

M.Sc.(Physics) (NEP Pattern) Semester-I
NEP-237 / 01MSCPH5 - Paper-V : Research Methodology

P. Pages : 2

Time : Three Hours



GUG/W/23/15142

Max. Marks : 80

Either:

1. a) Explain in detail about meaning, objectives and motivation of research. 8
- b) Write a detailed note on Deductive and inductive theory of research. 8

OR

- e) What are different types of Research? Explain in detail about basic research and applied research. 8
- f) Write a detail note on: 4+4
- i) Scientific research method.
- ii) Language of research, concept, construct and research process.

Either :

2. a) Explain in detail about scientific process of Identification of Research Problem. 8
- b) What is importance of research design? Explain in detail characteristics of a good research design. 8

OR

- e) What are different Online available database/websites for physical science research papers? Explain in details. 8
- f) What do you mean by Hypothesis? Explain qualities of a good hypothesis and its types as null hypothesis and alternative hypothesis. 8

Either:

3. a) What are characteristics of good research paper? Explain in detail about the concept, importance of research papers and research paper publishers. 8
- b) Explain in detail about Reference management software like endnote and Mendeley. 8

OR

- e) What are different types of research paper? Explain in detail about core research paper and review paper with important points included in research papers. 8
- f) Write a short note on: 8
- i) Software for paper formatting like Latex/MsOffice.
- ii) Concept of impact factor and cite index.

Either :

4. a) What do you mean by Intellectual Property Rights (IPR)? Explain its different types in details. **8**
- b) Explain in detail about patent rights and new development in IPR Licensing. **8**

OR

- e) Discuss in details about transfer of technology for granted patent. **8**
- f) Write a short note on: **8**
- i) Geographical indications.
 - ii) Trademark.
5. Attempt all of the followings.
- a) Write short note on: Correlational research and Experimental research. **4**
 - b) Write a short note on Indian database-Shodhganga and Shodhgangotri. **4**
 - c) Write a short note on different Software's available for detection of Plagiarism. **4**
 - d) Write a note on techniques of writing a patent. **4**
