

**M. PHARM. SEM-II (CHOICE BASED CREDIT & GRADE SYSTEM)
: SUMMER - 2018**

SUBJECT: ADVANCED PHARMACEUTICAL BIOTECHNOLOGY-III

Day : **Thursday**
Date : **05/07/2018**

S-2018-4009

Time: **10.00 AM to 01.00 PM**
Max. Marks: 60.

N.B.:

- 1) Attempt any **THREE** questions from Section-I and any **THREE** questions from Section-II.
 - 2) Both the sections should be written in **SEPARATE** answer books.
 - 3) Figures to the **RIGHT** indicate full marks.
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SECTION-I

- Q.1** Describe how a long DNA is folded into a chromatin structure? Explain how gene expression can be controlled through chromatin re-modeling. **(10)**
- Q.2** Define transfection. Elaborate different methods of transfection. **(10)**
- Q.3** Write in details about shotgun strategy of sequencing large genomes. **(10)**
- Q.4** Write short notes on any **TWO** of the following: **(10)**
- a) RISC
 - b) Dicer
 - c) DNA methylation
 - d) Histone protein.

SECTION-II

- Q.5** What are scaffolds? Explain its use in cartilage transplantation. **(10)**
- Q.6** What is BLAST? Explain how BLAST is useful in sequence analysis? **(10)**
- Q.7** Explain what are embryonic stem cells? Describe their therapeutic use. **(10)**
- Q.8** Write short notes on any **TWO** of the following: **(10)**
- a) Growth factors in ATC
 - b) Differentiate adherent and suspension cell cultures
 - c) Sequence alignment
 - d) Preservation of a cell line.

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