



**BRAINWARE UNIVERSITY**  
**ODD Semester Examinations 2021- 22**

Programme – Bachelor of Science in Medical Lab Technology - 2020 [B.Sc.(MLT)]

Course Name – Biotechnology and Human Welfare

Course Code – GEBT301

(Semester III)

Time allotted : 1 Hour 15 Minutes

Full Marks : 60

(Multiple choice type question)

60 x 1 = 60

*Choose the correct alternative from the following*

- (I) Full form of PEG is
- A) Polyethylene glycol  
B) Polyester glycol  
C) Polyethylene glucose  
D) Polyester glucose
- (II) PEG is used in gene transfer in plants by
- A) Biological method  
B) Physical method  
C) Chemical method  
D) Mechanical method
- (III) Biological samples for DNA fingerprinting
- A) Blood  
B) Hair  
C) Saliva  
D) All of these
- (IV) DNA of eukaryotic organisms has several repeating units of short sequences called
- A) random repeats.  
B) tandem repeats.  
C) mini satellites  
D) all of these
- (V) Which statement is true?
- A) The origin of T and B cells is different  
B) The origin of T and B cells is different  
C) T and B cells are found at different places in the lymphoid pool  
D) Actually there is no difference between T and B cells.
- (VI) Simple sequence repeats are
- A) 1-6 bp long sequences distributed along the chromosome  
B) individual specific in number and position.  
C) also called as micro satellites  
D) All of these
- (VII) Bacteria contributes \_\_\_\_\_ % of total commercial enzyme production;
- A) 5%  
B) 24%  
C) 60%  
D) 15%
- (VIII) Which compound is available at the N-terminal site of amino acid?
- A) NH<sub>2</sub>  
B) COOH  
C) CONH  
D) H<sub>2</sub>
- (IX) In general, bacteria needs \_\_\_\_\_ temperature for optimum growth.
- A) 37° C  
B) 24° C  
C) 47° C  
D) 28° C
- (X) Ligation refers
- A) Joining of DNA molecules  
B) Cutting of DNA molecules  
C) Amplification of DNA molecule  
D) Cloning of gene
- (XI) What is a measure of the average additional pounds of milk and fat the bull will transmit to his daughters called?
- A) Age  
B) Efficiency  
C) Predicted difference  
D) Milking capacity

- (XII) A multi subunit protein have  
A) quaternary structure  
B) tertiary structure  
C) secondary structure  
D) primary structure
- (XIII) Examples of agrowaste  
A) fats  
B) oil waxes  
C) cellulose  
D) all of these
- (XIV) The number of base pairs in primer is  
A) 2-3  
B) . 3-4  
C) 25-35  
D) 100-200
- (XV) Humanized monoclonal antibodies are  
A) Palivizumab  
B) Trastuzumab  
C) Alemtuzumab  
D) All of these
- (XVI) In protein molecule alpha helix and beta sheet can be clearly visible at  
A) Primary structure  
B) Secondary structure  
C) Tertiary structure  
D) Quaternary structure
- (XVII) Which one is the example of delayed type hypersensitivity  
A) Acute contact dermatitis  
B) Positive tuberculin test  
C) Pollen allergic response  
D) Allergic reaction against food
- (XVIII) HIV virus is unique in the sense that  
A) It has got reverse transcriptase enzyme  
B) It has got RNA  
C) It has got both RNA and DNA  
D) All are correct
- (XIX) Holo enzyme made up of  
A) Apo enzyme and co enzyme  
B) Apo enzyme and co factor  
C) quaternary peptide structure with substrate  
D) Bubble like structural protein
- (XX) Nostoc is an example of  
A) Filamentous algae  
B) Unicellular algae  
C) Bacteria  
D) Macro fungi
- (XXI) Paternity test is best determined by  
A) RAPD.  
B) AFLP  
C) SSR.  
D) non repetitive DNA.
- (XXII) Serum sickness is an example of  
A) Type I immune complex disease  
B) Type II hypersensitivity  
C) Type III immune complex disease  
D) Type IV hypersensitivity
- (XXIII) What do nonstructural carbohydrates consist of?  
A) Plant proteins, pectin, and sugar  
B) Protein  
C) Plant starch, pectin, and sugar  
D) Plant sugar
- (XXIV) The length of RAPD primer is  
A) 10-15 bp  
B) 30-40 bp.  
C) 40-50 bp.  
D) none
- (XXV) Point mutation refers  
A) Chromosome deletion  
B) Chromosome addition  
C) DNA base injury  
D) None of these
- (XXVI) Molecular markers are used to construct  
A) chromosome maps  
B) cytogenetic maps  
C) physical maps  
D) All.of these
- (XXVII) Monoclonal antibody for Alzheimer`s disease  
A) Bapineuzumab  
B) Solanezumab  
C) aducanumab  
D) all of these

