

MASTER OF PHARMACY EXAMINATION-2018
(First Year, Second Semester)
Environmental Management and Ecology

Time: Three hours

Full Marks: 100

The figure in the right hand margin indicate marks
 (Answer question no. 1 and five from the followings)

Q. No. 1

A. Answer the following questions:- (any ten)

1x10=10

1. The disease 'Itai Itai' is caused by which metal?
2. With respect to environmental Science write down the full form of SPM.
3. Define Ecological succession.
4. Give the names of five foreign Ecologists of international fame.
5. In which year WWF was established?
6. Name an animal which exclusively eat eucalyptus leaves .
7. Which day is denoted as World Ozone Day?
8. Write down the full form of GEA and ETC.
9. Define waterborne and enteric disease.
10. Write down two enzymatic and two non enzymatic antioxidant enzymes.
11. What is natality?
12. What are generation time and cohort?

B. Solve the problem:-

5

According to the following given data,

- (i) Seeded waste water:-
 Initial dissolved oxygen (DO) = 7.8 mg/L
 Final dissolved oxygen (DO) = 2.8 mg/L
 Volume of waste water = 6.0 ml
 Total volume in BD bottle = 300 ml
- (ii) Seeded dilution water:-
 Initial dissolved oxygen (DO) = 8.2 mg/L
 Final dissolved oxygen (DO) = 7.3 mg/L
 Total volume in BD bottle = 300 ml
- Calculate the BOD of the sample.

C. Write down the full form of the following:

1x5=5

- (i) SOD (ii) BFC (iii) TSS (iv) DDT (v) NIPTS

P.T.O

Q.no.2

1. Write down the major routes of surface water pollution. 2
2. Explain different water pollution controlling methods. 5
3. Discuss about the various causes of water quality degradation. 5
4. Write down the effects of water pollution on human health. 6
5. What is nematocide ? Give two examples. 2

OR

1. What is thermal pollution? 2
2. Write down different sources and effects of thermal pollution. 4
3. Write down the causes of thermal pollution. 2
4. Discuss on the control of thermal pollution. 4
5. Explain various causes of acid rain. 4
6. Draw a schematic diagram and explain the reaction and transport of acid rain. 4

Q. No. 3

1. How heavy metals effects on the immune system. 4
2. Draw a schematic diagram showing biological impact pathway of various solid and gaseous pollutants. 5
3. Explain how Cadmium influences on gene up regulation. 5
4. Environmental pollutants alter body's antioxidant homeostasis. Discuss 6

OR

1. Define Ozone depletion. 2
2. Write down the mechanism and biochemical reactions of ozone depletion. 5
3. Explain various effects of ozone depletion on human, animal and plants. 7
4. How Taj Mahal is affected by the ozone depletion. 4
5. Name two scientists who received Nobel Prize in chemistry for their research on ozone depletion. 2

Q. No. 4

1. Classify the category of industry as per CPCB. 3
2. Define: Consent to operate and renewal to operate, Consent to administration, Consent to establishment. 6
3. Mention different pollution control monitoring parameters based on PCB and their standard permissible limits. 6

OR

1. Define industrial sitting policy. 2
2. According to schedule mention the ambient air quality standards in respect to noise. 3
3. Write down four industries each under the different category as per CPCB's guidelines. 6
4. What is environmental statement? How it is important for Pharma industry. 4

Q. No. 5

1. What is climatic change?
2. Discuss how CO₂, CH₄ and N₂O have a positive role on climatic change.
3. What is a positive feedback loop?
4. How will climatic change affects us.

2
5
5
6
2

2
6
3
4

OR

1. Write down the impact of noise on human.
2. What is a dry mass?
3. How is energy transferred along a food chain?
4. What are the three main types of trophic pyramids studies in ecology?
5. Which ecological pyramid can never be inverted?

2
4
2
4
4

5
3
2
4
1

Q. No. 6

Write down the short notes on:-

5x2=10

- (a) Zero Liquid Discharge System (ZLD)
- (b) Effects of Green house gases

OR

- (a) Ganga Action Plan (GAP)
 - (b) Plankton
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