

SEAT No. _____

[40]

SARDAR PATEL UNIVERSITY



T.Y. B.Sc. Industrial Chemistry SEMESTER – V
 EXAMINATION -2022
 Petroleum and Petroleum Products
 SUB CODE: US05CICH22

DATE: 11/11/2022

DAY: Friday

TIME: 10.00 AM TO 1.00 PM

TOTAL MARKS: 70

[10]

Q. 1 Choose the correct answer.

- (1) The general formula of paraffin is
 (A) C_nH_{2n} (C) CH
 (B) C_nH_{2n+2} (D) None of these
- (2) Demulsification process is used in crude oil for removal of _____
 (A) water (C) Salts
 (B) Sulphur (D) None of these
- (3) Which diesel has more than 1000 rpm speed?
 (A) Low speed diesel (C) high speed diesel
 (B) Medium speed diesel (D) None of these
- (4) Extraction of aromatic by ethylene glycol is _____
 (A) UDX method of extraction (C) steam distillation
 (B) solid liquid extraction (D) None of these.
- (5) Which product obtain from demethanizer in separation of C2 fraction?
 (A) Methane (C) N_2
 (B) H_2 (D) All of these
- (6) The catalyst used in manufacture of HCN is.
 (A) Ag (C) Au
 (B) Pt-Rhodium alloy (D) Cu
- (7) Which gas separated from CS_2 Production?
 (A) Cl_2 (C) O_2
 (B) H_2S (D) H_2
- (8) _____ is used in manufacture for unsaturated polyester manufacture.
 (A) Maleic anhydride (C) CS_2
 (B) HCN (D) H_2O_2
- (9) Major uses of LABS is in the field of _____
 (A) Detergent (C) Pesticides
 (B) Food (D) Plastics
- (10) Manufacturing of butane to butadiene the requisite steam to butane ratio is _____
 (A) 11:1 (C) 4:5
 (B) 9:8 (D) 10:15

C.R.T.O.)

[20]



Q.2 Answer the following.(attempt ten)

- (1) Name the various reactions taking place in catalytic cracking
- (2) Explain signification of water removal from crude oil
- (3) Write the detail of modern theory of petroleum formation
- (4) Give the separated product by C8 fraction.
- (5) Draw the flow diagram of UDEX extraction method.
- (6) Name various techniques used for separation of petroleum distillate.
- (7) Sketch the flow diagram of caprolactum production.
- (8) Write a use of ethyl benzene.
- (9) Explain product obtain from methane.
- (10) Explain regeneration of catalyst, production of Butadiene.
- (11) Explain liquid phase hydration of ethylene.
- (12) Write the reaction condition production of propionaldehyde.

Q.3 Explain Theory of petroleum.

[10]

OR

Q.3 Composition of petroleum in detail.

[10]

Q.4 (A) Explain low temperature separation of C₂ fraction.

[05]

(B) Using azeotropic distillation explain separation and non-aromatic fraction using methanol.

[05]

OR

Q.4 (A) Explain extraction of Aromatic fraction using with liquid SO₂.

[05]

(B) Explain process with flow diagram removal of ISO-butane from C₄-Fraction

[05]

Q.5 (A) Write the Manufacture of HCN.

[05]

(B) Explain Manufacture of ethyl benzene.

[05]

Q. 5 (A) Explain process of Manufacture of CS₂.

[05]

(B) Manufacture of isopropyl benzene.

[05]

Q. 6 (A) Give the Production process of LABS.

[05]

(B) Explain the manufacturing process of Phenol.

[05]

Q. 6 (A) Production process of Vinyl acetate.

[05]

(B) Write the manufacturing process of Butadiene.

[05]

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