

Program Name and Code : Environmental Science (Code no 2012)

F E (Sem I) (R - 2012)

Maximum marks for the paper: 60 Duration of the paper: 2 hrs

Sr No.	Topic name	Weig htag e	Q1	Q2	Q3	Q4	Q5	Q6	Total
01	<p>Multidisciplinary Nature of Environmental Studies:</p> <p>Scope & importance, Need for Public awareness, Depleting nature of Environmental resources- such as Soil, Water, Minerals and Forests, Global Environmental crisis related to - Population, water, sanitation & Land, ecosystem: Concept, Classification, Structure of ecosystem, Overview of Food Chain, Food Web & Ecological Pyramid.</p>	08	03			05		05	13
02	<p>Sustainable Development:</p> <p>Concept of sustainable development. Social, Economical & Environmental aspects of sustainable development. Control measures: 3R (Reuse, Recovery, Recycle) Appropriate technology, Environmental education, Resource utilization as per the carrying capacity.</p>	08	03	05			05		13
03	<p>Environmental Pollution:</p> <p>Air pollution: Sources, Effects of air pollution with respect to Global warming, Ozone layer depletion, Acid rain, Photochemical smog, Two control measures:- Bag house filter, Venturi scrubber. Water pollution: Sources & Treatment, Concept of waste waters:- Domestic & Industrial and treatment. Land Pollution: Solid waste, Solid waste management by Land filling, Composting. Noise pollution: Sources & Effects. E-Pollution: Sources & Effects.</p>	16	06	05	05		05	05	26

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Program Name and Code : Environmental Studies (FEC106)

F E (Sem I) (R 2012)

Maximum marks for the paper: 60, Duration of the paper: 2 hrs

Sr No.	Topic name	Weightage	Q1	Q2	Q3	Q4	Q5	Q6	Total
04	Environmental Legislation: Overview, Ministry of Environment & Forest (MoEF) Organizational structure of MoEF. Functions & powers of Central Control Pollution Board, Functions & powers of State Control Pollution Board. Environmental Clearance, Consent & Authorization Mechanism. Environmental Protection Act.	08	03		05	05			13
05	Renewable Sources of Energy: Limitations of conventional sources of Energy. Various renewable energy sources. Solar energy: Principle, working of Flat plate collector & Photovoltaic cell. Wind Energy: Principle, Wind Turbines. Hydel Energy: Principle, Hydropower generation. Geothermal Energy: Introduction, Steam Power Plant.	12	03	05		05	05		18
06	Environment & Technology: Role of Technology in Environment & Health. Concept of Green Buildings, Indoor air pollution. Carbon Credit: Introduction, General concept. Disaster Management: Two Events: Tsunami, Earthquakes and Techniques of Disaster Management.	08	03		05			05	13
		60	15	15	15	15	15	15	96

Q. P. Set No. _____

Degree Course: First Year Engineering (FE), Revised Course,

F E : Semester: I,

Subject: **Environmental Studies,**

Subject Code: FEC106

Maximum Marks: **60**, Time Duration: **02 Hrs.**

Instructions:

- (i) **Q.No.1 is Compulsory and solve any three Questions from remaining Q.No.2 to Q. No.6.**
- (ii) Figures to the right indicate Full Marks.
- (iii) Draw figures wherever necessary.
- (iv) Assume suitable additional data if necessary.

Q.1. Solve any FIVE of the following:

(15)

- (a)
- (b)
- (c)
- (d)
- (e)
- (f)
- (g)

Q.2. Solve the following:

- (a) (5)
- (b) (5)
- (c) (5)

Q.3. Solve the following:

- (a) (5)
- (b) (5)
- (c) (5)

Q.4. Solve the following:

(a) (5)

(b) (5)

(c) (5)

Q.5. Solve the following:

(a) (5)

(b) (5)

(c) (5)

Q.6. Solve the following:

(a) (5)

(b) (5)

(c) (5)