

**B****DF-3000****B. Sc. (Microbiology) (Sem. III) Examination****March/April – 2016****MB-05 : Control of Microorganisms**

Time : 2 Hours]

[Total Marks : 50

**Instructions :**

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
Fillup strictly the details of signs on your answer book.

Name of the Examination :  
B. Sc. (MICROBIOLOGY) (SEM. 3)

Name of the Subject :  
MB-05 : CONTROL OF MICROORGANISMS

Subject Code No. : 3 0 0 0 Section No. (1, 2,.....) : Nil

Seat No. :

Student's Signature

- (2) This exam contains 50 multiple choice questions, each carries one mark.
- (3) Choose only ONE most appropriate answer per question.
- (4) Do not crease or fold the answer sheet.

***O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ  
O.M.R. Sheet-ની પાછળ છાપેલ છે.  
Important instructions to fillup O.M.R. Sheet  
is given on back side of the provided O.M.R. Sheet.***

- 1 The efficiency of HEPA filter is :  
(A) 100% (B) 90.00%  
(C) 95.8% (D) 99.97%
- 2 Depth filters are made up of  
(A) Any of them  
(B) Diatomaceous earth  
(C) Unglazed porcelain  
(D) Asbestos
- 3 Glutaraldehyde exhibit a wide spectrum of antimicrobial activity at  
(A) 2% solution (B) 4% solution  
(C) 8% solution (D) 0.5% solution
- 4 Halogenation of which amino acid affects the activity of enzyme ?  
(A) Glutamine (B) Lysine  
(C) Tyrosine (D) Tryptophan
- 5 Which of the following is not true ?  
(A) Iodine posses sporocidal activity  
(B) Ethanol cannot destroy bacterial spores  
(C) Phenol is also called carbolic acid  
(D) Chlorinated lime is an example of chloramines
- 6 Which of the following are used to treat Athlete's foot ?  
(A) Detergents (B) Alcohol  
(C) Phenolic compound (D) Chlorine compounds
- 7 Which of them is an ideal and most effective antimicrobial agent ?  
(A) Zinc (B) Sodium  
(C) Iron (D) Silver
- 8 At which concentration mercury compound exert bactericidal effect ?  
(A) 1 : 100 (B) 1 : 5000  
(C) 1 : 10000 (D) 1 : 1000
- 9 Copper sulphate prevent algal growth in water at \_\_\_\_\_ concentration.  
(A) 1 : 1000 (B) 5 ppm  
(C) 2 ppm (D) 1 : 10000
- 10 Which of the following class of dye possess antimicrobial activity ?  
(A) trimethylacridine (B) trymethylphemyl  
(C) triphenylmethane (D) triethylmethane

- 11 Monilia and Torula fungi can be inhibited by
- (A) neutral red
  - (B) methylene blue
  - (C) rose bengal
  - (D) crystal violet
- 12 QAC belongs to \_\_\_\_\_ category.
- (A) All of them
  - (B) Nonionic
  - (C) Anionic
  - (D) Cationic
- 13 The group that play major role in alkylation by ethylene oxide is :
- (A) All of them
  - (B) Amino
  - (C) Carboxyl
  - (D) Sulfhydryl
- 14 Which of the following have sporocidal property ?
- (A) Dyes
  - (B) Aldehydes
  - (C) Alcohol
  - (D) Phenol
- 15 Which of the following can act as a sterilant ?
- (A) Silver nitrate
  - (B) QAC
  - (C) Ethylene oxide
  - (D) Detergents

- 16 Glutaraldehyde is good antimicrobial agent for :
- (A) All of them
  - (B) Endospore of bacteria
  - (C) Fungi
  - (D) Viruses
- 17 What is the correct application of Acridine dyes ?
- (A) All of them
  - (B) Bladder irritation
  - (C) Ophthalmic application
  - (D) Treatment of burn and wound
- 18 To make colloidal silver compounds, silver or its oxide is combined with
- (A) Any of them
  - (B) Salts of mercury
  - (C) Proteins
  - (D) Liposomes
- 19 Ionizing radiations are used to sterilize :
- (A) Non-proteinaceous substances
  - (B) Heat resistant substances
  - (C) Heat sensitive substances
  - (D) Proteinaceous substances
- 20 Effect of temperature on microorganisms depends on :
- (A) All of them
  - (B) Intensity of application
  - (C) Type of microbe
  - (D) Rate of metabolism

