

Vitthalbhai Patel & Rajratna P. T. Patel Science College
Vallabh Vidyanagar
B. Sc. (Semester-VI)



Subject : ORGANIC CHEMISTRY (US06CCHE02)

Date : 13-03-2018

Internal Test – March, 2018

Marks : 25

Day : Tuesday

Time : 11.00 to 12.30 p.m.

Note: (i) All questions are to be attempted. (ii) Figures to the right indicate marks.

Q.1 Choose the correct option for the following : [3]

- (i) Insulin is a protein.
(a) globular (b) fibrous (c) both "a" and "b" (d) none of these.
- (ii) In Purine rings are fused together.
(a) pyrimidine and imidazole (b) pyrimidine and pyridine
(c) pyrimidine and pyrrole (d) pyrimidine and indole.
- (iii) For energy transfer between donor and acceptor molecules, the donor molecule should have at least ----- kcal/mole more energy than the energy required to excite the acceptor molecules.
(a) 5 (b) 10 (c) 0 (d) None of these.

Q.2 Answer the following (Attempt any two) : [4]

- [A] Write synthesis of Phenylalanine using malonic ester synthesis.
[B] Define nucleic acid, nucleotide and nucleoside.
[C] Explain : Triplet excited state of ethylene molecule is more stable than that of singlet state.

Q.3 [6]

- [A] Write synthesis of Gly-Phe-Ala using benzyloxy carbonyl method.
[B] Discuss the primary structures of RNA & DNA, as well as secondary structures of DNA.

OR

Q.3 [6]

- [A] Give the broad classification of proteins and discuss their properties.
[B] Discuss P. Edman method for N-terminal residue analysis. Also give its advantages and limitations.

Q.4 [6]

- [A] Discuss the isolation of Uric acid from human urine. What happens when Uric acid is heated with POCl_3 ?
[B] Discuss the structure of Theobromine.

OR

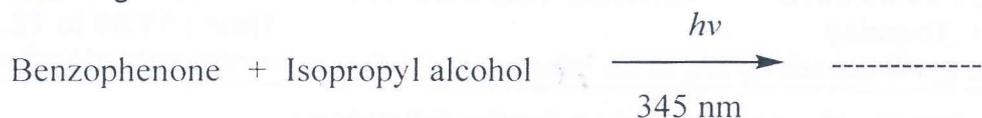
Q.4 [6]

- [A] How will you determine the position of methyl group in the structure of Caffeine?
[B] How will you determine the presence of Alloxan and Allantoin moiety in the structure of Uric acid ?

Q.5

[6]

- [A] Discuss Photo - Fries rearrangement.
[B] Complete and suggest appropriate reaction mechanism involved in the following reaction :



OR

Q.5

[6]

- [A] Discuss Norrish Type - I & - II reactions using suitable illustration.
[B] **Explain the following :**
(i) Michler's ketone do not undergo photoreduction in isopropyl alcohol.
(ii) Limitation of Paterno-Buchi reaction giving suitable illustration.

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