

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2011-12 & thereafter)

SUBJECT CODE: 11CH/PE/IM14

M.Sc. DEGREE EXAMINATION, NOVEMBER 2014
FIRST SEMESTER

COURSE : ELECTIVE
PAPER : INDUSTRIAL WASTE MANAGEMENT
TIME : 30 MINUTES **MAX. MARKS: 20**

SECTION – A

TO BE ANSWERED ON THE QUESTION PAPER ITSELF

ANSWER ALL QUESTIONS: (20 x 1 = 20)

I CHOOSE THE CORRECT ANSWER:

1. The second region of atmosphere is
(a) Troposphere (b) Mesosphere (c) Stratosphere (d) Thermosphere
2. In the waste water treatment, the level where aerated lagoon present is
(a) secondary (b) Primary (c) Tertiary (d) none
3. Sanitary landfills are part of
(a) Waste water management (b) Solid waste management
(c) Air control management (d) none of the above
4. The LD₅₀ (g/kg) of lead for rat is
(a) 0.05 (b) 0.002 (c) 0.15 (d) 0.25

II FILL IN THE BLANKS:

5. The major pollutant responsible for acid rain is _____.
6. Sedimentation is done at the _____ level of water treatment.
7. The case study of Itai Itai disease is based on _____ poisoning.
8. Water (prevention and control of pollution) act was constituted in _____.

III STATE WHETHER TRUE OR FALSE:

9. ISO 14000 deals with environmental standards.
10. Tsunami 2004 is also called as *boxing day tsunami*.
11. Trickling filters are part of primary treatment of water.
12. EPA stands for environmental prevention act.

IV MATCH THE FOLLOWING:

- | | |
|------------------------|------------------------|
| 13. Bhopal gas tragedy | (a) Chlorofluorocarbon |
| 14. OSHA | (b) methyl isocyanate |
| 15. EDTA | (c) safety study |
| 16. ozone depletion | (d) hardness study |

V ANSWER IN A LINE OR TWO:

17. What are photochemical pollutants?
18. What is the principal pollutant from distilleries?
19. How is incineration of solid waste done?
20. Define sustainable development in environment.

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COURSE : ELECTIVE
PAPER : INDUSTRIAL WASTE MANAGEMENT
TIME : 2 ½ HOURS **MAX. MARKS: 80**

SECTION – B

ANSWER ANY FIVE QUESTIONS: (5 x 8 = 40)

1. a) Write the classification of air pollutants. (4+4)
b) How do electrostatic filters act as pollution control devices for particulates?
2. Write short notes on (2+4+2)
(i) COD (ii) total hardness of water (iii) eutrophication
3. Give a detailed account on waste water management in Textile industry. (8)
4. a) Explain solid waste management by vermi composting. (4+4)
b) How is recycling of solid waste done?
5. Discuss on (4+4)
(i) toxicity of chemicals in general (ii) LD₅₀.
6. a) How are nuclear wastes disposed? (4+4)
b) What are the problems encountered due to urbanization?
7. What are the steps taken in global and national level towards green future? (4+4)

SECTION – C

ANSWER ANY TWO QUESTIONS: (2 x 20 = 40)

8. a. Discuss in detail the primary, secondary and tertiary level waste water treatment. (15)
b. Explain the importance of “Rain water harvesting” in urban and rural scenario. (5)
9. a. Explain in detail the source, effects and treatment for Pb, As and pesticide poisoning.
b. Illustrate Minamata incident. (5)
10. a. Discuss in detail on (6+6)
(i) biodiversity (ii) EPA 1986
b. Describe “Polluter pays principle”. What are the advantages and limitations of PPP? (8)
