



BRAINWARE UNIVERSITY

Term End Examination 2021 - 22

Programme – Bachelor of Science in Physician Assistant

Course Name – Biochemistry and Hematology

Course Code - BPA201

(Semester II)

Time allotted : 1 Hrs.15 Min.

Full Marks : 60

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

Choose the correct alternative from the following :

- (1) Which of the following is also known as invert sugar

a) Sucrose	b) Fructose
c) Dextrose	d) Glucose
- (2) Which of the following polysaccharide employed for the assessment of kidney function

a) Albumin	b) Glycogen
c) Keratan sulphate	d) Inulin
- (3) Name a glycosidic antibiotic

a) Streptomycin	b) Azithromycin
c) Penicillin	d) Glucovanillin
- (4) Ribose and deoxyribose differ in structure around a single carbon namely,

a) C1	b) C2
c) C3	d) C4
- (5) Name the pathway for glucose synthesis by non-carbohydrate precursors:

a) Glycogenesis	b) Glycolysis
c) Glycogenolysis	d) Gluconeogenesis
- (6) Chitin consists of:

a) N-acetyl muramic acid	b) N-acetyl glucosamine
c) D-glucose unit	d) N-acetyl muramic acid and N-acetyl glucosamine
- (7) Which is not a homopolysaccharide:

a) . Starch	b) Heparin
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- c) Glycogen
d) Cellulose
- (8) Non-carbohydrate moiety of glycosides is:
a) Aglycone
b) Glycosidic bond
c) Amylopectin
d) Amylose
- (9) Seliwanoff's test is used for the identification of:
a) Glucose and Fructose
b) Glucose and Lactose
c) Glucose and Maltose
d) Lactose and Sucrose
- (10) Which of these amino acids are essential for infants?
a) Methionine
b) Arginine and Histidine
c) Valine
d) Lysine and Leucine
- (11) Name of a imino acid:
a) Histidine
b) Tryptophan
c) Tyrosine
d) Proline
- (12) Triacylglycerol packed with the apolipoprotein and cholesterol in lipoprotein aggregate is called _____
a) Chylomicrons
b) VLDL
c) HDL
d) LDL
- (13) Name the energy source of the brain during starvation?
a) Fat
b) Ketone bodies
c) Protein
d) Lipid
- (14) Cholesterol is the precursor of
a) Steroid hormones
b) Vitamin A
c) Bile salts
d) Both (a) and (c)
- (15) Synthesis of fatty acid takes place when
a) fatty acid are plentiful
b) Carbohydrate is plentiful
c) carbohydrate and energy are plentiful
d) all options are wrong
- (16) VLDL stands for
a) Very low density lipid
b) Very Low Density liquid
c) Very Low Density Lipoprotein
d) All options are wrong
- (17) What is the biosynthetic source of all steroid hormones?
a) Cholesterol
b) Ketone bodies
c) Carbohydrate
d) Protein
- (18) Genetic mutation occurs in
a) Protein
b) RNA
c) DNA
d) Nucleus
- (19) DNA is the genetic material in
a) Viruses
b) Prokaryotes & Eukaryotes
c) Only in Eukaryotes
d) All statements are correct
- (20) Left handed DNA is
a) A-DNA
b) B-DNA
c) Z-DNA
d) C-DNA
- (21) What is the nature of an enzyme?

- a) Vitamin
c) Carbohydrate
- b) Lipid
d) Protein
- (22) Hexokinase is
- a) Cleaved phosphodiester bond
c) Incorporate phosphate group into substrate
- b) Cleavage of Peptide bond amino bonds
d) Cleave H bond
- (23) Hydrolases: catalyze the ___ of various bonds
- a) Oxidation
c) Isomerization
- b) Hydrolysis
d) Reduction
- (24) Deficiency of which vitamin causes Beri-Beri?
- a) Vitamin B12
c) Vitamin B6
- b) Vitamin B2
d) Vitamin B1
- (25) Name the vitamin which functions as hormone as well as visual pigment?
- a) Thiamine
c) Retinol
- b) Riboflavin
d) Folic acid
- (26) Chemical messengers secreted by ductless glands are called _____
- a) Lymph
c) Plasma
- b) Platelets
d) Hormones
- (27) Which of the following is protein hormone?
- a) Oxytocin
c) TSH
- b) Insulin
d) Antidiuretic hormone
- (28) How solid sodium carbonate be obtained from sodium carbonate solution?
- a) Centrifugation
c) It cannot be extracted
- b) Filtration
d) Evaporation
- (29) Isoenzymes (Isozymes):
- a) Catalyse the same reaction
c) Are physically distinct forms of the same enzyme
- b) Have different mobilities on electrophoresis
d) All statements are true
- (30) Gelatin & peptone can be differentiated by:
- a) Saturation test
c) Ninhydrin test
- b) Heat coagulation test
d) Millon's test
- (31) Blood is stained with ___ stain
- a) Methylene blue
c) Leishman stain
- b) Safranin
d) Carbol fuchsine
- (32) . Hemoglobin is a _____
- a) Reproductive pigment
c) Carbohydrate
- b) Respiratory pigment
d) Fat
- (33) Shape of red blood cells are:
- a) Triconcave
c) Biconcave
- b) Triconvex
d) Ocular
- (34) Process through which red blood cells are broken down in spleen and liver is called
- a) Hemolysis
c) Hemogram
- b) Hemocytosis
d) Hemometer

