Avinashilingam Institute for Home Science and Higher Education for Women
[Deemed to be University] Coimbatore-641 043

Bachelor's Degree Examination – November 2018

III Semester

Class : II UG **Time: 3 hours**
Major : Biochemistry and Biotechnology **Max. Marks: 100**

15BBCC05 Intermediary Metabolism-I

Part-A **10 x 1=10**
Choose the correct answer

1. In glycolysis glucose is converted into
   a. Pyruvate b. glycogen c. sucrose d. starch

2. In vertebrates, gluconeogenesis mainly takes place in
   a. stomach b. liver c. heart d. intestine

3. Glycolytic pathway regulation involves
   a. allosteric stimulation by ADP b. allosteric inhibition by ATP
   c. feedback, or product, inhibition by ATP d. all of the above

4. The released energy obtained by oxidation of glucose is stored as
   a. a concentration gradient across a membrane b. ADP
   c. ATP d. NAD^+

5. Fatty acids which must be obtained from food are called as
   a. non-essential fatty acids b. saturated fatty acids
   c. unsaturated fatty acids d. essential fatty acids

6. Unsaturated fats have
   a. low melting points b. high melting points
   c. high boiling points d. melts at room temperature

7. Naturally occurring fatty acids have number of carbon atoms in range
   a.10-15 b. 12-28 c. 30-40 d. 50-100

8. Saturated fat is a type of fat in which fatty acids have
   a. single bonds b. double bonds
   c. triple bonds d. coordinate covalent bonds

9. In deamination, amino acid is converted into
   a. aldol acid b. ketoacid c. hydrochloric acid d. carboxylic acid

10. Process of breakdown of amino acids to α keto acids is called
    a. cisamination b. amination c. transamination d. Racemization

Part - B 5x6=30

Answer the following

Answer should not exceed 400 words or two pages

11. a. Write a note on galactose metabolism.

(or)

11. b. Describe the synthesis of mannose.

12. a. Illustrate about glycogenolysis.

(or)

12. b. Give a note on glucouronic acid pathway.

13. a. Describe the β-oxidation of fatty acids.

(or)

13. b. Give a note on ω-oxidation of fatty acid.

14. a. Explain the biosynthesis of unsaturated fatty acid.

(or)

14. b. Discuss the essential fatty acids.

15. a. Write short note on transamination.

(or)

15. b. Enumerate the decarboxylation.

Part - C 5x12=60

Answer the following

Answer should not exceed 800 words or four pages

16. a. Describe the TCA cycle.

(or)

16. b. Explain the glyoxalate cycle.

17. a. Elucidate the Hexose monophosphate pathway.

(or)

17. b. Describe the gluconeogenesis.

18. a. Enumerate the catabolism of unsaturated fatty acids.

(or)

18. b. Discuss the oxidation of one carbon fatty acids.

19. a. Elaborate on chain elongation of fatty acid.

(or)

19. b. Discuss the synthesis of saturated fatty acid.

20. a. Give a detail note on urea cycle.

(or)

20. b. Describe the general breakdown of protein.

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