Write the following information in the first page of Answer Script before starting answer

ODD SEMESTER EXAMINATION: 2020-21

Exam ID Number_____

Course_____ Semester_____

Paper Code _____Paper Title _____

Type of Exam: _____ (Regular/Back/Improvement)

Important Instruction for students:

1. Student should write objective and descriptive answer on plain white paper.
2. Give page number in each page starting from 1st page.
3. After completion of examination, Scan all pages, convert into a single PDF, rename the file with Class Roll No. **(2019MBA15)** and upload to the Google classroom as attachment.
4. Exam timing from 10am – 1pm (for morning shift).
5. Question Paper will be uploaded before 10 mins from the schedule time.
6. Additional 20 mins time will be given for scanning and uploading the single PDF file.
7. Student will be marked as ABSENT if failed to upload the PDF answer script due to any reason.

M.Sc. CHEMISTRY
THIRD SEMESTER
ENVIRONMENTAL POLLUTION & MANAGEMENT
MSC-306 A (MDC)

Duration : 3 hrs. **Full Marks : 70**

(PART-A : Objective)

Time : 20 min. **Marks : 20**

Choose the correct answer from the following: ***1X20=20***

1. In which year the first world environment day was observed?
a. 1973 **b.** 1974
c. 1975 **d.** 1976

2. Air pollution is a mixture of:
a. Gases in the air **b.** Solid particles and gases in the air
c. Air and water vapour **d.** None of these

3. The term pesticide is used to:
a. Kill pests **b.** Control pests
c. Kill and control pests **d.** None of these

4. The full form of SPM is:
a. Suspended particulate matter **b.** Super permanent matter
c. Super particulate matter **d.** None of these

5. The chemicals which can destroy the ozone layer is/are?
a. Chlorofluorocarbons (CFCs) **b.** Halon
c. Carbon tetrachloride **d.** All of these

6. Which one of the following is not an example of Green house gas?
a. Water vapour **b.** CO_2
c. Methane (CH_4) **d.** Carbon monoxide

7. Photochemical reaction for formation of photochemical smog involve:
a. Heat **b.** Sun light
c. Low pressure and temperature **d.** None of these

8. Point out the odd one.
a. Thermosphere **b.** Lithosphere
c. Hydrosphere **d.** Atmosphere

9. Which of the following is not a part of hydrologic cycle?
a. Runoff **b.** Precipitation
c. Fixation **d.** Transpiration

10. The approximate pH of acid rain is:
a. 7 **b.** 8
c. 4 **d.** 6.5

11. The main goal of sustainable agriculture is/are:

a. Environmental health **b.** Economic profitability
c. Social equity **d.** All of these

12. Which of the following is incorrect regarding nitrogen cycle?

a. Nitrogen from the atmosphere is not directly usable **b.** Lightening hampers nitrogen fixation
c. Bacteria in soil converts nitrogen in usable form **d.** Trees absorb nitrogen from soil through roots

13. Which one of the following can be used for minimizing waste?

a. By recycling **b.** By dumping of waste material
c. Throwing of plastic bag **d.** All of these

14. Which one of the following waste is becoming a greater threat to the environment?

a. Non biodegradable waste **b.** Biodegradable waste
c. Waste water **d.** None of these

15. In carbon cycle which among the following absorb carbon dioxide from atmosphere?

a. Human **b.** Animals
c. Plants **d.** Insects

16. Which of the following belongs to type of dyes?

a. Natural **b.** Synthetic
c. Laser **d.** All of them

17. Which of the following is not a step of hydrocarbon decay?

a. Reduction **b.** Termination
c. Propagation **d.** Initiation

18. In which of the following ways detergent is harmful to environment.

a. Creates algea bloom **b.** Acts as food imitation
c. Reduces surface tension between oil and water **d.** Needs plastic packaging

19. Which of the following industries is source of wastes?

a. Food **b.** Oil
c. Mining **d.** All of them

20. Which one of the following process is used for effective management

a. Use of plastics **b.** Reuse and recycle
c. Disposal of waste **d.** None of these

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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. **a.** Explain the term Green house effect. Write briefly about the causes and consequences of Green house effect. 5+5=10
b. What are the 3R's principle used in waste management? Mention one example of Bio-degradable and non-biodegradable waste.

2. **a.** Write short notes on Ozone layer depletion. 5+2+3=10
b. What is the formula of acid rain?
c. What is smog? What are the types of smog?

3. **a.** With the help of schematic describe hydrological cycle. 5+5=10
b. Briefly describe carbon and nitrogen cycle.

4. **a.** When water is said to be polluted? What are main causes of water pollutants? Explain the affect of water pollution. 5+5=10
b. Define eutrophication. What are the different techniques used for treatment of polluted water?

5. **a.** What is soil pollution? Briefly explain the different causes of soil pollution. 5+5=10
b. What is land remediation? How do you remediate contaminated soil?

6. **a.** What are the harmful effects of pesticides? How do fertilizers cause soil pollution? 5+5=10
b. **(i)** What are wastes?
(ii) What is disposal?
(iii) Define the term recycling used in waste management?

7. **a.** With the help of schematic describe oxygen cycle. 5+5=10
b. Pointwise describe the methods usually adopted in the treatment of hydrocarbon spillages and contaminations.

8. **a.** Pointwise describe harmful effect of dyes. 5+5=10
b. Describe how synthetic polymers are harmful to the environment?

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