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Sardar Patel University Examination
B.Sc.(Fifth Semester)
Monday 18th November 2013
Subject code: US05CICV03
(Technology of Petroleum and Petroleum Products)
Industrial Chemistry (Vocational)

Time:10:30 to 1:30 pm **Total Marks: 70**

Q-1 Answer the following MCQ'S : **(10)**

I. Average percentage of carbon in petroleum is _____
a. 15 b. 30 c. 84-86 d. 90-95
II. Naphthenes are _____ compounds.
a. Saturated b. Unsaturated c. Aromatic d. SaturatedCyclic
III. Gribotol process is used in crude oil for removal of
a. Water b. Sulphur c. Salts d. None of these
IV._____ is co- product in production of Carbon disulphide.
a. H_2S b. Ammonium sulphate c. Carbon dioxide d. All .
V. For the removal of unreacted ammonia_____ is used as scrubbing agent in the production of HCN.
a. H_2SO_4 b. Water c. Sodium carbonate d. All
VI. For production of HCN from methane_____ catalyst is used.
a.Pt- Rhodium alloy b. Copper based c. Silica d. Alumina
VII. In the production of ethanol by direct hydration of ethylene, water to ethylene Mole ratio is _____
a.0.6 to 0.7 b. 1to 2 c. 10 to 12 d. 3 to 6
VIII .In the production of vinyl chloride all the reaction are allowed to take place on _____catalyst
a. Copper fluoride b. Alumina c. Silica d. Zinc dust
IX. Dehydrogenation of butane result into
a. Xylene b. Cyclobutane c. Butadiene d. Butanol
X. Dehydrogenation of benzene result into
a. Xylene b. Cyclohexane c. Butadiene d.Butanol

Q-2 Answer the following short question (ANY TEN) **(20)**

I. Name method used of demulsification of crude oil.
II. Write detail of carbide theory of petroleum formation.
III .Explain signification of water removal from crude oil.
IV. Write a short note on properties & uses of CS_2.
V. Write properties & industrial uses of HCN.
VI. Write an important properties & uses of Methanol.
VII. Give the outline of chemical obtained from C_2 (ethane) fraction.
VIII. Synthesis of glycerine by Acrolein route.
IX .Explain synthesis of ethanol from ethane by liquid phase hydration.
X. What are the limitations of molecular sieve as catalyst?
XI .Give the outline of the various chemical obtained from butane?
XII. Give the outline of various chemical obtained from butene?

Q-3 (i) Explain the Construction & working of bubble cap tray. (05)
(ii) Write short note on Molecular sieves. (05)

OR

Q-3 (i) Explain theory of petroleum formation. (05)
(ii) Give details of distillation & refining of light petroleum products. (05)

Q-4 (i) With the help of flow diagram explain the manufacturing of HCN. (05)
(ii) Out line that how are the important petro-chemicals obtained from Methane. (05)

OR

Q-4 (i) With the help of flow diagram explain the manufacturing of CS_2 (05)
(ii) How are the important petrochemicals obtained from Ethylene? (05)

Q-5 (i) Describe the process of manufacturing of acrylonitrile. (05)
(ii) Describe the mfg of ethyl chloride. (05)

OR

Q-5 (i) With the help of flow diagram explain manufacture and use of styrene. (05)
(ii) Describe the mfg of vinyl acetate from acetic acid. (05)

Q-6 Explain the manufacturing of Isobutane. (10)

OR

Q-6 Describe the method of production of BTX(Benzene,Toluene,Xylene). (10)

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