

MUDRA LIFE SCIENCES

VOLUME-04

PART B & C

MODEL QUESTION BANK FOR THE TOPICS:

7. SYSTEM PHYSIOLOGY-ANIMAL

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7. SYSTEM PHYSIOLOGY-ANIMAL

UNIT - 1

1. The living and growing part of human hair is
 - a) Hair shaft
 - b) Hair root
 - c) Hair follicle
 - d) Hair papilla

2. Grey matter consists of
 - a) A large number of neurons
 - b) A large number of nerve cell bodies
 - c) A large number of nerve fibers
 - d) Neuroglia

3. Blood is formed in the human adult by the
 - a) Heart
 - b) Spleen
 - c) Red bone marrow
 - d) Yellow bone marrow

4. On chemical analysis, a bottle – cork is found to contain primarily
 - a) Carbohydrates
 - b) Lipids
 - c) Tannins
 - d) Proteins

5. During the course of prolonged starvation and fasting, glucose or glycogen is synthesized from non - carbohydrate precursors by the process of
 - a) Glycogenesis
 - b) Glycolysis
 - c) Gluconeogenesis
 - d) Glycogenolysis

6. Which of the following compounds found in all living organisms are rich in phosphorus?
 - a) Carbohydrates
 - b) Fats
 - c) Nucleic acids
 - d) Proteins

7. The country that leads in life expectancy for both males and females is
 - a) USA
 - b) CIS
 - c) UK
 - d) Japan

8. Which of the following statement is correct about membrane cholesterol?
- (A) The hydroxyl group is located near the centre of the lipid layer
 - (B) Most of the cholesterol is in the form of a cholesterol ester
 - (C) The steroid nucleus form forms a rigid, planar Structure
 - (D) The hydrocarbon chain of cholesterol projects into the extracellular fluid
9. The surface tension in intestinal lumen between fat droplets and aqueous medium is decreased by
- (A) Bile Salts
 - (B) Bile acids
 - (C) Conc. H₂SO₄
 - (D) Acetic acid
10. ADH test is based on the measurement of
- (A) Specific gravity of urine
 - (B) Concentration of urea in urine
 - (C) Concentration of urea in blood
 - (D) Volume of urine in ml/minute
11. The specific gravity of urine normally ranges from
- (A) 0.900–0.999
 - (B) 1.003–1.030
 - (C) 1.000–1.001
 - (D) 1.101–1.120
12. Specific gravity of urine increases in
- (A) Diabetes mellitus
 - (B) Chronic glomerulo-nephritis
 - (C) Compulsive polydypsia
 - (D) Hypercalcemia
13. Fixation of specific gravity of urine to 1.010 is found in
- (A) *Diabetes insipidus*
 - (B) Compulsive *polydypsia*
 - (C) Cystinosis
 - (D) Chronic glomerulonephritis

14. Addis test is the measure of
- (A) Impairment of the capacity of the tubule to perform osmotic work
 - (B) Secretory function of liver
 - (C) Excretory function of liver
 - (D) Activity of parenchymal cells of liver
15. Lactate formed in muscles can be utilized through
- (A) Raport-Luebeling cycle
 - (B) Glucose-alanine cycle
 - (C) Cori's cycle
 - (D) Citric acid cycle
16. Action of salivary amylase on starch leads to the formation of
- (A) Maltose
 - (B) Malto-triose
 - (C) Both of the above
 - (D) Neither of these
17. Congenital galactosaemia can lead to
- (A) Mental retardation
 - (B) Premature cataract
 - (C) Death
 - (D) All of the above
18. Catalytic activity of salivary amylase requires the presence of
- (A) Chloride ions
 - (B) Bromide ions
 - (C) Iodide ions
 - (D) All of these
19. Cyclic AMP is formed from ATP by the enzyme adenylate cyclase which is activated by the hormone:
- (A) Insulin
 - (B) Epinephrine
 - (C) Testosterone
 - (D) Progesterone
20. Which one of the following would be expected in pyruvate kinase deficiency?
- (A) Increased levels of lactate in the R.B.C
 - (B) Hemolytic anemia
 - (C) Decreased ratio of ADP to ATP in R.B.C
 - (D) Increased phosphorylation of Glucose to Glucose-6-phosphate

21. Ehlers-Danlos syndrome characterized by hyper-mobile joints and skin abnormalities is due to
- (A) Abnormality in gene for procollagen
 - (B) Deficiency of lysyl oxidase
 - (C) Deficiency of prolyl hydroxylase
 - (D) Deficiency of lysyl hydroxylase
22. Transfer of the carbamoyl moiety of carbamoyl phosphate to ornithine is catalysed by a liver mitochondrial enzyme:
- (A) Carbamoyl phosphate synthetase
 - (B) Ornithine trans-carbamoylase
 - (C) N-acetyl glutamate synthetase
 - (D) N-acetyl glutamate hydrolase
23. Cytosolic and mitochondrial carbamoyl phosphate synthetase has the following similarity:
- (A) Both use ammonia as a substrate
 - (B) Both provide carbamoyl phosphate for urea synthesis
 - (C) Both require N-acetylglutamate as an activator
 - (D) Both are allosteric enzymes
24. Cystinuria results from inability to
- (A) Metabolise cysteine
 - (B) Convert cystine into *cysteine*
 - (C) Incorporate cysteine into proteins
 - (D) Reabsorb cystine in renal tubules
25. The defective enzyme in histidinemia is
- (A) Histidine carboxylase
 - (B) Histidine decarboxylase
 - (C) Histidase
 - (D) Histidine oxidase

26. All the following statements about phenylketonuria are correct except
- (a) Phenylalanine cannot be converted into tyrosine
 - (b) Urinary excretion of phenylpyruvate and phenyllactate is increased
 - (c) It can be controlled by giving a low phenylalanine diet
 - (d) It leads to decreased synthesis of thyroid hormones, catecholamines and melanin
27. Biological value of a protein is
- (a) The percentage of ingested protein/nitrogen absorbed into circulation
 - (b) The percentage of ingested protein/nitrogen in the body
 - (c) The percentage of ingested protein utilized for protein synthesis in the body
 - (d) The gain in body weight (gm) per gm of protein ingested
28. Net protein utilization depends upon
- (A) Protein efficiency ratio
 - (B) Digestibility coefficient
 - (C) Digestibility coefficient and protein efficiency ratio
 - (D) Digestibility coefficient and biological value
29. Synthesis of the following enzymes is increased during starvation.
- (A) Digestive enzymes
 - (B) Gluconeogenic enzymes
 - (C) Urea cycle enzymes
 - (D) Glucokinase
30. In hypoparathyroidism
- (A) Plasma calcium and inorganic phosphorous are low
 - (B) Plasma calcium and inorganic phosphorous are high
 - (C) Plasma calcium is low and inorganic phosphorous high
 - (D) Plasma calcium is high and inorganic phosphorous low

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