

MASTER OF PHARMACY EXAMINATION, 2017
(1st Year, 1st Semester)
Environmental Management and Ecology

Time: Three hours

Full Marks : 100

The figure in the right hand margin indicate marks

A. Answer the following questions (any ten)

2x10=20

1. Write down the full form of ESR & ROFA.
2. What are the objectives of ZLD?
3. Define hazardous waste and biomedical waste.
4. Mention the objective of Ganga Action Plan (GAP) Phase-II.
5. Write down the full form of NRCP & OEQMS.
6. Mention different ambient noise standards.
7. Write down the full form of SOD & GPx.
8. Explain Acute Radiation Syndrome (ARs) & Cutaneous Radiation Injury (CRI).
9. Mention the health effects caused by VOC & PM₁₀.
10. Write down the average ambient noise level (leq) in Kolkata.
11. Define TTS and NIPTS.
12. Write down the validity period of consent to operate of bulk and formulation drug industry.

B. Answer the following questions (any four)

1. Discuss about the important characteristics of sewage in both industrial and domestic sector. 10
2. The ministry of Environment, Forest and Climate Change (MoEFCC) in March, 2016 releases details of the new categorization for the industries to prevent pollution load throughout the country – Discuss. 10
3. Define primary and secondary air pollutants. Explain the source and deleterious effects of different indoor air pollutants. Write down the controlling measures of air pollution. 2+6+2
4. Classify waste according to their origin and type. Write down the impact of waste on environment and health. 6+4

P.T.O

5. Write down in brief the impact of Pharmaceutical waste on human life and environment (both flora & fauna). 10

6. Write short notes on ----- (any two) 5x2

(i) Nomami Ganga Mission

(ii) Properties of Pharmaceutical effluents

(iii) Oxidative Stress caused by air pollutants

(iv) Deleterious effect of noise

C. Answer the following questions (any two)

1. What is ZLD? Why and Where ZLD system is required? Write down the various methods and technologies being adopted in ZLD system. Write in short about the various effluent and emission parameters those are monitored through online monitoring system. Draw a schematic diagram of typical effluent treatment scheme for combined effluent from pharmaceutical industries. 2+3+4+5+6

2. Write down the different category of industry as per direction of pollution control board. What do you mean by consent of administration, explain. Discuss about the different prescribed limits of ambient and effluent parameters. Write down the permissible occupational noise exposure prescribed by the PCB. What is Good Environmental Practice (GEP)? 3+5+6+4+2

3. What is oxidative stress? Write down the electron transfer theory related to oxidative stress. Explain the various effect of oxidative stress on health. How antioxidant enzymes protect body against free radicals. Explain the molecular mechanism of oxidative stress on Pulmonary inflammation. What is apoptosis? 2+3+7+6+2
