



# BRAINWARE UNIVERSITY

**Term End Examination 2021 - 22**

**Programme – Diploma in Pharmacy**

**Course Name – Biochemistry & Clinical Pathology**

**Course Code - 1.4T**

**( Year I )**

**Time allotted : 1 Hrs.35 Min.**

**Full Marks : 80**

[The figure in the margin indicates full marks.]

## Group-A

(Multiple Choice Type Question)

1 x 80=80

*Choose the correct alternative from the following :*

- (1) Biuret test is qualitative test for
 

a) Protein	b) Carbohydrate
c) Lipid	d) Vitamin
- (2) Molisch's test is qualitative test for
 

a) Lipid	b) Protein
c) Vitamin	d) Carbohydrate
- (3) Co-enzyme is
 

a) Protein in nature	b) Non-protein in nature
c) Acidic in nature	d) None of the above
- (4) The normal platelet count is
 

a) 2-5 lacs per cu.mm of blood	b) 2-8 lacs per cu.mm of blood
c) 3-5 lacs per cu.mm of blood	d) 1-5 lacs per cu.mm of blood
- (5) Which hormone is responsible for regulation of water metabolism
 

a) Vasopressin	b) Aldosterone
c) Renin	d) All of these
- (6) Lactose is made up of
 

a) One glucose molecule and one galactose molecule	b) Two glucose molecule
c) Two galactose molecule	d) One glucose and one fructose molecule
- (7) Heparin is a
 

a) Monosaccharide	b) Aldose
c) Disaccharide	d) Hetero polysaccharide

- (8) Rickets occur due to deficiency of
- |              |              |
|--------------|--------------|
| a) Vitamin E | b) Vitamin A |
| c) Vitamin D | d) Vitamin K |
- (9) The normal WBC count is
- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| a) 4000 to 11000 per cu. mm of blood | b) 9000 to 11000 per cu. mm of blood |
| c) 4000 to 15000 per cu. mm of blood | d) 6000 to 11000 per cu. mm of blood |
- (10) Which of the following is not excreted through urine?
- |                |           |
|----------------|-----------|
| a) Lactic acid | b) Sodium |
| c) Sulphur     | d) Urea   |
- (11) Milky white colour of urine is due to the presence of
- |                  |                 |
|------------------|-----------------|
| a) Ketone bodies | b) Urea         |
| c) Uric acid     | d) Fat globules |
- (12) Which of the following is a sulphur containing amino acid
- |               |               |
|---------------|---------------|
| a) Glycine    | b) Tryptophan |
| c) Methionine | d) Valine     |
- (13) Which Nucleic Acid is responsible for transmission of genetic codes?
- |                |                  |
|----------------|------------------|
| a) DNA         | b) RNA           |
| c) DNA and RNA | d) None of these |
- (14) Normal hemoglobin content in female
- |                   |                  |
|-------------------|------------------|
| a) 12-14 mg/100cc | b) 8-10 mg/100cc |
| c) 15-20 mg/100cc | d) None of these |
- (15) Deficiency of vitamin B12 leads to
- |                      |             |
|----------------------|-------------|
| a) Scurvy            | b) Pellagra |
| c) Pernicious anemia | d) Rickets  |
- (16) Goiter occurs due to the deficiency of \_\_\_\_\_
- |       |       |
|-------|-------|
| a) Br | b) Na |
| c) Cl | d) I  |
- (17) The normal blood glucose level is
- |                |                 |
|----------------|-----------------|
| a) 80-120mg/dl | b) 120-150mg/dl |
| c) 10-50mg/dl  | d) 200-300mg/dl |
- (18) The coenzyme form of niacin is
- |        |                 |
|--------|-----------------|
| a) NAD | b) TPN          |
| c) FMN | d) All of these |
- (19) pH of urine is
- |            |           |
|------------|-----------|
| a) 4 to 8  | b) 5 to 6 |
| c) 7 to 10 | d) 5 to 7 |
- (20) In anaerobic glycolysis number of ATP production from one mole of glucose is
- |      |      |
|------|------|
| a) 3 | b) 2 |
| c) 5 | d) 7 |
- (21) The blood pH is about
- |        |        |
|--------|--------|
| a) 7.4 | b) 6.8 |
| c) 4.5 | d) 14  |

