

2023

Time - 3 hours

Full Marks - 80

Answer ALL questions.

Figures in the right hand margin indicate marks.

1. (a) What do you mean by heat budget of the earth atmosphere system ? Write notes on vertical temperature gradient and vertical stability atmosphere. [10]
- (b) What principles are adopted to measure the following water quality parameters ? [10]
- (i) chlorine content
 - (ii) sulphate content
 - (iii) phosphate content
 - (iv) nitrite content

OR

- (a) What do you mean by aquatic pollution ? Discuss about source and effect of the following pollutants : [10]
- (i) inorganic
 - (ii) organic.

- (b) Write notes on the followings : [5 × 2]
- (i) Detection and separation of oil spills / oil pollutants of water
 - (ii) Sewage treatment
2. (a) Write a note on composition of soil ? What do you mean by micro and macro nutrients ? What is their role in our environment ? [10]
- (b) Discuss about the primary and secondary pollutants of atmosphere. With example, discuss about various criteria and non-criteria pollutants of atmosphere. [10]

OR

- (a) When we say that soils get polluted ? Discuss various categories of soil pollutants and give their treatment procedure. What do you mean by MSW ? [10]
- (b) Discuss about the air pollution control processes for hydrocarbons, green house gases, particulate matters. [10]
3. (a) What do you mean by fly ash ? How and where they are created ? What may be the remedies for the fly ash problem ? [10]
- (b) In which way the iron and steel industries' wastes harm out environment ? [10]

OR

- (a) Discuss about various instruments used to detect and monitor air pollution due to cement industry. [10]
- (b) Write notes on various industrial wastes and their management procedure. [10]
4. (a) What do you mean by green technology ? How this technology will help for environment-friendly processes in industries ? Explain with example. [10]
- (b) Write about some chemical practices for solution to environmental problems. [10]

OR

- (a) What do you mean by biodegradable products ? Why industries should be modified for biodegradable products. [10]
- (b) Green energy and green materials – Describe these two. [10]