2012-13

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)
Post Graduate Diploma in Genomic Technology (PGDGT)
(Semester - II)
October – 2013 Examination

Time: 3 Hrs. [Max. Marks: 100]

Paper – II
Molecular Cell Biology
Q.P Code: 5222

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Illustrate knock out techniques and transgenic technique in experimental biology.
2. Define PCR technique and explain its applications with suitable examples.

SHORT ESSAY **10 X 5 = 50 Marks**

3 Southern blotting
4 Role of liposomes in gene therapy
5 Ames test
6 Oncogenes
7 Anti-cancerous compounds
8 Ethical issues of human genome project
9 Leucine-zipper motif
10 Post translational modifications
11 Lac operon
12 DNA profiling

SHORT ANSWERS **10 X 3 = 30 Marks**

13 DNA ligase
14 Reverse transcriptase
15 Application of RDNA technology
16 Tumor markers
17 Types of restriction enzymes
18 DNA amplification
19 Microchips
20 Principles of Sanger DNA sequencing
21 VNTR
22 Biological databases

* * *

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

Post Graduate Diploma in Genomic Technology (PGDGT)

(Semester - II)

October – 2013 Examination

Time: 3 Hrs. [Max. Marks: 100]

Paper – I
Cytogenetics

Q.P Code :5112

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

Section – A Cytology (50 Marks)

(Use Separate Answer booklet for Section "A" and Section "B")

LONG ESSAY **2 X 10 = 20 Marks**

1. Discuss and compare commonly used cytogenetic and molecular methods in diagnosis of disease.
2. Discuss the use of molecular genetics in solid tumours.

SHORT ESSAY **3X 5 = 15 Marks**

3 Protein kinase and chromosome stability.

4 Immunohistochemistry in soft tissue tumours in brief.

5 Deletion and translocations in genetic disorders.

SHORT ANSWERS **5 X 3 = 15 Marks**

6 Telomerase.

7 Spindle check point.

8 Molecular pathogenesis of breast cancer.

9 Comparative genomic hybridization.

10 X chromosome linked recessive disorders

Section – B Genetics (50 Marks)

(Use separate Answer booklet for Section-B)

LONG ESSAY **2 X 10 = 20 Marks**

1. Enumerate Mendelian laws of inheritance. Explain briefly the law of segregation with suitable examples.
2. Define Inheritance. Explain dominant inheritance with pedigree chart.

SHORT ESSAY **3X 5 = 15 Marks**

3 Hydatidiform mole.

4 HLA system.

5 Immune system disorders.

SHORT ANSWERS **5 X 3 = 15 Marks**

6 Lyon hypothesis of X inactivation.

7 Unusual blood groups.

8 Genetic counseling.

9 Eugenics.

10 Zinc finger genes.

* * *