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SEAT No. _____

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Sardar Patel University

M.Sc. Renewable Energy
Course Code: PS04CSYT01
Day and Date: Monday, 18.03.2019

Semester: Fourth
Title: Research Methodology
Time: 02:00 PM to 05:00 PM
Total Marks: 70

Note: 1. All the questions are compulsory
2. Figures on the right bracket indicated marks

Q-1: Choose the correct Answer (9)

- i. Quantitative research is based on the measurement of
 - a) Quantity or amount
 - b) Quality or kind
 - c) Formulation of theory
 - d) Experience of observation

- ii. When each and every item in the population has an equal chance of inclusion in the sample and each one has probability of being selected is called
 - a) Systematic sampling
 - b) Quota sampling
 - c) Deliberate sampling
 - d) Simple random sampling

- iii. Independent variables that are not related to the purpose of the study, but may affect the dependent variable are termed as
 - a) Fixed variable
 - b) Basic units
 - c) Extraneous variable
 - d) Values

- iv. Mean is also known as
 - a) Unit
 - b) Summation
 - c) Average
 - d) None of the above

- v. Which of the following is not covered under Intellectual Property Rights?
 - a) Copyrights
 - b) Trade Marks
 - c) Patents
 - d) Thesaurus

- vi. focuses on sociology of meaning through close field observation of socio-cultural phenomenon
 - a) Case study
 - b) Ethnography
 - c) Grounded study
 - d) Phenomenology

- vii. involves copying material, either word from word or as a paraphrase, from anything ranging from books, to artistic works
 - a) Plagiarism
 - b) Drafting
 - c) Editing
 - d) None of the above

- viii. An author-level metric that attempts to measure both the productivity and citation impact of the publications of a scientist or scholar is termed as
 - a) h- index
 - b) Citation
 - c) Impact factor
 - d) Peer Review

- ix. The essential qualities of a researcher are
 - a) Spirit of free enquiry
 - b) Systematization or theorizing of knowledge
 - c) Reliance on observation and evidence
 - d) All the above

(P.T.O)

Q-2 Write short note on following (Any 7) (21)

- i. Define dependant, independent variables and extraneous variables
- ii. Define plagiarism and describe in brief.
- iii. Define and brief about scientific research
- iv. Explain in brief about the main types of qualitative research
- v. Explain the different types of hypothesis
- vi. What are the objectives of research
- vii. What do you mean by the research design
- viii. What is impact factor? Brief how it is calculated and used.
- ix. What is industrial design? How industrial designs are protected?
- x. Write short notes on criteria of good research

Q-3 (A) Explain the problems encountered by researchers in India (5)

(B) Explain the technique involved in defining a problem

OR

Draw flow chart of research process and describe each steps of research process in brief (5)

Q-4 (A) Define hypothesis? What characteristics it must possess in order to be a good research hypothesis? (5)

(B) Discuss types of quantitative methods (5)

OR

List important concept relating to research design and explain any three concepts

Q-5 (A) What is documentation? Why is documentation important? (5)

(B) What is h-index. Explain in details. (5)

OR

Write the rules for making good oral presentation

Q-6 (A) Discuss the ethical issues of plagiarism (5)

(B) What are the different Intellectual Property rights? Explain in brief. (5)

OR

What is plagiarism? Explain.

— x —
(2)