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

Time : 2 Hours] [Total Marks : 50

Instructions :

(1) Fill up strictly the details of signs on your answer book.

<table>
<thead>
<tr>
<th>Name of the Examination :</th>
<th>B. Sc. (MICROBIOLOGY) (SEM. 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the Subject :</td>
<td>MB-05 : CONTROL OF MICROORGANISMS</td>
</tr>
<tr>
<td>Subject Code No. :</td>
<td>3 0 0 0</td>
</tr>
</tbody>
</table>

(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** कर्षण अनेक अनुवत्ती सूचनाओ आपेक्ष
**O.M.R. Sheet**-ली पत्ता अपेक्ष करा.

*Important instructions to fill up 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 possesses 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) trimethylphenyl
     (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) Sulphydryl

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°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