



BRAINWARE UNIVERSITY

Term End Examination 2021 - 22

Programme – Bachelor of Technology in Electronics & Communication Engineering

Course Name – Biology

Course Code - BSC(ECE)401

(Semester IV)

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 cell organelles does not contain DNA?

a) chloroplast	b) lysosomes
c) nucleus	d) mitochondria
- (2) Which of the following cell organelles is absent in animal cells and present in a plant cell?

a) mitochondria	b) cytoplasm
c) vacuoles	d) nucleus
- (3) which of the following cell organelle is known as powerhouse of the cell?

a) mitochondria	b) nucleus
c) endoplasmic reticulum	d) lysosomes
- (4) _____ is the study of the cell, its types, structure, functions and its organelles.

a) biology	b) cell biology
c) microbiology	d) biotechnology
- (5) Which of the following cell organelles is called a suicidal bag?

a) lysosomes	b) peroxisomes
c) golgi bodies	d) mitochondria
- (6) Which of the following statements is true about chromosomes?

a) It is present within the nucleus	b) It carries genes and helps in inheritance
c) It is composed of DNA in the form of Chromatin and protein	d) all of these
- (7) Which of the following is not a double membrane-bound organelle?

a) Chloroplast	b) Mitochondria
c) Endoplasmic Reticulum	d) all of these
- (8) Enzymes are

a) Proteins	b) Carbohydrates
c) Lipids	d) None of these
- (9) The process of protein synthesis takes place in which of the following cell organelles?

- a) Nucleus
c) Vacuoles
- b) Cytoplasm
d) mitochondria
- (10) Name the simplest amino acid
- a) Asparagine
c) Tyrosine
- b) Alanine
d) Glycine
- (11) The prokaryotic cell membrane
- a) Contains metabolic enzymes
c) regulates the entry and exit of materials
- b) is selectively permeable
d) contains proteins and phospholipids
- (12) The tendency of an offspring to resemble its parent is known as
- a) Variation
c) Resemblance
- b) Heredity
d) Inheritance
- (13) Chromosomes are separated during
- a) Telophase
c) Anaphase
- b) Prophase
d) Metaphase
- (14) The function of Golgi complex within a cell is
- a) protein synthesis
c) metabolism
- b) transport
d) nucleic acid synthesis
- (15) The process of transfer of hereditary character from one generation to another is known as.....
- a) Genetics
c) Mutation
- b) Variation
d) Genes
- (16) The alternate form of a gene is
- a) Alternate type
c) Dominant character
- b) Recessive character
d) Allele
- (17) Pea plants were used in Mendel's experiments because
- a) They were cheap
c) They were available easily
- b) They had contrasting characters
d) All of these
- (18) Who is known as the father of genetics?
- a) Mendel
c) Morgan
- b) Watson
d) Bateson
- (19) Cristae are associated with
- a) Mitochondria
c) Golgi bodies
- b) Nucleus
d) None of these
- (20) Digestive enzymes are present in
- a) Liposomes
c) Vacuoles
- b) Lysosomes
d) Nucleus
- (21) _____ is absent in animal cells and present in a plant cell
- a) mitochondria
c) vacuoles
- b) cytoplasm
d) nucleus
- (22) This is known as powerhouse of the cell
- a) mitochondria
c) endoplasmic reticulum
- b) nucleus
d) lysosomes
- (23) It is called a suicidal bag within the cell
- a) lysosomes
c) golgi bodies
- b) peroxisomes
d) mitochondria
- (24) _____ is not a double membrane-bound organelle
- a) Chloroplast
c) Endoplasmic Reticulum
- b) Mitochondria
d) all of these

