BRAINWARE UNIVERSITY

Term End Examination 2020 - 21

Programme – Master of Science in Microbiology

Course Name – Microbe Identification and Cell Culture

Course Code - MMB304

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) Classification of microbes include

a) Protozoa
b) Bacteria
c) Both Protozoa and Bacteria
d) None of these

(ii) Example of sporozoa

a) Plasmodium vivax
b) Entamoeba histolytica
c) Balantidium coli
d) None of these

(iii) Shape of Cocci bacteria is

a) Rod shaped
b) Spiral
c) Round
d) None of these

(iv) Example of bacilli bacteri

a) Mycobacterium leprae
b) Corynebacterium diphtheria
c) Both of these
d) None of these

(v) Classification of Spirochetes are

a) Treponemes
b) Borreliae
c) Leptospires
d) All of these

(vi) Example of gram negative bacteria

a) Enterobacteriaceae
b) Clostridum
c) Corynebacterium
d) Staphylococcus

(vii) Thermophile bacteria grows in temperature range of

a) 10-30 degree celsius
b) 30-55 degree celsius
c) 40-85 Degree celsius
d) None of these

(viii) Genetic material of virus can be

a) DNA
b) RNA
c) Either DNA or RNA
d) None of these

(ix) Stains used for bacterial identification are

a) Gram Stain
b) Acid Fast Stain
c) Albert's stain
d) All of these

(x) Bacteria multiplies by

a) Sexual Reproduction
b) Binary Fission
c) Both Sexual Reproduction and Binary Fission
d) None of these

(xi) Diameter of protozoa ranges between

a) 200-100?m
b) 20-100?m
c) 2-10?m
d) 2-100?m

(xii) Classification of Cocci are

a) Tetrad
b) Sarcina
c) Diplococci
d) All of these

(xiii) On the basis of oxygen requirements bacteria are classified into

a) Aerobic
b) anearobic

c) capnophilic
d) Both Aerobic and anearobic

(xiv) Physical sterilization includes

a) Heat
b) filtration
c) radiation
d) All of these

(xv) Alcohols and Aldehydes are methods of

a) Physical sterilization
b) biological sterilization
c) chemical sterilization
d) semi-physical sterilization

(xvi) Surface active agents and ethylene oxide gas are methods of

a) Physical sterilization
b) biological sterilization
c) chemical sterilization
d) semi-physical sterilization

(xvii) Ideal sterilization/disinfection process are

a) Highly efficacious
b) Fast
c) Good penetrability
d) All of these

(xviii) Disposable syringes, and other disposable items are sterilized by

a) Hot –air oven
b) Autoclaving
c) Gamma radiation
d) Tyndallisation

(xix) Culture media are sterilized by

a) Hot –air oven
b) Autoclaving
c) Gamma radiation
d) Tyndallisation

(xx) Culture media containing serum and egg are sterilized by

a) Hot –air oven
b) Autoclaving
c) Gamma radiation
d) Tyndallisation

(xxi) Inoculating wires and loops are sterilized by

a) Hot –air oven
b) Autoclaving
c) Gamma radiation
d) Red heat

(xxii) Toxin , serum, sugar, and antibiotic solutions are sterilized by

a) Hot –air oven
b) Autoclaving
c) Gamma radiation
d) Filtration

(xxiii) Cystoscope and endoscope are sterilized by

a) Hot –air oven
b) Autoclaving
c) Gamma radiation
d) Glutaraldehyde

(xxiv) Infected soiled dressings are sterilized by

a) Hot –air oven
b) Autoclaving
c) Gamma radiation
d) Incineration

(xxv) Types of filters are

a) Candle filters
b) Sintered glass filters
c) Asbestos disc filters
d) All of these