- (22) Fasting blood sugar range is  
a) 70 - 100 mg/dl  
b) 90 - 120 mg/dl  
c) 60 - 120 mg/dl  
d) 40 - 90 mg/dl
- (23) The normal value of ESR in men is  
a) 5-15 mm  
b) 4-10 mm  
c) 5-13 mm  
d) 9-11 mm
- (24) The process of blood clotting is initiated by  
a) Prothombin  
b) Fibrinogen  
c) Fibrinogen  
d) Thromboplastin
- (25) Vitamin K deficiency results in the disorder of  
a) Defective blood clotting  
b) Dermatitis  
c) Anemia  
d) Blindness
- (26) Ribose is  
a) Triose  
b) Tetrose  
c) Pentose  
d) Hexose
- (27) Alanine is a  
a) Essential amino acid  
b) Non essential amino acid.  
c) Both essential and non essential amino acid.  
d) Carbohydrate
- (28) Transamination takes place principally in  
a) Liver  
b) Muscles  
c) Stomach  
d) Gall bladder
- (29) Proteins are precipitated by adding  
a) Water  
b) Sodium Hydroxide  
c) Formaldehyde  
d) Trichloro acetic acid
- (30) Red to reddish brown colour of urine is due to the presence of  
a) Fat globules  
b) Ketone bodies  
c) Uric acid  
d) Hemoglobin
- (31) The major site of fat digestion  
a) Large Intestine  
b) Small Intestine  
c) Kidney  
d) Liver
- (32) The function of iron is  
a) Formation of bones and teeth  
b) Control excitability of nerves  
c) Regulate permeability of membrane  
d) Synthesis of hemoglobin
- (33) The general formula for lipid is  
a)  $C_nH_{2n}O_n$   
b)  $C_nH_{2n+1}O_n$   
c)  $C_nH_{2n}COOH$   
d)  $C_nH_{2n+1}COOH$
- (34) The fats are  
a) Completely insoluble in water  
b) sparingly soluble in water  
c) Completely soluble in water  
d) None of these
- (35) Cholesterol consist of  
a) 27 carbons  
b) 30 carbons  
c) 14 carbons  
d) 35 carbons

- (36) Wilson disease occurs due to abnormal secretion of
- |                     |                     |
|---------------------|---------------------|
| a) Cu <sup>2+</sup> | b) Iron             |
| c) Ca <sup>2+</sup> | d) Mg <sup>2+</sup> |
- (37) Cobalt is component of
- |                |              |
|----------------|--------------|
| a) Vitamin-B6  | b) Vitamin-A |
| c) Vitamin-B12 | d) Vitamin-D |
- (38) The main protein of connective tissue is
- |             |            |
|-------------|------------|
| a) Keratin  | b) Myosin  |
| c) Collagen | d) Melanin |
- (39) The sugar present in nucleic acid is
- |            |             |
|------------|-------------|
| a) Ribose  | b) Xylose   |
| c) Glycose | d) Fructose |
- (40) Which element is required for the contraction of muscles?
- |              |              |
|--------------|--------------|
| a) Calcium   | b) Sodium    |
| c) Magnesium | d) Manganese |
- (41) The first amino acid during protein synthesis
- |                          |                        |
|--------------------------|------------------------|
| a) Arginine              | b) Formylated arginine |
| c) Formylated methionine | d) Methionine          |
- (42) Creatinine level in urine gets elevated in
- |                      |                   |
|----------------------|-------------------|
| a) Addison's disease | b) Hypothyroidism |
| c) Typhoid fever     | d) Nephritis      |
- (43) Hyperlipidemia is excess of
- |                                  |                    |
|----------------------------------|--------------------|
| a) Cholesterol and triglycerides | b) Free fatty acid |
| c) Glucose                       | d) Ketone bodies   |
- (44) Which one of these vitamin is a part of coenzyme
- |              |                  |
|--------------|------------------|
| a) Vitamin-A | b) Vitamin-C     |
| c) Thiamine  | d) None of these |
- (45) Xanthoproteic test is positive in protein containing
- |                         |                        |
|-------------------------|------------------------|
| a) Sulphur containing   | b) Alpha-amino acid    |
| c) Aliphatic amino acid | d) Aromatic amino acid |
- (46) Neutral amino acid is
- |                  |              |
|------------------|--------------|
| a) Leucine       | b) Lysine    |
| c) Aspartic acid | d) Histidine |
- (47) Blood platelets are formed by
- |           |                          |
|-----------|--------------------------|
| a) W.B.C  | b) Bonemarrow            |
| c) Spleen | d) Spleen and Bonemarrow |
- (48) Lipogenesis is the formation of
- |                              |                       |
|------------------------------|-----------------------|
| a) Glucose from fats         | b) Fats from glucose  |
| c) Fats from surplus glucose | d) Glycogen from fats |
- (49) A keto sugar can be detected by
- |                      |                  |
|----------------------|------------------|
| a) Fehling's test    | b) Benedict test |
| c) Seliwanoff's test | d) Molisch test  |

