- India as a mega-diversity nation.
- Hot-spots of biodiversity.
- Threats to biodiversity: habitats loss, poaching of wild life, man wildlife conflicts.
- Endangered and endemic species of India.
- Conservation of biodiversity: in-situ and ex-situ conservation of biodiversity.

UNIT IV: **Environmental Pollution** :

- Definition, Causes, effects and control measures of: a. Air pollution b. Water pollution c. Soil pollution d. Noise pollution e. Nuclear hazards.
- Solid waste Management: Principles, methods and significance
- Disaster management: Floods, earth quake, cyclone and landslides.

Unit V : **Social issues and the Environment :**

- From unsustainable to sustainable development
- Urban problems related to energy
- Water conservation: rain water harvesting, water shed management
- Environmental ethics: issues and possible solutions
- Climate change, global warming, acid rain, ozone layer depletion and nuclear accidents
- Wasteland reclamation
- **Environmental Legislation:** Environment protection Act (1986); Air (prevention and control of pollution) Act (1981-82); Water (prevention and control of pollution) Act (1974); Wildlife protection act (1972); Forest conservation act (1980), Issues involved in enforcement of environmental legislation

Unit VI : **Human population and the environment** :

- Population growth and variation among nations
- Population explosion- family welfare program
- Environment and human health
- Human rights
- Value education
- HIV / AIDS
- Women and child welfare
- Role of information technology in environment and human health

(B) Field work : Project report / Internal work / Survey [20 Marks]

- 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 local plants, insects, birds.
- Study of local ecosystems - pond, lake, river, forest, etc.

Recommended Books :

1. Text Book of Environmental studies, Erach Bharucha, UGC .
2. Fundamental concepts in Environmental Studies, D D Mishra, S Chand & Co Ltd.
3. Ecology and Environment, P. D. Sharma.
4. Ecology, M. P. Arora, Himalaya Publishing House.

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