



BRAINWARE UNIVERSITY

Term End Examination 2020 - 21

Programme – Bachelor of Science in Medical Lab Technology

Course Name – Clinical Biochemistry

Course Code - BMLT302

Semester / Year - Semester III

Time allotted : 75 Minutes

Full Marks : 60

[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 60=60

1. (Answer any Sixty)

(i) Surface antigens on live cells can be identified by

- | | |
|--------------------|-----------------|
| a) RIA | b) ELISA |
| c) Electrophoresis | d) Both a and b |

(ii) Factors influence immunogenicity include

- | | |
|-------------------------|---------------------|
| a) foreignness | b) molecular size |
| c) chemical composition | d) all of the above |

(iii) Horse-radish peroxidase (HRPO) is a type molecule that is:

- | | |
|---------------------|-----------------------|
| a) Primary Antibody | b) Secondary Antibody |
| c) Antigen | d) Enzyme |

(iv) Antibody binds specifically with Antigen site called

- | | |
|-------------|------------|
| a) Paratope | b) Epitope |
| c) Epimer | d) Anomer |

(v) Home pregnancy test kit is an example of:

- | | |
|----------------------|-------------------|
| a) Sandwich ELISA | b) Indirect ELISA |
| c) Competitive ELISA | d) Direct ELISA |

(vi) The primary regulator of plasma sodium concentration is :

- a) Renin
- b) Aldosterone
- c) Anti diuretic hormone (ADH)
- d) Insulin

(vii) Differential centrifugation is based on the differences in _____ of biological particles of different _____.

- a) Size and Density
- b) Sedimentation rate, sizes and density.
- c) Size, structure
- d) Mass, size

(viii) SDS-PAGE works based on the principle of:

- a) Eletrophoretic mobility
- b) Mass of proteins
- c) Specific Gravity
- d) None of these

(ix) The example of local posining is

- a) Oxalic acid
- b) Sulphuric acid
- c) Chromic acid
- d) None of these

(x) Which of the following metal toxicity leads to encephalopathy

- a) Copper
- b) Iron
- c) Lead
- d) Zinc

(xi) Which Zinc salt leads to corrosive action

- a) Zinc Pyrophosphate
- b) Zinc hydrate
- c) Zinc Sulphate
- d) Zinc Chloride

(xii) Which zinc salt destroy smell or odur

- a) Zinc hydrate
- b) Zinc Sulphate
- c) Zinc Gluconate
- d) Zinc Pyrophosphate

(xiii) Osmomolality is measured by

- a) osmo-theromometer
- b) osmolith

c) osmogram

d) osmometer

(xiv) A single & fundamental form of load cell which is basically used as a transducer in the operation of a weighing machine undergoes the conversion of

-

a) Force into an electrical signal

b) Pressure into an electrical signal

c) Acceleration into an electrical signal

d) Velocity into an electrical signal

(xv) Which device is used to separate the components of blood ?

a) Auto-Analyzer

b) Magnetic stirrer

c) Hematocrit

d) Centrifuge

(xvi) Which centrifuge machine is used mostly at Laboratory ?

a) Micro centrifuge

b) Battery-operated centrifuge

c) Electric-operated centrifuge

d) All of these

(xvii) At what speed do you centrifuge blood?

a) 2200-2500 RPM

b) 3000-3200 RPM

c) 1000-1500 RPM

d) 4000 RPM

(xviii) In most laboratories the commonest test performed to estimate plasma glucose is :

a) Folin Wu test

b) Fehling's test

c) Hexokinase test

d) Benedict test

(xix) Fluoride is used during collection of blood samples for glucose estimation because

a) It inhibits enolase

b) Inhibits aldolase

c) Acts as anticoagulant only

d) All of the above

(xx) Best investigation to diagnose diabetes in first pregnancy

- a) OGTT
- b) Fasting & PP blood glucose
- c) HbA1C
- d) All of these

(xxi) Considering 10 hours after intake of food, if the blood glucose level (per 100 ml) is 100 to 125 then the person is said to be

- a) Cirrhosis
- b) Cancerous
- c) Diabetic
- d) Pre-diabetic

(xxii) Peptide bond absorbs light maximum at

- a) 400 nm
- b) 190 nm
- c) 280 nm
- d) 260 nm

(xxiii) The most widely used method of protein estimation

- a) GPO-POD Method
- b) Biuret method
- c) Bradford method
- d) None of these

(xxiv) The normal range of serum total proteins in adults

- a) 2 - 5 gm/100 ml
- b) 8 - 12 gm/100 ml
- c) 1 - 3 gm/100 ml
- d) 6 - 8 gm/100 ml

(xxv) BUN can be estimated by

- a) Jaffe's method
- b) Berthelot method
- c) Folin-Wu method
- d) All of these

(xxvi) Increased BUN is,

- a) Azotemia
- b) Nephrotic syndrome
- c) Enzyme defect
- d) None of these

(xxvii) Normal range of Blood Urea Nitrogen (BUN)

