

**KALOJI NARAYANA RAO UNIVERSITY OF
HEALTH SCIENCES
WARANGAL, TELANGANA STATE-506 002
MBBS FIRST YEAR SUPPLEMENTARY
EXAMINATIONS: FEBRUARY/MARCH, 2024
BIOCHEMISTRY (New Regulation)
PAPER - II**

Time: 3 Hours

Max Marks: 100

Note: Answer all questions Draw diagrams whenever necessary with Black Ball point pen/HB pencil/any dark Colour pencil

Multiple Choice Questions: 10 X 1=10

- 1) A Zwitter ion is
 - a) Positive
 - b) Negative
 - c) No net charge
 - d) None of the above
- 2) The major donor of carbon atom to the one carbon pool is
 - a) Serine
 - b) Tyrosine
 - c) Threonine
 - d) Proline
- 3) Which enzyme protects DNA from ageing.

- a) DNA polymerase
 - c) Deoxyribonuclease
 - b) Topoisomerase
 - d) Telomerase
- 4) Which amino acid is required for both purine and pyrimidine synthesis.
- a) Glycine
 - c) Alanine
 - b) Aspartate
 - d) Glutamine
- 5) Which one of the following is a termination codon in mitochondrial translation
- a) UAA
 - c) UGA
 - b) UAG
 - d) AGA
- 6) Tumour marker for prostate cancer are
- a) Alkaline phosphatase
 - c) Bence-Jones proteins
 - b) Prostate specific antigen
 - d) Calcitonin
- 7) Which of the following diseases are not attributed to free radical damage.
- a) Rheumatoid arthritis
 - c) Hypothyroidism
 - b) Chronic glomerulonephritis
 - d) Cataract
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8) The predominant cation in extracellular fluid (ECF) is

- a) Na
- c) Ca
- b) K
- d) Mg

9) At the pH of blood 7.4, the ratio between the carbonic acid and bicarbonate fractions is

- a) 1:10
- c) 1:30
- b) 1:20
- d) 1:40

10) Monoclonal antibodies are useful for

- a) Early detection of pregnancy
- c) Treatment of autoimmune diseases
- b) Treatment of cancer
- d) All the above

Essay/ Long Answer Questions: 2 X 15=30

11) Why is ammonia toxic to the body. Describe the metabolic reactions involved in the detoxification of ammonia. Add a note on the defects in the metabolic cycle associated with detoxification of ammonia. (4+7+4)

12) What is the normal blood pH. Explain the role of plasma buffers and renal mechanism in the maintenance of acid base balance of the body. (1+7+7)

Short Answer Questions: 7X6=42

13) Describe the metabolism of polyamines; functions

and clinical importance.

- 14) Describe on biosynthesis of Haem, add a note on regulation of Haem synthesis.
- 15) Describe the purine salvage pathway. Add a note Lesch Nyhan syndrome.
- 16) Mention about the principles, basic mechanism and tools of recombinant DNA technology.
- 17) Discuss on the classification of liver function tests in detail. And explain the mechanism of Vanden Berg test reaction.
- 18) Discuss how lifelong learning helps the growth of a physician.
- 19) Explain the mechanism of Hormone action.

Very Short Answer Questions: 6X3=18

- 20) What is genetic code? Describe the characteristics of genetic code.
- 21) Detoxification by conjugation.
- 22) Structure of Immunoglobulin.
- 23) Describe the composition and functions of extracellular matrix.
- 24) Mention anticancer drugs used in chemotherapy and their mode of action.
- 25) Orotic Aciduria.
