

**M.Sc. 4th Semester Examination, 2024**

**BIOMEDICAL LABORATORY SCIENCE  
AND MANAGEMENT**

*( Diagnostic Microbiology-II :  
Virology & Mycology )*

**( Practical )**

**PAPER – BML-496**

*Full Marks : 50*

*Time : 4 hours*

**Answer all questions**

*The figures in the right hand margin indicate marks*

1. Write the principle and standard operating procedure of Lactophenol Cotton Blue fungal staining. What are the functions of each components of Lactophenol Cotton Blue

stain ? Write the observations, results and interpretation of the supplied fungal specimen.

7 + 2 + 6

2. Write the principle of conventional PCR. Formulate the preparation of PCR master-mix for 50 $\mu$ l volume of each reaction by mentioning working and final concentrations of each component. Design the thermal cycling condition for running end-point PCR using a primer pair of  $T_m$  59 $^{\circ}$ C and 60 $^{\circ}$ C and amplicon length of 500bp. Draw the image of agarose gel electrophoresis showing test samples, controls, and DNA ladder.

4 + 5 + 3 + 3

3. Viva-voce. 10

4. Laboratory Note Book. 10