

**B.SC. SEM 6**

**ENVIRONMENTAL SCIENCE**

**PAPER II (WATER SUPPLY AND WASTE WATER TREATMENT )**

**TEACHER NAME : SHEETAL BALPANDE**

**NOTE: RED COLOUR INDICATE ANSWER THE QUESTION**

1) Per capita demand of water is calculated in liters

- a)  Per person per day
- b)  Per person per month
- c)  Per person per year
- d)  None of these

2) The method of supply of water is divided into how many types?

- a)  1
- b)  2
- c)  3
- d)  4

3) In which of the following Water supply system, the clean water flows entirely under gravity?

- a)  Gravity system
- b)  Pressure system
- c)  Combined gravity and pumping system
- d)  Pumping system

4) The pressure in the distribution mains does not depend on \_\_\_\_\_

- a)  Altitude to supply water
- b)  Fire fighting requirements
- c)  Availability of funds
- d)  Quality of water

5) In which system of water supply, water is available for 24 hours but uneconomically used?

- a)  Continuous supply
- b)  Fixed supply
- c)  Intermittent supply
- d)  Low supply

6) 8. In which system of water supply, water is supplied only during fixed hours of the day?

- a) Continuous supply
- b) Fixed supply
- c) Intermittent supply**
- d) Low supply

7) The hourly demand rate is constant throughout the day.

- a) True
- b) False**

8) The layout of distribution system in which water flow towards outer periphery is.....

- a) Ring system
- b) Dead end system
- c) Radial System**
- d) Grid iron supply

9) Detection and prevention of Leakage is important for conservation of water .

- a) True**
- b) False

10) For centrifugal pumps

- a) initial cost is low

- b) limited space is required
- c) the discharge obtained is steady and non-pulsating
- d) all the above.

11) Which of the following is source of waste water?

- a) **Industrial waste water**
- b) River water
- c) Sea water
- d) Lake water

12) Which is not objective of waste water treatment ?

- a) Reuse and recycle
- b) Protection of water body from pollution
- c) **throwing garbage in water body**
- d) health Safety

13) Screening and comminution are preliminary treatment processes.

- a) **True**
- b) False

14) \_\_\_\_\_ devices remove materials which would damage equipment or interfere with a process

- a) Grit
- b) **Screening**

- c) Oxidation
- d) Reduction

15) \_\_\_\_\_ represents the heavier inert matter in wastewater.

- a) Debris
- b) Waste
- c) Screens
- d) Grit**

16) Which of the following should be provided in the case where aeration is absent?

- a) Screening devices
- b) Mechanical mixers**
- c) Grit removers
- d) Sedimentation tank

17) Which process is employed to gain sufficient head for the wastewater?

- a) Screening
- b) Pumping**
- c) Oxidation
- d) Fermentation

18) What is the most common used coagulant?

- a) Alum**
- b) Ferric sulphate
- c) Limestone
- d) Coal

19) What is the intermediate zone composed of in aerobic-anaerobic ponds?

- a) Algae
- b) Aerobic bacteria
- c) Facultative bacteria**
- d) Organic solids

20) \_\_\_\_\_ means the deactivation or killing of pathogens.

- a) Reduction
- b) Disinfection**

- c) Oxidation
- d) Pyrolysis

21) Which of the following is not a chemical disinfectant?

- a) UV
- b) Ozone
- c) Chlorine
- d) Bromine

22) \_\_\_\_\_ is the process of elimination of most pathogenic micro-organisms.

- a) Pyrolysis
- b) Incineration
- c) Disinfection
- d) Sterilisation

23) What is the chemical or mechanical cleansing process called?

- a) Sterilization
- b) Disinfection
- c) Decontamination
- d) Sanitization

24) Septic tank is provided for....

- a) Setting of incoming sewage
- b) Settle sludge digestion
- c) storage of digested sludge
- d) All of these factor

25) Soak pit connected to ....

