

B.E. (Env.), Sem.- VIII

MCQ for final exam by SUK for IWT

Unit-1

Question

- 1 Hot water after cooling is source of wastewater from-----
a) Process
b) Utility
c) Domestic
d) None of these
Answer b) Utility
- 2 The main pollutant present in wastewater from cooling is -----
a) TDS
b) Acidity
c) BOD
d) **Waste Heat**
- 3 In industries, the most polluted source of wastewater is from -----
a) **Process**
b) Utility
c) Toilets
d) Kitchen
- 4 The wastewater from softener regeneration is source of wastewater from-----
a) Process
b) **Utility**
c) Domestic
d) None of these
- 5 There are ----- main sources of wastewater in industries
a) two
b) three
c) **four**
d) six
- 6 ---- indicates physical characteristics of industrial wastewater
a) Colour
b) Solids
c) Temperature
d) **All of these**
- 7 ----- indicates chemical characteristics of industrial wastewater
a) pH
b) BOD
c) COD
d) **All of these**
- 8 ----- indicates biological characteristics of industrial wastewater
a) viruses
b) pathogens
c) bacteria

- d) **All of these**
 9 In India, the guidelines for effluent standards are issued by -----
 a) Water Act, 1974
 b) The EPA, 1986
 c) CPCB
 d) **MoEFCC**
 10 Effluent standards are
 a) Upper limit which should be exceeded
 b) Lower limit which should be exceeded
 c) Upper limit which should not be exceeded
 d) Always the lowest limit
 Answer c) Upper limit which should not be exceeded
 11 The effluent standards have been defined to protect
 a) Streams & Rivers
 b) Sewers and STP
 c) Ground water
 d) **All of these**
 12 ----- standards are specified in the consent granted to the industries
 a) Stream
 b) Effluent
 c) Drinking water
 d) None of these
 13 The purpose of Water budget for industries is to ----
 a) Reduce fresh water requirement
 b) Promote recycling
 c) Promote reuse
 d) **All of these**
 Answer d) All of these
 14 Water budget is ----- for industries
 a) **Mandatory**
 b) Voluntary
 c) Optional
 d) Not required
 15 ----- is benefit of preparing water budget
 a) Reduction in consumption of fresh water
 b) Reuse of wastewater
 c) Recycling of wastewater
 d) **All of these**
 16 -----is the objective of industrial wastewater treatment
 a) Compliance with rules and regulation
 b) Promotion of reuse and recycling of wastewater
 c) Recovery of byproducts
 d) **All of these**
 17 Reduction in cost of fresh water intake is ----- benefit of waste treatment
 a) Intangible
 b) **Tangible**
 c) Nonmonetary

- d) Not
- Answer b) Tangible
- 18 Cost saved on fine for non compliance is ----- benefit
- a) **Primary tangible**
- b) Secondary tangible
- c) Tertiary tangible
- d) Non tangible
- 20 Increased value of adjacent properties due to proper treatment of wastewater is ----- benefit
- a) Primary tangible
- b) **Secondary tangible**
- c) Tertiary tangible
- d) Non tangible
- 21 Clean image of the industry is ----- benefits waste treatment
- a) **Intangible**
- b) Tangible
- c) Nonmonetary
- d) Not
- Answer a) Intangible
- 22 The order of waste minimization should be
- a) **Reduce, reuse, recycle, recover**
- b) Recover, reduce, reuse, recycle,
- c) Recycle, reduce, reuse, recover
- d) Reuse, reduce, recycle, recover
- Answer a) Reduce, reuse, recycle, recover
- 23 The ultimate goal of waste minimization should be-----
- a) No emission
- b) No waste generation
- c) Zero discharge
- d) Zero water
- Answer c) Zero discharge
- 24 Use of cooling water again for the same purpose is example of
- a) Reduction at source
- b) Recycling
- c) Recovery
- d) **Reuse**
- 25 Compared to sewage, the cost of treatment of industrial wastewater is normally -----
- a) Lower
- b) **Higher**
- c) Same
- d) None of these
- 26 Compared to STP, the units needed at ETP are normally -----
- a) **More**
- b) Less
- c) Same

d) None of these
27 Substitution of solvent-based paints with water-based paints is example of -----

- a) **Reduction at source**
- b) Recycling
- c) Recovery
- d) Reuse

28 Use treated industrial wastewater for irrigation is example of -----

- a) Reduction at source
- b) **Recycling**
- c) Recovery
- d) Reuse

29 Production of methane from treatment of industrial wastewater is -----

- a) Recovery of energy
- b) Recovery of material
- c) Reuse
- d) Recycling

30 ----- is one of the techniques of reduction of volume of wastewater

- a) Classification and segregation
- b) **All of these**
- c) Reuse
- d) Recycling

