M.Sc. ENVIRONMENTAL SCIENCE
FOURTH SEMESTER
OCCUPATIONAL HAZARDS & SAFETY
MEV-402

(Use separate answer scripts for Objective & Descriptive)

Duration : 3 hrs. Full Marks : 70

[PART-A : Objective]

Time : 20 min. Marks : 20

Choose the correct answer from the following: *1x20=20*

1. Industrial safety management is that branch of management which is concerned with _____ hazards from the industries.
   a. Reducing
   b. Controlling
   c. Eliminating
   d. All of the above

2. The following is(are) physical hazard agent(s):
   a. Falls
   b. Electricity
   c. Inhalation
   d. All of the above

3. Eco-toxicology is the study of_____.
   a. Chemical interactions of organism and environment.
   b. Physical interactions of organism and environment.
   c. Thermal interactions of organism and environment.
   d. Biological interactions of organism and environment.

4. Hazard estimation in ecotoxicology is done based on:
   a. Accumulation
   b. Bioaccumulation
   c. SARA
   d. HWL

5. Where is the most likely site for the absorption of toxic agents in the gastrointestinal tract?
   a. Between the stomach and the upper portion of the intestine.
   b. Stomach.
   c. Small intestine.
   d. Large intestine.

6. What is the major organ responsible for detoxification in the body?
   a. Lungs
   b. Kidney
   c. Liver
   d. Skin

7. Which of the following is not a class of insecticide?
   a. Carbamates
   b. Auxins
   c. Chlorinated hydrocarbons
   d. Organophosphates

8. The process of accumulating higher and higher amounts of a toxic material such as PCBs within the body of any animal is called:
   a. Bioaccumulation
   b. Biological amplification
   c. Biological halflife
   d. Biological persistence

9. What are impacts of overuse of inorganic fertilizers?
   a. High level of nitrates & eutrophications b. Salinization
   c. Desalinization d. Increase soil fertility

10. Costly and harmful pesticides can be replaced by:
   a. Artificial Predators b. Natural Predators
   c. Small Animals d. Weeds

11. There are..... types of occupational hazards.
   a. One b. Two
   c. Three d. Four

12. Nalgonda technique is related to:
   a. Arsenic b. Fluoride
   c. Iron d. None of above

13. Illumination is a type of..... hazard.
   a. Chemical b. Biological
   c. Both (a) and (b) d. None of above

14. Plasmodium parasite causes..... disease.
   a. Dengue b. Kalaazar
   c. Malaria d. All

15. Mottling of teeth is not due to:
   a. Fluoride b. Iron
   c. Both (a) and (b) d. None

16. Permissible limit of fluoride in drinking water is..... mg/L.
   a. 0.5 b. 1
   c. 1.5 d. 10

17. S in AIDS stands for:
   a. Syndrome b. Symptom
   c. Both (a) and (b) d. None

18. Crippling fluorosis occurs due to Fluoride concentration in drinking water more than..... mg/L.
   a. 1 b. 1.5
   c. 10 d. None of above

19. .....million people die every year from diarrheal diseases (including cholera).
   a. 1 b. 1.8
   c. 3.8 d. 21

20. United Nations, predicted that tuberculosis (TB) would be eliminated worldwide by:
   a. 2020 b. 2025
   c. 2030 d. 2040

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(PART-B : Descriptive)

Time : 2 hrs. 40 min. **Marks : 50**

[Answer question no.1 & any four (4) from the rest]

1. Define Environmental health. Describe its scope and importance. 3+7=10

2. "The health and well-being of current and future generations are intrinsically linked to the state of our environment and lifestyles". Write a note on this statement. 10

3. What are the major risks and hazards for an industrial worker? Describe the degree of industrial pollution and problems faced by industrial workers. 4+6=10

4. What do you understand by Epidemiological issues? How are they dealt with at national and international levels? 4+6=10

5. What is occupational health and hygiene? State its objectives. Describe the types of health hazards prevalent in a workplace. 2+3+5=10

6. Classify the different pesticides based on their chemical structure and composition citing good examples in each category. 10

7. Define the term ecotoxicology. What are its types, sources and effects? 1+3+3+3=10

8. What is the dose-effect relationship? Write a note on the exposure patterns of toxins. 3+7=10

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