



SB-3487

M. Sc. (Sem. - II) (SF) Examination

March / April - 2011

Organic Chemistry : Paper - II

(IC/PC/EC)

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दशांशविक निशानीवाणी विगतो उत्तरवही पर अवश्य कभवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="checkbox"/> M. Sc. (Sem. II)	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="checkbox"/> Organic Chemistry : Paper - II	<input type="text"/>
Subject Code No. : <input type="text" value="3"/> <input type="text" value="4"/> <input type="text" value="8"/> <input type="text" value="7"/>	<input type="text"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	
Student's Signature	

(2) Figures to the **right** indicate full marks of the questions.

1 Answer any **three** of the following : 18

- Discuss the Norrish type-I and Norrish type-II reactions.
- What are the principle classes of pericyclic reaction ? Explain the selection rule and stereochemistry of cycloaddition reaction.
- Discuss the Paterno-Buchi reaction.
- Prove that "In electrocyclic reaction the ring opening of Cyclobutene \rightarrow Butadiene system, photochemical reaction follows disrotatory path and thermal reaction follows conrotatory path."

2 Answer any **three** of the following : 18

- Explain Merrifield polypeptide synthesis.
- What are nucleotides and nucleosides ? Prove the structure of pyrimidine nucleosides.
- What are amylose and amylopectin ? Prove the structure of amylose.
- Explain the terms : DNA, RNA, ADP and ATP. Give the synthesis of ATP.

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[Contd...

- 3** Answer any **three** of the following : **18**
- (a) Explain the Blanc's rule. How is it useful to establish the ring system in cholesterol ?
 - (b) Prove the structure of farnesol by analytical evidences.
 - (c) Justify the position of hydroxyl group in cholesterol.
 - (d) What are hormones ? Classify them. Give the synthesis of :
 - (i) Testosterone
 - (ii) Diel's hydrocarbon.
- 4** Answer any **four** of the following : **16**
- (a) Give the name and structural formula of sugars and bases present in nucleic acids. Give the synthesis of guanosine.
 - (b) Write a note on the Jablonski diagram.
 - (c) Prove the structure of zingiberene analytically.
 - (d) Give evidences for the ethylenic double bond in cholesterol.
 - (e) What are terpenoids ? Give the synthesis of cadalene.
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