31 ----- sample is collected during characterization survey

- a) Blank
- b) Mixed
- c) Integrated
- d) **Composite**

Answer d) Composite

32 Characterization survey is done to check-----

- a) **Quantitative and qualitative variation**
- b) Quantitative variation
- c) Qualitative variation
- d) Flow variation

Answer a) Quantitative and qualitative variation

33 ----- sample is sufficient when there is no variation in quality of wastewater

- a) Composite
- b) Mixed
- c) Integrated
- d) Grab

Answer d) Grab

34 ----- sample is useful when there is variation in quality of wastewater

- a) **Composite**

- b) Mixed
 - c) Integrated
 - d) Grab
- Answer a) Composite
- 35 Composite sampling is done to find ----
- a) Highest concentration of pollutants
 - b) Average concentration of pollutants**
 - c) Lowest concentration of pollutants
 - d) Highest and lowest concentrations of pollutants
- Answer a) Average concentration of pollutants
- 36 ----- of the sample must be measured on site
- a) BOD
 - b) COD
 - c) Temperature**
 - d) TDS
- 37 Grab sample represents -----
- a) Conditions prevailing at time of collection**
 - b) Average conditions
 - c) Highest concentration
 - d) Lowest concentration
- 38 For batch processes, the duration of composite sampling period should be -----
- a) 12 hours
 - b) 24 hours
 - c) should cover at least one complete cycle**
 - d) None of these
- Answer c)
- 39 To maintain the integrity of the collected sample it is stored at
- a) 0⁰ C
 - b) 20⁰ C
 - c) 27⁰ C
 - d) 4⁰ C**
- 40 Concentrated sulfuric acid is used as preservative for analysis of -----
- a) BOD
 - b) COD**
 - c) Metals
 - d) Nitrogen
- 41 Unit operations are based on use of ----- for removal of pollutants
- a) Physical forces**
 - b) Chemical processes
 - c) Biological processes
 - d) None of these
- 42 Unit processes are based on use of ----- for removal of pollutants
- a) Physical forces
 - b) Chemical processes
 - c) Biological processes
 - d) Chemical & biological processes**

- 43 Sedimentation is -----
- Unit operation
 - Primary treatment
 - Physical treatment
 - All of these**
- Answer b) All of these
- 44 Coagulation is -----
- Unit operation
 - Secondary treatment
 - Physical treatment
 - Chemical process**
- 45 Flocculation is -----
- Unit process
 - Secondary treatment
 - Physical treatment**
 - Chemical process
- 46 The target pollutant during secondary treatment is
- BOD**
 - COD
 - TOC
 - O&G
- Answer BOD
- 47 UASB is -----
- Anaerobic biological treatment**
 - Aerobic biological treatment
 - Anaerobic chemical treatment
 - Primary treatment
- 48 Membrane filtration is ----- treatment
- Primary
 - Secondary
 - Tertiary**
 - Chemical
- Answer c) Tertiary
- 49 Advanced Oxidation processes are ----- treatment
- Physical
 - Secondary
 - biological
 - Chemical**
- 50 Primary treatment comprises of
- Only unit operations
 - Only physical treatment
 - Combination of unit operations and unit processes**
 - Only pH adjustment
- 51 Neutralization is type of ----- treatment
- Physical
 - Secondary
 - Tertiary

- d) **Chemical**
- 52 Secondary treatment comprises of
- a) Only unit operations
- b) Only physical treatment
- c) Combination of chemical and biological processes
- d) **Only biological treatment**
- 53 Secondary settling tank is type of -----
- a) **Physical treatment**
- b) Chemical treatment
- c) Combination of physical and biological treatment
- d) biological treatment
- 54 Primary treatment is provided -----
- a) Before chemical treatment
- b) **Before biological treatment**
- c) Before physical treatment
- d) Before physico-chemical treatment
- 55 ----- are normally most expensive part of the treatment
- a) Primary treatment
- b) Secondary treatment
- c) **Tertiary treatment**
- d) Chemical treatment
- 56 Adsorption is part of
- a) Primary treatment
- b) Secondary treatment
- c) **Tertiary treatment**
- d) Chemical treatment
- 57 Nutrient removal treatment is -----
- a) Primary treatment
- b) Physical treatment
- c) **Tertiary treatment**
- d) Unit operation
- 58 Equalization Tank can be designed for equalization of -----
- a) Volume
- b) Strength
- c) **Volume & strength both**
- d) None of these
- 59 Flow equalization is -----
- a) **Physical treatment**
- b) Secondary treatment
- c) Tertiary treatment
- d) Chemical treatment
- 60 Equalization is very useful for -----
- a) **All of these**
- b) Avoidance of shock load to biological treatment
- c) Imparting uniform characteristics to wastewater
- d) Improvement of the performance of ETP

