

B. Sc. MEDICAL TECHNOLOGY (LABORATORY) (BMLT)
SEMESTER -IV EXAMINATION, JUNE-2026
(BMLT402) VIROLOGY & MYCOLOGY

[Time allotted: Three Hours]**[Max Marks: 100]****Note:** Read all the instructions carefully

Answer all questions in serial order. Draw suitable diagrams wherever necessary

Q. 1. Objective type questions: (Attempt All)**(10 x 02 = 20)**

(Very short/ short answer/ MCQ/ One liners/ Fill in the blanks/ True/False)

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| <p>a. Which of the following is the smallest virus?
(PO 4; CO 3)</p> <ol style="list-style-type: none"> i. Parvovirus ii. Poxvirus iii. Rhabdovirus iv. Hepatitis virus <p>b. Which of the following is DNA virus? (PO4; CO3)</p> <ol style="list-style-type: none"> i. Poliovirus ii. Rubella virus iii. Dengue virus iv. Hepatitis B virus <p>c. Negri bodies are the characteristic inclusion bodies seen in:
(PO1, 4; CO 3,6)</p> <ol style="list-style-type: none"> i. Yellow fever virus ii. Rabies virus iii. Influenza virus iv. Dengue <p>d. Best laboratory test to diagnose dengue infection at the earliest is –
(PO1,2; CO 3,6)</p> <ol style="list-style-type: none"> i. IgM antibody by ELISA ii. IgG antibody by ELISA iii. NS1 antigen by ELISA iv. IgM antibody by rapid card test <p>e. The most common viral cause of gastroenteritis:
(PO1,2; CO 3,6)</p> <ol style="list-style-type: none"> i. Rotavirus ii. Norwalk virus iii. Adenovirus iv. Hepadnavirus | <p>f. Antigenic shift is seen in:
(PO1,4; CO 3)</p> <ol style="list-style-type: none"> i. Influenza A ii. Mumps virus iii. Parainfluenza virus iv. Dengue virus <p>g. Rhizoids are characteristically seen in:
(PO1,4; CO 3,4)</p> <ol style="list-style-type: none"> i. Aspergillus ii. Rhizopus iii. Penicillium iv. Candida <p>h. Germ tube test is diagnostic for: (PO1,4; CO 3,4)</p> <ol style="list-style-type: none"> i. Candida albicans ii. Candida krusei iii. Aspergillus iv. Mucor <p>i. Which of the following is marker of invasive fungal infection?
(PO1,2,4; CO 3,4)</p> <ol style="list-style-type: none"> i. Beta -D glucan assay ii. Specific cell wall mannan iii. Capsular antigen iv. Galactomannan assay <p>j. Which of the following is vaccine preventable viral disease?
(PO 4; CO 3)</p> <ol style="list-style-type: none"> i. Rubella ii. Chikungunya iii. RSV iv. Ebola |
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Q. 2. Short notes/ Short answer type questions (Attempt any Five)**(05 x 04 = 20)**

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| <p>a. Laboratory diagnosis of fungal infections.</p> <p>b. Oncogenic viruses</p> <p>c. Sporotrichosis</p> <p>d. Mucormycosis</p> <p>e. Viral vaccines</p> <p>f. Bacteriophage</p> <p>g. Differentiate between Injectable and oral polio vaccine.</p> | <p>(PO1,4; CO3,4)</p> <p>(PO4 , CO3)</p> <p>(CO 3,4; PO 1,4)</p> <p>(PO 1,4,5; CO 3,4)</p> <p>(PO 2,4; CO3)</p> <p>(PO 4,6 ; CO 3)</p> <p>(PO 4,6; CO 3)</p> |
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Q. 3. Structured questions (Attempt any Three)

(03 x 10 = 30)

- a. (i) Define dermatophytosis.
(ii) Describe the pathogenesis and clinical types of dermatophytes infection.
(iii) Discuss its laboratory diagnosis in detail. (PO 1,2,4; CO 3,4,6)
- b. (i) What are the risk factors for invasive aspergillosis?
(ii) Describe the various clinical manifestations of aspergillosis?
(iii) Add a note on its laboratory diagnosis and treatment. (PO 1,2,4,5; CO 3,4,6)
- c. (i) What are the serotypes of Dengue? Name the vector responsible for the transmission of the disease.
(ii) Describe the pathogenesis and its clinical manifestations.
(iii) Discuss in detail the laboratory diagnosis of Dengue. (PO 1,2,4,5; CO 3,6)
- d. (i) What is antigenic variations?
(ii) Describe the laboratory diagnosis of Influenza infection.
(iii) Briefly add a note on preventive measures available for this condition. (PO 1,3,4,5; CO 3,4,6)

Q. 4. Long Answer/ Essay type questions (Attempt any Two)

(02 x 15 = 30)

- a. (i) Describe in detail the laboratory diagnosis of systemic candidiasis.
(ii) Add a note on Candida auris. (PO 1,4,5; CO 4,6)
- b. (i) Draw a well labelled diagram of structure of HIV.
(ii) Describe in detail the laboratory diagnosis of HIV infection. Add a note on NACO strategies for diagnosing the HIV infection. (PO 1,3, 4,5; CO 3,4,6)
- c. (i) What are the different routes of transmission of Hepatitis B virus?
(ii) Discuss the laboratory diagnosis of hepatitis B infection. (PO 1,4,5; CO 4,6)