

1953

- (b) Design a simple experimental study to investigate Tuberculosis OR Cardiovascular Disease. Describe the research problem, controls, replicates, and statistical analysis method you would use. 7
6. (a) Discuss the importance of Intellectual Property Rights in promoting scientific research and technological innovation. 8
- (c) Discuss the role of a well-defined research question and objectives in a successful research grant proposal. 7

[This question paper contains 4 printed pages]

Your Roll No. :

Sl. No. of Q. Paper : **1953** **I**

Unique Paper Code : 3183010013

Name of the Paper : Research Methodology (NEP)

Name of the Course : **B.Sc. (H) Biomedical Sciences**

Semester : VI

Time : 3 Hours **Maximum Marks : 90**

Instructions for Candidates :

- (a) Write your Roll No. on the top immediately on receipt of this question paper.
- (b) Attempt any **FIVE** questions in **all**. Question **NO.1** is compulsory.
- (c) Subparts of the questions should be attempted together.
- (d) Draw illustrations or diagrams wherever necessary.

1. (a) Define: 1×4=4
- (i) Research
 - (ii) Copyright

- (iii) Annotated Bibliography
- (iv) Reference
- (b) Expand: $1 \times 4 = 4$
 - (i) WIPO
 - (ii) PCT
 - (iii) ORCID
 - (iv) ISSN
- (c) Differentiate between: $3 \times 4 = 12$
 - (i) Reference and Bibliography
 - (ii) Patent and Trademark
 - (iii) Research Methodology and Research method
 - (vi) Systematic and Descriptive Review
- (d) State **true** or **false** and justify: $2.5 \times 4 = 10$
 - (i) Google scholar only indexes journals that are subscription based.
 - (ii) Theoretical research always aims to generate new theories
 - (iii) Acknowledging the source with a reference and placing the words in quotation marks is required if you use someone else's exact words.
 - (iv) Trade secrets protect original creative expression

- 2. Write short notes on. $5+5+5=15$
 - (a) Predatory Journals
 - (b) Oral Presentation
 - (c) Hypothesis testing
- 3. (a) Explain the concepts of Impact Factor, h-index, and i10-index and discuss their importance in evaluating research output 8
- (b) Define randomized controlled trials and non-randomized trials. How do they differ in methodology? 7
- 4. (a) What is a conflict of interest in research? Discuss how conflicts of interest can influence research outcomes and how they should be managed. 8
- (b) Discuss different forms of plagiarism in scientific research. How can researchers avoid plagiarism while writing scientific papers? 7
- 5. (a) What is the difference between fundamental research and applied research? Explain their objectives and significance in scientific studies. 8