- (50) Reichert-Meissel value of Butter is
- a) 32
  - b) 100
  - c) 12
  - d) 150
- (51) Deficiency of vitamin -B1 produces a disease known as
- a) Beriberi
  - b) Pellagra
  - c) Anemia
  - d) Scurvy
- (52) A component of Coenzyme A is \_\_\_\_\_
- a) Inosine
  - b) Thiamine
  - c) Pantothenic acid
  - d) Pyridoxine
- (53) The volume of water in the human body is \_\_\_\_\_
- a) 60%-70%
  - b) 90%-100%
  - c) 10%-20%
  - d) 30%-40%
- (54) Cellulose contains
- a) Beta glycosidic linkage
  - b) Alpha glycosidic linkage
  - c) Delta glycosidic linkage
  - d) Gamma glycosidic linkage
- (55) Starch contains
- a) Beta glycosidic linkage
  - b) Alpha glycosidic linkage
  - c) Delta glycosidic linkage
  - d) Gamma glycosidic linkage
- (56) Deficiency disease of vitamin-B2 is
- a) Beriberi
  - b) Glossitis
  - c) Infertility
  - d) Cancer
- (57) Deficiency disease of niacin is
- a) Beriberi
  - b) Epilepsy
  - c) Pellagra
  - d) Cheilosis
- (58) Scurvy occur due to deficiency disease of
- a) Vitamin-A
  - b) Vitamin-D
  - c) Vitamin-E
  - d) Vitamin-C
- (59) Co-enzymes are
- a) Heat stable
  - b) Heat unstable
  - c) Heat stable and Heat unstable
  - d) None of these
- (60) Protein that has different primary structure but performs same functions are named as
- a) Monomer
  - b) Dimer
  - c) Isoforms
  - d) Peptides
- (61) Haemoglobin is a pigment found in red blood cells and its function is to transport
- a) Oxygen
  - b) Carbon dioxide
  - c) Peptide
  - d) Amino acids
- (62) The primary structure of protein represent as
- a) Linear sequence of amino acid joined together by peptide bond
  - b) 3 dimensional structure of protein
  - c) Sub unit structure of protein
  - d) Helical structure of protein
- (63) A dipeptide has
- a) 2 amino acids and one peptide bonds
  - b) 2 amino acids and 2 peptide bonds
  - c) 3 amino acids and 3 peptide bonds
  - d) 4 amino acids and 4 peptide bonds

- (64) Tertiary structure of protein is maintained by
- Peptide bond
  - Di-sulphide bond
  - Hydrogen bond
  - All of these
- (65) Which of the following is not included in fat soluble vitamins?
- Vitamin A
  - Vitamin D
  - Vitamin E
  - Vitamin B
- (66) Starch is an example of
- Monosaccharide
  - Oligosaccharides
  - Polysaccharides
  - Lipids
- (67) Which of following is important in vision?
- Vitamin A
  - Vitamin B
  - Vitamin C
  - Vitamin D
- (68) Which of following is necessary for proper bone and tooth growth?
- Vitamin A
  - Vitamin B
  - Vitamin C
  - Vitamin D
- (69) Linkage which joins two amino acid units is called
- Peptide bond
  - Covalent bond
  - Ionic bond
  - Hydrogen bond
- (70) Which of following is added to fruit juices and flavoured drinks to prevent scurvy
- Vitamin A
  - Vitamin B
  - Vitamin C
  - Vitamin D
- (71) Which of following are called simplest carbohydrates?
- Monosaccharaides
  - Oligosaccharides
  - Polysaccharides
  - Starch
- (72) Which of following regulates blood calcium?
- Vitamin A
  - Vitamin B
  - Vitamin C
  - Vitamin D
- (73) Which of following are further classified as trioses, tetroses, pentoses, hexoses etc?
- Monosaccharaides
  - Oligosaccharides
  - Polysaccharides
  - Starch
- (74) Which of following are called building blocks of all proteins?
- Vitamins
  - Amines
  - Lipids
  - Amino acids
- (75) Molecular formula of glucose is
- C<sub>12</sub>H<sub>22</sub>O<sub>11</sub>
  - C<sub>18</sub>H<sub>32</sub>O<sub>16</sub>
  - C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>
  - None of these
- (76) Enzymes are protein in nature and are used as
- Biological catalyst
  - Chemical catalyst
  - Reaction inhibitor
  - Reaction stopper
- (77) Sugars which rotate plane of polarized light in clockwise direction are called
- Lactose sugar
  - Complex sugar
  - Dextrose sugar
  - Simple sugar

(78) Which of the following is aldotrioses?

a) Dihydroxyacetone

b) Glyceroldehyde

c) Ribose

d) Erythrose

(79) To possess optical activity, a compound must be

a) A carbohydrate

b) A hexose

c) Asymmetric

d) D-glucose

(80) Which of the following is a heteropolysaccharide?

a) Cellulose

b) Hyaluronate

c) Glycogen

d) Starch