

(7 pages)

Reg. No. :

Code No. : 8844

Sub. Code : KPHM 34

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2017.

Third Semester

Physics

RESEARCH METHODOLOGY

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Research is
 - (a) searching again and again
 - (b) finding solution to any problem
 - (c) working in a scientific way to search for truth to any problem
 - (d) none of the above.

2. A common test in research demands much priority on
 - (a) reliability
 - (b) useability
 - (c) objectivity
 - (d) all of the above.
3. Which of the following is an example of primary data?
 - (a) Book
 - (b) Journal
 - (c) Newspaper
 - (d) Census report.
4. In the process of conducting research "Formulation of Hypothesis" is followed by
 - (a) statement of objectives
 - (b) analysis of data
 - (c) selection of research tools
 - (d) collection of data.
5. The blueprint of research work is called
 - (a) research problem
 - (b) research design
 - (c) research tools
 - (d) research methods.
6. Final stage in the research process is
 - (a) problem formulations
 - (b) data collection
 - (c) data analysis
 - (d) report writing.

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7. A research paper is a brief report of research work based on
- (a) primary data only
 - (b) secondary data only
 - (c) both primary and secondary data
 - (d) none of the above.
8. Short summary of technical report is called
- (a) article
 - (b) research abstract
 - (c) publication
 - (d) guide.
9. Failure to acknowledge the borrowed material is called
- (a) acknowledgement
 - (b) foot note
 - (c) index
 - (d) plagiarism.
10. Bibliography means
- (a) foot note
 - (b) quotations
 - (c) list of books referred
 - (d) title page.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Define and explain the term 'research'. Briefly explain the objectives of research.

Or

- (b) Write a brief note on "Descriptive Vs Analytical" research types.

12. (a) How do you define a research problem? Give three examples to illustrate your answer.

Or

- (b) Discuss the importance of literature review in defining a problem.

13. (a) Explain the meaning and significance of a research design.

Or

- (b) Explain the meaning of the following context of research design.

- (i) Extraneous variable
- (ii) Confounded relationship.



14. (a) Describe in detail the logical format for writing a research work.

Or

- (b) Define "data". Differentiate primary sources of data from secondary sources.
15. (a) Write short notes on "Reproduction of published materials".

Or

- (b) Discuss about the trade aspects of intellectual property rights.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) (i) What is research process? Discuss the various steps involved in research process.
- (ii) Write short notes on "The characteristics of scientific research method".

Or

- (b) Discuss the following research types.
- (i) Applied Vs fundamental
- (ii) Quantitative Vs qualitative.

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17. (a) Explain the various sources for literature review.

Or

- (b) Discuss the following :
- (i) Selecting the research problem
- (ii) Necessity of defining the problem.

18. (a) Discuss in detail about the important experimental designs.

Or

- (b) Explain the need for research design and some features of a good design.

19. (a) Enumerate the different methods of collecting data. Discuss the collection of data through questionnaires and schedules.

Or

- (b) (i) Give the meaning of interpretation. Discuss in detail the various techniques of interpretation.
- (ii) Describe the precautions that the researcher should take while interpreting his findings.

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20. (a) Discuss in detail about the environmental impacts and ethical research issues.

Or

- (b) Write short notes on the following :

- (i) Plagiarism
 - (ii) Research journal and reporting to journals
 - (iii) Impact factor and citation index.
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