



BRAINWARE UNIVERSITY

ODD Semester Examinations 2021- 22

Programme – Master of Science in Microbiology - 2020 [M.Sc.(MB)]

Course Name – Microbe Identification and Cell Culture

Course Code – MMB304

(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) Example of simple media

- A) Blood agar
- C) Nutrient broth

- B) Peptone water
- D) All of these

(II) Importance of somatic embryogenesis

- A) Low Propagation rate
- C) Labour savings

- B) Artificial seed production
- D) Both Artificial seed production and Labour savings

(III) The plant growth can be achieved in

- A) shoots directly by appropriate media
- C) Both shoots directly by appropriate media and By somatic embryogenesis

- B) By somatic embryogenesis
- D) None of these

(IV) Composition of culture media include

- A) Water
- C) Energy source

- B) Carbon source
- D) All of these

(V) Plant tissue culture depends on

- A) Totipotency
- C) Both Totipotency and Plasticity

- B) Plasticity
- D) None of these

(VI) Organ that serve as tissue source

- A) source of explant
- C) culture environment

- B) Nutrient media
- D) all of these

(VII) A population of cells or multicellular organisms growing in the absence of other species or types

- A) Pure Culture
- C) Mixed culture

- B) Aseptic culture
- D) All of these

(VIII) EMEM is used in cell culture as

- A) Medium
- C) temperature

- B) antibiotics
- D) None of these

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

- A) Hot –air oven
- C) Gamma radiation

- B) Autoclaving
- D) Filtration

(X) Factors Affecting Tissue Culture Efficiency

- A) source of the cultured tissue
- C) plant species,

- B) age and health of the donor plant
- D) All of these

(XI) Example of diplococci

- A) Meningococci
- C) Both of these

- B) Gonococci
- D) None of these

- (XII) Suitable specimens for anaerobic culture
 A) Abscesses
 C) Cerebrospinal fluid
 B) Blood
 D) All of these
- (XIII) Physical sterilization includes
 A) Heat
 C) radiation
 B) filtration
 D) All of these
- (XIV) Who first broke the callus tissues into single cell?
 A) Murashige
 C) Overbeek
 B) Muir
 D) Pascal
- (XV) In MacConkey agar Lactose fermenters form
 A) green colonies
 C) black colonies
 B) pink colonies
 D) White colonies
- (XVI) Glass ware- syringes, petridishes, testtubes, flasks are sterilized by
 A) Hot –air oven
 C) Gamma radiation
 B) Autoclaving
 D) Tyndallisation
- (XVII) Alcohols and Aldehydes are methods of
 A) Physical sterilization
 C) chemical sterilization
 B) biological sterilization
 D) semi-physical sterilization
- (XVIII) Father of Tissue Culture is known as
 A) Haberlandt
 C) Kepler
 B) Crosswood
 D) Saritius
- (XIX) Thermophile bacteria grows in temperature range of
 A) 10-30 degree celsius
 C) 40-85 Degree celsius
 B) 30-55 degree celsius
 D) None of these
- (XX) Culture media containing serum and egg are sterilized by
 A) Hot –air oven
 C) Gamma radiation
 B) Autoclaving
 D) Tyndallisation
- (XXI) Surface sterilization of plant was done by
 A) Sodium hypochlorite
 C) Both A and B
 B) Calcium hypochlorite
 D) None of these
- (XXII) Shape of Cocci bacteria is
 A) Rod shaped
 C) Round
 B) Spiral
 D) None of these
- (XXIII) Sterilization is done using
 A) laminar
 C) microscope
 B) Incubator
 D) Refrigerator
- (XXIV) Synthetic or defined medium are classified based on
 A) Physical state
 C) Energy state
 B) Chemical state
 D) None of these
- (XXV) The ability of plant cells to regenerate into a whole plant is called
 A) Totipotency
 C) Plasticity
 B) Regeneration
 D) All of these
- (XXVI) Stains used for bacterial identification are
 A) Gram Stain
 C) Albert's stain
 B) Acid Fast Stain
 D) All of these
- (XXVII) Disadvantages of tissue culture are
 A) High level of expertise is required
 C) Instability
 B) A small error may lead to complete collapse of product/plant
 D) All of these

