



AAI-38203 Seat No. _____
First Year B. Voc. (MLMDT) (Sem. II)
(CBCS) Examination
March / April - 2016
MLMDT- 2.3 : General Microbiology

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :**
- (1) All questions are compulsory.
 - (2) The paper is divided in two sections.
 - (3) There is no separate OMR sheet will be provided for Section I.
 - (4) Figures on right indicate marks

SECTION - I

- 1 Answer the following MCQ : **20**
- (1) _____ is the process in which microbial population is lower down up to the level which is judged by Government officials.
(A) Sterilization (B) Disinfection
(C) Sanitization (D) All of above
 - (2) What is the total magnification of High Power lens?
(A) 100X (B) 10X
(C) 450X (D) 1000X
 - (3) The organisms which utilizes organic electron donor are called:
(A) Lithotrophs (B) Autotrophs
(C) Heterotrophs (D) Organotrophs
 - (4) To avoid ice crystal formation during cryopreservation, _____ should be added as a cryoprotective agents.
(A) Penicillin (B) Glycerol
(C) Mineral oil (D) Methanol
 - (5) Which of the following structure of bacterial cell is found to be external to cellwall?
(A) Flagella (B) Capsule
(C) Mesosome (D) (A) and (B)

- (6) Major disadvantage of pour plate technique is
- (A) Colonies remain at the top of the agar plate.
 - (B) Colonies can not be count.
 - (C) Colonies remain only at the bottom of the agar plate.
 - (D) Submerged colonies are difficult to pick up.
- (7) Which of the following condition is used in HTST Pasteurization?
- (A) 62.8°C, 30 min. (B) 145°C, 30 mins
 - (C) 71.9°C, 15 Seconds (D) 71.9°C, 15 mins
- (8) Staphylococcus aureus shows _____ colored colonies.
- (A) Pink (B) Golden Yellow
 - (C) Green (D) Red
- (9) Which of the following was the first widely used antiseptic and disinfectant?
- (A) Chlorine (B) Iodine
 - (C) Phenol (D) Methanol
- (10) Streptomycin is an antibiotic:
- (A) That inhibits cell wall synthesis
 - (B) That inhibit nucleic acid and protein synthesis
 - (C) That inhibit enzymes
 - (D) That damage cytoplasmic membrane
- (11) Which of the following medium inhibits growth of Gram Positive bacteria?
- (A) MacConkey's Agar (B) EMB Agar
 - (C) SS Agar (D) All of the above
- (12) Which of the following are Gram Positive bacteria?
- (A) Proteus vulgaris
 - (B) Shigelle dysenteriae
 - (C) Staphylococcus aureus
 - (D) Enterobacter aerogens
- (13) _____ acts as counter stain in Gram staining.
- (A) Iodine (B) Crystal Violet
 - (C) Saffranine (D) Acetone alcohol
- (14) In viable count method, x means _____
- (A) Dilution factor (B) Aliquote of inoculums
 - (C) No. of colonies (D) No. of organisms

- (15) _____ are able to grow at high temperature.
 (A) Mesophiles (B) Piezophiles
 (C) Psychrophiles (D) Thermophiles
- (16) Which of the following phase of bacterial growth curve is also known as youth phase?
 (A) Log phase (B) Lag phase
 (C) Decline phase (D) Stationery phase
- (17) Which of the following is used for continuous culture?
 (A) Chemostat (B) Turbidostat
 (C) None of the above (D) (A) and (B)
- (18) Choose the correct type of container for storing flammable waste prior to disposal via UBC.
 (A) Glass Bottles (B) Yellow containers
 (C) Red Cans (D) Plastic jugs
- (19) Yellow bags are used for the disposal of _____
 (A) Non infectious plastic wastes
 (B) Infectious wastes
 (C) infectious non plastic wastes
 (D) Sharp wastes
- (20) _____ is used for the collection of samples from alimentary canal.
 (A) Sterile swab (B) Needle Aspiration
 (C) Intubation (D) Catheters

SECTION - II

- 2 (a) Answer specifically : (any **three**) **6****
- (1) What is Generation Time?
 - (2) Enlist various flageller arrangements found in microbes.
 - (3) Define: Thermal Death Time, Decimal reduction time.
 - (4) What are obligatory anaerobes?
 - (5) Differentiate between pure culture and mix culture.
 - (6) How to store Biomedical waste?

- (b) Answer Specifically : (any **three**) **9**
- (1) Enlist various basic nutritional requirements for growth.
 - (2) Write a note on chemostat.
 - (3) Write a note on Iodine as disinfectant.
 - (4) Compare and contrast - Capsule and Slime layer
 - (5) Describe streak plate technique for pure culture.
 - (6) Explain color coding of biomedical waste disposal.
- (c) Write short notes : (any **two**) **10**
- (1) How radiation is effective in sterilization?
 - (2) Describe in detail major types of media?
 - (3) Write an essay on Cell wall of Gram positive bacteria.
 - (4) Discuss chemical methods of selection for pure culture.
 - (5) Give detailed outline on categories of biomedical wastes as per GOI, Schedule I.
- 3** (a) Answer specifically : (any **three**) **6**
- (1) Define: Mixotrophs.
 - (2) What is oxygen toxicity?
 - (3) What is Auxochrome?
 - (4) Write the applications of alcohol as disinfectant.
 - (5) Enlist various cellwall synthesis inhibiting antibiotics.
 - (6) Write a use of catheter.
- (b) Answer Specifically : (any **three**) **9**
- (1) Write the principle of acid fast staining?
 - (2) Write a note on culture collection centre.
 - (3) Write in brief on gaseous requirements of bacteria.
 - (4) Write in brief antifungal antibiotics.
 - (5) Write in detail on types of microbes based on temperature requirements.
 - (6) Explain Intubation technique.
- (c) Write short notes : (any **two**) **10**
- (1) Write a note on Streptomycin & Tetracyclin.
 - (2) Write a note on Protoplast & Spheroplast.
 - (3) Discuss in detail septum formation.
 - (4) Write a note on techniques of preservation of pure culture,
 - (5) Describe in detail transport of specimen.