Total No. of Questions : 12]

SEAT No. :

P1518

[Total No. of Pages :3

[4759] - 19

B.E. (Civil Engineering)

ADVANCED ENVIRONMENTAL MANAGEMENT

(Elective - III) (2008 Pattern) (Semester - II)

Time : 3 Hours] *[Max. Marks : 100*

Instructions to the candidates:

1) ***Solve Q. No. 1 or 2, 3 or 4, 5 or 6 from section - I and Q. No. 7 or 8, 9 or 10, 11 or 12 from section - II.***
2) ***Answers to the two sections must be written in separate answer books.***
3) ***Figures to the right indicate full marks.***
4) ***Draw neat diagram wherever necessary.***
5) ***Use of logarithmic table, slide rule and electronic pocket calculator are allowed.***
6) ***Assume Suitable data, if necessary stating it clearly.***

SECTION - I

Q1) Write in detail about: **[16]**

a) The background and development of ISO 14000 series.

b) The development of National Environmental Policy during various five year plans.

OR

Q2) Write a note on: **[16]**

a) Water Act, 1974.

b) Air Act, 1981.

Q3) a) Explain in details, the principles and elements of environmental management system (EMS). **[8]**

b) Discuss in detail the Environment Protection Act - 1986 as an umbrella act. **[8]**

OR

Q4) a) Explain the Muncipal Solid Waste Rules 2000. **[8]**

b) Write the links between ISO 14000 and ISO 9000 in a tubular form. **[8]**

P.T.O.

Q5) a) Explain the pollution indices in air monitoring and air quality assessment. **[9]**

b) Discuss the National Ambient Air quality (NAAQ) Standards for SPM, SO_X, NO_X & CO. **[9]**

OR

Q6) a) The ambient air quality for Mumbai, Pune and Nagpur are given below: **[10]**

Sr. No.	City	SPM ($\mu g/m^3$)	So_2 ($\mu g/m^3$)	CO ($\mu g/m^3$)
1	Mumbai	170	78	2200
2	Pune	230	72	2600
3	Nagpur	210	87	1700

Determine the air pollution index for each city and thereby name the city having more air pollution.

b) Discuss the role of meterological parameters in the dispersion of air pollutants in the atmosphere. **[8]**

SECTION - II

Q7) a) Explain what you understand by Biomedical waste. Discuss the different methods for collection and disposal of Biomedical waste. **[8]**

b) Discuss the energy recovery from solid waste. **[8]**

OR

Q8) a) Explain the various methods of collection and disposal of Municipal Solid Waste. Also discuss the site selection criteria for disposal of MSW. **[8]**

b) Discuss the treatment and reuse options for industrial waste water management. **[8]**

Q9) a) Explain colour coding system for biomedical waste management and their collection in different coloured bins or bags. **[9]**

b) Explain with reference to hazardous waste: **[9]**

i) Toxicity

ii) Reactivity

iii) Corrosity

OR

Q10)a) Contrast between refuse and garbage. **[9]**

List down the most significant property of the city refuse which guides the adoption of each of the following methods of refuse disposal.

i) incineration

ii) Sanitary landfill

iii) Composting

b) Discuss the classification of the wastes generated from the following sources: **[9]**

i) Hospitals

ii) Electroplating plant

iii) Schools and

iv) Restaurants

Q11)a) Discuss the methodology for preparing Environmental Impact Assessment. **[8]**

b) Explain the procedure to carry out the Environmental Impact Assessment of Thermal Power Plant. **[8]**

OR

Q12)a) Explain any two types of check list method for EIA. **[8]**

b) Discuss the EIA of construction activities. **[8]**