(6 pages)

Reg. No. :.....

Code No. : 10821 E **Sub. Code : SMBO 52**

B.Sc (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Fifth Semester

Botany — Main

BIOCHEMISTRY AND BIOPHYSICS.

(For those who joined in July 2017 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. Which one of the following has maximum number of atoms?

   (a) 18g of H_20

   (b) 18g of O_2

   (c) 18g of CO_2

   (d) 18g of CH_4

2. Pure water is known to be which of the followings?

   (a) Weak electrolytes

   (b) Strong electrolytes

   (c) Neither weak nor strong

   (d) Not on electrolytes

3. Lactose can also be called as

   (a) Milk sugar (b) Malt sugar

   (c) Cane sugar (d) Grape sugar

4. Simplest carbohydrate is

   (a) Dihydroxy acetone

   (b) Glyceroldehyde

   (c) Glucose

   (d) Sucrose

5. Which of these amino acids are not optical activity?

   (a) gysteines

   (b) lysines

   (c) arginies

   (d) glycines

6. Enzymes are

(a) Proteins (b) Carbohydrates

(c) Nucleic acids (d) DNA molecule

7. Name the enzyme secreted by Pancreas?

(a) Pepsin

(b) Chymotrypsin

(c) Tryspin

(d) Alcohol dehydrogenase

8. Name an enzyme that digest fat.

(a) Lipase (b) Sucrase

(c) Maltase (d) Fructase

9. The plastid responsible for photosynthesis

(a) Leucoplast (b) Chromoplast

(c) Chloroplast (d) All of these

10. All are colourless plastids (leucoplast) excepts

(a) elaioplast (b) amyloplast

(c) proteinoplast (d) rhodoplast

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain about paper chromatography

Or

(b) Write a note on chemical bond.

12. (a) Discuss simple and complex carbohydrates.

Or

(b) Enumerate the properties and function of Lignin.

13. (a) Describe about non-essential amino acids.

Or

(b) Compare monomeric and polymeric proteins

14. (a) Describe the central role of enzymes as Biological catalyst.

Or

(b) Write the non competitive enzyme inhibition.

15. (a) Describe the structure of mitochondria.

Or

(b) Give a notes about omission spectrum.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not be exceed 600 words.

16. (a) Explain the working principles of colorimeter.

Or

(b) Explain about Thin layer chromatography

17. (a) Explain the classification of carbohydrates.

Or

(b) Compare, contrast the Aldose and Ketose group of sugar.

18. (a) Explain the protein classification based on the structure.

Or

(b) Oligomeric proteins – Explain.

19. (a) Explain the classification and nomenclature of enzymes.

Or

(b) Describe the general characters of lipid.

20. (a) Describe the chlorophyll fluorescence.

Or

(b) Explain the structure and role of ATP in the biological system.

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