Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination –August 2020
VI Semester

Class : III UG **Time : 2 Hours**
Major : Chemistry **Max. Marks : 50**

15BCHC23 Industrial Chemistry

Part A **10 x 1 = 10**

Choose the Correct Answer

1.The hardness of water is due to the presence of
a. Calcium and Magnesium b. Aluminium and Copper
c. Chromium and Nickel d. Aluminium and Nickel

2. Ion exchange process is used for
a. softening of water b. sterilization of water
c. purification of waste d. none of the above

3. The molecular formula of sucrose is
a. $C_6H_{12}O_6$ b. $C_{12}H_{22}O_{11}$
c. $C_5H_{10}O_5$ d.$C_7H_{14}O_7$

4. The optimum temperature of fermentation is
a. 50^0C-60^0C b. 70^0C-80^0C
c. 60^0C-70^0C d. 30^0C-50^0C

5. Which one of the following is solid lubricant?
a. Graphite b. Molybdenum disulphide
c. Both (a) and (b) d. None of the above

6. The temperature at which the oil ceases to flow when cooled at standard condition is
a. cloud point b. pour point
c. flash point d. ignition temperature

7.The gas which is used to produce an inert atmosphere is
a. Bromine b. Carbon dioxide
c. Hydrogen d. Helium

8. Dry ice is
a. Solid Carbon Dioxide b. Solid Carbon
c. Solid Copper d. Solid Chlorine

9.The effluent coming out of atomic energy plant is
a. Tartaric acid b. Lead
c. Fluorides d. Free Chlorine

10.Trickling filters are used to reduce
a. BOD b.COD
c. refining d. none of the above

Part – B **3 X 6 = 18**

Answer any Three questions

Answer should not exceed 400 words or two pages

11. Explain the following:
    i. Hardness of water ii. Unit of hardness

12. Write short notes on sedimentation and coagulation.

13. What are the conditions favourable for fermentation?

14. Write a note on characteristics of enzymes.

15. Write short notes on:
    i. Complete fluid lubrication and ii. Boundary lubrication.

16. Explain the following: i Pour point ii. Viscosity index.

17. Give an account on the following:
    i. Dry ice ii. Uses of CO_2

18. What are the industrial uses of: i. Nitrogen ii Acetylene iii Oxygen.

19. Write a note on characteristics of industrial wastes.

20. Give an account on treatment and disposal of industrial wastes.

Part – C **2 X 11 = 22**

Answer any Two questions

Answer should not exceed 800 words or four pages

21. Give an account of
    i. Zeolite process and ii. Ion exchange process.

22. How will you sterilize water using UV, Bleaching powder and Chlorine?

23. Explain the process of manufacture of cane sugar.

24. Discuss the process of manufacture of paper.

25. Write a note on Solid Lubricants. Mention its uses.

26. Explain the following:
    i Classification of greases ii. Chemical properties of greases.

27. Write any two methods of manufacturing of carbon dioxide
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28. Give an account on industrial production of hydrogen.

29. Write short notes on the following: i Types of industrial wastes
    ii. Destructive and regenerative method.

30. Give an account on:
    i. Production of surface water from pollution with industrial sewage and
    ii. Sanitary chemical analysis of industrial effluents.

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