



Centre for Distance Learning

(Approved by Joint Committee of UGC-AICTE-DEC)

Third Floor, Balaji Metro Plaza, Dondaparthy Main Road, Visakhapatnam-530 016.
Phone: 0891-2866455/466, 2797499, 8179681900 E-mail: cdl@gitam.edu

SPDBT 201 - MOLECULAR BIOLOGY

ASSIGNMENT- 1 5 X 3 =15 Marks

- 1.Explain in detail the mechanism of DNA replication?
- 2.Explain in detail the regulation process of DNA replication
- 3.Discuss the process of protein synthesis and its inhibitors?
- 4.Explain in detail the process of translation mechanism in prokaryotes
- 5.Discuss in detail about the Giant chromosomes

ASSIGNMENT- 2 5 X 3 =15 Marks

- 6.Discuss in detail the role of enhancers, cis and trans elements in gene expression
- 7.Write an account on the post translational modifications occurring in living organisms
- 8.How prokaryotic transcription is different from eukaryotic transcription? Explain in detail?
- 9.What are the differences between prokaryotic and eukaryotic genetic material?
- 10.Explain the mechanism of transcription in eukaryotes

MSc-Biotechnology - 2

1

SPDBT 202 - GENETIC ENGINEERING

ASSIGNMENT- 1 5 X 3 =15 Marks

- 1.What are the applications of genetic engineering in industry
- 2.What are artificial chromosomes? Explain with examples
- 3.What are salient features of Human Genome project
- 4.Write about any three gene transfer techniques
- 5.What are the essential features of cloning vectors and discuss about vector of plasmid origin

ASSIGNMENT- 2 5 X 3 =15 Marks

- 6.What are the applications of genetic engineering in
- 7.Explain different blotting techniques
- 8.Give an account on In situ hybridization?
- 9.Describe Transformation, Electroporation and Biolistic gene transfer methods?
- 10.Give an account on the structure and properties of phage vectors?

MSc-Biotechnology - 2

2

SPDBT 203 - PLANT BIOTECHNOLOGY

ASSIGNMENT- 1 5 X 3 =15 Marks

- 1.Explain the role of molecular markers in crop improvement
- 2.Write an account on the strategies used for protein production in plants
- 3.Describe the production of artificial seeds and their applications
- 4.What is symbiotic nitrogen fixation in plants. Also highlight its Pathway
- 5.Explain the various types and applications of organogenesis in detail

ASSIGNMENT- 2 5 X 3 =15 Marks

- 6.Discuss about various stages and applications of micropropagation
- 7.Write an account on the tissue culture composition and media preparation
- 8.Explain the process of protoplast isolation and its culture
- 9.Write an account on Agrobacterium mediated gene transfer. Add a note on vir genes?
- 10.Discuss about the process and applications of somatic embryogenesis

MSc-Biotechnology - 2

3

SPDBT 204 - ANIMAL AND MEDICAL BIOTECHNOLOGY

ASSIGNMENT- 1 5 X 3 =15 Marks

- 1.Write about the production of transgenic animals. What are the Advantages?
- 2.Discuss about stem cells and their importance in medicine
- 3.Give a detailed account on the production of bio artificial skin and pancreas
- 4.Explain the production of Insulin by rDNA technology
- 5.Outline methods in embryo culturing, comment on applications of embryo culturing

ASSIGNMENT- 2 5 X 3 =15 Marks

- 6.What is cloning? Explain the creation of transgenic sheep by cloning
- 7.What is IVF? Explain in detail
- 8.Write a detailed account on isolation and culturina of stem cells
9. Explain i) Transgenic cattle ii) Transgenic sheep
- 10.Give an overview of various media used in animal tissue culture

MSc-Biotechnology - 2

4

SPDBT 205 - INDUSTRIAL AND ENVIRONMENTAL BIOTECHNOLOGY

ASSIGNMENT- 1 5 X 3 =15 Marks

- 1.Explain various methods of production and applications of useful enzymes
- 2.Write in detail about bioleaching process
- 3.Write about the different media used in industrial fermentations
- 4.Discuss the role of microbes in bioleaching process of Copper and Gold
- 5.Explain various steps involved in Vitamin B12 production

ASSIGNMENT- 2 5 X 3 =15 Marks

- 6.sketch and explain the typical bioreactor and explain different types of bioreactors
- 7.Write about the industrial production of penicillin
- 8.Write in detail about isolation and screening of industrially useful microorganisms
- 9.Write about the industrial production process for cellulases
- 10.Write in detail about production of biofuels

NOTE:

- 1) Last date for submission of assignments for all the courses / paper is- 15.03.2018
- 2) Non-submission of assignments as per the scheduled dates mentioned above attracts a fine of Rs. 200/- upto 26.03.2018 per each assignment of a course / paper and under any circumstances the assignments will not be accepted from 27th March, 2018.
- 3) Assignments are to be written in the Book-lets provided by CDL and other formats are not accepted.
- 4) Answer all 10 questions, in a single book only