- a) 12 - 45 mg/dl
- b) 8 - 25 mg/dl
- c) 4 - 16 mg/dl
- d) 10 - 20 mg/dl

(xxviii) Uric acid is excreted mostly by

- a) Heart
- b) Liver
- c) Brain
- d) Kidney

(xxix) Reduced levels of Uric acid can be found in

- a) Arthritis
- b) Gout
- c) Wilson's disease
- d) Impaired renal function

(xxx) GFR is at birth

- a) 90 ml/min
- b) 30 ml/min
- c) 60 ml/min
- d) 125 ml/min

(xxxii) Normal urinary excretion of creatinine in female is

- a) 0.5 - 1 mg/dl
- b) 3 - 5 gm/day
- c) 1 - 2 gm/day
- d) 0.5 - 0.8 gm/day

(xxxiii) ALP is increased in all of the following except

- a) Paget's diseases
- b) Osteogenic sarcoma
- c) Osteomalacia
- d) Osteoporosis

(xxxiv) The normal range of total Bilirubin in adults

- a) 1.00 - 4.05 mg/dl
- b) Up to 1.10 mg/dl
- c) Up to 0.25 mg/dl
- d) 1.05 - 4.00 mg/dl

(xxxv) Essential fatty acids are all except

- a) Linoleic acid
- b) Arachidonic acid
- c) Linolenic acid
- d) Nervonic acid

(xxxvi) Highest source of cholesterol is

- a) Vanaspati
- b) Butter

c) Margarine

d) Egg yolk

(xxxvi) Highest amount of PUFA is present in

a) Safflower oil

b) Sunflower oil

c) Corn oil

d) Soyabean oil

(xxxvii) The most common familial hyperlipidemia is

a) Type I

b) Type II

c) Type III

d) Type IV

(xxxviii) Number which indicates higher tendency of rancidity

a) Acid number

b) Acetyl number

c) Iodine number

d) Polenske number

(xxxix) The principle of flame photometry is

a) Emission spectrophotometry

b) Luminescence

c) Absorption spectrophotometry

d) All of these

(xl) The cation that plays a major role in determining the osmotic pressure of the plasma is

a) Potassium

b) Sodium

c) Phosphate

d) Chloride

(xli) Renin is released by the

a) Kidney

b) Lungs

c) Liver

d) Pancreas

(xlii) The Predominant extracellular cation is

a) Bicarbonate

b) Sodium

c) Potassium

d) Chloride

(xliii) Potassium levels in the body are regulated by

- a) ADH
- b) PTH
- c) Insulin
- d) All of these

(xliv) Calcium balance is influenced by

- a) ADH & Parathyroid hormone levels
- b) ADH & Aldosterone levels
- c) Parathyroid hormones & vitamin d levels
- d) Aldosterone & Parathyroid hormone levels

(xlv) ELISA (enzyme-linked immunosorbent assay) allows for rapid screening and quantification of the presence of _____ in a sample

- a) DNA
- b) Antigen
- c) Amino acid
- d) Protein

(xlvi) What is the role of goat anti-rabbit IgG horseradish peroxidase conjugate in the experiment?

- a) Antigen
- b) Primary antibody
- c) Secondary antibody
- d) Substrate

(xlvii) Which is working principle of ELISA ?

- a) Ag-Ab neutralization
- b) Ag-Ab complex
- c) Ag-Ab neutralization & Ag-Ab complex
- d) None of these

(xlviii) Which of the following is not a type of radiation detectors?

- a) Geiger Muller counter
- b) Proportional counter
- c) Semiconductor detector
- d) Flame emission detector

(xlix) Allergic contact dermatitis is

- a) A non-immune response caused by a direct action of an agent on the skin
- b) An immediate type-I hypersensitivity reaction
- c) A delayed type-IV hypersensitivity
- d) Characterized by the intensity of reaction

reaction

being proportional to the elicitation dose

(l) The most common target organ of Neurotoxicity is the

- a) Heart
- b) Lung
- c) CNS (brain & spinal cord)
- d) Skin

(li) The most rapid exposure to a chemical would occur through which of the following routes

- a) Oral
- b) Subcutaneous
- c) Inhalation
- d) Intramascular

(lii) Which of the following is NOT an initiating event in carcinogenesis

- a) DNA adduct formation
- b) DNA stand breakage
- c) Oxidative damage of DNA
- d) Mitogenesis

(liii) Mercury poisoning leads to

- a) Pink disease
- b) Minamata disease
- c) kaposhki syndrom
- d) Both a and b

(liv) Hair examination in forensic is done by

- a) Cellulose Acetate method
- b) Polaroid coater method
- c) Micrometry
- d) All of these

(lv) For examination of diatoms sample should collect from

- a) Blood
- b) Bone marrow
- c) Tissue
- d) Epithelial cells

(lvi) A study of relationships between organisms and their environment

- a) Monoecious
- b) Monospecific
- c) Ecology
- d) Ethnology

(lvii) Immunoaffinity chromatography can be used in biochemical applications to

- a) break down antibody structure
- b) purify protein antigen
- c) break down antigen and analyze quantitatively
- d) none of the above

(lviii) Which of the following radioactive element is generally involved in RIA?

- a) Tritium
- b) Carbon-14
- c) Iodine-125
- d) All of these

(lix) RAST test (radio allergosorbent test) is often used to detect

- a) antibodies associated with allergies (IgE)
- b) antigen associated with allergies (IgE)
- c) bacteriophages
- d) None of the above

(lx) An antigen preparation and an antibody preparation are tested by immunodiffusion. Three bands are found, indicating that

- a) the temperature was too high
- b) the antibody was impure
- c) there was more than one antigen
- d) there was one antibody and one antigen