

BACHELOR OF PHARMACY (B. PHARM.) (CBCS-2019 COURSE)

B. Pharm. Sem-VI : WINTER- 2022

SUBJECT : PHARMACEUTICAL BIOTECHNOLOGY

Day : Friday

Time : 10:00 AM-01:00 PM

Date : 27-01-2023

W-20684-2022

Max. Marks : 75

**N.B :**

- 1) All Questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Answers to both sections should be written in **SEPARATE** answer books.

**SECTION - I**

**Q.1** Answer all the questions. [20]

- a) Give salient features of DNA double helix.
- b) What are histone proteins? Give structure of a nucleosome.
- c) Draw a neat labelled diagram of Miller's apparatus.
- d) Differentiate introns and exons.
- e) What is primase?
- f) Give important properties of TaqDNA polymerase.
- g) With example, explain palindromic sequence.
- h) Differentiate rRNA and mRNA.
- i) What is DNA Ligase? What are its applications?
- j) What are transcription factors?

**Q.2** Attempt **ANY TWO** of the following [20]

- a) Write in details about Griffith's experiment. Explain how Avery-MacLeod-McCarthy's work gave important conclusions to Griffith's experiment.
- b) Give salient features of the genetic code.
- c) Describe the key steps involved in rDNA technology and give applications of rDNA technology.

**SECTION - II**

**Q.3** Answer **ANY SEVEN** of the following: [35]

- a) Multiplexed Vaccines.
- b) Frame-Shift Mutation.
- c) Structure of Immunoglobulins
- d) Antibody mediated hypersensitivity
- e) Production of Penicillinase
- f) Principle of SDS gel electrophoresis
- g) Hybridoma technology for producing MABs
- h) Techniques of Enzyme immobilization
- i) Stirred-tank reactor
- j) Sandwich ELISA

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