

GUJARAT TECHNOLOGICAL UNIVERSITY
RESEARCH METHODOLOGY EXAM – 2018 (REMEDIAL)

Subject Code: PH001 [PHP]
Subject Name: Research Methodology
Time: 2:00 to 5:00 PM

Date: 01/09/2018

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Subject relevant literature/book is permitted to carry in an exam hall (Use of E-Books, Laptops, Mobiles & I-pads is strictly prohibited).

- Q.1 Answer in Brief:**
- | | | |
|-----|--|------|
| I | What are different search engines can be used for literature search ? | 2x5 |
| ii | Which type of unethical practices are commonly observed in scientific community ? | = 10 |
| iii | Name various post hoc tests for parametric and non-parametric data. | |
| iv | What is the difference between basic research and applied research explain with suitable example ? | |
| V | Write name of different funding agencies which give financial support for Research. | |
- Q.2**
- | | | |
|-----|--|----|
| i | Various scientists have applied for the post of professor in research institute and as evaluator you have to scrutinize list of publications of each and have to rank all of them. In this case describe your strategies and parameters for evaluation. | 06 |
| ii | What is research and explain different Phases of research. | 05 |
| iii | Give examples of Parametric and non-parametric data. Enumerate all statistical methods used for analysis of both type of data. Write importance of post hoc test with suitable example. | 04 |
| iv | Ms. Mistry has completed her Ph.D. lab work which is funded by DBT under your guidance and has to start thesis writing work. describe in detail content to be included in each section of thesis as well as difference between abstract. Introduction, discussion and conclusion section write up. Explain to Ms. Mistry about precautions to be taken during write up to avoid plagiarisms. Also guide her for research report writing to submit DBT. | 10 |

- Q.3 i Answer in one line.**
- | | | |
|-----|---|----|
| 1. | Define 'Accuracy of experimentation' | 10 |
| 2. | What is Trademark? | |
| 3. | What is Likert scale? | |
| 4. | What is rapid communication? | |
| 5. | What are different types of review methods? | |
| 6. | Explain Immediacy factor | |
| 7. | Which type of articles are more cited in scientific articles? | |
| 8. | What is SCImago journal Rank (SJR)? | |
| 9. | What is the full form of MEDLINE? | |
| 10. | Write website address of different patent search site. | |
- ii** Mr. Singh has completed research project on novel formulation development of anticancer compound. He wants to present this work in international conference. Explain in detail to Mr. Singh for making effective oral presentation as well as structure of presentation. Also describe in detail importance of use of visual aids also. 07
- iii** Describe the process of framing Research question for your Ph.D. research project. How will you make it more impeccable? 08
- Q.4 Answer Precisely (no description required):**
- | | | |
|------|---|----------|
| i. | Which are different recent techniques used in documentation of research. | 1X |
| ii | What is the full form of WTO and as per its guideline product patent or process patent is eligible? | 1=
10 |
| iii | Which Characteristics are required in the research for successful patent filing? | |
| iv | Give example of data set where you can apply paired t test? | |
| v | What is the frequency of SNIP updating? | |
| vi | Which are different Reference writing styles? | |
| vii | What is Type-II error? | |
| viii | If there are 250 and 350 citations to items published in 2016 and 2017 respectively with 150 and 50 source items published in 2016 and 2017 respectively, then calculate the impact factor for the journal. | |
| ix | Define Plagiarism. | |
| v | What are different type of hypothesis? | |