

BACHELOR OF SCIENCE (BIOTECHNOLOGY) (CBCS - 2015 COURSE)
T.Y.B.Sc. (Biotech) Sem-VI : WINTER :- 2021
SUBJECT: ANIMAL BIOTECHNOLOGY

Day : Tuesday
Date 1/2/2022

W-13266-2021

Time : 02:00 PM-05:00 PM
Max. Marks: 60

N.B.:

- 1) Q. No.1 and Q.No.5 are **COMPULSORY**. Answer **ANY TWO** from questions 2, 3 & 4 and from 6, 7 & 8.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SAME** answer book.

SECTION-I

- Q.1** Attempt **ANY FIVE** of the following: (10)
- a) What is transgenic animal?
 - b) State the use of transgenic animal in disease control.
 - c) What do you understand by the term “Within breed solution”?
 - d) State the advantage of gamete transfection in animal cloning.
 - e) State the role of phenol red in tissue culture medium.
 - f) Draw a well labelled diagram of stirrer flask.
- Q.2** a) Explain the retrovirus mediated gene transfer method for development of transgenic animals. (05)
- b) Describe any five applications of animal biotechnology. (05)
- Q.3** Answer the following:
- a) Define cell line. Explain the growth characteristics of normal diploid cell line. (05)
 - b) What is CO₂ incubator? Describe its role in tissue culture. (05)
- Q.4** Write a short notes on **ANY TWO** of the following: (10)
- a) Microinjection
 - b) Artificial twinning method
 - c) Organ culture

SECTION-II

- Q.5** Answer **ANY FIVE** of the following: (10)
- a) What is dye uptake assay?
 - b) What is serum free medium?
 - c) What are toxoids?
 - d) Give any two names each of i) bacterial vaccines ii) viral vaccines.
 - e) Give any two names each of i) growth factors ii) therapeutic proteins.
 - f) Enlist four routes of chick embryo inoculation.
- Q.6** a) What is primary culture? How chick embryo primary fibroblast culture is prepared? (05)
- b) Define stem cells. Explain their types and properties. (05)
- Q.7** Attempt the following questions:
- a) What are monoclonal antibodies? Describe the method for their synthesis. (05)
 - b) Explain the method for production of bacterial vaccine giving suitable example. (05)
- Q.8** Write short notes on **ANY TWO** of the following: (10)
- a) Inactivated vaccines
 - b) Universal Immunization Program of India
 - c) Edible vaccines

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