Registration No : | | | | | | | | | | |

Total Number of Pages : 02 **B.Pharm**
15PH405

4th Semester Regular / Back Examination 2017-18
ORGANIC CHEMISTRY- III
BRANCH : B.Pharma
Time : 3 Hours
Max Marks : 100
Q.CODE : C1100

Answer Part-A which is compulsory and any four from the Part-B.
The figures in the right hand margin indicate marks.
Answer all parts of a question at a place.

Part-A

Q1. Answer the Followings: **(2 x 10)**

a) Outline the methods of preparation of phenothiazine.
b) Define essential amino acids with suitable examples.
c) What happens when pyrazole reacts with concentrated sulphuric acid?
d) How dextrin is formed? Mention its important uses?
e) Define mutarotation with suitable example.
f) Define nucleosides and nucleotides with suitable examples.
g) Write the structure of D-Glucose and L-Glucose?
h) Write down the (2+2) π Diels-Alder Cycloaddition reaction.
i) Define epimer with suitable examples.
j) Outline the mechanism of reaction involve in benzoin condensation.

Q2. Choose the correct answer : **(2 x 10)**

(a) Fructose on reduction in presence of HI gives
   a. n-hexane
   b. D-fructose oxime
   c. D-glucose oxime
   d. None of the above

(b) Out of the following which one is different
   a. Palmitic acid
   b. Oleic acid
   c. Linoleic acid
   d. Stearic acid

(c) Out of the following which one contain a sulphur hetero atom
   a. Oxazole
   b. Phenothiazine
   c. Iso-oxazole
   d. Pyrole

(d) All the followings are Monosaccharaides except
   a. Glucose
   b. Mannose
   c. Lactose
   d. Galactose

(e) Cellulose dissolves in water.
   a. True
   b. False
   c. Dissolves in Acid
   d. None of the above

(f) Galctose occur naturally in
   a. D-form

b. L-form
c. Both D- And L- form
d. None of the above

(g) Lipids on agitation with water in presence of soap or gelatin form
a. Suspension
b. Emulsion
c. Elixir
d. Tincture

(h) Out of the following which one give more energy:
a. 1 gm. of lipid and fats
b. 2 gm. of glucose
c. 1 gm. of proteins
d. Equal energy

(i) Out of the following which one is a scleroprotein
a. Zein
b. Globulin
c. Hair
d. None of the above

(j) Which one of the following is a derived lipid:
a. Cholesterol
b. Fat
c. Waxes
d. Oils

Part-B

Q3. **a)** Define and classify carbohydrates with suitable examples. Write the chemical properties of glucose. **(10)**

b) Discuss the chemical composition and chemical properties of starch. **(5)**

Q4. **a)** Describe the structure, nomenclature, methods of preparation and chemical reactions of Benzimidazole. **(10)**

b) Write down the structure and synthesis of Pyrimidine. **(5)**

Q5. Write short note on :
(a) Reformatsky reaction and its mechanism **(5)**
(b) Nucleic acids **(5)**
(c) Beckmann rearrangement and its mechanism **(5)**

Q6. Write short note on:
(a) Pericyclic reaction **(5)**
(b) Electrocyclic reaction **(5)**
(c) Claisen rearrangement reaction **(5)**

Q7. **a)** Define and classify amino acids. Write the methods of preparation and chemical reactions of amino acids. **(10)**

b) Define proteins and classify proteins with suitable examples. **(5)**

Q8. **a)** Define and classify lipids and fats with suitable examples. Write down the chemical properties of lipids and fats. **(10)**

b) Write a short note on purification of proteins. **(5)**

Q9. Discuss the mechanism of reactions of the followings :
(a) Mannich reaction **(5)**
(b) Oppenaur oxidation **(5)**
(c) Michael reaction **(5)**