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

Master of Philosophy (M.Phil)

Molecular Cell Biology and Medical Genetics

Semester – III Examination September 2013

Time: 3 Hrs. Max. Marks: 100]

Paper – I

Research Methodology & Biostatics

Q.P Code: 6113

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

Section – A Research Methodology (50 Marks)

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

5 X 10 = 50 Marks

(Each Question 5 marks)

1. What is a research question?
2. Explain the method of performing electronic literature search.
3. Describe any one method of obtaining qualitative data.
4. Explain the components and benefits of systematic review.
5. What is a pilot study?
6. Explain the importance of writing a research protocol?
7. What is phase 1 of drug trials?
8. What are the guidelines for Good Laboratory Practice (GLP)?
9. Explain the concept of reliability in educational research.
10. Discuss the procedure for getting an informed consent.

Section – B Biostatistics (50 Marks)

(Use separate Answer booklet for Section-B)

5 X 10 = 50 Marks

(Each Question 5 marks)

1. Describe the rationale for determination of sample size.
2. Explain the concept of normal distribution of data.
3. Explain variance and standard deviation.
4. Discuss the method of simple random sampling.
5. Describe the concept of null hypothesis.
6. Explain the use of paired t-test in data analysis.
7. Discuss the technique of linear regression analysis.
8. Explain the structure of a scientific paper.
9. Discuss the role of evidence based medicine in clinical practice.
10. What is research misconduct?

* * *

Register No. : 11MPhil01

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)
Master of Philosophy (M.Phil)
Molecular Cell Biology and Medical Genetics
Semester – III Examination September 2013

Time: 3 Hrs. Max. Marks: 100]

Paper – II

Q.P Code: 6123

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

(Each Question 10 marks) **10 X 10 = 100 Marks**

1. Describe Hearing impairment under following headings
   a) Definition
   b) Types
   c) Non syndromic congenital hearing impairment
2. What is blotting techniques, mention different types, explain in detail southern blot technique and its applications.
3. Describe GJB2 gene under following headings
   a) Location
   b) Expression
   c) Role in Congenital non-syndromic hearing impairment
4. Describe PCR under the following headings-principle, types, procedure and applications.
5. Enumerate diagnostic tests for Hearing impairment and explain any two in detail.
6. Explain the pathophysiology of GJB2 and GJB6 gene polymorphism in hearing impairment.
7. Enumerate the causes of hearing impairment. Explain any three genetic causes in detail.
8. Define electrophoresis. Explain basic procedure of electrophoresis, explain in detail PAGE and their applications.
9. Explain (a) Restriction enzymes (b) RFLP and its uses
10. Classify the hearing impairment according to the severity and add a note on its management.

* * *