



BRAINWARE UNIVERSITY

Term End Examination 2020 - 21

Programme – Bachelor of Science in Physician Assistant

Course Name – Biotechnology and Human Welfare

Course Code - GEBT301

Semester / Year - Semester III

Time allotted : 75 Minutes

Full Marks : 60

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

1. (Answer any Sixty)

(i) Name the start codon of amino acid synthesis

- | | |
|--------|--------|
| a) UUA | b) AUG |
| c) UUU | d) AGU |

(ii) In gluconeogenesis 'glucose 6-phosphate' is converted into 'glucose' by

- | | |
|-------------------------------------|----------------------------------|
| a) Releasing one phosphate molecule | b) Adding one phosphate molecule |
| c) Releasing two phosphate molecule | d) Adding two phosphate molecule |

(iii) Which compound is available at the N-terminal site of amino acid?

- | | |
|--------------------|-------------------|
| a) NH ₂ | b) COOH |
| c) CONH | d) H ₂ |

(iv) What is percentage of fungal resources used for optimum enzyme production?

- | | |
|-------|-------|
| a) 22 | b) 60 |
| c) 4 | d) 40 |

(v) Point mutation refers

- | | |
|------------------------|------------------------|
| a) Chromosome deletion | b) Chromosome addition |
| c) DNA base injury | d) None of these |

(vi) Protein engineering can be done by

- a) Fermentation
- b) Gluconeogenesis
- c) Amino acid exchange
- d) Gene cloning

(vii) 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

(viii) Yeast biomass is the good source of

- a) Sugars
- b) Lipids
- c) Minerals & salts
- d) Protein & vitamins

(ix) Meat tenderizer enzyme is

- a) Cellulase
- b) Amylase
- c) Papain
- d) Pectinase

(x) The first industrial enzyme was discovered in

- a) 1896
- b) 1986
- c) 1869
- d) 1969

(xi) Cane sorghum contains ____% of fermentable sugar.

- a) 24
- b) 34
- c) 14
- d) 4

(xii) The percentage of nitrogen in the air is

- a) 75%
- b) 78%
- c) 15%
- d) 70%

(xiii) Tumor growth in a plant is the symptom of

- a) Gall disease
- b) Wilt disease

- c) Canker disease
- d) Blight disease

(xiv) PEG is used in gene transfer in plants by

- a) Biological method
- b) Physical method
- c) Chemical method
- d) Mechanical method

(xv) *Agrobacterium tumefaciens* has ____ number of chromosomes

- a) 2
- b) 6
- c) 8
- d) 4

(xvi) What is the raw material normally used in bioethanol production?

- a) Protein
- b) Lipid
- c) Mineral
- d) Sugar

(xvii) In developmental/reproductive biology 'IVF' refers

- a) In vitro fertilization
- b) In vivo fertilization
- c) In vitro fusion
- d) In vivo fusion

(xviii) Alkaloids are

- a) Plant hormone
- b) Plant toxin
- c) Plant primary metabolites
- d) Plant secondary metabolites

(xix) How much does a bushel of shelled corn weigh?

- a) 20 pounds
- b) 30 pounds
- c) 40 pounds
- d) 50 pounds

(xx) Which of the following is not a variety of cheese?

- a) Blue
- b) Cheddar
- c) Buttery
- d) Cottage

(xxi) What is the name of one of the 4 compartments of a ruminant's stomach?

- a) Rumen
- b) Calf
- c) Udder
- d) Hind

(xxii) 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

(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) 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

