

2020

BIOCHEMISTRY — GENERAL

Paper : GE/CC-3

Full Marks : 50

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

1. Answer **any five** of the following : 2×5
- (a) Which step is called the ‘pacemaker’ step of glycolysis?
 - (b) Define β oxidation of fatty acid.
 - (c) Mention the utilization of the byproducts of tyrosine metabolism.
 - (d) Name two accessory pigments of photosynthesis with its function.
 - (e) What is salvage pathway?
 - (f) Define fermentation.
 - (g) Name five coenzymes of PDH complex.
 - (h) How many ATP is needed for urea cycle?
2. Answer **any two** of the following :
- (a) (i) How galactose enter into metabolism pathway?
(ii) What are the end products of purine and pyrimidine metabolism? 3+2
 - (b) (i) Describe glyoxylate pathway.
(ii) Write the full structure of TAG. 4+1
 - (c) Mention the pathway of gluconeogenesis. 5
 - (d) (i) Name two glycogen storage diseases.
(ii) Where chain elongation of fatty acids takes place and how it is elongated? 2+(1+2)
3. Answer **any three** of the following :
- (a) (i) ‘Glycolysis and gluconeogenesis occurs reciprocally’— Explain.
(ii) Write the importance of Pentose Phosphate Pathway. 5+5
 - (b) (i) Describe the role of mitochondria in respiratory chain.
(ii) How fatty acids biosynthesis is regulated? 5+5

Please Turn Over

- (c) (i) Discuss the role of insulin and glucagon of glucose metabolism.
(ii) What is FAS complex?
(iii) Differentiate between Oxidative phosphorylation and Photo-phosphorylation. 3+4+3
- (d) (i) Discuss the C₄ pathway of photosynthesis.
(ii) How glycogen synthesis and glycogenolysis are regulated? 5+5
- (e) (i) How deoxyribonecleotide is formed from ribonucleotide?
(ii) What is transamination reaction?
(iii) What is albinism? Write down the cause. 3+2+(2+3)
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