



KQ-1347 Seat No. _____

B. Sc. (Sem. I) Examination

November / December - 2017

MB - 01 : Microbiology

(Fundamentals of Microbiology)

Time : 3 Hours]

[Total Marks : 70

SECTION - I

1 Answer the following M.C.Qs : **35**

(1) Which of the following is basic dye ?

- (A) Crystal Violet
- (B) Malachite green
- (C) Methylene blue
- (D) all

(2) Who was first to observed microbes ?

- (A) Antony van Leeuwenhoek
- (B) Loius Pastuer
- (C) Theodor Schulza
- (D) T.Van Dusch

(3) The proper order from shortest to longest wavelength is :

- (A) Visible, infrared, ultraviolet
- (B) Infrared, visible, ultraviolet
- (C) Ultraviolet, visible, infrared
- (D) Visible, ultraviolet, infrared

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(4) Who disprove the theory of abiogenesis ?

- (A) Van Helmont
- (B) Louis Joblot
- (C) Louis Pasteur
- (D) (B) and (C) both

(5) Ehrlich discovered _____ as the first magic bullet for treatment of infectious disease.

- (A) Trypan
- (B) Propanol
- (C) Butanol
- (D) Mercury

(6) _____ instrument is used for sterilization

- (A) Incubator
- (B) Orbital Shaker
- (C) Hot air Oven
- (D) Spectrophotometer

(7) Roll tube methods is used for isolation of

- (A) Aerobic bacteria
- (B) Anaerobic bacteria
- (C) Both
- (D) None of the above

(8) _____ can increase the affinity of stains for cellular structures.

- (A) Fixative
- (B) Mordant
- (C) Stain
- (D) Intensifier

(9) Which two dyes make Giemsa's Stain?

- (A) Methylene blue + eosin
- (B) Crystal violet + Metachite green
- (C) Congo red + Methylene blue
- (D) Safranine + crystal violet

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- (10) What does a phycologist study?
(A) Protozoa (B) Fungi
(C) Algae (D) Parasites
- (11) Enrichment culture technique was developed by _____
(A) Winograskly (B) Beijerinck
(C) Pasteur (D) Loeffler
- (12) Iodophors is mixture of _____
(A) Iodine + polyenolpyrrolidone
(B) Iodine tincture
(C) Iodine + polyvinylpyrrolidone
(D) all
- (13) The event that triggered the development and establishment of microbiology as a science is
(A) Development of Microscope
(B) Germ theory of disease
(C) Spontaneous generation
(D) All
- (14) Which is the part of microscope used to control amount of light that reaches to the specimen?
(A) Cultivation (B) Inoculation
(C) Isolation (D) Sterilization
- (15) The method is used to grow microorganism in the culture medium is called _____
(A) Cultivation (B) Inoculation
(C) Isolation (D) Sterilization

- (16) Gram's staining is _____ staining technique
(A) Special (B) Positive
(C) Differential (D) Supravital
- (17) _____ is referred as biological indicator of autoclave.
(A) Bacillus stearothermophilus
(B) Bacillus subtilis
(C) Bacillus megatorium
(D) Bacillus cereus
- (18) Culture prepared from a single colony is termed as
(A) Pure culture (B) Mixed culture
(C) Axenic culture (D) Isolated culture
- (19) Who discovered 1st Antibiotic and got noble prize in 1945 ?
(A) Sir Alexander Fleming
(B) Fleming, Chain and Florey
(C) Chain and Florey
(D) Chain and A. Fleming
- (20) Chemotherapeutic agents must _____
(A) Prevent/destroy the activity of a parasite
(B) Leave unaltered the host's natural defense mechanisms
(C) Be able to come in contact with the parasite by penetrating the cells.
(D) All above

- (21) Cold sterilization is
 - (A) Radiation
 - (B) Pasteurization
 - (C) Desiccation
 - (D) Filtration
- (22) Which of the following is best method for isolation?
 - (A) Sector method
 - (B) four flame method
 - (C) Spread plate technique
 - (D) Pour plate technique
- (23) _____ is a unique device for isolation of bacteria and fungi.
 - (A) Micromanipulator
 - (B) LAF
 - (C) Autoclave
 - (D) colony counter
- (24) Spore forming bacteria, are more resistant to _____
 - (A) Heat
 - (B) cold
 - (C) Water
 - (D) all of the above
- (25) The absorption of UV light is leads with _____
 - (A) Formation of T-T dimer
 - (B) Formation of purine dimer
 - (C) Breakdown of DNA strand
 - (D) All of the above
- (26) Phenol coefficient is used to _____
 - (A) Determine Chernical structure of disinfectant
 - (B) Check the toxicity
 - (C) Determine the antimicrobial activity of disinfectant
 - (D) All above

- (27) For culture preservation In liquid nitrogen at which. temperature ampoules, are stored ?
 - (A) -196 °C
 - (B) -78 °C
 - (C) -150 °C
 - (D) -80 °C
- (28) Electrons of Scanning, Electron Microscope are reflected through
 - (A) Glass funnel
 - (B) Specimen
 - (C) Metal-coated surfaces
 - (D) Vacuum chamber
- (29) The study of Bacteria is called _____
 - (A) Bacteriology
 - (B) Parasitology
 - (C) Virology
 - (D) Phycology
- (30) 20% Copper sulfate solution is used in _____
 - (A) Capsule staining
 - (B) Flagella staining
 - (C) Spore. staining
 - (D) Metachromatic staining
- (31) Magnification of light microscope is _____
 - (A) 1000X
 - (B) 2000X
 - (C) 1500X
 - (D) 2500X
- (32) _____ is termed use for the absence, of all kind of microbes. including spores.
 - (A) Sterility
 - (B) Decontamination
 - (C) Sanitization
 - (D) Disinfection
- (33) 1 meter is equal to _____
 - (A) 10^9
 - (B) 10^{-9}
 - (C) 10^6
 - (D) 10^{-6}

(34) Which of the following is not ionizing radiation?

- (A) X rays
- (B) Alpha rays
- (C) UV rays
- (D) cosmic rays

(35) _____ is the ability to reveal closely adjacent points as separate & distinct. a)

- (A) Magnification
- (B) Resolution
- (C) Numerical aperture
- (D) None of the above

SECTION - B

2 Answer any four short questions :

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- (a) Write principle of Gram's staining
- (b) Define pure culture and colony
- (c) Write full. form of CV-I and ZNCF
- (d) Give any two example of physical method used for sterilization
- (e) Which are the types of Electron microscope?
- (f) what is difference between Dye and stain?

3 Answer any three questions :

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- (a) Explain Francesco Redi experiment
- (b) Numerical aperture
- (c) Micromanipulator
- (d) Application of microbiology in various field
- (e) Phenol as antimicrobial agent

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4 Answer any three questions

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- (a) Describe the discovery of viruses
- (b) Distinguish between TEM and SEM
- (c) Enlist methods of isolation of bacteria and explain one in details
- (d) Write note on different types of staining
- (e) Explain effect of radiation on microbes