- (XXVIII) *Agrobacterium tumefaciens* has \_\_\_ number of chromosomes
- A) 2  
B) 6  
C) 8  
D) 4
- (XXIX) What is percentage of fungal resources used for optimum enzyme production?
- A) 22  
B) 60  
C) 4  
D) 40
- (XXX) Molecular marker Include
- A) RFLP  
B) AFLP  
C) SSR  
D) All of these
- (XXXI) Mismatched blood group transfuse causes
- A) Activation of cytotoxic cells  
B) Activation of Type II hypersensitivity  
C) Activation of IgE  
D) Activation of IgM
- (XXXII) Fields of forensic science
- A) Forensic Optometry  
B) Forensic DNA Analysis  
C) Forensic Pathology  
D) All of these
- (XXXIII) In agarose gel DNA fragments moves according to their
- A) Size  
B) charge  
C) charge and size  
D) all
- (XXXIV) *Saccharomyces cerevisiae* is used for
- A) Alcohol production only  
B) bread production only  
C) both alcohol production and bread production  
D)
- (XXXV) Thermophiles grows in
- A) 15 to 20°C  
B) 35 to 45°C  
C) 45 to 100°C  
D) all of these
- (XXXVI) Environmental stress includes
- A) Abiotic stress  
B) Biotic stress  
C) both of these  
D) None of these
- (XXXVII) Chilling and freezing injury can directly affect
- A) crop growth  
B) physical damage  
C) reducing yield  
D) all of these
- (XXXVIII) What are metabolic disorders?
- A) They are abnormalities in the sequence of reactions involved in metabolising nutrients that are manifested in clinical symptoms.  
B) They are clinical symptoms that arise due to changes in individuals' basal metabolic rates as a result of genetic factors.  
C) They are disturbances in the balance of energy spent by the body on internal and external processes.  
D) None of these
- (XXXIX) Suffix for monoclonal antibodies is
- A) mbB  
B) Maa  
C) mAb  
D) Mob
- (XL) Meat tenderizer enzyme is
- A) Cellulase  
B) Amylase  
C) Papain  
D) Pectinase
- (XLI) In Ti plasmid the opine synthesis gene is located
- A) near the left T-DNA border  
B) near the right T-DNA border  
C) in between vir region and left T-DNA border  
D) near to Ori genes
- (XLII) Psychrophiles grows in
- A) 15 to 20°C  
B) 35 to 45°C  
C) 45 to 100°C  
D) all of these

- (XLIII) Which one of the following marker is of co-dominant type?  
 A) RAPD. B) RFLP.  
 C) both of these D) None of these
- (XLIV) The extension temperature of PCR is --- degree centigrade.  
 A) 72 B) 50-60  
 C) 95 D) 20
- (XLV) First approved gene therapy experiment  
 A) Ashanti DeSilva was treated for Alzheimer B) Ashanti DeSilva was treated for multiple sclerosis  
 C) Ashanti DeSilva was treated for ADA-SCID D) Ashanti DeSilva was treated for Huntington's disease
- (XLVI) The first industrial enzyme was discovered in  
 A) 1896 B) 1986  
 C) 1869 D) 1969
- (XLVII) Tumor growth in a plant is the symptom of  
 A) Gall disease B) Wilt disease  
 C) Canker disease D) Blight disease
- (XLVIII) Types of bioerosion are  
 A) Bulk erosion B) Surface erosion  
 C) Both of these D) None of these
- (XLIX) The codon responsible for methionine amino acid is  
 A) UUA B) AUG  
 C) GCU D) AUA
- (L) How much more energy do fats contain per unit than carbohydrates and proteins?  
 A) 3.0 B) 2.25  
 C) 3.5 D) 1.5
- (LI) Cane sorghum contains \_\_\_\_% of fermentable sugar.  
 A) 24 B) 34  
 C) 14 D) 4
- (LII) CD20 monoclonal antibodies are  
 A) OFATUMUMAB B) RITUXIMAB  
 C) AFUTUZUMAB D) All of these
- (LIII) In developmental/reproductive biology 'IVF' refers  
 A) In vitro fertilization B) In vivo fertilization  
 C) In vitro fusion D) In vivo fusion
- (LIV) Advantage of live vaccines are  
 A) Long term protection B) Both cellular and humoral responses  
 C) one or few doses normally required D) All of these.
- (LV) Name the start codon of amino acid synthesis  
 A) UUA B) AUG  
 C) UUU D) AGU
- (LVI) Amino acids are connected with  
 A) H-bond B) Covalent bond  
 C) Hydrophilic bond D) Peptide bond
- (LVII) Example of Non biodegradable polymers  
 A) poly vinyl chloride, B) polyethylene  
 C) both of these D) None of these
- (LVIII) Agrobacterium tumefaciens contains about \_\_\_\_\_ number of genes.  
 A) 5000 B) 500  
 C) 50,000 D) 5500

(LIX) Major petrochemicals are

- A) acetylene
- C) methane

- B) benzene
- D) All of these

(LX) antibiotic generally kill bacteria by

- A) Inhibition cell wall synthesis
- C) perforate plasma membrane

- B) inhibition protein synthesis
- D) all of them