- 61 During biological treatment, O&G interfere with
- TDS removal
 - Settling of sludge
 - Oxygen transfer
 - TSS removal
- Answer c) Oxygen transfer
- 62 The O&G can be present in ----- form
- Free or emulsified
 - Free and floating
 - Free and dissolved
 - Dispersed and dissolved
- Answer a) Free or emulsified
- 63 Abbreviated form of API is
- American Petroleum Institute
 - American Polyester Institute
 - American Polymer Institute
 - American Petroleum Investigation
- Answer a) American Petroleum Institute
- 64 ----- is one of the type of the floatation
- Pressure Flootation
 - Dissolved Air Flootation
 - Dispersed air Flootation
 - All of these
- Answer d) All of these
- 65 In Flootation unit suspended solids are collected at the ----- of the unit
- Top
 - Bottom
 - Middle
 - Side
- Answer a) Top
- 66 --- is popular method of removal of heavy metal
- Chemical reduction
 - Coagulation
 - Chemical precipitation
 - Alkaline chlorination
- Answer C) Chemical precipitation
- 67 Alkaline chlorination is used for removal of
- Chlorine
 - Cyanide
 - Mercury
 - Chromium
- Answer b) Cyanide
- 68 Refractories can be removed by
- Advanced Oxidation
 - Coagulation
 - Chemical precipitation

- d) Alkaline chlorination
 Answer a) Advanced Oxidation
- 69 Delay and decay method is for ----- radioactive waste
 a) Low level
 b) High level
 c) Medium level
 d) All of these
 Answer c) Medium level
- 70 High level radioactive waste is generated from
 a) Uranium Processing
 b) Laboratories
 c) Radiation therapy centers
 d) Nuclear power plants
 Answer d) Nuclear power plants
- 71 Flow equalization -----
 a) Is always in-line
 b) Is always off- line
 c) Can be in-line or off-line
 d) None of these
- 72 Proportioning is type of -----
 a) **Unit operation**
 b) Unit process
 c) Tertiary treatment
 d) Chemical treatment
- 73 Size of equalization tank needed for off-line equalization is
 a) More
 b) Less
 c) Same
 d) None of these
- 74 Graphical method is useful to determine ----- of Equalization tank
 a) Aeration need
 b) **Volume**
 c) Volume and strength both
 d) strength
- 75 Neutralization of wastewater is desirable to -----
 a) Enhance the compatibility of w/w for further ttm
 b) Prevent corrosion
 c) Protect of microorganisms in biological ttm.
 d) **All of these**
- 76 Lime slurry treatment is used for neutralization of ----- wastewater
 a) **Acidic**
 b) Alkaline
 c) Acidic and alkaline both
 d) None of these
- 77 Treatment with flue gas is used for neutralization of ----- wastewater
 a) Acidic
 b) **Alkaline**

c) Acidic and alkaline both
d) None of these
78 Treatment with carbon dioxide gas is used for neutralization of -----
wastewater

a) Acidic
b) **Alkaline**
c) Acidic and alkaline both
d) None of these
79 API oil & grease separator is used for removal of

a) **Free oil**
b) Emulsified oil
c) Free and emulsified both
d) None of these

80 O&G separation by API separator is

a) Unit process
b) **Physical treatment**
c) Chemical treatment
d) Secondary treatment

