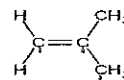
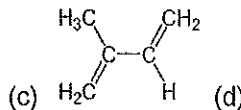
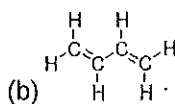
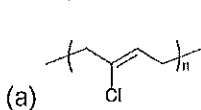


SARDAR PATEL UNIVERSITY**B.Sc. Vth Semester Industrial Chemistry (CBCS) Examination****Industrial Chemistry****Course No.: US05CICH03****Subject: Petroleum Technology****Time: 10:00 A.M. To 01:00 P.M.****15th November 2019 Friday****Total Marks: 70****N.B. (1) Marks allotted to the question are on its RHS****(2) Illustrate your answers wherever necessary with the help of neat sketches & chemical equations****Q. 1 Answer the following MCQ'S:****(10)**

- 1 _____ Process is used in crude oil for removal of water.
(a) Selexol (b) Sulfinol (c) Gribotol (d) Demulsification
- 2 _____ Process is used in crude oil for removal of sulphur.
(a) Selexol (b) Sulfinol (c) Gribotol (d) Demulsification
- 3 A gasoline with an octane number of _____ has the same knock as a mixture of 92% isooctane and 8% heptane.
(a) 0 (b) 118 (c) 92 (d) 100.
- 4 CGS unit for kinematic viscosity is the _____.
(a) millipascal seconds (mPa·s) (b) Poise (P)
(c) Pascal-second (Pa·s) (d) stokes (St)
- 5 The flash and fire points are useful in determining a _____ and _____ resistance
(a) lubricants volatility and fire (b) lubricants fluidity and fire
(c) lubricants volatility and solvent (d) lubricants fluidity and solvent
- 6 In unsaturated polyester resin the amount of _____ is added in proportion to other diacids.
(a) Isophthalic Acid (b) Terphthalic Acid
(c) Phthalic Anhydride (d) Maleic Anhydride
- 7 O-xylene + Oxygen \longrightarrow _____ + Water
(a) Isophthalic Acid (b) Terphthalic Acid
(c) Phthalic Anhydride (d) Maleic Anhydride
- 8 Caprolactam is synthesized from _____, which is first converted to its oxime and treatment of this oxime with acid induces the Beckmann rearrangement to give caprolactam.
(a) Cyclohexanone (b) Benzoic acid (c) Cinnamic acid (d) Isophthalic Acid
- 9 _____ is the ideal structure for butadiene rubber production.



- 10 _____ is manufactured by hydrolysis of ethylene oxide.
(a) Propylene glycol (b) Butylene glycol (c) Neopentyl glycol (d) Ethylene glycol

Q-2 Answer any ten of the following:**(20)**

- 1 Why inorganic theory fails to explain formation of crude oil?
- 2 Distinguish between Octane number and Cetane Number
- 3 Explain signification of salts removal from crude oil

- 4 Which are the different chemicals derive from propane-propylene fraction?
- 5 Which are the different chemicals derive from C₄ fraction?
- 6 Write properties & uses of HCN.
- 7 Give the chemical reaction of CS₂
- 8 Give the outline of chemical obtained from ethane.
- 9 Sketch the flow diagram of LABS Process.
- 10 Explain regeneration of catalyst, production of Butadiene.
- 11 Explain liquid phase hydration of ethylene
- 12 Sketch the flow diagram of butadiene production.
- Q-3 a Explain in detail theories for the formation of petroleum. (05)
- b Enlist the composition of petroleum and explain it in brief. (05)
- OR**
- Q-3 a Write a note on Construction & working of bubble cap tray. (05)
- b Write a note on Distillation & refining of light petroleum products. (05)
- Q-4 a Explain process with flow diagram removal of iso-butane from C₄-Fraction (05)
- b Explain extraction of Aromatic fraction using with liquid SO₂. (05)
- OR**
- Q-4 a Write complete note on UDEX method for separation of aromatic. (05)
- b Explain low temperature separation of C₂ fraction. (05)
- Q-5 a With the help of flow diagram explain the manufacturing of HCN. (05)
- b With the help of flow diagram explain the manufacturing of CS₂. (05)
- OR**
- Q-5 a Outline the Manufacture of caprolactum. (05)
- b Write a short note on Manufacture of phthalic anhydride (05)
- Q-6 Explain the manufacture of butadiene. (10)
- OR**
- Q-6 Write manufacture methods for the Vinyl acetate (10)
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