

MBBS: Biochemistry Paper 2 Part 1.
ABVMUUP
Paper Code: 2122130003

- Q1. Give a detailed account of the transcription process. (20 marks)
How is it regulated? Name inhibitors of transcription.
- Q2. Write briefly on: (4 x 5 = 20 marks)
(a) Multiple myeloma
(b) GTT
(c) Mutations
(d) Genetic code
- Q3. Multiple Choice Questions: (Each question carries 1 mark = 10)
- Gene amplification can be achieved by:
A) Southern blotting
✓ C) Polymerase chain reaction
B) DNA finger printing
D) Gene cloning
 - All the following are nucleic acids, EXCEPT:
A) Plasmids
✓ B) Prions
C) Cosmids
D) Virons
 - Negative nitrogen balance is observed in:
A) Pregnancy
C) Convalescence
✓ B) Chronic fever
D) Growth period
 - Which enzymes protects DNA from ageing?
A) DNA polymerase
C) Deoxyribonuclease
✓ B) Topoisomerase
D) Telomerase
 - Serum alkaline phosphatase is increased in:
A) Hypothyroidism
✓ C) Bone diseases
B) Carcinoma of prostate
D) Myocardial infarction
 - Proximal renal tubular acidosis is characterized by all, EXCEPT:
A) Metabolic acidosis
✓ C) Urine pH of 4.5
B) Normal anion gap
D) Hyperchloremia
 - Which is the anticoagulant of choice for biochemical estimation in general:
✓ A) EDTA
C) Lithium heparin
B) Oxalate-flouride mixture
D) Citrate
 - Which anions are present in normal urine:
A) Phosphate
✓ C) Chloride
B) Sulfate
D) Proteinate
 - A patient with infective hepatitis is likely to have all the following findings, except:
A) Hyperbilirubinemia
✓ C) Absence of bile salts in urine
B) Billirubinuria
D) Elevated AST
 - All the techniques listed below measures proteins, except:
A) Nephelometry
C) ELISA
✓ B) Flame photometry
D) Radial immunodiffusion

Q1. What are xenobiotics? Describe the role of glutathione in detoxification. (20 marks)

Q2. Write short notes on:

(5 marks each = 20)

- Maple syrup urine disease
- Gonadotropins
- Oncogenes
- Visual cycle

Q3. Multiple choice questions:

(Each question carries 1 mark: Total 10 marks)

- In human body, highest concentration of ascorbic acid is found in:
 - Liver
 - Adrenal cortex
 - Posterior pituitary gland
 - Muscle

- The metal present in vitamin B12 is:
 - Copper
 - Cobalt
 - Chromium
 - Manganese

- Alpha-fetoprotein level in serum is increased in:
 - Prostatic cancer
 - Hepatoma
 - Lung cancer
 - Nephritis

Name the defective enzyme in phenylketonuria:

- Cystathionase
- Phenylalanine hydroxylase
- Homogentisic acid oxidase
- Para-hydroxyphenylpyruvate oxidase

- Nutritional status of a person can be assessed by all, EXCEPT:
 - Serum protein estimation
 - Hemoglobin level
 - Gain or loss in weight
 - Mid arm circumference

- Features of galactosemia include the following, EXCEPT:
 - Cataract
 - Hepatosplenomegaly
 - Mental retardation
 - Hemolytic anemia

- Sunlight helps maximally in the synthesis of which of the following vitamin in the body:
 - Vitamin A
 - Vitamin B
 - Vitamin C
 - Vitamin D

- All the following are characteristics of thalassemia major, EXCEPT:
 - It is manifested when the affected genes are in homogenous state
 - It is the result of gene deletion
 - It is a common molecular disease in India
 - It is incompatible with life

- Nyctalopia (abnormal inability to see in dim light) is due to the deficiency of:
 - Vitamin K
 - Vitamin E
 - Vitamin B12
 - Vitamin A

- Steroid hormones are produced from:
 - Purine
 - Pyrimidine
 - Cholesterol
 - Stercobilinogen