

**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: 2hrs**

Sr No.	Topic Name	Weightage	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Total
01	<b>Multidisciplinary Nature of Environmental studies:</b>  Scope and 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 and Land, ecosystem: Concept, Classification , Structure of Ecosystem, Overview of Food Chain, Food Web and Ecological Pyramid.	08	03			05		05	13
02	<b>Sustainable Development:</b>  Concept of sustainable development. Social, Economical and Environmental aspects of sustainable development. Control measures: 3R (Reuse, Recovery, Recycle) Appropriate technology, Environmental education, Resource utilization as per the carrying capacity.	08	03	05			05		13
03	<b>Environmental Pollution:</b>  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 and Effects.	16	06	05	05		05	05	26
04	<b>Environmental Legislation:</b>  Overview, Ministry of Environment & Forest (MoEF) Organizational structure of MoEF. Functions and powers of Central Control Pollution Board, Functions and Powers of State Control Pollution Board. Environmental Clearance, Consent & Authorization Mechanism. Environmental Protection Act.	08	03		05	05			13

05	<b>Renewable Sources of Energy:</b> 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	<b>Environment &amp; Technology:</b> 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
		<b>60</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>96</b>

**Q.P. Set No.....**

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

F.E: Semester: I,

Subject: **Environmental Studies,**

Subject Code: FEC 106

Maximum Marks: 60,

Time Duration: 2hrs

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)