(xxv) Limiting factors of biodegradation of petroleum hydrocarbon

- a) chemistry
- b) physiological factors
- c) nutrients
- d) all of these

(xxvi) Types agricultural waste

- a) Crop waste
- b) Animal waste
- c) Processing waste
- d) All of these

(xxvii) Method of disposal for dairy product processing

- a) Land filling
- b) Land spreading
- c) both of these
- d) None of these

(xxviii) Method of disposal for Sugar processing

- a) composting
- c) composting

- b) burning
- d) All of these

(xxix) Waste from leather tanning

- a) Fleshings
- c) Tanned trimmings

- b) hair and raw
- d) All of these

(xxx) Waste from animal production are

- a) Biological sludges
- c) manures

- b) trimmings
- d) peels, leaves

(xxxi) Examples of agrowaste

- a) fats
- c) cellulose

- b) oil waxes
- d) all of these

(xxxii) Environmental stress includes

- a) Abiotic stress
- c) both of these

- b) Biotic stress
- d) None of these

(xxxiii) Example of chemical stress are

- a) herbicides
- c) chilling

- b) wind
- d) Radiation

(xxxiv) Effects of Heat stress on Plants

- a) Alteration in photosynthesis
- c) Pollen development is not affected

- b) Total biomass is increased
- d) swelling of leaf margins

(xxxv) Psychrophiles grows in

- a) 15 to 20°C
- c) 45 to 100°C

- b) 35 to 45°C
- d) all of these

(xxxvi) Thermophiles grows in

- a) 15 to 20°C
- b) 35 to 45°C
- c) 45 to 100°C
- d) all of these

(xxxvii) Example of Non biodegradable polymers

- a) poly vinyl chloride,
- b) polyethylene
- c) both of these
- d) None of these

(xxxviii) Natural biodegradable polymers are

- a) Collagen
- b) Dextran
- c) Gelatin
- d) All of these.

(xxxix) The length of RAPD primer is

- a) 10-15 bp
- b) 30-40 bp.
- c) 40-50 bp.
- d) none

(xl) 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

(xli) Which one of the following marker is of co-dominant type?

- a) RAPD.
- b) RFLP.
- c) both of these
- d) None of these

(xlii) The extension temperature of PCR is --- degree centigrade.

- a) 72
- b) 50-60
- c) 95
- d) 20

(xliii) Paternity test is best determined by

- a) RAPD.
- b) AFLP

c) SSR.

d) non repetitive DNA.

(xlv) The number of base pairs in primer is

a) 2-3

b) . 3-4

c) 25-35

d) 100-200

(xlvi) In agarose gel DNA fragments moves according to their

a) Size

b) charge

c) charge and size

d) all

(xlvii) 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

(xlviii) Molecular marker Include

a) RFLP

b) AFLP

c) SSR

d) All of these

(xlviii) Molecular markers are used to construct

a) chromosome maps

b) cytogenetic maps

c) physical maps

d) All.of these

(xlix) Mode of action of forensic study

a) Examination of physical evidence

b) Administration of tests

c) Interpretation of data

d) All of these

(l) Role of forensic experts are

a) physical and chemical analyses on physical evidence

b) law enforcement officials

c) microscopic examining techniques

d) All of these

(li) Fields of forensic science

- a) Forensic Optometry
- b) Forensic DNA Analysis
- c) Forensic Pathology
- d) All of these

(lii) Biological samples for DNA fingerprinting

- a) Blood
- b) Hair
- c) Saliva
- d) All of these

(liii) DNA fingerprinting can cure diseases like

- a) Huntington's disease
- b) sickle cell anemia
- c) thalassemia
- d) All of these

(liv) Suffix for monoclonal antibodies is

- a) mbB
- b) Maa
- c) mAb
- d) Mob

(lv) Humanized monoclonal antibodies are

- a) Palivizumab
- b) Trastuzumab
- c) Alemtuzumab
- d) All of these

(lvi) CD20 monoclonal antibodies are

- a) OFATUMUMAB
- b) RITUXIMAB
- c) AFUTUZUMAB
- d) All of these

(lvii) Monoclonal antibody for Alzheimer's disease

- a) Bapineuzumab
- b) Solanezumab
- c) aducanumab
- d) all of these

(lviii) Disadvantage of killed vaccine

- a) Multiple doses required
- b) Poorly defined composition

c) Both of these

d) None of these

(lix) 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

(lx) Example of somatic cell gene therapy

a) Introduction of genes into bone marrow cells

b) Introduction of genes into blood cells

c) Introduction of genes into skin cells

d) all of these