

SEAT NO. _____

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SARDAR PATEL UNIVERSITY
FIFTH SEMESTER T. Y. B. Sc. EXAMINATION-2021
COURSE NO. : US05CICV22

SUBJECT : Technology Of Petroleum & Petroleum Products

DATE : 24/11/2021, Wednesday

TIME : 03:00 to 5:00 P.M.

Q 1. Answer the following Multiple choice questions. (All are Compulsory)

(10)

1. Paraffins are primarily obtained as a ____ fraction from the crude distillation unit.
(A) Solid (B) Gas (C) Liquid (D) Any of this
2. The highest carbon atom present in crude oil is
(A) C₉₀ (B) C₇₅ (C) C₇₀ (D) C₈₀
3. CS₂ is used for manufacturing of
(A) CCl₄ (B) Xanthates (C) Ammonium (D) All
4. Heaviest fraction of petrochemicals are called
(A) Gasoline (B) Bitumen (C) Kerosene (D) Naptha
5. Which of the following forms explosive mixture with air?
(A) Glycerin (B) Acrylonitrile (C) Acrolein (D) Ethyl Benzene
6. Acetylene conversion into acetaldehyde is...
(A) Addition Reaction (B) Elimination Reaction (C) Substitution reaction (D) Rearrangement
7. Allyl alcohol is manufactured from propylene oxide using _____ catalyst.
(A) AlCl₃ (B) Zn (C) V₂O₅ (D) Li₃PO₄
8. Which of the following treatment used for removal of sulfur from fuels?
(A) Hydrofining (B) Dewaxing (C) Alkali washing (D) Sulfuric acid
9. Hydrogenation of benzene result into ____
(A) Cyclohexane (B) Cyclobutane (C) Butadiene (D) Butanol
10. In manufacturing of LBS, ____ of paraffins is accomplished to obtain olefins.
(A) Hydration (B) Dehydration (C) Alkylation (D) Rearrangement



Q 2. Are the following statements true or false? (All are Compulsory)

(08)

1. Aromatic compound contribute towards higher octane number.
2. Packing trays are used for liquid and adsorption system.
3. HCN is blue color liquid which is miscible with water.
4. The catalyst used in manufacturing of HCN is Pt-rh.
5. Production of ethylene oxide is exothermic reaction.
6. Allyl alcohol is produced by isomerization of propylene oxide.
7. Aniline point is used to indicate aliphatic content of hydrocarbons mixtures.
8. Styrene is produce by dehydrogenation of ethyl benzene.

Q 3. Answer the following short questions. (Any 10 out of 12)

(20)

1. Classify additives used in gasoline and explain any one of them briefly.
2. What is Hydrotreating? Write down it's advantages.
3. Write the detail of organic theory of petroleum formation.

(1)

(P.T.O)



4. Give Classification of petrochemicals.
5. Write a short note on properties and uses of HCN.
6. Explain the manufacturing of CS_2
7. Write a note on production of Acrylonitrile.
8. Write down the reaction and reaction condition for manufacturing of Ethylene oxide.
9. Write a note on direct hydration of ethylene.
10. Explain briefly any one test method used in petrochemical industry.
11. Draw flow chart of Oxo synthesis.
12. What are the reactions involved in BTX production?

Q 4. Answer the following long questions. (Any 4 out of 8)

(32)

1. Explain Girbotol process in detail with the help of flow diagram.
2. Explain briefly the composition of crude chemistry.
3. With the help of flow diagram explain the manufacturing of Methanol.
4. Classify important chemicals obtained from Ethylene.
5. Write a note on manufacturing process of Cumene with the help of flow diagram.
6. Write a note on production of Isopropanol from propylene.
7. Write a note on LABS.
8. Write a note on production of Butadiene from Butane.

