

**Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore - 641 043**

**Master Degree Examination - November, 2017
III - Semester**

**Class: II PG
Major: Botany**

**Time: 3 hours
Max. Marks: 60**

12MBOC15 - Plant Biochemistry

Part - A 10 × ½ =5

Choose the correct answer

1. The atom which is present in hydrogen bonding is
a) Hydrogen b) Sodium c) Calcium d) Sulphur
2. The pH of distilled water is
a) 4 b) 5 c) 6 d) 7
3. The major functions of carbohydrates include
a) structural framework b) storage c) both a and b d) synthesis
4. Glycogen in liver is used for
a) plasma glucose b) starch synthesis c) amylose synthesis
d) lipid synthesis
5. The natural lipids are readily soluble in
a) Oil b) Mercury c) Water d) none of these
6. Genetic mutation occurs in
a) Protein b) RNA c) DNA d) Nucleus
7. The repeating units of proteins are
a) Glucose units b) Amino acids c) Fatty acids d) Peptides
8. The first protein was sequenced by
a) Frederick Sanger b) Alberto Santos-Dumon c) Alan Turing
d) Al-Battani
9. The melting point of phenol is
a) 55°C b) 43°C c) 64°C d) 75°C
10. The word 'flavonoids' derived from the language
a) French b) Latin c) Japanes d) Chines

Part – B

5x4=20

Answer ALL questions

Each answer should not exceed 200 words to one page

11. a) Explain the structure of atom with diagram.

(or)

11.b) Describe the colligative properties.

12.a) Write short notes on chemical composition of biomolecules.

(or)

12.b) What is monosaccharide? Explain it.

13.a) Briefly explain the structure of lipids.

(or)

13.b) Give an account of general properties of lipids.

14.a) Explain the primary proteins.

(or)

14.b) What is Ramachandran plot? Explain it.

15.a) Describe the alkaloids.

(or)

15.b) Briefly explain the functions of flavonoids.

Part – C

5x7=35

Answer ALL questions

Each answer should not exceed 600 words to three pages

16. a) Write an essay on stabilizing interactions.

(or)

16. b) Give a detailed account on thermodynamics.

17.a) Enumerate the structure, function and metabolism carbohydrates.

(or)

17.b) Write an essay on oligosaccharides and polysaccharides.

18.a) Give an account of classification of lipids.

(or)

18.b) Describe the structure and functions of nucleic acids with diagram.

19.a) Write an essay on amino acids.

(or)

19.b) Give a detailed account on vitamins.

20.a) Explain the structure, function and synthesis of phenols.

(or)

20.b) Enumerate the structure, function and synthesis of steroids.
