Reg. No. :

Code No.: 20370 E Sub. Code: AMBO 53

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023

Fifth Semester

Botany - Core

## BIOCHEMISTRY AND BIOINFORMATICS

(For those who joined in July 2020 onwards)

Time: Three hours

Maximum: 75 marks

PART A —  $(10 \times 1 = 10 \text{ marks})$ 

Answer ALL questions.

Choose the correct answer:

- The instrument that is used to determine the concentration of biochemical compounds is called
  - (a) pH meter
  - (b) Colorimeter
  - (c) Chromatography
  - (d) Centrifugation
- 7. The enzymes acting on lipids are named as
  - (a) nucleases
- (b) lipases
- (c) sucrase
- (d) lactase
- 8. The protein part of an enzyme is called
  - (a) Apoenzyme
  - (b) Holoenzyme
  - (c) Isoenzyme
  - (d) Endoenzyme
- One of the following is nucleic acid sequence database
  - (a) CATH
- (b) PIR
- (c) SCOP
- (d) DDBJ
- 10. PIR is
  - (a) enzyme database
  - (b) protein database
  - (c) nucleic acid database
  - (d) none of these

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- Svedberg invented
  - (a) Colorimeter
  - (b) pH meter
  - (c) Spectrophoto meter
  - (d) Centrifuge
- 3. Which of the following is the storage polysaccharide in plants?
  - (a) Pectin
- (b) Chitin
- (c) Starch
- d) Cellulose
- 4. This is the disaccharide
  - (a) maltose
- b) glucose
- (c) starch
- (d) cellulose
- 5. One of the following is an example for tertiary structure of proteins
  - (a) prolamine
- b) albumin
- (c) myoglobin
- (d) haemoglobin
- 6. Ergosterol is
  - a) carbohydrate (b) protein
  - (c) lipid
- (d) a solvent

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## PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions choosing either (a) or (b). Each answer should not exceed 250 words.

11. (a) Describe covalent bonds.

Or

- (b) Write short notes on centrifuge.
- 12. (a) Describe the structure of sucrose.

Or

- (b) Write the physical properties of monosaccharides.
- 13. (a) Explain the tertiary structure of proteins.

Or

- (b) Describe the properties of lipids.
- 14. (a) Write the classification of enzymes.

Or

- (b) Explain the role of enzymes in industry.
- 15. (a) Write short notes on internet.

Or

(b) Write short notes on PIR.

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[P.T.O.]

## PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b). Each answer should not exceed 600 words.

(a) Give a brief account on atom.

Or

- (b) Write the principle, structure and uses of pH meter.
- 17. (a) Write the properties of disaccharides.

Or

- (b) Describe the structure and properties of starch.
- 18. (a) Describe the primary and secondary structure of proteins.

Or

- (b) Write the classification of lipids.
- 19. (b) Explain the mechanism of enzyme action.

Or

(b) Write briefly about nomenclature of enzymes.

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20. (a) Write an essay on enzyme database.

Or

(b) Write an essay on computer.

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