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PG CBCS

M.SC. Semester-II Examination, 2021

MEDICAL LABORATORY TECHNOLOGY

PAPER: MLT 296

PRACTICAL

(MICROBIOLOGY & MOLECULAR BIOLOGY)

Full Marks: 50 **Time: 3 Hours**

Answer any <u>TWO</u> questions of the following: **25X2=50**

1. Write the working principle of autoclave. State the procedure for cleaning and sterilizing the glass wares in a medical laboratory? Write the principle and procedure of indole and citrate test. 6+(3+6)+(5+5)
2. Write down the principle and procedure for enumeration of bacteria from soil. Write down the principle and procedure of Negative Staining. State the principle and procedure of Gram Staining. (3+6)+(3+4)+(4+5)
3. Write down the principle and procedure of bacterial DNA isolation and visualization by agarose gel electrophoresis. (5+8)+(4+8)
4. Write down the principle and procedure of antibiotic sensitivity test by disc diffusion method. Determine the minimum inhibitory concentration of an antibiotic against *Escherichia coli* (Principle, procedure, and interference). (5+6)+(4+6+4)
5. How do you determine the molecular weight of a protein sample by using poly acrylamide gel electrophoresis (principle, reagent preparation, procedure, and interference)? State the principle and procedure of methyl red test. (4+5+5+3)+(4+4)
6. Write down the principle and procedure of restriction digestion of lambda DNA using EcoR1. State the principle and procedure of polymerase chain reaction. Write the principle and procedure of fungi isolation from a clinical sample. (3+5)+(5+4)+(3+5)

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