

**BV(3/CBCS) MDT/MLT-VC-3016/22
(CC/MC/NC/MLTC/KC/RUPC/RC)**

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(Held in 2022)

**MEDICAL LAB AND MOLECULAR
DIAGNOSTIC TECHNOLOGY/MEDICAL
LABORATORY TECHNICIAN**

QP : Medical Laboratory Technician

Paper : MDT/MLT-VC-3016

(Microbiology—II)

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Fill in the blanks : 1×7=7

- (a) _____ is a study of disease caused by fungi.
- (b) Common CNS infection *Neisseria* causes _____.
- (c) *S. pneumoniae* grows on _____.
- (d) Bacteria are defined as _____ organisms.
- (e) Natural host of *Shigella* is _____.

(2)

- (f) Causative agent of *diphtheriae* is ____.
- (g) Staining is primarily used to enhance ____ in the image.

2. Answer the following questions : $2 \times 4 = 8$

- (a) What is tinea nigra? Mention the symptoms of tinea nigra. $1 + 1 = 2$
- (b) What are mycotoxins? Give two examples of mycotoxins. $1 + 1 = 2$
- (c) List out the pathogenicity of *Helicobacter pylori*.
- (d) Write the cultural characteristics of *Streptococcus pneumoniae*.

3. Answer any three of the following questions :

$5 \times 3 = 15$

- (a) What is bacteremia? What are the possible infections caused by it? $1 + 4 = 5$
- (b) Write a note on laboratory diagnosis of *Corynebacterium diphtheriae*.
- (c) What are two treatments for *Pneumocystis*? Describe the laboratory diagnosis of *Pneumocystis*. $2 + 3 = 5$
- (d) Write the procedure of endospore staining technique.
- (e) Write a note on laboratory diagnosis and pathogenesis of *Treponema pallidum*. $3 + 2 = 5$

(3)

4. Answer any three of the following questions :

$10 \times 3 = 30$

- (a) Write in detail about the morphology, cultural characteristic, pathogenesis and laboratory diagnosis of *Vibrio cholerae*. $2 + 2 + 3 + 3 = 10$
- (b) What is negative staining? Write in detail about the principle and procedure of capsule staining techniques. $1 + 4 + 5 = 10$
- (c) Discuss in detail on morphology, cultural characteristics, biochemical reactions, antigenic characteristic and pathogenesis of *Staphylococcus epidermis*. $2 + 2 + 2 + 2 = 10$
- (d) List out any four beneficial and harmful effects of fungi. Add a note on general properties of fungi. $2 + 2 + 6 = 10$
- (e) What is aspergillosis? What are the types of aspergillosis and their symptoms? How is aspergillosis diagnosed? $2 + 6 + 2 = 10$
