

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086**  
**(For candidates admitted from the academic year 2008 – 09)**

**SUBJECT CODE: BI/PC/RM42**  
**M. Sc. DEGREE EXAMINATION, APRIL 2010**  
**BIOINFORMATICS**  
**FOURTH SEMESTER**

|               |          |                             |              |          |                       |
|---------------|----------|-----------------------------|--------------|----------|-----------------------|
| <b>COURSE</b> | <b>:</b> | <b>MAJOR – CORE</b>         | <b>TIME</b>  | <b>:</b> | <b>1 hrs. 30 min.</b> |
| <b>PAPER</b>  | <b>:</b> | <b>RESEARCH METHODOLOGY</b> | <b>Marks</b> | <b>:</b> | <b>50</b>             |

**SECTION – A**

**I Choose the correct answer**

**(7x1=7)**

1. Which of the following orders is the recommended in the flowchart of the development of a research idea?
  - a) Research topic, research problem, research purpose, research question, hypothesis
  - b) Research topic, research purpose, research problem, research question, hypothesis
  - c) Research topic, research problem, research purpose, research question, hypothesis
  - d) Research topic, hypothesis, research problem, research question, research purpose.
  
2. Which of the following is not a source of research ideas?
  - a) Everyday life
  - b) Practical issues
  - c) Past research
  - d) Theory
  - e) All of the above are sources of research ideas
  
3. A good qualitative problem statement:
  - a) Defines the independent and dependent variables
  - b) Conveys a sense of emerging design
  - c) Specifies a research hypothesis to be tested
  - d) Specifies the relationship between variables that the researcher expects to find
  
4. The statement of purpose in a research study should:
  - a) Identify the design of the study
  - b) Identify the intent or objective of the study
  - c) Specify the type of people to be used in the study
  - d) Describe the study
  
5. The research participants are described in detail in which section of the research plan?
  - e) Introduction
  - f) Method
  - g) Data analysis
  - h) Discussion
  
6. One step that is not included in planning a research study is:
  - a) Identifying a researchable problem
  - b) A review of current research
  - c) Statement of the research question
  - d) Conducting a meta-analysis of the research
  - e) Developing a research plan

7. A formal statement of the research question or “purpose of research study” generally
- Is made prior to the literature review
  - Is made after the literature review
  - Will help guide the research process
  - All of the above
  - b and c

**II Define the following :**

(4x2= 8)

8. Primary Data
9. Exploratory research
10. Research design
11. Citation index

**SECTION – B**

(4x5=20 marks)

**Answer any four of the following questions in about 100 words ( 1 page)**

12. Enumerate the various ways of collecting data for research.
13. Outline the information that should be included in preparing a research proposal.
14. List the common elements in research. Explain the role of theory in research.
15. Write about the importance of literature review in research.
16. Explain the importance of ethics in research.
17. Differentiate between qualitative and quantitative research.

**SECTION – C**

(1x15=15 marks)

**Answer any one question not exceeding 3 –4 pages (600-800 words)**

18. Write a proposal for receiving grant from a scientific organization justifying your demand.
19. Discuss the main points involved in writing a thesis or dissertation.

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