



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(MRIT)-2022/B.Sc.(MRIT)-2023

Course Name – Clinical Biochemistry & General Pathology

Course Code - BMRITC102

(Semester I)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Name the condition marked by a low TSH?
 - a) Hypothyroidism
 - b) Hyperthyroidism
 - c) Goitre
 - d) Thyroid Cancer
- (ii) This condition of chronic inflammation of the thyroid leading to under-activity is
 - a) Thyroiditis
 - b) Goitre
 - c) Hypothyroidism
 - d) Hyperthyroidism
- (iii) Which of following are the components of radioimmunoassay?
 - a) Radiolabeled Antigens
 - b) Monoclonal Antibodies
 - c) Unlabeled Antigens
 - d) All of these
- (iv) Write the application of Autoclave used for sterilization
 - a) Principle of autoclave
 - b) Application in diagnostic lab
- (v) Which of the following immune cell is unable to phagocytose
 - a) neutrophils
 - b) macrophages
 - c) T-cells
 - d) monocytes
- (vi) State the laboratory department that studies antigen-antibody reaction:
 - a) Chemistry
 - b) Microbiology
 - c) Pathology
 - d) Immunology
- (vii) Predict the durable material that is used to make glasswares:
 - a) Polythelene
 - b) Soda lime
 - c) Borosilicate
 - d) Polystyrene
- (viii) The process that destorys all the microorganisms including spores are:
 - a) Volcanization
 - b) Sterilization
 - c) Disinfection
 - d) Asepsis
- (ix) Microtitre Well Plate is composed of:
 - a) Polypropylene
 - b) Poly vinyl Chloride
 - c) Polystyrene
 - d) Nylon

- (x) Define neoplasia
 a) Normal growth of tissue
 c) Inflammation of tissues
 b) Abnormal, uncontrolled growth of cells
 d) Repair of damaged tissue
- (xi) The compound used for Chelation Therapy
 a) Heparin
 c) EDTA
 b) Tetracycline
 d) All of these
- (xii) Autoclaves are used in the medical applications to perform _____
 a) Vulcanization
 c) Heating
 b) Sterilization
 d) Cleaning
- (xiii) Rise in blood urea in pre-renal cases is mainly due to :
 a) Dehydration
 c) Due to renal failure
 b) Multi organ failure
 d) Increased urea synthesis
- (xiv) The Predominant extracellular cation is
 a) Bicarbonate
 c) Potassium
 b) Sodium
 d) Chloride
- (xv) ELISA (enzyme-linked immunosorbent assay) allows for rapid screening and quantification of the presence of _____ in a sample
 a) DNA
 c) Amino acid
 b) Antigen
 d) Protein

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Define hyperplasia and give examples of the physiological and pathological hyperplasia (3)
3. Distinguish between transudate and exudate permeability (3)
4. Identify the instrument and write its principle used for biochemical assessment in laboratory diagnosis (3)
5. Differentiate between hemolytic jaundice and obstructive jaundice (3)
6. Evaluate the pattern of necrosis in a tissue. (3)

OR

Design a flowchart on the role of hypoxia in causing cell injury. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Summarize the mode of carcinogenesis by genetic, chemical and microbial agents. (5)
8. Differentiate between water bath and incubator (5)
9. Explain Gestational diabetes (5)
10. Define free radical and explain how it triggers the cell injury (5)
11. Define inflammation and state about the etiological factors of inflammation (5)
12. Compile the causes of autoimmune diseases in the human being. (5)

OR

Design the stepwise procedure of ELISA (5)
