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B.M.S COLLEGE FOR WOMEN

BENGALURU – 560004

III SEMESTER END EXAMINATION – JAN/FEB - 2024

B.Sc.-ZOOLOGY

MOLECULAR BIOLOGY, BIOINSTRUMENTATION & TECHNIQUES IN BIOLOGY

(NEP Scheme 2021-22 onwards F+ R)

Course Code: ZOO3DSC03

QP Code: 3017

Duration: 2 ½ Hours

Max. Marks: 60

Instructions: 1. Draw neat labeled diagram wherever necessary.

2. Answer should be completely in English.

PART- A

I. Answer the following in one word or one sentence.

(5X1=5)

1. What is a ribonucleoprotein box?
2. Define gene silencing.
3. Mention two types of centrifuges.
4. Give an application of Dark field microscopy.
5. Expand ELISA.

PART- B

II. Answer any five of the following.

(5X3=15)

1. Mention the types of RNA polymerases with their functions in eukaryotes.
2. Differentiate between cistron and muton.
3. Give the schematic structure of a prokaryotic promoter.
4. Write short notes on Glycosylation.
5. List three applications of chromatography.
6. Explain the working principle of light microscopy.
7. What is autoradiography? Mention its applications.

PART- C

III. Answer any four of the following.

(4X5=20)

1. List five properties of genetic code.

2. Differentiate between euchromatin and heterochromatin.
3. Write short notes on methylation of proteins.
4. Explain the working principle of centrifuge.
5. Write a note on pH meter.
6. Give an account on DNA finger printing.

PART- D

IV. Answer any two of the following.

(2X10=20)

1. Elucidate on the process of translation in eukaryotes.
2. Give an account on *lac* operon.
3. Explain the working principle and applications of scanning electron microscope.
4. Give an account on Polymerase Chain Reaction.

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