



**GAN-144003**

Seat No. \_\_\_\_\_

**M. Sc. (Sem. IV) Examination**

**March / April – 2019**

**MSCOC - 403 : Bio Organic Chemistry**

Time : 3 Hours]

[Total Marks : 70

**Instruction :**

Figures shown on right hand side indicates marks.

**1** Answer the following ;

- (A) Discuss the Henderson-Hasselbalch equation to check behavior of weak acid and buffers. 7

**OR**

Describe absorption transport, mobilization and Biochemical function of Vitamin-A.

- (B) Describe absorption transport, mobilization and Biochemical function of folic acid. 7

**OR**

Describe absorption transport, mobilization and Biochemical function of Vitamin-B<sub>6</sub>.

**2** Answer the following ;

- (A) Define and classify peptides. Discuss how Sanger's method is useful to identify the N-terminal residue. 7

**OR**

Give classification of enzyme and give diagram, discuss activation energy with reference to catalyst.

- (B) Discuss enzymatic reaction of lysozyme. 7

**OR**

Write a brief note on enzyme inhibitor with suitable example.

**3** Answer the following ;

- (A) Name the components present in nucleotides and giving example show the order in which they are linked together. 7

**OR**

What are nucleic acid ? Give various hydrolysis reactions of nucleic acid.

- (B) Give complete classification of carbohydrates and its general nomenclature. 7

**OR**

Discuss the structure of alpha amylose and amylopectin with reference to their glycosidic linkages.

4 Answer the following ;

(A) Write a brief note on glycolipids and neutral lipids.

7

**OR**

Give an account to check purity of fats and oil with at least five parameters.

(B) Name any three essential fatty acids and discuss biosynthesis of fatty acid.

7

**OR**

What are lipids? Give classification of lipids and their biological importance..

5 Answer the following;

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- (i) Write structure of any two tocopherol .
- (ii) Give the conversion of pyridoxine to pyridoxamines.
- (iii) Give the factors affecting enzyme activity.
- (iv) Write structure and importance of Vitamin-D.
- (v) Give one biological function of Vitamin-H .
- (vi) What are antimetabolites ? Write their uses.
- (vii) Draw the structure and biological importance of D-glucose.
- (viii) What is induced dipole moment ?.
- (ix) State the types of RNA's.
- (x) What is meant by hydrolytic rancidity and oxidative rancidity ?
- (xi) Define iodine number.
- (xii) Define amphipathic lipid.
- (xiii) Define mutarotation.
- (xiv) Name the methods to check purity of fats and oil.

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