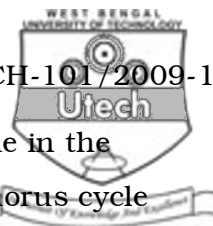






- iv) For a sample of waste water containing both biodegradable and non-biodegradable waste is
- a)  $BOD > COD$                       b)  $BOD < COD$   
c)  $BOD = COD$                       d)  $BOD \cdot COD$ .
- v) Lakes rich in nutrients is known as
- a) Eutrophic lake                      b) Atrophic lake  
c) Mestrophic lake                      d) Oligotrophic lake.
- vi) Full form of ESP is
- a) Electrostatic Precipitator  
b) Electrostatic Producer  
c) Electron Source Precipitator  
d) None of these.
- vii) The catalyst used in catalytic converter is finely divided
- a) Ni                                      b) P  
c) Pt                                      d) Fe.
- viii) Organo mercury is example of
- a) Fungicide                              b) Fumigant  
c) Antibiotic                              d) Rodenticide.
- ix) Fungi and bacteria carry out a very significant step in
- a) grazing food chain                      b) detritus food chain  
c) parasitic food chain                      d) all of these.
- x) Living organisms are good examples of
- a) closed system                              b) open system  
c) isolated system                              d) none of these.



- xi) Aspergillus bacteria play a significant role in the
- nitrogen cycle
  - phosphorus cycle
  - sulfur cycle
  - oxygen cycle.
- xii) The main constituent of London fog is
- carbon monoxide
  - hydrogen sulfide
  - carbon dioxide
  - sulfur dioxide.

### GROUP – B

#### ( Short Answer Type Questions )

Answer any *three* of the following.  $3 \times 5 = 15$

- What is acid rain ? Write down the causes, reaction and effects of acid rain.  $1 + 4$
- Write down the principal advantages and disadvantages of ESP and Cyclone separator.  $2 \times 2 \frac{1}{2}$
- Define food chain. Discuss grazing food chain with examples.  $1 + 4$
- Describe the nitrogen cycle with a diagram.  $5$
- Define environment. What do you understand by environmental pollution ? Give an example.  $2 + 2 + 1$

### GROUP – C

#### ( Long Answer Type Questions )

Answer any *three* of the following.  $3 \times 15 = 45$

- Write notes on any *five* of the following :  $3 \times 5$ 
  - Eutrophication
  - Pollutant and contaminant
  - Maximum sustainable yield
  - Ocean Thermal Energy Conversion ( OTEC )
  - Logistic growth model of population
  - Hydrological cycle.



8. a) What is adiabatic lapse rate ?  
b) Discuss the toxic effects of Arsenic and Cadmium in human body.  
c) What are the types of solid wastes ?  
d) Discuss different types of aquifers.  
e) State Darcy's law. 2 + 5 + 3 + 3 + 2
9. a) Name three sources of thermal pollution.  
b) What do you understand by self-purification of a river ? State the various modes of self purification of a river or stream.  
c) "It is the physical characteristics of the particulates which are quite significant in air pollution". Comment.  
d) State & explain Wein's Law. How would you explain Green House effects with its help ? 3 + 4 + 4 + 4
10. a) Explain what is called critical dissolved oxygen and also state the effects of low DO on aquatic life. State the factors influencing DO.  
b) What is bio-degradation rate constant ?  
c) Write down the photochemical reactions for formation of ozone hole in stratosphere by CFC-12.  
[ ( 3 + 3 + 3 ) + 3 + 3 ]
11. a) What is meant by hazardous wastes ? Mention the special care to be taken for their handling and disposal purpose.  
b) Explain the term 'Weathering of rock salt'.  
c) Define the terms De-oxygenation and Re-aeration.  
d) What is the hardness of water and how does it affect the water quality ? 5 + 3 + 4 + 3
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