Total page: 01

PG CBCS

M.Sc. Semester-II Examination, 2022

MEDICAL LABORATORY TECHNOLOGY

PAPER: MLT 202

(DIAGNOSTIC MOLECULAR BIOLOGY AND EPIDEMIOLOGY)

Full Marks: 40 **Time: 2 Hours**

The figures in the right - hand margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

1. Answer any <u>two</u> questions: **8X2=16**

a) What do you mean by DNA damage? Write the process of BER, NER and SOS repair of DNA damage. 1+8

b) Write down the principle of Site directed mutagenesis and flow cytometry. 4+4

c) Describe the process of transcription.

d) Write the principle of Flow cytometry. Illustrate the working principle of flow cytometry for cell separation with diagram. 2 +6

GROUP - B

2. Answer any <u>four</u> questions: **4×4=16**

a) Write the name of any five tumour markers with their site of tumour.

b) Write down the principle of Commet study.

c) Briefly discuss gene therapy with an example.

d) Write down the mechanism of TUNEL study.

e) Write down the basic steps of Recombinant DNA technology.

f) Discuss the process of "switched off "and "switched on" control of Lac operon.

g) Briefly write the molecular mechanism of cancer.

h) Write the difference between prevalence and incidence rate of disease. Define sampling for survey.

GROUP - C

3. Answer any <u>four</u> questions: **2×4=8**

a) What do you mean by central dogma of life? Write the composition of RNA Polymerase holoenzyme. 1+1

b) What is genetic code? Write any two features of genetic code. 1+1

c) Define apoptosis.

d) What do you mean by morbidity rate?

e) What is incident rate of a disease? Give example. 1+1

f) Define questionnaire?

g) Briefly write the initiation process of the DNA replication. 2

h) Which enzyme is called molecular scissor? Give an example of that enzyme show how it cuts the DNA. 1+1

******