



BRAINWARE UNIVERSITY

Term End Examination 2021 - 22

Programme – Bachelor of Optometry

Course Name – General and Ocular Biochemistry

Course Code - BOPTO203

(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) All test are positive for lactose except:

a) Benedict test	b) Barfoed's test
c) Fehling's test	d) Osazon test
- (2) In Benedict test we can differentiate:

a) Glucose and Maltose	b) Glucose and Sucrose
c) Fructose and Glucose	d) None of these
- (3) Starch consists of:

a) Amylose and Amylopectin	b) Amylase and amylose
c) Amylopectin only	d) Amylodextrin and Amylose
- (4) In polysaccharide, monosaccharide are joined by:

a) Peptide bond	b) Glucose bond
c) Glycosidic bond	d) Covalent bond
- (5) Which is not a homopolysaccharide

a) Starch	b) Heparin
c) Glycogen	d) Cellulose
- (6) Non-carbohydrate moiety of glycosides is:

a) Aglycone	b) Glycosidic bond
c) Amylopectin	d) Amylose
- (7) Seliwanoff's test is used for the identification of:

a) Glucose and Fructose	b) Glucose and Lactose
c) Glucose and Maltose	d) None of the above
- (8) Lactulose is disaccharide comprised of :

a) Glucose & Galactose	b) Galactose & Fructose
c) Sucrose & Fructose	d) Fructose and Maltose
- (9) Artificial sweetener is:

a) Sucralose	b) Lactulose
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- c) Cellobiose
d) Hyaluronic acid
- (10) Storage protein includes:
a) Glutelin
b) Albumin
c) Immunoglobulins
d) None of these
- (11) Which of these is a hereditary disease caused due to an error in amino acid metabolism?
a) Homocystinuria
b) Albinism
c) Phenylketonuria
d) Both a and c
- (12) Which of these amino acids are essential for infants?
a) Methionine
b) Arginine and Histidine
c) Valine
d) Lysine and Leucine
- (13) The following non-protein amino acid:
a) Ornithine
b) Proline
c) Histidine
d) Lysin
- (14) Protein is Polymer of:
a) Peptides
b) Amino acids
c) Carbohydrates
d) Fatty acids
- (15) Parkinson's Disease is linked with decreased synthesis of:
a) Serotonin
b) Arginine
c) Dopamine
d) None of the above
- (16) The metabolite excreted in alkaptonuria is:
a) Phenylalanine
b) Bilirubin
c) Alkaline phosphatase
d) None of the above
- (17) Which of the following is fibrous amino acid:
a) Collagen
b) Chitin
c) Tyrosine
d) Pepsin
- (18) What is the nature of an enzyme?
a) Vitamin
b) Lipid
c) Carbohydrate
d) Protein
- (19) Name the enzyme secreted by pancreas
a) Pepsin
b) Chymotrypin
c) Trypsin
d) Alcohol dehydrogenase
- (20) Mark the CORRECT function of enzyme, Peptidase
a) Cleave phosphodiester bond
b) Cleave amide bonds
c) Remove phosphate from a substrate
d) Removal of H₂O
- (21) A _____ is a biocatalyst that increases the rate of the reaction without being changed
a) Aluminum oxide
b) Silicon dioxide
c) Enzyme
d) Hydrogen peroxide
- (22) What is an apoenzyme?
a) It is a protein portion of an enzyme active conjugated enzyme
b) It is a non-protein group
c) It is a complete, biologically
d) It is a prosthetic group
- (23) Which of this vitamin is associated with the coenzyme Biocytin?
a) Nicotinic acid
b) Thiamine
c) Pantothenic acid
d) Pyridoxine
- (24) Sex hormone is a _____
a) Water soluble hormone
b) Fat soluble hormone
c) Protein hormone
d) None of the above

