

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(Third Semester)

Branch – BIOTECHNOLOGY

METABOLISM

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- Which of the following enzymes are not involved in galactose metabolism?
(i) Galactokinase (ii) Glucokinase
(iii) Galactose-1-Phosphate Uridyltransferase (iv) UDP-Galactose 4- epimerase
- Fatty acid synthesis occurs in _____.
(i) Cytosol (ii) Mitochondria
(iii) Endoplasmic reticulum (iv) All of the above
- Uridine present in RNA is _____.
(i) nucleotides (ii) pyrimidine
(iii) purine (iv) nucleoside
- _____ is not a classified form of conjugated proteins.
(i) Lipoproteins (ii) Glycoproteins
(iii) Metalloproteins (iv) Complete proteins
- Calcium is excreted by _____ organs.
(i) Kidney (ii) Kidney and intestine
(iii) Kidney and liver (iv) Kidney and pancreas

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6.a. Describe glycolysis pathway.
(OR)
b. Summarise glycogen metabolism.
- 7.a. Expound the effects of oil and fats on human health.
(OR)
b. State salient features of omega fatty acid.
- 8.a. Explain salvage pathway for purine biosynthesis.
(OR)
b. Explain about gout disorder.
9. a. State biosynthesis of tyrosine with flowchart.
(OR)
b. Outline the urea cycle with suitable diagram.
- 10.a. Narrate demerits of alcoholism.
(OR)
b. Describe advantages of a well balanced diet.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11.a. Discuss TCA cycle with its key metabolites.
(OR)
b. Justify gluconeogenesis mechanism with helpful intermediates.
- 12.a. Analyse alpha and omega oxidation.
(OR)
b. Enumerate biosynthesis of saturated fatty acid.
- 13.a. Explain the disorder of purine metabolism.
(OR)
b. Discuss symptom properties and treatment methods for Lesch-Nyhan syndrome.
- 14.a. Differentiate deamination and transamination.
(OR)
b. Summarise starvation with biological consequences.
- 15.a. Enumerate jaundice and its repercussions.
(OR)
b. Discuss mineral metabolism with one example.

Z-Z-Z

END