

(DBT01)

Total No. of Questions : 10]

[Total No. of Pages : 01

P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018

BIO-TECHNOLOGY

Microbiology and Immunology

Time : 3 Hours

Maximum Marks :70

Answer any five questions.

All questions carry equal marks.

- Q1)** Describe the morphology and ultra structure of Fungi.
- Q2)** Describe the general features of Photosynthetic Yeasts.
- Q3)** Describe the methods of sterilization.
- Q4)** Write an account on nutritional requirements of Bacteria.
- Q5)** Explain the metabolism of Photosynthetic bacteria.
- Q6)** Describe the regulation of nitrogenase and nif-genes.
- Q7)** Write an account on the structure of antigen and antibody.
- Q8)** Describe the role of microorganisms in carbon cycle.
- Q9)** Describe the Hypersensitivity and its effects.
- Q10)** Write an account on Autoimmunity.



(DBT02)

Total No. of Questions : 10]

[Total No. of Pages : 01

P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018
BIO-TECHNOLOGY

Biochemistry and Molecular Biology

Time : 3 Hours

Maximum Marks :70

Answer any five questions from the following.

All questions carry equal marks.

- Q1)** Describe Gluconeogenesis and its significance.
- Q2)** Write an account on electron transport system.
- Q3)** Describe the Protein metabolism.
- Q4)** Write an account on the biosynthesis of purines and their catabolism.
- Q5)** Describe the structure and functions of amino acids.
- Q6)** Describe the structure and functions of nucleic acids.
- Q7)** Write an account on the post transcriptional modifications.
- Q8)** Describe DNA as genetic material.
- Q9)** Describe the regulation of gene expression.
- Q10)** Write an account on Mutations.



(DBT03)

Total No. of Questions : 10]

[Total No. of Pages : 01

P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018
BIO-TECHNOLOGY

Plant and Animal Tissue Culture and Genetic Engineering

Time : 3 Hours

Maximum Marks :70

Answer any five of the following questions.

All questions carry equal marks.

- Q1)** Describe the media preparation and sterilization.
- Q2)** Write an account on Berguman's plating technique.
- Q3)** Explain cellular totipotency and meristem culture.
- Q4)** Write an account on the production of haploids.
- Q5)** Describe the techniques and types of mammalian cell cultures.
- Q6)** Describe the biology of cells in culture.
- Q7)** Write an account on the cell growth and cell transformation.
- Q8)** Describe stem cell culture and its applications.
- Q9)** Describe the methods of identification and expression of cloned genes.
- Q10)** Write an account on enzymes used in genetic engineering.



(DBT04)

Total No. of Questions : 10]

[Total No. of Pages : 01

P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018

BIO-TECHNOLOGY

Applications of Biotechnology

Time : 3 Hours

Maximum Marks :70

Answer any five of the following questions.

All questions carry equal marks.

- Q1)** Describe isolation and preservation of microorganisms.
- Q2)** Explain maintenance and improvement of industrially important microbes.
- Q3)** Describe the methods of immobilization of enzymes.
- Q4)** Write an account on the production of amino acids.
- Q5)** Describe the production of penicillin and its uses.
- Q6)** Describe the production of cephalosporin and its applications.
- Q7)** Describe the production of citric acid.
- Q8)** Describe production of acetone.
- Q9)** Write an account on transgenic plants.
- Q10)** Explain the production of somatostatin through genetically engineered microbes.

