

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

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

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

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

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

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

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

