



RAN - 2103000203026002

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B. Sc. (Microbiology) (A.T.K.T.) (Sem. - III) Examination

March - 2023

Microbiology : MB302

Control of Microorganisms in the Environment

[Total Marks: 50

સૂચના : / Instructions

(1)

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

Name of the Examination:

B. Sc. (Microbiology) (A.T.K.T.) (Sem. - III)

Name of the Subject :

Microbiology : MB302 Control of Microorganisms in the Environment

Subject Code No.: **2103000203026002**

Seat No.:

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Student's Signature

- (2) This exam contains 50 multiple choice questions, each worth 1 mark.
(3) All questions are compulsory.

***O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ
O.M.R. Sheetની પાછળ છાપેલ છે.***

***Important instructions to fillup O.M.R. Sheet
are given on back side of the provided O.M.R. Sheet.***

SET - I

- Q. 1.** Among the following which is the most effective method of killing microorganisms?
- A. High temperature
 - B. Low temperature
 - C. High temperature, high moisture
 - D. Low temperature, low moisture
- Q. 2.** Which of the following instrument uses steam under pressure to sterilize the material?
- A. Hot Air Oven
 - B. Autoclave
 - C. Water bath
 - D. UV cabinet
- Q. 3.** _____ is the killing, inhibition, or removal of microorganisms that may cause disease; and it causes substantial reduction of the total microbial population and the destruction of potential pathogens.
- A. Sterilization
 - B. Disinfection
 - C. Sanitization
 - D. Antisepsis
- Q. 4.** Use of chemical agents to kill or inhibit the growth of microorganisms within host tissue is referred as _____.
- A. Chemotherapy
 - B. Radiotherapy
 - C. Immunotherapy
 - D. Surgery
- Q. 5.** Gaseous chemical agents can be used for
- A. Sterilization only
 - B. Disinfection only
 - C. Chemotherapy
 - D. Sterilization & disinfection
- Q. 6.** Which of the following method involves the complete removal or destruction of all viable microorganisms including spores?
- A. Antisepsis
 - B. Disinfection
 - C. Sterilization
 - D. Sanitization
- Q. 7.** Which of the following are the physical agents used for sterilization?
- A. Dry heat
 - B. Ionizing radiations
 - C. Moist heat
 - D. All of these
- Q. 8.** Which of the following is based on mechanical method for microbial control?
- A. Ethylene Oxide
 - B. Membrane Filters
 - C. Phenolics
 - D. Glutaraldehyde

- Q. 26.** Which of the following kills the microbial cell by disrupting cell membrane?
A. Halogens
B. Aldehydes
C. Cationic detergents
D. Heavy metals
- Q. 27.** Which of the following is used to control the growth of algae in swimming pools?
A. Methylene blue
B. Copper nitrate
C. Ferrous sulphate
D. Copper sulphate
- Q. 28.** Which of the following is a cationic detergent?
A. Tween-80
B. Triton X 100
C. Sodium Dodecyl Sulphate
D. Cetyltrimethylammonium bromide
- Q. 29.** Which of the following is highly effective sterilant at 2% concentration for treating heat-sensitive medical devices?
A. Alkaline glutaraldehyde
B. Ethanol
C. Iso-propanol
D. Sodium hypochlorite
- Q. 30.** Which of the following is used at low levels to disinfect drinking water?
A. Iodine
B. Chlorine
C. Ethanol
D. Copper sulphate
- Q. 31.** If you wish to develop a deodorant soap, which of the following can be included to kill microorganisms?
A. Sodium hypochlorite
B. Glutaraldehyde
C. Triclosan
D. Hydrogen peroxide
- Q. 32.** Which of the following is economical, effective and safe for disinfection of food preparation surfaces?
A. Phenolics
B. Gamma radiations
C. Quats
D. Alcohol
- Q. 33.** Which of the following is/are gaseous agent for microbial control?
A. Ethylene oxide
B. Chlorine dioxide
C. Vaporized hydrogen peroxide
D. All of these
- Q. 34.** Which of the following is used as surface sterilizing agent for isolation of endophytic bacteria from plant parts?
A. Phenolics
B. Formaldehyde
C. Ethylene oxide
D. Mercuric chloride

- Q. 35.** Least concentration of an antimicrobial agent that inhibits the visible growth of test bacterium is called as _____.
- A. Minimum Inhibitory Concentration
 - B. Minimum Lethal Concentration
 - C. Growth Inhibitory Concentration
 - D. Maximum Inhibitory Concentration
- Q. 36.** Plasmolysis is
- A. Shrinkage of cells when placed in hypotonic solution
 - B. Shrinkage of cells when placed in hypertonic solution
 - C. Swelling of cells when placed in hypotonic solution
 - D. Swelling of cells when placed in hypertonic solution
- Q. 37.** The presence of _____ can dramatically affect the effectiveness of antimicrobial agent.
- A. Single cell
 - B. Biofilm
 - C. Capsid
 - D. Cell wall
- Q. 38.** In _____, iodine is linked to a carrier molecule that releases free iodine slowly.
- A. Chromophore
 - B. Chlorophore
 - C. Iodophore
 - D. Fluorophore
- Q. 39.** _____ is used to decontaminate enclosed spaces such as safety cabinets and small rooms.
- A. Hydrogen peroxide
 - B. Vaporized hydrogen peroxide
 - C. Glutaraldehyde
 - D. Ethylene oxide
- Q. 40.** Which of the following can be used for disinfection of drinking water?
- A. Oxygen
 - B. Ozone
 - C. Hydrogen peroxide
 - D. Formaldehyde
- Q. 41.** Heavy metals mostly react with _____ groups of proteins to denature them.
- A. Amino groups
 - B. Sulfhydryl groups
 - C. Alkyl group
 - D. Carboxyl group
- Q. 42.** Aldehydes exert their antimicrobial activity by
- A. Oxidation of lipids
 - B. Oxidation of proteins
 - C. Oxidation of carbohydrates
 - D. Alkylation of DNA

- Q. 43.** Phenol exerts its antimicrobial effect by
- A. Denaturing proteins and disrupting cell membrane
 - B. Disrupting cell wall
 - C. Oxidizing lipids
 - D. Denaturing DNA
- Q. 44.** _____ is frequently used to evaluate the effectiveness of antimicrobial agents.
- A. Phenol concentration test
 - B. Phenol coefficient test
 - C. Alcohol coefficient test
 - D. Alcohol concentration test
- Q. 45.** Which of the following is not effective on spores?
- A. Steam under pressure
 - B. Glutaraldehyde
 - C. Alcohol
 - D. Ethylene oxide
- Q. 46.** Crystal violet dye is included in MacConkey's agar medium to inhibit the growth of _____.
- A. Gram negative bacteria
 - B. Gram positive bacteria
 - C. Capsulated bacteria
 - D. Acid-fast bacteria
- Q. 47.** Detergents are considered as
- A. Low level germicides
 - B. High level germicides
 - C. Antiseptics
 - D. Sterilants
- Q. 48.** Which of the following is often referred as household bleach?
- A. Sodium chloride
 - B. Sodium carbonate
 - C. Sodium hypochlorite
 - D. Sodium bicarbonate
- Q. 49.** SDS is a
- A. Cationic detergent
 - B. Anionic detergent
 - C. Neutral detergent
 - D. SDS is not a detergent
- Q. 50.** Hydrogen peroxide inhibits the growth of bacteria by
- A. Generating ROS
 - B. Denaturing cell wall
 - C. Solubilizing cell membrane lipids
 - D. Creating pores in cell membrane

SPACE FOR ROUGH WORK