F.Y.B.PHARM. SEMESTER-I (CBCS - 2015 COURSE) :
WINTER - 2017
SUBJECT: PHARMACEUTICAL CHEMISTRY – II (Organic)

Day: **Friday** Time: **10.00 AM TO 01.00 PM**
Date: **16/11/2017** Max. Marks: 60

W-2017-3777

N.B.:

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

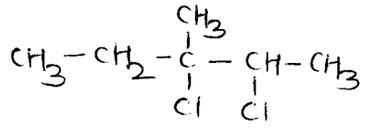
SECTION-I

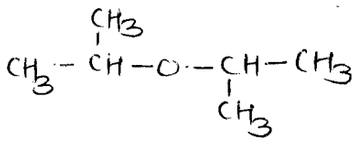
Q.1 Answer any **FIVE** of the following: **(10)**

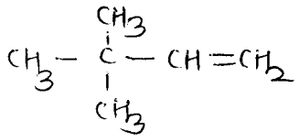
a) Define Ionization potential.
b) What is Dipole moment?
c) Why water is a good solvent?
d) What is I-strain?
e) Explain –synthesis of 1, 2, 3- tri-tert butylbenzene is very difficult.
f) Give different conformations of 2, 3 dibromobutane.
g) Why N, N- dimethyl – o – toluidine is more basic than aniline?

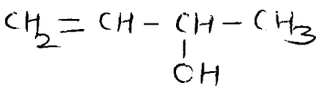
Q.2 Define Inductive effect. Give its applications in detail. **(10)**

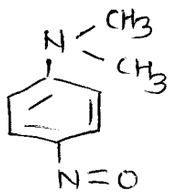
Q.3 **a)** Give method of writing resonance hybrid structure. **(05)**
b) Give IUPAC names of following structure. (Any **FIVE**) **(05)**

(i) 

(ii) 

(iii) 

(iv) 

(v) 

(vi) 

Q.4 Write short notes on any **TWO** of the following: **(10)**

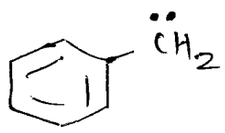
a) Hyperconjugation
b) S_N1 reaction
c) Hybridization
d) Resonance in CO_2 molecule

P. T. O.

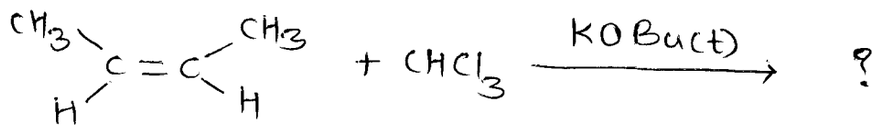
SECTION-II

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

a) Give resonance in the following carbanion.



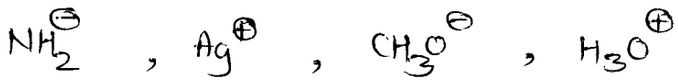
b) Predict the product.



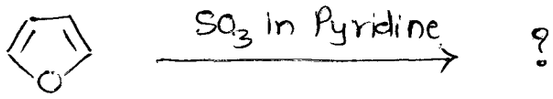
c) Give two differences between σ-complex and π-complex.

d) Enlist factors affecting rate of Collision theory.

e) Differentiate following into electrophiles and nucleophiles.



f) Predict the product.



g) Enlist different reagents used for chlorination reaction.

Q.6 What are reaction intermediates? Explain method of preparation and reactions of carbon radical and carbon cation. **(10)**

Q.7 **a)** Define Isomerism. Explain structural isomerism with suitable examples **(05)**

b) What are Friedel Craft reactions? **(05)**

Q.8 Write short notes on any **TWO** of the following: **(10)**

a) Transition state theory

b) Nitration Reactions

c) Optical Isomerism

d) Benzynes

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