2012 - 13

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)
May-2014 Examination

Time: 3 Hrs. Max. Marks: 100]

Paper – I
Research Methodology & Biostatistics

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")

(Each Question 5 marks) **5 X 10 = 50 Marks**

1. Write a short note on Pilot Study
2. Write notes on Nurember code and Belmont Principles
   Discuss SMART in detail
3. Write short notes on SMART and PICO model
4. Write short notes on journals and impact factor
5. List out major electronic literature seach engines and explain in detail on PubMed
6. Write short notes on Plagiarism and Copyrights
7. Comment on GLP and GCP
8. Write short notes on systematic review
9. Discuss on IMARD
10 Discuss in brief on ethical issues in research

Section – B Biostatistics (50 Marks)

(Use separate Answer booklet for Section-B)

(Each Question 5 marks) **5 X 10 = 50 Marks**

1. List out different types of sampling with suitable examples
2. Describe and differentiate Correlation and regression
3. Discuss in detail on Parametric tests and Non Parametric tests
4. Define different types of ANOVA with special emphasis on one-way ANOVA
5. Write short notes on estimating sample size for a research study
6. Describe the uses of statistical packages with a special mention to SPSS
7. Explain the importance of Biostatistics in research
8. Summarize your knowledge on any three of the following
   a. Cumulative Frequency Curve
   b. Correlation
   c. Random Sampling
   d. Type I and Type II errors
9. Answer any three of the following
   a. P-Value
   b. Null Hypothesis
   c. Histogram
   d. Normal distribution
10 Write a note on presentation of Data. Describe various methods of presenting data collected by investigators.

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2013-14

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Paper – I
Research Methodology & Biostatics

Q.P Code: 6113

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Section – A Research Methodology (50 Marks)

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

(Each Question 5 marks) **5 X 10 = 50 Marks**

1. Paper presentation at a conference
2. Validity and reliability a research questionnaire
3. Study Protocol
4. Electronic Literature search
5. Meta Analysis
6. Institutional Animal Ethics Committee
7. IMRAD
8. Fabrication of data
9. Define a Research Question
10 Acknowlegement

Section – B Biostatistics (50 Marks)

(Use separate Answer booklet for Section-B)

(Each Question 5 marks) **5 X 10 = 50 Marks**

1. T test
2. Normal distribution
3. Measures of Dispersion
4. Logistic Regression
5. Chi square test
6. Bias
7. SPSS
8. Sample Size
9. Cluster sampling
10 Blinding

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Master of Phiiosophy (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

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Section – A Research Methodology (50 Marks)

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

(Each Question 5 marks) **5 X 10 = 50 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)

(Each Question 5 marks) **5 X 10 = 50 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?

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