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BRAINWARE UNIVERSITY

Term End Examination 2023
Programme – B.Sc.(MLT)-2019/B.Sc.(MLT)-2020/B.Sc.(MLT)-2021
Course Name – General Bacteriology
Course Code - BMLT301
(Semester III)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) write correct option- Simple media is known as:
   a) Enriched media b) Basal media
   c) Differential media d) Defined media

(ii) Write the name of Diagnostic Techniques for Mycobacterium tuberculosis identification
   a) Bactec system b) Septic check acid-fast bacilli system
   c) Polymerase chain reaction d) All of these

(iii) Select the correct option-Which of the following method can be used to determine the number of bacteria quantitatively?
   a) Spread plate b) Pour plate
   c) Streak plate d) Both pour and spread plate

(iv) Identifythe device name which is used to pick a single bacterial cell from a mixed culture
   a) microscope b) micropipette
   c) microprobe d) micromanipulator

(v) For Gram staining, select the primary stain is
   a) safranin b) acid fuchsin
   c) iodine d) crystal violet

(vi) Select correct option- when an organism remains unstained against a stained background then that stain is known as
   a) Simple stain b) Negative stain
   c) Metachromatic stain d) Gram stain

(vii) identify correct answer-The staining technique use to stain the metachromatic granules of Corynebacterium diptheriae
   a) Giemsa stain b) Gram stain
   c) Lactophenol stain d) Albert stain

(viii) Select the correct bacterial type-Neisser stain is used to detect

a) polysulphate bacteria
b) polyphosphate in bacteria
c) polyphosphate in filamentous bacteria
d) polyphosphate in filamentous fungi

(ix) Choose the correct option- Positive result for hydrogen sulfide production test is indicated by presence of which color?

a) Red
b) Yellow
c) Black
d) Colourless liquid

(x) Write Which test is mainly used for differentiation between Enterobacteriaceae from gram-negative bacteria?

a) Nitrate reduction test
b) Urease test
c) Litmus milk test
d) Hydrogen sulfide production test

(xi) Choose which one is correct-Gram staining is an example of

a) Differential staining
b) Simple staining
c) Acid fast staining
d) All options are correct

(xii) Capsule staining is an example of (select correct option)

a) Gram stain
b) Acid fast stain
c) Negative stain
d) None of these

(xiii) All of the following are common stains used in the microbiology laboratory, Except (select correct option):

a) Bismarck brown
b) Lactophenol cotton blue
c) Ziehl - Neelsen stain
d) Crystal violet

(xiv) choose the correct option- which test is done to dignose Rickettsial infection

a) WIDAL test
b) Weil-Felix test
c) ASO test
d) CRP test

(xv) Choose the correct option- Escherichia coli forms __ from glucose

a) acid
b) gas
c) pigment
d) both acid and gas

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Explain the term "Differential Staining Process". (3)
3. Bacteria A is Catalase Positive and Bacteria B is catalase Negative- Prepare an experimental set up to establish the statement (3)
4. If any bacterium is citrate test positive- what will be your interpretation? (3)
5. How can you distinguish between Streptococcus pseudopneumoniae and other alpha hemolytic Streptococci (3)
6. Prepare a Flow chart to demonstrate TB skin test. (3)

OR

Write about the ELISA test to detect Neisseria gonorrhea (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Define Pure culture and make a flowchart to prepare a pure culture in microbiological laboratory (5)
8. Write about the culturing method of bacteria responsible for whooping cough (5)
9. The differential between General purpose and Enrichment culture media (5)
10. Write about importance of use peptone , yeast extract in culture media and Prepare the composition list of any well known synthetic medium (5)
11. Write about culture characteristics and culture medium of Corynebacterium sp. (5)

12. Write about the colony characteristics of Mycobacterium tuberculosis on LJ medium (5)

OR

Distinguish catalse test,amidase test, nitrate reduction test, suceptibility to TCH test for Mycobacterium tuberculosis (5)

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