

SINHAGAD-II (CBCS – 2012 COURSE) : SUMMER 2016
SUBJECT: ADVANCED PHARMACEUTICAL BIOTECHNOLOGY-III

Day : *Tuesday*
Date : *05-07-2016*

Time: *10:00AM TO 1:00 P.M.*
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.

SECTION-I

- Q.1** Give a detailed account on outcome of human genome project. (10)
- Q.2** Describe Histone tail modification as gene expression control mechanism. (10)
- Q.3** Elaborate how double stranded RNA may lead to gene silencing? Discuss its therapeutic applications. (10)
- Q.4** Write short notes on any **TWO** of the following: (10)
- a) Transfection
 - b) Pharmacogenomics
 - c) Shotgun Strategy
 - d) Genome map.

SECTION-II

- Q.5** What are important components of ATC media? (10)
- Q.6** Describe various tools available at NCBI for DNA sequence analysis. (10)
- Q.7** What are stem cells? Discuss stem cell therapy with suitable examples. (10)
- Q.8** Write short notes on any **TWO** of the following: (10)
- a) FASTA format
 - b) Clastal W
 - c) Scaffold
 - d) Cryopreservation.

* * *

SINHAGAD-II (CBCS – 2012 COURSE) : SUMMER 2016
SUBJECT: ADVANCED PHARMACEUTICAL BIOTECHNOLOGY-II

Day : *Saturday*
Date : *02-07-2016*

Time: *10:00 AM TO 1:00 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.

SECTION-I

- Q.1** Define monoclonal antibodies. Write in details their application in diagnostics. (10)
- Q.2** What is MHC? Discuss the process of antigen presentation. (10)
- Q.3** Discuss cell mediated and humoral immunity. (10)
- Q.4** Write short notes on any **TWO** of the following: (10)
- a) Programmed cell death
 - b) Immunoglobulin
 - c) Flow cytometry
 - d) Adjuvants.

SECTION-II

- Q.5** What are bioreactors? With neat diagram describe stirred tank reactor. (10)
- Q.6** Discuss various factors affecting enzyme activity. (10)
- Q.7** Describe site directed mutagenesis experiment using a DNA oligomer. (10)
- Q.8** Write short notes on any **TWO** of the following: (10)
- a) Enzyme inhibitor
 - b) Fumigation
 - c) Fermentation media
 - d) Whole cell immobilization.

* * *

