

Answer five questions, selecting two from each Group whereas Q.No. 1 is compulsory.

1. Select the correct answer of the following :

- (a) Cell theory was proposed by
 (i) Watson and Crick (ii) Meselson and Stahl
 (iii) Schleiden and Schwann (iv) None of the above
- (b) The cell organelles called Suicidal bags are
 (i) ER (ii) Golgi complex (iii) Peroxisomes (iv) Lysosomes
- (c) The latest model for plasma membrane is
 (i) Lamellar model (ii) Unit membrane model
 (iii) Fluid mosaic model (iv) Molecular lipid model
- (d) Ribosomes are the centre of
 (i) Respiration (ii) Protein synthesis (iii) Fat synthesis (iv) Glycolysis
- (e) Glycogen in our body is stored in
 (i) Liver (ii) Liver and spleen
 (iii) Liver and muscles (iv) Spleen and muscles
- (f) Lactose is made up of
 (i) Glucose + Fructose (ii) Glucose + Glucose
 (iii) Glucose + Galactose (iv) Fructose + Fructose
- (g) Number of essential amino acids in a man is :
 (i) 7 (ii) 8 (iii) 10 (iv) 14
- (h) The proteinous part of an enzyme is called :
 (i) Isoenzyme (ii) Apoenzyme (iii) Coenzyme (iv) Prosthetic enzyme
- (i) DNA replication takes place during :
 (i) G-1 phase (ii) G-2 phase (iii) S-phase (iv) M-phase
- (j) Crossing over occurs during :
 (i) Zygotene (ii) Pachytene (iii) Diplotene (iv) Prophase
- (k) The hormone which regulates the basal metabolism in our body is secreted from :
 (i) Pituitary (ii) Thyroid (iii) Pancreas (iv) Adrenals
- (l) Diabetes mellitus occurs due to the hyposecretion of :
 (i) Oxytocin (ii) Vasopressin (iii) Thymosine (iv) Insulin
- (m) Haemoglobin is a type of
 (i) Vitamin (ii) Skin pigment (iii) Carbohydrate (iv) Respiratory pigment
- (n) Meroblastic cleavage refers to one of the following types of division in eggs :
 (i) Incomplete (ii) Total (iii) Spiral (iv) Horizontal
- (o) Human placenta is :
 (i) Haemochorial (ii) Syndesmochorial (iii) Yolk sac (iv) Haemo-endothelial

Group-A

2. Give an account of structure and classification of proteins. LNMUonline.com
3. Describe properties of water as biological solvent.
4. Describe ultra structure and functions of Chromosome.
5. Define immunity. Give a brief idea of cellular basis of immunity.
6. Write short notes on any three of the following :
 (a) Free energy (b) Mitochondria (c) Ribosome (d) Cell cycle (e) Vitamins

Group-B

7. Give an account of digestion of protein in a mammal.
 - a brief account of respiratory pigments.
9. Explain types of eggs in vertebrates giving suitable diagrams.
10. Describe the extra embryonic membrane in chick and their roles.
11. Describe histophysiology of thyroid gland.