

**Class: Final Year B. Tech (Civil Engineering)**  
**Subject: Industrial Wastewater Treatment (Elective)**

Sr. No.	Questions	Answer
1	In case of Moving Bed Bioreactor and Activated Sludge process which is the factor that limits the rate of the reaction? a) Temperature b) pressure c) pH d) ionic composition	A
2	The degradation of BOD is classified as what type of reaction? a) First Order Reaction b) Zero Order Reaction c) Second Order Reaction d) Third Order Reaction	A
3	What is the combination of using a photocatalyst and UV or visible light for the treatment of wastewater and gaseous pollutants is called? a) Photocatalysis b) Super critical water oxidation c) Advanced oxidation process d) Wet air oxidation	A
4	Which among these is the alternative BOD test for determining the oxygen consuming potential of a wastewater sample? a) ThOD b) COD c) BOD d) TOC	B
5	Organic matter + nutrients + O <sub>2</sub> → CO <sub>2</sub> + H <sub>2</sub> O + _____ a) Biomass b) O <sub>2</sub> c) Nutrients d) Organic matter	A
6	_____ tend to resist conventional methods of wastewater treatment. a) Suspended solids b) Nutrients c) Refractory organics d) Priority pollutants	C
7	Which of the following related to the aerobic organic matter is true? a) Essential nutrients for growth b) Development of sludge deposits c) Growth of undesirable aquatic life d) Development of septic conditions	D
8	The chemical composition of wastewater naturally reflects the origin from which it came. a) True b) False	A
9	Dilution=volume added/total volume. What does total volume indicate? a) Volume of the sample b) Volume of the sample including blank	B

	c) Volume of the sample excluding blank d) Volume of the blank	
10	The rate at which oxygen is dissolved into the water from the atmosphere is proportional to the deficit of oxygen in the water. a) True b) False	A
11	When the deoxygenation rate exceeds the reoxygenation rate, the oxygen sag curve shows _____ in a deficit of oxygen. a) Increase b) Decrease c) Constant d) Same	A
12	During which of the following conditions, the deoxygenation is equal to reoxygenation? a) Stream exposed to atmosphere b) Increased volume c) Greener vegetation d) High temperature	A
13	BOD is a physical procedure for determining DO needed for aerobic biological organisms. a) True b) False	B
14	What is the type of pollution where the pollutants reach the water body in points called? a) Point-source pollution b) Diffuse pollution c) Point-source contamination d) Diffuse contamination	A
15	What is the growth of huge amounts of algae and other aquatic plants leading to the deterioration of the water quality called? a) Eutrophication b) Algae growth c) Nitrification d) Denitrification	A
16	The optimum temperature for bacterial activity is in what range? a) 25-35 degree Celsius b) 50 degree Celsius c) 20 degree Celsius d) 40 degree Celsius	A
17	Which one of the following is the basic indicator of river health? a) BOD b) COD c) DO d) ThOD	C
18	What is the minimum amount of DO required for the life survival of aquatic animals? a) 10 mg/l b) 5 mg/l	C

	c) 2 mg/l d) 1 mg/l	
19	In the concept of self purification of natural streams, complete the following phrase. Solution to pollution is _____ a) Control b) Dilution c) Reuse d) Recycle	B
20	_____ is accomplished by the replenishment of oxygen lost to bacterial degradation of organic waste. a) Gas transfer b) Dilution c) Filtration d) Re-suspension	A
21	On which of the following does the self purification process does not depend? a) Volume b) Flow rate c) Temperature d) Aquatic species	D
22	In a flowing stream, the breakdown of degradable wastes by bacteria _____ dissolved oxygen. a) Increases b) Depletes c) Maintains d) Improves	B
23	The impact of pollution depends upon nature of the pollutants and the _____ a) Toxic contaminants b) Season c) Contaminants d) Characteristics of river	D
24	Which of the following below represents nitrate ion? a) $\text{NO}_2$ b) $\text{NO}_3^-$ c) $\text{NO}^-$ d) $\text{NO}_2^-$	B
25	_____ is the biochemical degradation of Organic-N into $\text{NH}_3$ or $\text{NH}_4^+$ . a) Nitrogen fixation b) Ammonification c) Nitrification d) Denitrification	B
26	Which of the following bacteria is used in nitrification process? a) Escherichia coli b) Nitrosomonas c) Morganella d) Providencia	B
27	_____ is the controlled application of waste water onto the land surface to achieve a specified level of treatment.	C

	<ul style="list-style-type: none"> <li>a) Water treatment</li> <li>b) Wastewater treatment</li> <li>c) Land treatment</li> <li>d) Soil treatment</li> </ul>	
28	<p>Which type of treatment methods are used for municipal and industrial wastewaters?</p> <ul style="list-style-type: none"> <li>a) Slow rate</li> <li>b) Rapid infiltration</li> <li>c) Overflow</li> <li>d) Main stream</li> </ul>	A
29	<p>How are suspended solids removed from the soil?</p> <ul style="list-style-type: none"> <li>a) Soil adsorption</li> <li>b) Bacterial oxidation</li> <li>c) Filtration</li> <li>d) Chemical immobilization</li> </ul>	C
30	<p>Which of the following wastewater constituents are removed by chemical immobilization?</p> <ul style="list-style-type: none"> <li>a) BOD</li> <li>b) Suspended solids</li> <li>c) Metals</li> <li>d) Phosphorus</li> </ul>	D