- 21 Disinfection means :
- (A) All of these
  - (B) Killing of pathogen
  - (C) Inhibition of organism that cause disease
  - (D) Removal of microorganisms to reduce total microbial population
- 22 Which of the following is responsible for resistance against antimicrobial agent ?
- (A) Endospores
  - (B) Young age of bacterial cell
  - (C) Capsule
  - (D) Vegetative form
- 23 Tyndallization means
- (A) Intermittent sterilization
  - (B) Irradiation
  - (C) Pasteurization
  - (D) Autoclaving
- 24 Cold sterilization means
- (A) Sterilization using solar rays
  - (B) Sterilization at  $-196^{\circ}\text{C}$  temperature
  - (C) Sterilization using ice
  - (D) Sterilization using gamma rays
- 25 For a disinfectant, phenol co-efficient method indicates its
- (A) Purity
  - (B) Quantity
  - (C) Dilution
  - (D) Efficacy
- 26 Boiling water cannot destroy
- (A) None of them
  - (B) Vegetative cells
  - (C) Bacterial spores
  - (D) Fungal spores
- 27 The indicator bacteria in an autoclave indicate efficient sterilization, means
- (A) All of them
  - (B) they do not grow in the medium
  - (C) they grow in the medium
  - (D) they do not grow in sterile distilled water

- 28 Fractional sterilization was mainly designed for  
(A) None of these  
(B) Heat sensitive materials  
(C) Heat resistant spores  
(D) Fungal cells
- 29 The advantages of dry heat sterilization are :  
(A) It is applicable for antibiotics  
(B) It is suitable for heat sensitive plastic materials  
(C) It does not corrode metallic instrument  
(D) It can be used for volatile substances
- 30 Inoculating wire loops are sterilized by :  
(A) Chemicals  
(B) Incineration  
(C) Autoclave  
(D) Radiation
- 31 A cryoprotectant is the agent that :  
(A) Protect cell damage at low water concentration  
(B) Prevent cell lysis due to osmotic pressure  
(C) Protect cell damage at low pH  
(D) Protect cell damage at low temperature
- 32 The temperature of liquid nitrogen is :  
(A) 4°C  
(B) -100°C  
(C) -96°C  
(D) -196°C
- 33 The fabricating material of membrane filters is :  
(A) Magnesium sulfate  
(B) Silica  
(C) Polyethylene chloride  
(D) Cellulose acetate
- 34 HEPA filters are a type of :  
(A) Wire gauze  
(B) Depth filter  
(C) Membrane filter  
(D) Soil filter

- 35 Which of the following is not high energy radiation ?
- (A) Gamma rays
  - (B) X-rays
  - (C) UV rays
  - (D) Infrared rays
- 36 Radiation as sterilizing agent possess energy in the form of
- (A) Electromagnetic waves
  - (B) Thermal / heat waves
  - (C) Ultrasonic waves
  - (D) Cold waves
- 37 Electromagnetic radiation has the following property
- (A) None of them
  - (B) Continuous wave phenomenon
  - (C) Discontinuous particle phenomenon
  - (D) Both of them
- 38 Lyophilized cultures are also known as :
- (A) All of them
  - (B) Desiccated culture
  - (C) Dehydrated culture
  - (D) Vacuum dried culture
- 39 Detergent can also act as a disinfectant, when
- (A) None of them
  - (B) Improves the effectiveness of chemical agent
  - (C) Detergent activity gives cleansing effect
  - (D) Both of them
- 40 Destruction of vegetative pathogens but not bacterial endospore is :
- (A) Degermination
  - (B) Antisepsis
  - (C) Disinfection
  - (D) Sterilization

- 41 Ethanol is found practically inert against :
- (A) Vegetative cells (B) Fungi  
(C) Protozoa (D) Bacterial endospores
- 42 \_\_\_\_\_ is the example of copper based fungicide.
- (A) Bordet mixture (B) Boric acid mixture  
(C) Colloidal mixture (D) Bordeaux mixture
- 43 Which concentration of malachite green can inhibit *Staphylococcus aureus* ?
- (A) 1 : 30,00,000 (B) 1 : 3000  
(C) 1 : 100,000 (D) 1 : 10,00,000
- 44 The best disinfectant for skin is :
- (A) Phenol (B) Chlorine  
(C) Iodine (D) Alcohol
- 45 Oligodynamic action means : Inhibition of microbes by \_\_\_\_\_.
- (A) None of them  
(B) Halogen  
(C) Oligonucleotide  
(D) Small amount of heavy metal
- 46 Which of the following are most sensitive to QAC ?
- (A) None of them (B) Gram negative bacteria  
(C) Gram positive bacteria (D) Acid fast bacteria
- 47 Which of the following procedure cannot destruct bacterial endospore ?
- (A) None of them (B) Sterilization  
(C) Incineration (D) Disinfection
- 48 Heat kills rapidly at :
- (A) All of them (B) An acidic pH  
(C) An alkaline pH (D) Neutral pH
- 49 Which of the following takes more time to pasteurize ?
- (A) Water (B) Fruit juice  
(C) Tomato juice (D) Milk
- 50 Bacteria can be killed at 60-70°C temperature within \_\_\_\_\_ minutes.
- (A) 20 (B) 10  
(C) 30 (D) 5