- a) Manhole
- b) Septic tank

c) Gully trap

d) Nahani trap

26) Septic tank involve....

a) Sedimentation alone

**b) Sedimentatio as wll as sludge digestion**

c)sludge digestion alone

d) Sewage aeration

27) Which of the following type of filter use in filtration of waste water?

a) Contact bed

b) intermittent sand filter

d) Trickling filter

**d) all of the above**

28) Air is blown in the reverse direction during cleaning of filter beds.

**a) True**

b) False

29) What is the accumulated layer at the bottom of the tank called as?

a) Floccs

b) Sediment

c) Sludge

d) Sewage

30) How many types of sedimentation tanks are present based on the shape of the tank?

- a) 2
- b) 3
- c) 4
- d) 5

31) What is the time period for which the water is stored in fill and draw type of sedimentation

- a) 48 hours
- b) 24 hours
- c) 52 hours
- d) 76 hours

32) In which of the following sedimentation tanks, the flow may be either horizontal or vertical

- a) Circular
- b) Rectangular
- c) Fill and draw type
- d) Continuous flow

33) The vertical type of sedimentation tanks are usually in \_\_\_\_\_ shape.

- a) Circular
- b) Rectangular
- c) Semi-circular
- d) Cylindrical

34) \_\_\_\_\_ is provided after activated sludge process.

- a) Primary sedimentation tank
- b) Flocculation tank
- c) Secondary sedimentation tank
- d) Sand filter



35) Activated sludge process uses micro-organisms to degrade organics from wastewater.

- a) **True**
- b) False

36) Activated sludge process degrade organics and \_\_\_\_\_

- a) Improve nutrients
- b) **Remove nutrients**
- c) Remove odour
- d) Remove taste

37) What is required to keep the activated sludge suspended?

- a) Carbon-dioxide
- b) Nitrogen
- c) **Oxygen**
- d) Ammonia

38) \_\_\_\_\_ provides the dual purpose of providing DO and mixing of the mixed liquor and w

- a) Flocculation
- b) **Aeration**
- c) Sedimentation
- d) Clarification

39) In a trickling filter \_\_\_\_\_?

- A. Filtration process is used
- B. Biological action is used
- C. Neither A. nor B.
- D. Both A. and B.**

40)Trickling filter use to remove .....

a) Colloidal organic matter

b) dissolved inorganic solid

c) pathogenic bacteria

d) None of these

41) The average temperature of sewage is taken as

A. 0<sup>0</sup> C

B. 5<sup>0</sup> C

C. 10<sup>0</sup> C

D. 20<sup>0</sup> C

42) The sewage treatment units in which anaerobic decomposition of organic matter is used, are

A.Imhoff tanks

B.Trickling filters

C.Sludge sedimentation tanks

D.None of these

43) Which is/are agro based Industries?

(a) cotton

(b) woollen

(c) jute

(d) All

44) The fertiliser industry is centred around the production of

(a) nitrogenous fertilisers

- (b) phosphatic fertilisers
- (c) ammonium phosphate
- (d) All**

45) Industries are responsible for

- (a) Air Pollution
- (b) Air Pollution
- (c) Land Pollution
- (d) All**

46) Which of the following are the largest contributors to global pollution?

- a) Soil pollution
- b) Industrial pollution**
- c) Radioactive pollution
- d) Water pollution

47) Which one of the following is the prime factor towards soil pollution?

- a) Soil erosion
- b) Floods
- c) Dumping of industrial wastes**
- d) Using land for irrigation

48) Which of the following are major environmental issues involved in mining?

- a. air pollution
- b. water pollution
- c. soil degradation
- d. all of the above

49) **The most important remedy to avoid negative impact due to industrialisation is**

- a. industry should be closed
- b. don't allow new industrial units
- c. industry should treat all the wastes generated by it before disposal
- d. industries should be shifted far away from human habitats

50) Biodegradable plastics can not be degrade in nature.

- a) True
- b) False

