Total No. of Questions : 10]

DBT 01

P.G. DIPLOMA DEGREE EXAMINATION,
JUNE/JULY - 2019

BIO-TECHNOLOGY

Microbiology and Immunology

Time : 3 Hours **Maximum Marks : 70**

Answer any Five questions
All questions carry equal marks

Q1) Describe the Ultra-structure of Fungal cell with labelled diagram.

Q2) Write an account on the general characters of Photosynthetic bacteria.

Q3) Describe the nutritional requirements of Bacteria.

Q4) Explain the methods of sterilization of bacterial cultures.

Q5) Describe Photosynthetic bacteria and their metabolism.

Q6) Describe role of microorganisms in nitrogen cycle.

Q7) Describe the antigen and antibody reactions.

Q8) Write an account on types of immunity.

Q9) Describe the production of Vaccines.

Q10) Write an account on autoimmunity.

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Total No. of Questions : 10]

DBT02

P.G. DIPLOMA DEGREE EXAMINATION,
JUNE/JULY - 2019
BIO-TECHNOLOGY
Biochemistry and Molecular Biology

Time : 3 Hours **Maximum Marks : 70**

Answer any Five questions
All questions carry equal marks

Q1) Describe the structure and functions of amino-acids.

Q2) Write an account on the structure and functions of Nucleic acids.

Q3) Describe the glycogen metabolism.

Q4) Explain the electron transport system.

Q5) Describe the Nucleotide metabolism.

Q6) Describe the biosynthesis of pyrimidines.

Q7) Describe DNA as genetic material.

Q8) Write an account on the Watson and Crick model of DNA.

Q9) Describe the regulation of gene expression.

Q10) Write an account on post translational modifications.

Total No. of Questions : 10]

DBT03

P.G. DIPLOMA DEGREE EXAMINATION,
JUNE/JULY - 2019
BIO-TECHNOLOGY
Plant and Animal Tissue Culture and Genetic Engg.

Time : 3 Hours **Maximum Marks : 70**

Answer any Five questions
All questions carry equal marks

Q1) Describe Bergman's plating technique and its significance.

Q2) Write an account on media preparation and sterilization.

Q3) Write an account on meristem culture and clonal propagation.

Q4) Describe the protoplast isolation, culture and fusion.

Q5) Describe the methods of maintenance of cell culture.

Q6) Describe the basic techniques and types of mammalian cell culture.

Q7) Describe the in vitro fertilization and embryo transfer.

Q8) Describe cell growth and cell transformation.

Q9) Describe the vectors used in genetic engineering.

Q10) Write an account on gene therapy and its importance.

Total No. of Questions : 10]

DBT04

P.G. DIPLOMA DEGREE EXAMINATION,
JUNE/JULY - 2019
BIO-TECHNOLOGY
Applications of Biotechnology

Time : 3 Hours **Maximum Marks : 70**

Answer any Five questions

All questions carry equal marks

Q1) Describe methods of isolation and improvement of industrially important microbes.

Q2) Write an account on methods of maintenance of important microbes.

Q3) Write an account on fermentative production of Citric acid.

Q4) Describe the fermentative production of Acetone.

Q5) Write an account on immobilization of enzymes.

Q6) Describe biosensors and their applications in biotechnology.

Q7) Describe the production of antibiotic, Tetracyclin and its importance.

Q8) Write an account on the production of antibiotic, Cephalosporin and its applications.

Q9) Describe the production of Hepatitis - B vaccine, through genetically engineered microbes and its importance.

Q10) Write an account on the production of transgenic animals and their importance in medicine.