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No. Of Printed Pages: 2

SARDAR PATEL UNIVERSITY
M. Sc. Semester - IV Examination
Tuesday, 12th April 2016
INDUSTRIAL CHEMISTRY
Subject: Petrochemicals

Date: 12/04/2016

Time: 02:30 a.m. to 05:30 p.m.

Course No. : PS04EICH04

Marks: 70

Q. 1 Answer the following MCQ s (Attempt all)

[08]

- I. Naphthenic acid decomposes at _____ ° F
 - a) 700
 - b) 1400
 - c) 600
 - d) 1200
- II. What is LPG?
 - a) liquefied petroleum gas
 - b) liquefied protective gas
 - c) low pressure gas
 - d) light protecting glass
- III. _____ temperature is maintained in delayed coking.
 - a) 460-480°C
 - b) 480-500°C
 - c) 500-550°C
 - d) 100-200°C
- IV. Catalytic conversion process include _____.
 - a) catalytic cracking
 - b) alkylation
 - c) polymerization
 - d) all of these
- V. _____ is an important refrigerant.
 - a) chlorine
 - b) liquid ammonia
 - c) benzene
 - d) DMF
- VI. Anhydrous ammonia is used for manufacture of _____.
 - a) fertiliser
 - b) fungicides
 - c) fumigants
 - d) all of above
- VII. Cyclohexane is used to produce _____.
 - a) ethane
 - b) toluene
 - c) caprolactum
 - d) phenol
- VIII. Disproportionation of toluene occurs at _____ °C
 - a) 450-530
 - b) 500-550
 - c) 100-150
 - d) 800-1000

Q.2 Answer the following short question (Any seven)

[14]

- I. Enlist various processes utilized for physical separation of crude oil.
- II. What is natural gas?
- III. Define solvent extraction.
- IV. What is delayed coking?
- V. Enlist the type of petroleum cokes.
- VI. Enlist the uses of methanol.
- VII. Write the uses of ammonia.
- VIII. Write properties and uses for cyclohexane.
- IX. Write the properties of phenol.

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(P.T.O.)

- Q.3 (a) Write explanatory note on coal and oil shale [06]
(b) Write note on chemisorptions and LNG [06]
Or
(b) Write explanatory note on properties of crude oil [06]
- Q.4 (a) With the help of diagram explain distillation of crude oil [06]
(b) With the help of diagram explain manufacture of ethylene from ethane [06]
Or
(b) Write explanatory note on catalytic reforming [06]
- Q.5 (a) With the help of diagram explain chlorination of methane. [06]
(b) With the help of flow diagram explain manufacture of ethanol amines [06]
Or
(b) Write note on chemical based on methane [06]
- Q.6 (a) With the help of flow diagram explain manufacture of ethyl benzene [06]
(b) With the help of flow diagram explain disproportionation of toluene [06]
Or
(b) Write note on principle reactions of benzene [06]

Best of Luck.....

