

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)**

**CLASS: BHMCT  
BRANCH: HMCT**

**SEMESTER : VII  
SESSION : MO/18**

**SUBJECT: HM7111 / HM7211 RESEARCH PROJECT DESIGN & METHODOLOGY  
TIME: 3.00 HOURS**

**FULL MARKS: 60**

**INSTRUCTIONS:**

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
  2. Candidates may attempt any 5 questions maximum of 60 marks.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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|---|-----|
| Q.1(a) What are the objectives of research?                                 | [2] |
| Q.1(b) Distinguish between Applied and Fundamental research.                | [4] |
| Q.1(c) Enumerate the different types of research approaches.                | [6] |
|   |     |
| Q.2(a) Write short note on stratified radon sampling.                       | [2] |
| Q.2(b) Distinguish between research methods and research methodology.       | [4] |
| Q.2(c) Briefly describe the different steps involved in research process.   | [6] |
|   |     |
| Q.3(a) Distinguish between primary data and secondary data.                 | [2] |
| Q.3(b) Describe different types of measurement scales.                      | [4] |
| Q.3(c) Enumerate the characteristic of Hypothesis.                          | [6] |
|   |     |
| Q.4(a) Explain structured interview with examples.                          | [2] |
| Q.4(b) Explain the difference between questionnaires and schedules.         | [4] |
| Q.4(c) Enumerate the different methods of observation method with examples. | [6] |
|   |     |
| Q.5(a) Define sampling design.  | [2] |
| Q.5(b) Evaluate the factors of systematic bias of sampling procedure.       | [4] |
| Q.5(c) Enumerate the steps in sampling design.                              | [6] |
|   |     |
| Q.6(a) What are the sources of error in measurement.                        | [2] |
| Q.6(b) Describe the scale procedures techniques.                            | [4] |
| Q.6(c) Explain the procedure of developing a Likert type of scale.          | [6] |
|   |     |
| Q.7(a) Explain Principle of Randomization.                                  | [2] |
| Q.7(b) Enumerate the techniques involved in defining a research problem.    | [4] |
| Q.7(c) Enumerate the different steps in writing report.                     | [6] |

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