(xxvi) Types of animal cell culture

a) epithelial
b) lymphoblast
c) Fibroblast
d) All of these

(xxvii) DMEM is an example of

a) Medium
b) antibiotics
c) temperature
d) None of these

(xxviii) Penicillin is used as

a) Medium
b) antibiotics

c) temperature
d) None of these

(xxix) Father of Tissue Culture is known as

a) Haberlandt
b) Crosswood
c) Kepler
d) Saritius

(xxx) High ratio of cytokinin to auxin leads to

a) Shoot development
b) root development
c) Leaf development
d) All of these

(xxxi) Low ratio of cytokinin to auxin leads to

a) Shoot development
b) Root development
c) Leaf development
d) All of these

(xxxii) Caulogenesis refers to

a) Shoot development
b) Root development
c) Leaf development
d) All of these

(xxxiii) Rhizogenesis refers to

a) Shoot development
b) Root development
c) Leaf development
d) All of these

(xxxiv) Culture systems are required for

a) Shoot development
b) Root development
c) Leaf development
d) All of these

(xxxv) Some factors that affect cellular totipotency are

a) source of explant
b) Nutrient media
c) culture environemnt
d) all of these

(xxxvi) Organ that serve as tissue source

a) source of explant
b) Nutrient media
c) culture environemnt
d) all of these

(xxxvii) Autoclave is used to sterilize

a) Plant material
b) Equipments and Glasswares
c) Aseptic Condition
d) None of these

(xxxviii) Incubating chamber mantains

a) Plant material
b) Equipments and Glasswares
c) Aseptic Condition
d) None of these

(xxxix) laminar airflow cabinet maintains

a) Plant material
b) Equipments and Glasswares
c) Aseptic Condition
d) None of these

(xl) Batch culture is categorised based on

a) the type of medium used
b) the part used for culture
c) the aseptic condition
d) None of these

(xli) Anther culture is categorised based on

a) the type of medium used
b) the part used for culture
c) the aseptic condition
d) None of these

(xlii) Composition of culture media include

a) Water
b) Carbon source
c) Energy source
d) All of these

(xliii) Synthetic or defined medium are classified based on

a) Physical state
b) Chemical state

c) Energy state
d) None of these

(xliv) Color of agar is

a) Green
b) White
c) Golden yellow
d) All of these

(xlv) Example of complex media

a) Blood agar
b) Peptone water
c) Nutrient broth
d) All of these

(xlvi) Enriched media

a) Simple media
b) Complex media
c) Special media
d) None of these

(xlvii) Selective media

a) Simple media
b) Complex media
c) Special media
d) None of these

(xlviii) Anaerobic media

a) Simple media
b) Complex media
c) Special media
d) None of these

(xlix) Differential media

a) Simple media
b) Complex media
c) Special media
d) None of these

(l) Earliest plant tissue culture media

a) White`s medium
b) MS medium
c) B5 medium
d) All of these

(li) Most widely used plant media

a) White`s medium
b) MS medium
c) B5 medium
d) All of these

(lii) Media used for protoplast culture

a) White`s medium
b) MS medium
c) B5 medium
d) All of these

(liii) Media used for anther culture

a) White`s medium
b) MS medium
c) B5 medium
d) Nitsch's medium

(liv) Factors Affecting Tissue Culture Efficiency

a) source of the cultured tissue
b) age and health of the donor plant
c) plant species,
d) All of these

(lv) Types of somatic embryogenesis

a) Direct
b) Both Direct and Indirect
c) Indirect
d) None of these

(lvi) Media for somatic embryogenesis requires

a) BAP
b) Both BAP and NAA
c) NAA
d) None of these

(lvii) Importance of somatic embryogenesis

a) Low Propagation rate
b) Artificial seed production
c) Labour savings
d) Both Artificial seed production and Labour savings

(lviii) Cytokinins

a) Stimulate cell elongation
b) Promote cell division

c) Elongate internode
d) None of these

(lix) NAA and 2-4D

a) Stimulate cell elongation
b) Promote cell division
c) Elongate internode
d) None of these

(lx) Plant Growth regulators are

a) auxin
b) water
c) magnesium
d) None of these