- (25) Genetic mutation occurs in
- a) Protein
 - b) RNA
 - c) DNA
 - d) Nucleus
- (26) Z-DNA have a
- a) Double helical structure
 - b) Zig-Zag appearance
 - c) Uracil base
 - d) Single strand nature
- (27) Watson & Crick discover the DNA, They called it is:
- a) Helical & Double stranded
 - b) Double-helix
 - c) Twisted-ladder
 - d) Double stranded
- (28) Cholesterolemia means
- a) lack of functional LDL receptors
 - b) lack of functional HDL receptor
 - c) high sensitivity to fatty food intake
 - d) none of the above
- (29) Cholesterol is synthesized from
- a) Triglyceride
 - b) Acetyl CoA
 - c) Fatty acid
 - d) Bile
- (30) Blood Urea test is a screening test of
- a) Renal Function
 - b) Gastro function
 - c) Pulmonary function
 - d) Blood function
- (31) Creatine is produced from three amino acids:
- a) Glycine, arginine methionine
 - b) glycine, aspartate, methionine
 - c) glycine, lysine, arginine
 - d) none of these
- (32) Serotonin neurotransmitter is synthesized from
- a) Tryptophan
 - b) Tyrosine
 - c) Proline
 - d) phenylalanine
- (33) Consumption of which nutrient leads to the multiplication of oral bacteria?
- a) Fat
 - b) Carbohydrate
 - c) Protein
 - d) Fluoride
- (34) Iodine is a part of thyroid hormone and is essential for the prevention of
- a) goiter
 - b) osteoporosis
 - c) muscle weakness
 - d) diarrhea
- (35) The mineral which is considered important in maintaining electrical potential in nerves and membranes is
- a) magnesium
 - b) manganese
 - c) calcium
 - d) iron
- (36) Which of the following ion is required for the development of sound teeth with resistance to tooth decay?
- a) Fluoride ion
 - b) Sodium ion
 - c) Chloride ion
 - d) Magnesium ion
- (37) Selenium deficiency leads to
- a) liver necrosis
 - b) diarrhea
 - c) multiple sclerosis
 - d) Crohn's disease
- (38) Manganese is a key component of all of the following enzymes except
- a) arginase
 - b) pyruvate carboxylase
 - c) ceruloplasmin
 - d) Mn-superoxide dismutase
- (39) Which trace mineral is a component of the enzyme that activates vitamin A in the eye?
- a) Zinc
 - b) Iron
 - c) Iodine
 - d) Chromium

- (40) Manganese is needed for
- a) normal bone structure
 - b) reproduction and functioning of central nervous system
 - c) both (a) and (b)
 - d) muscle strengthening
- (41) Which among the following is an endocrine gland in the human body
- a) Salivary gland
 - b) Digestive gland
 - c) pituitary gland
 - d) sweat gland
- (42) Which hormone is secreted by the pituitary gland
- a) Adrenaline
 - b) Growth hormone
 - c) Insulin
 - d) Thyroxin
- (43) The digestive juice which has no enzyme
- a) Bile
 - b) Saliva
 - c) Intestinal juice
 - d) Gastric juice
- (44) Which amongst the following is the largest endocrine gland in the body
- a) Thyroid
 - b) Parathyroid
 - c) Thalamus
 - d) Pituitary
- (45) In human body the hormone which is secreted into blood and controls the rate of heart beat
- a) Adrenaline
 - b) Thyroxine
 - c) Insuline
 - d) Testosterone
- (46) What is the filter called that acts as an artificial kidney in hemodialysis?
- a) Dialyzer
 - b) Hemolyzer
 - c) Nephrolyzer
 - d) None of the above
- (47) The term used to determine the protecting power of a lyophilic colloid is
- a) oxidation number
 - b) coagulation value
 - c) Gold number
 - d) critical micelle concentration
- (48) Which of the following compounds form micelles, if their concentration is increased in aqueous solution?
- a) Urea
 - b) Glucose
 - c) Pyridinium Chloride
 - d) Dodecyl trimethyl ammonium chloride
- (49) The risk factors for type 2 diabetes mellitus include:
- a) being overweight
 - b) family history
 - c) high intake of dietary fat
 - d) All of the options listed are correct
- (50) The test for checking mean plasma glucose concentration over the previous 8-10 weeks is:
- a) Hemoglobin A1c
 - b) Oral glucose tolerance test (OGTT)
 - c) Fructosamine test
 - d) Fasting plasma glucose concentration
- (51) What is the first-line drug for patients with type 2 diabetes and obesity?
- a) Metformin
 - b) Insulin
 - c) Acrobase
 - d) sulphonylureas
- (52) What is the SI unit of viscosity?
- a) Candela
 - b) Poiseiulle
 - c) Newton/m
 - d) No units
- (53) Buffer solutions resist any change in pH. This is because _____.
- a) acids and alkalis in these solutions are shielded from attack by other ions
 - b) these give unionised acid or base on reaction with added acid or alkali
 - c) fixed value of pH
 - d) large excess of H^+ or OH^- ions
- (54) The type of cells found in retina are
- a) Purkinje cells
 - b) Schwann cells

- c) Neuroglial cells
d) Amacrine cells
- (55) Wilson's disease is an example of _____ and Menkes' syndrome is an example of _____
_____ .
- a) zinc deficiency; zinc toxicity
b) zinc deficiency; zinc toxicity
c) copper deficiency; copper toxicity
d) copper toxicity; copper deficiency
- (56) Hyperkalemia is related to
- a) High Potassium level
b) High Sodium level
c) High Chlorine level
d) High glucose level
- (57) The intake of diuretics leads
- a) Hypokalemia
b) Hyperkalemia
c) Hypocalcemia
d) All of these
- (58) What is the name of the drug which inhibits Na^+/K^+ pump across the cell membrane?
- a) Taxol
b) Vinblastine
c) Ouabain
d) Quinone
- (59) The carbon atom involved in osazon formation :
- a) 1 and 2
b) 3 and 4
c) 2 and 3
d) 5 and 6
- (60) Sorbitol and Mannitol are:
- a) Optical isomers
b) Enomers
c) Epimers
d) Stereoisomers