

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2019
(Third Semester)

Branch- BIOTECHNOLOGY

METABOLISM

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

- 1 The priming function in glycogen Synthesis is carried out by_____

(i) Lysine	(ii) Arginine
(iii) Glycogenin	(iv) Glutamate
- 2 The rate of breakdown of metabolites is termed as_____

(i) metabolic state	(ii) metabolism
(iii) steady-state	(iv) homeostasis
- 3 Is the energy source of the brain during starvation?

(i) Fat	(ii) Ketone bodies
(iii) Protein	(iv) Lipids
- 4 Organ in the animal body have the ability to synthesize triacylglycerol.

(i) Spleen	(ii) Kidney
(iii) Liver	(iv) Adipose tissues
- 5 Identify the Purine base of nucleic acid in the following.

(i) Cytosine	(ii) Thymine
(iii) Uracil	(iv) Adenine
- 6 What is the composition of nucleoside - ?

(i) a sugar + a phosphate	(ii) a base + a sugar
(iii) a base + a phosphate	(iv) a base + a sugar + phosphate
- 7 Transamination is catalyzed by____

(i) transferases	(ii) aminotransferases
(iii) hydrogenases	(iv) dehydrogenases
- 8 _____ amino acid is essential for infants.

(i) Methionine and serine	(ii) Arginine and Histidine
(iii) Valine and Lysine	(iv) Lysine and Leucine
- 9 Iodine is a part of thyroid hormone and is essential for the prevention of____

(i) Goiter	(ii) Osteoporosis
(iii) Muscle weakness	(iv) Diarrhea
- 10 Insulin deficiency is associated with_____

(i) Reduced Lipolysis	(ii) Increased Ketogenesis
(iii) Reduced gluconeogenesis	(iv) Reduced proteolysis

SECTION-B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 5 = 25)

11a Describe about uranic acid pathway.

OR

- 12 a Give an account on β - oxidation of fatty acids.
OR
b Give detailed note on of facts of oil and fats on health with a suitable case study.
- 13 a Explain in detail about catabolism of purines.
OR
b Describe about gout disease / syndrome.
- 14 a Explain in detail about deamination and transamination.
OR
b Give an account on glucose - alanine cycle.
- 15 a Discuss about Phenylketonuria and its importance in metabolism.
OR
b Describe about pompe disorder.

SECTION -C (40 Marks!

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 8 = 40)

- 16 a Discuss about glycolysis pathway and energetics.
OR
b Describe the steps involved in catabolism of glycogen.
- 17 a Explain about biosynthesis of saturated fatty acids.
OR
b Give an account on Synthesis of Cholesterol.
- 18 a Discuss about biosynthesis of pyrimidines.
OR
b Explain about disorders associated with purine biosynthesis.
- 19 a Detailed note on metabolism of any two aromatic amino acids.
OR
b Give a detailed account on urea cycle.
- 20 a Explain in detail about source, absorption, transport and deficiency disorder of iron.
OR
b Describe about Hepatic Jaundice and its metabolic changes.

Z-Z-Z

END