

**(DBT01)**

**Total No. of Questions : 10]**

**[Total No. of Pages : 01**

**P.G. DIPLOMA DEGREE EXAMINATION, DEC. – 2016**

**BIO-TECHNOLOGY**

**Microbiology And Immunology**

**Time : 3 Hours**

**Maximum Marks: 70**

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**Answer any FIVE questions from the following**  
**All questions carry equal marks.**

**Q1)** Describe the morphology and ultra structure of Viruses.

**Q2)** Describe the general features of Archaeobacteria.

**Q3)** Explain the growth and growth kinetics of Bacteria.

**Q4)** Describe gene transfer mechanisms.

**Q5)** Describe the metabolism in phototrophic Bacteria.

**Q6)** Explain the regulation of Nitrogenase and nif-gene.

**Q7)** Write an account on the types of immunity.

**Q8)** Describe the structure and functions of antibodies.

**Q9)** Write an account on complement system.

**Q10)** Describe the production of monoclonal antibodies.



(DBT02)

Total No. of Questions : 10]

[Total No. of Pages : 01

PG DIPLOMA DEGREE EXAMINATION, DEC. - 2016

BIO-TECHNOLOGY

Biochemistry and Molecular Biology

Time : 3 Hours

Maximum Marks: 70

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*Answer any FIVE questions from the following*  
*All questions carry equal marks.*

- Q1)** Describe the structure and functions of Nucleic acids .
- Q2)** Write an account on Vitamins.
- Q3)** Describe the Metabolism of cholesterol.
- Q4)** Explain electron transport system.
- Q5)** Describe the biosynthesis of Pyrimidines.
- Q6)** Write an account on Protein metabolism.
- Q7)** Describe DNA as hereditary material.
- Q8)** Describe the Post-transcriptional modifications .
- Q9)** Write an account on Mutations.
- Q10)** Describe the regulation of gene expression.



**(DBT03)**

**Total No. of Questions : 10]**

**[Total No. of Pages : 01**

**PG DIPLOMA DEGREE EXAMINATION, DEC. – 2016**

**BIO- TECHNOLOGY**

**Plant And Animal Tissue Culture And Genetic Engg.**

**Time : 3 Hours**

**Maximum Marks: 70**

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**Answer any FIVE questions from the following**  
**All questions carry equal marks**

- Q1)** Describe the media preparation and sterilization.
- Q2)** Write an account on Berguman's plating technique.
- Q3)** Describe the production of haploids.
- Q4)** Explain Clonal propagation.
- Q5)** Describe the basic techniques and types of Mammalian cell cultures.
- Q6)** Write an account on the biology of cells in cultures.
- Q7)** Describe Invitro-fertilization and embryo transfer.
- Q8)** Write an account on stem cell culture and its applications.
- Q9)** Write an account gene therapy.
- Q10)** Describe the enzymes used in genetic engineering.



**(DBT04)**

**Total No. of Questions : 10]**

**[Total No. of Pages : 01**

**PG DIPLOMA DEGREE EXAMINATION, DEC. – 2016**

**BIO-TECHNOLOGY**

**Applications of Biotechnology**

**Time : 3 Hours**

**Maximum Marks: 70**

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**Answer any FIVE questions from the following**  
**All questions carry equal marks**

- Q1)** Write an account on the methods of preservation of industrially important microbes.
- Q2)** Describe the methods of improvement of industrially important microbes.
- Q3)** Describe the fermentative production of Citric acid.
- Q4)** Write an account on the production of Butanol.
- Q5)** Describe how the vitamins are immobilized.
- Q6)** Write an account on brewing of amino acids.
- Q7)** Describe the production of Streptomycin .
- Q8)** Write an account on the applications of Antibiotics.
- Q9)** Write an account on the production of transgenic animals and their applications in medicine .
- Q10)** Describe the production of Insulin through genetically engineered microbes.

