

**Q.P. CODE: M102A031****Dr NTR UNIVERSITY OF HEALTH SCIENCES: VIJAYAWADA- 520008****MBBS DEGREE EXAMINATION - AUGUST, 2024****FIRST M.B.B.S. EXAMINATION****BIOCHEMISTRY - PAPER-II (SET-B)****(Multiple Choice Questions)****Time: 20 Minutes****Max Marks: 20****Note: Answer all questions.**

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**SECTION-I (MCQs - 20 MARKS)****1X2=20**

1. Which of the following enzymes requires Adenosine Triphosphate (ATP) for its action?

- a. Argino Succinate lyase
- b. Argino Succinate synthetase
- c. Arginase
- d. Glutaminase

2. Which of the following contributes nitrogen atoms to both purine and pyrimidine rings?

- a. Aspartate
- b. Carbamoyl phosphate
- c. Carbon dioxide
- d. Glutamate

3. The greatest buffering capacity at physiological pH would be provided by a protein rich in which of the following amino acids?

- a. Serine
- b. Cysteine
- c. Alanine
- d. Histidine

4. Purely ketogenic amino acid is

- a. Leucine
- b. Threonine
- c. Isoleucine
- d. Tyrosine

5. RNA synthesis is different from DNA synthesis in the following ways, except:

- a. No efficient proofreading function during RNA synthesis
- b. Primer is not involved in RNA synthesis
- c. DNA synthesis occurs with 5'-3' polarity, whereas RNA synthesis occurs with 3'-5' polarity
- d. 'U' replaces 'T' as the complementary base for 'A' in RNA synthesis

6. The translation factor which helps in forming ternary tRNA methionine complex is:

- a. eIF2C
- b. eIF4A
- c. eIF4B
- d. eIF3

7. Nucleosomes are a fundamental unit of DNA organization. It consists of histones complexed to DNA. Histone proteins present in nucleosomes are rich in which of the following amino acids:

- a. Histidine and lysine

- b. Lysine and arginine
- c. Arginine and histidine
- d. Histidine and valine

8. Which out of the following is not a product of tyrosine metabolism:

- a. Melanin
- b. Melatonin
- c. Thyroxin
- d. Epinephrine

9. Which one of these inhibits adenylyl cyclase:

- a. ACTH
- b. ADH
- c. Angiotensin II
- d. Glucagon

10. Which is the major intracellular cation:

- a.  $\text{Na}^+$
- b.  $\text{K}^+$
- c.  $\text{Ca}^{2+}$
- d.  $\text{Mg}^{2+}$

11. Normal anion gap metabolic acidosis is caused by:

- a. Cholera
- b. Starvation
- c. Ethylene glycol poisoning
- d. Lactic acidosis

12. The major urinary buffer is:

- a. Bicarbonate
- b. Phosphate
- c. Protein
- d. Hemoglobin

13. Marker enzyme for Golgi complex is:

- a. Galactosyl transferase
- b. Catalase
- c. Glucose 6 phosphatase
- d. None

14. Which of the following is a negative phase reactant

- a. C Reactive protein
- b. Albumin
- c. Fibrinogen
- d. Ferritin

15. Plasmids contain a

- a. Circular single stranded DNA
- b. Linear single stranded DNA
- c. Circular double stranded DNA
- d. Linear double stranded DNA

16. Which of the following immunoglobulin crosses placenta

- a. IgG
- b. IgM
- c. IgE
- d. IgA

17. Which of the following activity is not seen in DNA polymerase I

- a. 5' – 3' polymerase
- b. 3' – 5' polymerase

- c. 5' – 3' exonuclease
- d. 3' – 5' exonuclease

18. Highly repetitive DNA is seen in

- a. Telomere
- b. Centromere
- c. Both
- d. None

19. Which enzyme defect is seen in Homocystinuria type I

- a. Methionine synthase
- b. Cystathionine beta synthase
- c. Cystathioninase
- d. None of the above

20. All are involved in iron metabolism except

- a. Hepcidin
- b. Transferrin
- c. Ceruloplasmin
- d. Ferritin

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