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
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) Seratonin
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 appearence
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) pitutary gland
d) sweat gland

(42) Which hormone is secreted by the pitutary 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) Pitutary

(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) Testosteron

(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) Steroisomers