- (25) Which one is true about proteins?
- a) Proteins are made up of amino acids.
 - b) Proteins are essential for the development of skin, teeth and bones.
 - c) Protein is the only nutrient that can build, repair and maintain body tissues.
 - d) all of these
- (26) Double-helix structure of DNA is discovered by _____
- a) Gobind Khurana
 - b) Nirenberg
 - c) Watson and Crick
 - d) Darwin
- (27) What is the origin of replication?
- a) Particular site at which DNA replication starts
 - b) Site which prevents initiation
 - c) Random location on the DNA
 - d) Site at which replication terminated
- (28) Which of these amino acids are not optically active?
- a) Cysteine
 - b) Lysine
 - c) Arginine
 - d) Glycine
- (29) The monomeric unit of nucleic acid are called _____
- a) Nucleotides
 - b) Nucleosides
 - c) Pyrimidines
 - d) Purines
- (30) Who discovered nucleic acid?
- a) Watson and Crick
 - b) Griffith
 - c) Friedrich Miescher
 - d) Walter Gilbert
- (31) Longest stage of cell cycle is
- a) Interphase
 - b) Metaphase
 - c) Telophase
 - d) Prophase
- (32) This is the most common media of pollination in flowers without petals?
- a) Water
 - b) Insects
 - c) Wind
 - d) All of these
- (33) In genetics, the Reverse transcriptase helps in which among the following transcriptions?
- a) Single stranded DNA into double stranded DNA
 - b) Single stranded RNA into double stranded DNA
 - c) Single Stranded RNA into double stranded RNA
 - d) Double Stranded DNA into single stranded RNA
- (34) Which among the following sugars is maximum in Honey?
- a) Fructose
 - b) Maltose
 - c) Sucrose
 - d) Glucose
- (35) Which among the following is not found in RNA?
- a) Adenine
 - b) Guanine
 - c) Thymine
 - d) All of these
- (36) The cell organelles essential for Cellular respiration are
- a) Endoplasmic reticulum
 - b) Nuclei
 - c) Golgi complex
 - d) Mitochondria
- (37) Cell membranes contain some biochemicals which are responsible for cell recognition and adhesion. They are _____ ?
- a) Proteins
 - b) Glycoproteins and glycolipids
 - c) Lipids
 - d) None of these
- (38) Which among the following is / are correct regarding a mature sperm and ovum?
- a) They both are of approximately same size
 - b) They both have equal number of Chromosomes
 - c) They both contain flagella
 - d) None of these
- (39) DNA-replication is by the mechanism of
- a) conservative
 - b) semi-conservative

- c) dispersive
d) none of these
- (40) DNA replicates during
a) S phase
b) G phase
c) G₀ phase
d) M phase
- (41) Building blocks of Nucleic acids are
a) proteins
b) nucleosides
c) amino acids
d) Nucleotides
- (42) Flowers with both androecium and gynoecium are called
a) Bisexual flowers
b) Anther
c) Stamens
d) Unisexual flowers
- (43) The transfer of pollen from the anther to stigma is called
a) Diffusion
b) Pollination
c) Fertilization
d) Adaptation
- (44) Functional megaspore in an angiosperm develops into
a) Embryo-sac
b) Embryo
c) Ovule
d) Endosperm
- (45) Carbohydrates are polyhydroxy compounds of _____
a) Oligosaccharides
b) Glucose
c) Aldehydes and ketones
d) Glyceradehyde
- (46) Proteins, which are tremendously complex molecules, what are their basic units or building blocks?
a) Carbohydrates
b) NH₂
c) Polypeptides
d) Amino acids
- (47) Animals store glucose in the form of which macromolecule?
a) Cellulose
b) Glycogen
c) Glycerol
d) Amylose
- (48) Protein synthesis in bacteria takes place on which of the following organelles?
a) Endoplasmic Reticulum
b) Golgi body
c) Ribosomes
d) Mitochondria
- (49) Which of the following are non-sense codons?
a) UAA
b) UAG
c) UGG
d) UCU
- (50) This cell is the longest in the human body
a) Nerve cells
b) Muscle cells
c) Bone cells
d) Gland cells
- (51) This cell organelle does not contain DNA
a) Nucleus
b) Mitochondria
c) Lysosomes
d) Chloroplast
- (52) RNA contains repeating units of
a) deoxyribonucleotides
b) ribonucleotides
c) deoxyribonucleosides
d) ribonucleosides
- (53) A phosphodiester bond is present in
a) Nucleic acids in a nucleotide
b) Monosaccharides in a polysaccharide
c) Amino acids in a polypeptide
d) Fatty acids in a diglyceride
- (54) Uridine present in RNA is
a) nucleotides
b) pyrimidine
c) purine
d) nucleoside

(55) Purine base found in RNA is

- a) Guanine
- c) Thymine

- b) Uracil
- d) Cytosine

(56) Acrosome is filled with _____

- a) a. Lipids
- c) Digestive enzymes

- b) Hormones
- d) None of these

(57) Which of the following amino acids has a net negative charge at physiologic pH (~7.4)?

- a) Glutamic acid
- c) Lysine

- b) Histidine
- d) Asparagine

(58) Which of the following properties of a protein is least likely to be affected by changes in pH?

- a) Net charge
- c) Secondary structure

- b) Primary structure
- d) Tertiary structure

(59) Which of these is not a lipid?

- a) Fats
- c) Proteins

- b) Oils
- d) Waxes

(60) In fats, the number of OH groups can be expressed as

- a) Reichert-Meissil number
- c) Iodine number

- b) Polenske number
- d) Acetyl number