- (XXVIII) GMEM is used as
 A) Medium
 C) temperature
 B) antibiotics
 D) None of these
- (XXIX) Example of facultative anaerobes
 A) E. coli
 C) B. subtilis
 B) H. pylori
 D) S. coccus
- (XXX) Penicillin is used as
 A) Medium
 C) temperature
 B) antibiotics
 D) None of these
- (XXXI) Example of sporozoa
 A) Plasmodium vivax
 C) Balantidium coli
 B) Entamoeba histolytica
 D) None of these
- (XXXII) Who first isolated protoplast by enzymatic degradation of cell wall?
 A) Gamborg
 C) Cocking
 B) Kanta and Maheshwari
 D) Pascal
- (XXXIII) Gibberelins
 A) Stimulate cell elongation
 C) Elongate internode
 B) Promote cell division
 D) None of these
- (XXXIV) Phenols and Halogens are methods of
 A) Physical sterilization
 C) chemical sterilization
 B) biological sterilization
 D) semi-physical sterilization
- (XXXV) Classification of Cocci are
 A) Tetrad
 C) Diplococci
 B) Sarcina
 D) All of these
- (XXXVI) Types of filters are
 A) Candle filters
 C) Asbestos disc filters
 B) Sintered glass filters
 D) All of these
- (XXXVII) Autoclave is used to sterilize
 A) Plant material
 C) Aseptic Condition
 B) Equipments and Glasswares
 D) None of these
- (XXXVIII) Advantage of somatic embryogenesis
 A) Germplasm conservation
 C) High propagation rate
 B) Somaclonal variation
 D) All of these
- (XXXIX) Milk are sterilized by
 A) Hot -air oven
 C) Gamma radiation
 B) Autoclaving
 D) Pasteurization
- (XL) Classification of Spirochetes are
 A) Treponemes
 C) Leptospire
 B) Borreliae
 D) All of these
- (XLI) Types of somatic embryogenesis
 A) Direct
 C) Indirect
 B) Both Direct and Indirect
 D) None of these
- (XLII) XLD is a
 A) Xyline Lysine Deoxycholate Agar
 C) Xylose Lysine Deoxy Agar
 B) Xylose Lamine Deoxycholate Agar
 D) Xylose Lysine Deoxycholate Agar
- (XLIII) Low ratio of cytokinin to auxin leads to
 A) Shoot development
 C) Leaf development
 B) Root development
 D) All of these

- (XLIV) Diameter of protozoa ranges between
 A) 200-100 μ m
 C) 2-10 μ m
 B) 20-100 μ m
 D) 2-100 μ m
- (XLV) Media used for protoplast culture
 A) White`s medium
 C) B5 medium
 B) MS medium
 D) All of these
- (XLVI) Stuart`s medium is a
 A) complex medium
 C) simple medium
 B) transport medium
 D) compound medium
- (XLVII) Stains used in gram staining are
 A) Crystal violet
 C) Both Crystal violet and Safranin
 B) Safranin
 D) None of these
- (XLVIII) Robertson Cooked Meat broth contains
 A) Meat particles
 C) Both a and b
 B) Nutrient broth
 D) None of these
- (XLIX) Batch culture is categorised based on
 A) the type of medium used
 C) the aseptic condition
 B) the part used for culture
 D) None of these
- (L) CLED is a
 A) Cysteine Lamine Electrolyte Deficient Agar
 C) Cysteine Lithium Electrolyte Deficient Agar
 B) Cytosol Lactose Electrolyte Deficient Agar
 D) Cysteine Lactose Electrolyte Deficient Agar
- (LI) Differential media
 A) Simple media
 C) Special media
 B) Complex media
 D) None of these
- (LII) How can microorganisms be killed?
 A) Denaturation of proteins
 C) Disruption of cell membranes
 B) Interruption of DNA synthesis/repair
 D) All of these
- (LIII) Media used for anther culture
 A) White`s medium
 C) B5 medium
 B) MS medium
 D) Nitsch`s medium
- (LIV) Factors that influence efficacy of disinfection/sterilization
 A) Temperature
 C) Number of microorganisms
 B) Type of microorganism
 D) All of these
- (LV) laminar airflow cabinet maintains
 A) Plant material
 C) Aseptic Condition
 B) Equipments and Glasswares
 D) None of these
- (LVI) Microaerophilic grow best at
 A) low O₂ tension
 C) medium O₂ tension
 B) high O₂ tension
 D) optimum O₂ tension
- (LVII) Bacteria multiplies by
 A) Sexual Reproduction
 C) Both Sexual Reproduction and Binary Fission
 B) Binary Fission
 D) None of these
- (LVIII) Skin are sterilized by
 A) Hot –air oven
 C) Gamma radiation
 B) Autoclaving
 D) Alcohol
- (LIX) Cocci is classified under the microbe
 A) Fungi
 C) Bacteria
 B) Virus
 D) protozoa

(LX) Inoculated cultures are kept at

- A) laminar
- C) microscope

- B) Incubator
- D) Refrigerator