- (35) PCV is the _____
- a) Percentage of white blood cells in circulating blood b) Percentage of platelets in whole blood
 c) Percentage of red blood cells in circulating blood d) Percentage of Platelets
- (36) Which anticoagulant used in Arterial Blood Gas test?
- a) EDTA b) Heparin
 c) Aspirin d) Aspirin
- (37) Anticoagulants are also called as-
- a) Blood coagulators b) Vasodilators
 c) Blood thinners d) Blood thickeners
- (38) The most important step in the performance of a venipuncture is
- a) Selecting needle size b) Identifying the patient
 c) Collecting enough sample d) Positioning the patient
- (39) Before performing a venipuncture, phlebotomist tie a tourniquet because:
- a) To elevate the blood pressure b) To insure thrombosis occurs
 c) To dull the pain at the puncture site d) To locate the veins in the antecubital
- (40) Megaloblastic anemia is caused due to deficiency of _____
- a) Cobalamin b) Pyridoxine
 c) Niacin d) Folic acid
- (41) Pellagra is caused due to
- a) Niacin b) Thiamin
 c) cobalamin d) Riboflavin
- (42) Absence of oxygen in DNA structure at carbon number
- a) 3' b) 2'
 c) 4' d) 1'
- (43) Factors control gastric acid secretions are
- a) Ach b) Histamine
 c) Gastrin and secretin d) all of the above
- (44) Simple equation of carbohydrate is
- a) $[(CH)_2O]$ b) $[C(OH)_2]_n$
 c) $[C(H_2O)]_n$ d) $[CH_2O]_2n$
- (45) The pH of whole blood, pure gastric juice and saliva are
- a) 7.4-8.5, 2-3 & 6.8 respectively b) 7.4-8.5, 0.9 and 6.3-6.8 respectively
 c) 6.3-6.8, 0.9, 7.4-8.5 respectively d) 2-3, 7.4-8.8 & 6 respectively
- (46) The carbohydrate namely raffinose belongs from
- a) Complex sugar b) Monosaccharides
 c) Polysaccharides d) Oligosaccharides
- (47) Hemiketal and hemiacetal monosaccharides contains the functional groups of
- a) Ketone and aldehyde respectively b) Aldehyde and ester respectively
 c) Ester and ether respectively d) Aldehyde and ketone respectively
- (48) Epimer is the

- a) Two isomers with conformations that are different only at one carbone
 b) This the complete mirror image of each other
 c) Changes only in th efunctional groups but the number of carbon of two sugar are same
 d) Data insufficient
- (49) Structure of cellulose contain
 a) Beta 1,4 glycosidic bonds
 b) Alpha 1,4 glycosidic bond
 c) Alpha 1,6 glycosidic bond
 d) Both beta 1,4 glycosidic bond and 1,6 glycosiic bond
- (50) The disaccharide lactose made up with the combdinatin of
 a) glcose and fructose
 b) glucose nad galactose
 c) galactose and fructose
 d) glucose and ribose
- (51) 1Osmole equivalent with
 a) 1gm weight of the perticular solute
 b) gm moleccular weight of the perticular solute
 c) molality of the solute
 d) both MW or the 1 gm MW of the specific solute
- (52) Bond between structure of Lctose is
 a) alpha 1,6 glycosidic bond
 b) beta 1,4 glycosidic bond
 c) alpha 1,4 glycosidic bond
 d) N acetyl glycosidic bond
- (53) Oligo penta saccharides contains
 a) 3 galactose+1 glucose+ 1 fructose
 b) 2galactose+ 3glucose
 c) 1galactose+ 3glucose +1fructose
 d) 1glucose+1galactose+1ribose+1 fructose
- (54) Anomeric carbon is
 a) the new asymmetric carbon (C5 in glucose) that created in cyclization at the carbon bond to oxygen in hemiacetal
 b) the asymmetric carbon at the C2 of cyclic glucose
 c) the asymmetric carbon at the position of C4 of cyclic glucose structure
 d) the new asymmetric carbon (C1in glucose) that created by cyclization at the carbone bond to oxygen in hemiacetal
- (55) Which of the following is also known as invert sugar
 a) Sucrose
 b) Fructose
 c) Dextrose
 d) Glucose
- (56) What is the name of the drug which inhibits Na^+/K^+ pump across the cell membrane?
 a) Taxol
 b) Vinblastine
 c) Ouabain
 d) Quinone
- (57) Name the major storage form of carbohydrates in animals
 a) Cellulose
 b) Glycogen
 c) Chitin
 d) Starch
- (58) Hyaluronic acid is an example of:
 a) Disaccharide
 b) Oligosaccharide
 c) Hetropolysaccharide
 d) Glycoprotein
- (59) What is the site for gluconeogenesis as per modern concept:
 a) Liver
 b) Blood
 c) Muscles
 d) Brain

(60) Which of the following are major sites for glycogen storage

a) Adipose tissue

b) Bones

c) Muscle and liver

d) Kidney and liver