31 In sugar industry press mud is generated from

a) Crushing
b) Filtering the lime sludge
c) Centrifugation
d) Evaporators

Answer b) Filtering the lime sludge

32 ---- is one of the byproduct from sugar industry

a) Bagasse
b) Yeast sludge
c) Spent wash
d) Whey

Answer a) Bagasse

33 Spent wash is wastewater from --- industry

a) Dairy
b) Sugar
c) Distillery
d) Tannery

Answer c) Distillery

34 -- ----- is final product of the distilleries

a) Spent wash
b) Molasses
c) Compost
d) Ethyl alcohol

Answer c) Ethyl alcohol

35 ----- is the byproduct of dairy industry

a) Butter
b) Cheese
c) Condensed milk

- d) Buttermilk
 Answer d) Buttermilk
- 36 Spent wash is incinerated for recovery of
 a) Potassium
 b) Nitrogen
 c) Carbon
 d) Phosphorous
 Answer a) Potassium
- 37 ----- can be recovered from spoiled milk
 a) Lactic acid
 b) Casein
 c) Poultry feed
 d) Fish food
 Answer b) Casein
- 38 ----- is the first step in distillery industry
 a) Dilution of molasses
 b) Fermentation of molasses
 c) Distillation of yeast
 d) Separation of yeast
 Answer a) Dilution of molasses
- 39 Spent wash is characterized by
 a) High temperature
 b) Strong odour
 c) High TDS
 d) All of these
 Answer c) All of these
- 40 ---- is solid waste generated during dry processes in Textile industry
 a) Press mud
 b) Yeast sludge
 c) Cotton dust
 d) Bagasse
 Answer c) Cotton dust
- 41 ----- is done to impart strength during weaving
 a) Sizing
 b) Desizing
 c) Kiering
 d) Souring
 Answer a) Sizing
- 42 Dyeing and printing generates ----- wastewater
 a) coloured
 b) acidic
 c) alkaline
 d) turbid
 Answer a) coloured
- 43 During pulp manufacturing black liquor is generated from ----- process
 a) Chipping
 b) Bleaching

- c) Soaking
d) Digestion
Answer d) Digestion
- 44 Bleaching of pulp is done to impart
a) Colour
b) Luster
c) Whiteness
d) Weight
Answer b) Whiteness
- 45 ----is the most difficult to treat stream of wastewater from Pulp & Paper industry
a) Yellow Liquor
b) Brown liquor
c) Spent wash
d) Black liquor
Answer d) Black liquor
- 46 Coal is heated in ----- to convert it into coke
a) Presence of air
b) Absence of air
c) Presence of catalyst
d) Presence of oxygen
Answer b) Absence of air
- 47 ---- is the main pollutant present in flue gases from blast furnace
a) Carbon monoxide
b) Carbon dioxide
c) Sulfur oxide
d) Fine dust
Answer d) Fine dust
- 48 ----- can be treated for recovery of digestive chemicals
a) Yellow Liquor
b) Brown liquor
c) Spent wash
d) Black liquor
Answer d) Black liquor
- 49 ----- is used for preservation of animal skin
a) Acid
b) Chromium
c) Chlorine
d) Salt
Answer d) Salt
- 50 The solid waste generated during dehairing of skin is
a) Feathers
b) Dung
c) Hair
d) Lime
Answer c) Hair
- 51 ---- tanning process done for heavy duty leather

- a) Chromium
 b) Vegetable
 c) Lime
 d) Enzyme
 Answer b) Vegetable
- 52 Wastewater from chromium tanning is
 a) Segregated and treated separately
 b) Treated jointly with other waste streams
 c) Treated for recovery of O&G
 d) Treated for recovery of animal feed
 Answer a) Segregated and treated separately
- 53 ---- is byproduct recovered from Tannery industries
 a) Salt
 b) Casein
 c) Potassium
 d) Nitrogen
 Answer a) salt
- 54 ---- is used to obtain various raw materials for fertilizer industries
 a) Naptha
 b) LPG
 c) Kerosene
 d) Tar oil
 Answer a) Naptha
- 55 In fertilizer industries maximum quantity of water is used for -----purpose
 a) Manufacturing
 b) Cooling
 c) Domestic
 d) Processing
 Answer b) Cooling
- 56 During joint treatment of industrial wastewater with sewage, the cost is -----
 -
 a) Paid by the industry
 b) Paid by the municipal corporation
 c) Paid by the state government
 d) Shared by the industry and municipal corporation
 Answer d) Shared by the industry and municipal corporation
- 57 The CETP treating sewage jointly with industrial waste is known as -----
 a) Complex CETP
 b) Combined CETP
 c) Homogeneous CETP
 d) Heterogeneous CETP
 Answer b) Combined CETP
- 58 Designing CETP is easier task for
 a) Complex industries
 b) Chemical industries
 c) Homogeneous industries
 d) Heterogeneous industries

Answer c) Homogeneous industries

59 The compounds which cannot be degraded during conventional biological treatment are known as -----

- a) Refractories
- b) Retro factories
- c) Heterogeneous
- d) Halogens

Answer a) Refractories

60 The end products of biological treatment are -----

- a) Nontoxic
- b) Non-biodegradable
- c) Toxic
- d) Unsafe to environment

Answer a) Nontoxic