

7211

6. (a) Explain the importance of randomization and blinding (single-blind vs. double-blind) in clinical research. How do these techniques reduce bias? 6
- (b) Discuss the importance of Informed Consent in Clinical Research involving human subjects. 6
- (c) How does the “Target Audience interaction” differ between a Poster Presentation and an Oral Presentation? 6

[This question paper contains 4 printed pages]

Your Roll No. :

Sl. No. of Q. Paper : **7211 I**

Unique Paper Code : 3183010013

Name of the Paper : Research Methodology (DSE)

Name of the Course : **B.Sc. (Hons) Biomedical Science**

Semester : VIII

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) Answer **five** questions in all
- (c) Question **No.1** is compulsory.
- (d) Give illustrations and examples wherever necessary
- (e) Subparts of the questions should be attempted together

1. (a) Expand the following abbreviations 1×4=4
- (a) NCBI
 - (b) ORCID

- (c) ISBN
- (d) IF
- (b) State **True/False**. Give Reason $2 \times 4 = 8$
 - (a) Epidemiology is only concerned with Infectious Disease
 - (b) A hypothesis is a proven fact that requires no further testing.
 - (c) Ethical guidelines are unnecessary in scientific research
 - (d) A Research Grant Proposal is a document written after the research is completed to report the findings.
- (c) Write a short note on the following $2 \times 3 = 6$
 - (a) Importance of abstracts in scientific papers
 - (b) Randomization in clinical trials
- 2. (a) Discuss the H-index, i10 index and Impact factor as parameters in evaluating a scientific research publication. $9 + 9 = 18$
- (b) What are patents, trademarks, copyright, and trade secrets. Discuss with respect to their objectives, duration and differences.

- 3. (a) What impact can poor review of literature have on the research proposal grant writing and subsequent grant of project? 9
- (b) Would it be correct to say that fundamental research is primarily concerned with generalizations and the formulation of a theory rather than immediate practical application. Elucidate 9
- 4. (a) What are the key steps in a clinical study? Why inclusion and exclusion criteria are critical for the internal validity of a clinical study? 9
- (b) What should a researcher keep in mind while preparing for an oral presentation? What factors will help make the presentation effective? 9
- 5. (a) If an experiment lacks proper controls, how might it affect the interpretation of results?
- (b) Describe two common search engines used specifically for Literature Surveys. 6
- (c) What is the significance of post-marketing surveillance in clinical research? 6