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Paper Code : BS-BIO301 Biology

UPID : 003488

Time Allotted : 3 Hours

Full Marks : 70

*The Figures in the margin indicate full marks.**Candidate are required to give their answers in their own words as far as practicable***Group-A (Very Short Answer Type Question)**

1. Answer any ten of the following :

[1 x 10 = 10]

- (i) Which organelle is responsible for photosynthesis in plant cell?
- (ii) Write down the name of six classes of microbes.
- (iii) Who is the father of genetics?
- (iv) What is the chemical composition of bacterial cell wall?
- (v) Give an example of multiple allele.
- (vi) Which organelle is known as protein factory of cell?
- (vii) What is the monomer of microtubule?
- (viii) Which organelle is known as suicidal sac of the cell?
- (ix) Which organelle is known as powerhouse of cell?
- (x) How many molecules of pyruvate are produced at end of glycolysis?
- (xi) Write an example of physical anti-microbial agent.
- (xii) What are the nitrogenous bases present in DNA?

Group-B (Short Answer Type Question)

Answer any three of the following :

[5 x 3 = 15]

1. Describe eukaryotic transcription process. [5]
2. Write a short note on CAM photosynthesis. [5]
3. Write a short note on cyclic photophosphorylation. [5]
4. Write a short note on incomplete dominance. [5]
5. Write a short note on properties of genetic code. [5]

Group-C (Long Answer Type Question)

Answer any three of the following :

[15 x 3 = 45]

6. Write down the identifying properties of algae, archaea and virus. [5+5+5]
7. (a) Define monosaccharide. [2]
- (b) Write a short note on cellulose and starch. [5]
- (c) Write down different types of monosaccharide on the basis of the number of carbon atom. [8]
8. (a) Describe TCA cycle. [8]
- (b) Calculate how many molecules of ATP will be synthesized under aerobic cellular respiration. [7]
9. (a) Define saturated fatty acid, unsaturated fatty acid, essential fatty acid and non-essential fatty acid. [4]
- (b) Write down the function of lipid. [3]
- (c) What is wax? Give example of animal wax and plant wax. [15]
10. Write down law of independent assortment with proper explanation.

*** END OF PAPER ***