

F.Y.B.PHARM. SEMESTER-II (2011 COURSE) : SUMMER - 2018

SUBJECT: PHARMACEUTICAL CHEMISTRY - IV

Day: Tuesday
Date: 24/04/2018

S-2018-3946

Time: 10.00 AM TO 01.00 PM
Max. Marks: 80

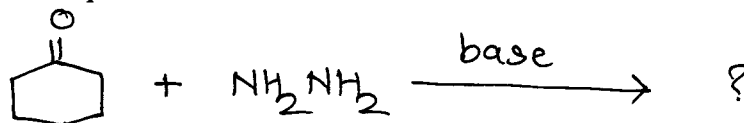
N.B:

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Solve **ANY TWO** of the remaining from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION - I

Q.1 Answer **ANY FIVE** of the following: (10)

a) Predict the product:



- b) What is Dow's process?
- c) Give a reaction of α -elimination.
- d) What happens when methanol is treated with ammonia in presence of aluminium oxide?
- e) How *p*-bromoaniline is obtained from aniline?
- f) How aldehydes are obtained from alcohols?
- g) What is Carbylamine test?

Q.2 a) Give any ten reactions of phenols. (10)

b) What is Esterification reaction? Give its mechanism. (05)

Q.3 a) Explain Anti-Markovnikov rule by giving mechanism. (07)

b) What is reductive amination reaction? (03)

c) What happens when amines react with nitrous acid? (05)

Q.4 Write short notes on **ANY THREE** of the following: (15)

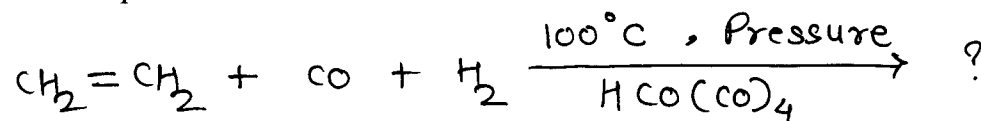
- a) Knoevenagel condensation
- b) Aldol condensation
- c) Separation of mixture of amines
- d) Synthesis of carboxylic acids

P.T.O.

SECTION -II

Q.5 Answer ANY FIVE of the following: (10)

- a) How phenol is obtained from coal?
- b) What happens when benzene is distilled with H_2O_2 in presence of Fluorosulphonic acid?
- c) What is $E1_{(CB)}$ mechanism?
- d) What is Mannich reaction?
- e) Predict the product:



- f) How formaldehyde gas is handled in laboratories?
- g) What is Clemmensen reduction of aldehyde?

Q.6 a) Give Saytzeff orientation and Hofmann orientation in Elimination reaction. (08)

b) What is Hofmann's Mustard oil reaction of primary amine? (02)

c) What is Dieckmann condensation? (05)

Q.7 a) What happens when Alkenes are treated with ozone? Explain with mechanism. (07)

b) Give Gabriel phthalimide synthesis of primary amines. (03)

c) Give reaction and mechanism involved in Hofmann Rearrangement. (05)

Q.8 Write short notes on ANY THREE of the following: (15)

- a) Hydroboration
- b) Hydroxylation
- c) Oxidative degradation of aldehydes
- d) Reactions of derivatives of ammonia with aldehydes

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