



## NABARD Grade A

Main Exam Paper II Environmental Engineering Practice Set

1. Chlorides are estimated by titration with a standard silver nitrate solution by using \_\_\_\_\_ as indicator.

- A. Potassium manganese
- B. Potassium chloride
- C. Potassium chromate
- D. Potassium dichromate

**Answer: C**

Explanation: 2-3 drops of potassium chromate are added to appropriate amount of water sample and then it is titrated with a standard solution of silver nitrate.

2. Which of the following statement is wrong regarding permanent hardness?

- A. It is also called carbonate hardness
- B. It is due to the presence of sulfates, chlorides and nitrates of calcium and magnesium
- C. It cannot be removed by boiling
- D. It requires special methods of water softening to get removed

**Answer: A**

Explanation: Permanent hardness is called non-carbonate hardness whereas temporary hardness is called carbonate hardness.

**3. One degree of hardness is equivalent to \_\_\_ ppm**

- A. 2
- B. 1
- C. 10
- D. 100

**Answer: B**

Explanation: Water is said to have one degree of hardness when its soap destroying power is equivalent to the effect of 14.25mg of calcium carbonate in one litre of water.

**4. In which method of determining total hardness of water is based on the premise that hardness producing substance react with soap and form insoluble compounds before lather is produced?**

- A. Clark's method
- B. Hehner's method
- C. Versenate method
- D. EDTA method

**Answer: A**

Explanation: In Clark's method, total hardness is found by determining the standard soap solution required to obtain permanent lather with the water sample of known volume.

**5. What is the indicator used in EDTA method?**

- A. Potassium chromate
- B. Potassium dichromate
- C. Potassium chloride
- D. Erio chrome, black T

**Answer: D**

Explanation: Hardness is determined by using Ethylene diamine tetra-acetic acid using Erio chrome, black T as indicator at a pH between 8.5 and 11.

6. The permissible limit of pH preferred for potable water is \_\_\_ppm.

- A. 6.5-9
- B. 7-8.5
- C. 10-14
- D. 0-7

**Answer: A**

Explanation: The permissible limit of pH for potable water should not exceed 9 and should not be less than 6.5 and the preferred limit is 7-8.5.

7. What is the concentration of H<sup>+</sup> ions in moles/L in water if the pOH value is 6?

- A. 10<sup>-6</sup>
- B. 10<sup>-7</sup>
- C. 10<sup>-8</sup>
- D. 10<sup>-9</sup>

**Answer: C**

8. Disinfection of drinking water means removal of

- A. Turbidity
- B. Colour
- C. Odour
- D. Bacteria

**Answer: D**

9. Disinfection of water is done by

- A. Filtration
- B. Alum
- C. Ozone

D. Passing chlorine

**Answer: D**

**10. The aeration of water is done for the removal of**

A. Colour

B. Turbidity

C. Bacteria

D. Odour

**Answer: D**

**11. For controlling the growth of algae, the chemical generally used is**

A. Alum

B. Lime

C. Bleaching powder

D. Copper sulphate

**Answer: D**

**12. For removal of temporary hardness of water**

A. Water is filtered

B. Water is boiled

C. Alum is added to water

D. Lime is added to water

**Answer: C**

**13. The presence of algae in water indicates that the water is**

A. Hard

B. Soft

C. Acidic

D. Pune

**Answer: C**

**14. For portable water the permissible pH value is**

A. 1 - 4.5

B. 4.5 - 7

C. 7 - 8.5

D. 9 -- 11

**Answer: C**

**15. The hardness limit for portable water ranges between**

A. 10 - 50 ppm

B. 50 - 65 ppm

C. 75 - 117 ppm

D. 150 - 250 ppm

**Answer: C**

**16. Iron & manganese present as pollutant in water cannot be removed by**

A. Lime soda process or manganese zeolite process.

B. Ion exchange process.

C. Chlorination.

D. Oxidation followed by settling & filtration.

**Answer: C**

**17. Which is a secondary air pollutant?**

A. Photochemical smog

- B. Sulphur dioxide
- C. Dust particles
- D. Nitrogen dioxide

**Answer: A**

**18. Siderosis is a disease caused by the inhalation of \_\_\_\_\_ dust.**

- A. Silica
- B. Coal
- C. Iron
- D. None of these

**Answer: C**

**19. Noise level heard at a distance of about 100 metres from a jet engine with after burner is about \_\_\_\_\_ decibels.**

- A. 170
- B. 120
- C. 200
- D. 140

**Answer: A**

**20. During which of the following operating conditions of an automobile, carbon monoxide content in the exhaust gas is maximum?**

- A. Idle running
- B. Cruising
- C. De-acceleration
- D. Acceleration

**Answer: A**

**21. Exposure to small amount of \_\_\_\_\_ results in high blood pressure & heart disease in human beings.**

- A. Asbestos
- B. Hydrogen sulphide
- C. Mercury
- D. Cadmium

**Answer: D**

**22. Operating principle of cyclone separator is based on the action of \_\_\_\_\_ dust particles.**

- A. Diffusion of
- B. Centrifugal force on
- C. Electrostatic force on
- D. Gravitational force on

**Answer: B**

**23. Tolerable limit of nitrogen oxides in air is \_\_\_\_\_ ppm.**

- A. 1
- B. 5
- C. 0.1
- D. 25

**Answer: B**

**24. In water chemical treatment plant, use of chloramines ensures**

- A. Weed control in reservoirs.
- B. Disinfection
- C. Taste & odour control.
- D. Removal of permanent hardness.

**Answer: B**

**25. Turbidity in water is due to**

- A. Algae
- B. Fungi
- C. Organic salts
- D. Finely divided particles of clay, silt and organic matter

**Answer: D**

SPLESSONS