



RAN - 2103001103030005



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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.: **2103001103030005**

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.** Unlike a disinfectant, an antiseptic
- A. Sanitizes objects rather than sterilizes them.
 - B. Requires heat to be effective
 - C. Is non-toxic enough to be used on human skin.
 - D. Destroys all microorganisms.
- Q. 2.** HEPA stands for
- A. High Efficiency Particulate Air
 - B. High Efficiency Provisional Air
 - C. Highly Efficient Particulate Agent
 - D. Highly Effective Particle Agent
- Q. 3.** What is the pore size of HEPA filter?
- A. 0.50 μm
 - B. 0.45 μm
 - C. 0.33 μm
 - D. 1 μm
- Q. 4.** Depth filters are generally used for filtration of
- A. Blood
 - B. Water
 - C. Media
 - D. Air
- Q. 5.** Cold sterilization refers to the use of _____ for sterilization.
- A. Hot air
 - B. Steam under pressure
 - C. Radiations
 - D. Phenolics
- Q. 6.** Which of the following is not used to preserve food?
- A. High concentrations of sugar.
 - B. High concentrations of salt.
 - C. Benzoic acid.
 - D. Ethylene oxide.
- Q. 7.** Which of the following includes intermittent heat sterilization?
- A. Pasteurization
 - B. Tyndallization
 - C. Autoclaving
 - D. Hot Air sterilization
- Q. 8.** Gamma rays for sterilization is obtained from a _____ based light source.
- A. Cobalt 60
 - B. Mercury
 - C. Tungsten
 - D. Deuterium

- Q. 9.** Which of the following kills the microbial cell by disrupting cell membrane?
A. Halogens
B. Aldehydes
C. Cationic detergents
D. Heavy metals
- Q. 10.** 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. 11.** Which of the following is a cationic detergent?
A. Tween-80
B. Triton X 100
C. Sodium Dodecyl Sulphate
D. Cetyltrimethylammonium bromide
- Q. 12.** 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. 13.** Which of the following is used at low levels to disinfect drinking water?
A. Iodine
B. Chlorine
C. Ethanol
D. Copper sulphate
- Q. 14.** 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. 15.** 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. 16.** 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. 17.** 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. 18.** Least concentration of an antimicrobial agent that inhibits the visible growth of test bacterium is called as _____.
- Minimum Inhibitory Concentration
 - Minimum Lethal Concentration
 - Growth Inhibitory Concentration
 - Maximum Inhibitory Concentration
- Q. 19.** Plasmolysis is
- Shrinkage of cells when placed in hypotonic solution
 - Shrinkage of cells when placed in hypertonic solution
 - Swelling of cells when placed in hypotonic solution
 - Swelling of cells when placed in hypertonic solution
- Q. 20.** The presence of _____ can dramatically affect the effectiveness of antimicrobial agent.
- Single cell
 - Biofilm
 - Capsid
 - Cell wall
- Q. 21.** In _____, iodine is linked to a carrier molecule that releases free iodine slowly.
- Chromophore
 - Chlorophore
 - Iodophore
 - Fluorophore
- Q. 22.** _____ is used to decontaminate enclosed spaces such as safety cabinets and small rooms.
- Hydrogen peroxide
 - Vaporized hydrogen peroxide
 - Glutaraldehyde
 - Ethylene oxide
- Q. 23.** Which of the following can be used for disinfection of drinking water?
- Oxygen
 - Ozone
 - Hydrogen peroxide
 - Formaldehyde
- Q. 24.** Heavy metals mostly react with _____ groups of proteins to denature them.
- Amino groups
 - Sulphydryl groups
 - Alkyl group
 - Carboxyl group
- Q. 25.** Aldehydes exert their antimicrobial activity by
- Oxidation of lipids
 - Oxidation of proteins
 - Oxidation of carbohydrates
 - Alkylation of DNA

- Q. 26.** Phenol exerts its antimicrobial effect by
- A. Denaturing proteins and disrupting cell membrane
 - B. Disrupting cell wall
 - C. Oxidizing lipids
 - D. Denaturing DNA
- Q. 27.** _____ 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. 28.** Which of the following is not effective on spores?
- A. Steam under pressure
 - B. Glutaraldehyde
 - C. Alcohol
 - D. Ethylene oxide
- Q. 29.** 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. 30.** Detergents are considered as
- A. Low level germicides
 - B. High level germicides
 - C. Antiseptics
 - D. Sterilants
- Q. 31.** Which of the following is often referred as household bleach?
- A. Sodium chloride
 - B. Sodium carbonate
 - C. Sodium hypochlorite
 - D. Sodium bicarbonate
- Q. 32.** SDS is a
- A. Cationic detergent
 - B. Anionic detergent
 - C. Neutral detergent
 - D. SDS is not a detergent
- Q. 33.** 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
- Q. 34.** 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

SPACE FOR ROUGH WORK