

M. Sc. DEGREE EXAMINATION, APRIL 2023
BIOTECHNOLOGY
SECOND SEMESTER

COURSE : CORE
PAPER : ANIMAL AND PLANT BIOTECHNOLOGY
TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

ANSWER ALL THE QUESTIONS

(10 x 2 = 20)

1. Define cell bank.
2. What is cryopreservation?
3. What is gene knock down?
4. What are xenotransplanters?
5. Differentiate cybrids and hybrids.
6. Define synthetic seeds.
7. What are selectable markers?
8. What are disarmed plasmids?
9. Define Cry proteins.
10. What is cytoplasmic male sterility?

SECTION – B

ANSWER ALL THE QUESTIONS

(5 x 8 = 40)

11. (a) Bring out the methods in cytotoxicity testing.
(or)
(b) Describe the fluidized bed reactor used for culturing cell lines.
12. (a) Discuss the pathogen, symptoms and control of diseases in cattle.
(or)
(b) Chart out the methods involved *in vitro* fertilization of farm animals.
13. (a) Elaborate the methods of germplasm conservation.
(or)
(b) Give an account on production of haploid plants and mention the advantages.
14. (a) Enumerate the reporters and promoters used in plant vectors.
(or)
(b) Narrate chloroplast transformation and its applications.
15. (a) Write short notes on plantibodies and edible vaccines.
(or)
(b) Give the protocol for the development of transgenic crop for abiotic stress tolerance.

SECTION – C

ANSWER ANY TWO QUESTIONS IN ABOUT 1500 WORDS

(2 x 20 = 40)

16. Elucidate the types of culture vessels, media and supplements for animal cell culture.
17. Discuss the methods involved in transgenic animal production.
18. Bring out the applications of plant tissue culture in agriculture and horticulture.
19. Describe the process of Bt transgenic crop. Add note on pros and cons.
