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SEAT No. _____

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SARDAR PATEL UNIVERSITY

B.Sc. Industrial Chemistry

(Semester -3rd) EXAMINATION

Date: 22/11/2019

Course No. : US03CICH01

Friday

(Heavy and Fine Chemicals)

Total Marks: 70

Time: 2.00 to 5.00 pm

Q.1 Answer the given multiple choice questions.

[10]

1. The catalyst used in production of H_2SO_4 by contact process is _____.
a) Ag b) V_2O_5 c) Pt d) None of these
2. H_2SO_4 can be used as _____ agent.
a) Dehydrating b) Oxidizing c) Pickling d) All of these
3. Which acid is also called as MURIATIC acid _____.
a) HCl b) H_2SO_4 c) HNO_3 d) H_2SO_4
4. The soda ash is manufactured by _____ process.
a) Electrolysis b) Solvay's ammonia c) Causticizing d) None of these
5. The common salt has chemical formula _____.
a) Na_2CO_3 b) $NaHCO_3$ c) NaCl d) NaOH
6. Abrasives are the material having _____.
a) Very high resistance b) Very high conduction
c) Very high hardness d) None of these
7. Sand is the raw material for manufacture of _____.
a) SiC b) Synthetic graphite c) CaC_2 d) Boron carbide
8. $KMnO_4$ is used as _____ agent.
a) Bleaching b) Reducing c) Oxidising d) None of these.
9. _____ catalyst is used for manufacture of Dioxane from diethylene glycol.
a) Base b) Acid c) Neutral d) Salts
10. 1,4-Dioxane is a six membered _____.
a) Cyclic diether b) Ketone c) Ester d) Alcohol

Q.2 Attempt any Ten.

[20]

- i. Write uses of Hydrogen.
- ii. List uses of HCl.
- iii. Discuss physical properties of HCL.
- iv. List common sources of NaCl.
- v. Write the difference between dry and submerged diagram cell.
- vi. Write different uses of Chlorine.
- vii. List Uses of SiC.
- viii. List two important factors which should be considered while selection of furnace.
- ix. Write about Boron Nitride.
- x. List industrial uses of DMF.
- xi. Discuss uses of THF.
- xii. Write properties of the DMSO.

(1)

(P.T.O)

Q.3a) With the help of diagram explain manufacturing of Nitric acid by oxidation of Ammonia. [5]

b) Write a note on: Steam Hydrocarbon Process. [5]

OR

Q.3a) Discuss Contact Process. Also write uses of H_2SO_4 . [10]

Q.4a) Discuss Carbonation and Ammoniation steps involved in manufacturing of Na_2CO_3 by Solvay Ammonia Process. [5]

b) Explain different methods used for manufacturing of NaCl. [5]

OR

Q.4a) Explain manufacturing of NaOH by electrolysis of Brine. [10]

Q.5a) Write a note on: CaC_2 [05]

b) Write about H_2O_2 . [05]

OR

Q.5a) Discuss manufacturing of Synthetic Graphite. [5]

b) Explain $KMnO_4$ manufacturing process. [5]

Q.6a) Write uses, properties and manufacture of Diethyl ether. [10]

OR

Q.6a) Write uses, properties and manufacture of Dimethyl formamide. [10]

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