

**A****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 Disinfection means :
 - (A) Killing of pathogen
 - (B) Inhibition of organism that cause disease
 - (C) Removal of microorganisms to reduce total microbial population
 - (D) All of these

- 2 Which of the following is responsible for resistance against antimicrobial agent ?
 - (A) Young age of bacterial cell
 - (B) Capsule
 - (C) Vegetative form
 - (D) Endospores

- 3 Tyndallization means
 - (A) Irradiation
 - (B) Pasteurization
 - (C) Autoclaving
 - (D) Intermittent sterilization

- 4 Cold sterilization means
 - (A) Sterilization at -196°C temperature
 - (B) Sterilization using ice
 - (C) Sterilization using gamma rays
 - (D) Sterilization using solar rays

- 5 For a disinfectant, phenol co-efficient method indicates its
 - (A) Quantity
 - (B) Dilution
 - (C) Efficacy
 - (D) Purity

- 6 Boiling water cannot destroy
 - (A) Vegetative cells
 - (B) Bacterial spores
 - (C) Fungal spores
 - (D) None of them

- 7 The indicator bacteria in an autoclave indicate efficient sterilization, means
 - (A) they do not grow in the medium
 - (B) they grow in the medium
 - (C) they do not grow in sterile distilled water
 - (D) All of them


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

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

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

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

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

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