21PHY3S3LP

Sl. No.

M.Sc. III Semester Degree Examination, April/May - 2024
Skill Enhancement Courses (SEC)
PHYSICS
Research Methodology
(NEP)

Time : 1 Hour   Maximum Marks : 30

1. Research can be classified as :
   (A) Basic, Applied and Action Research
   (B) Quantitative and Qualitative Research
   (C) Philosophical, Historical, Survey and Experimental Research
   (D) All of the above

2. The structured approach to inquiry is usually classified as :
   (A) Quantitative research   (B) Qualitative research
   (C) Both (A) and (B)   (D) None of the above

3. Experimental research is aimed to :
   (A) Establish an association between variables
   (B) Describe variables
   (C) Study the application of theory
   (D) Study trend analysis

4. Which of the following periodical is specifically meant for publishing research work ?
   (A) Magazine   (B) Monographs   (C) Journals   (D) Books

5. Sci-Hub, the world's largest piracy website was providing access to :
   (A) Only journals   (B) Only books
   (C) Both (A) and (B)   (D) None of the above

6. First page of the research report is :
   (A) Appendix   (B) Bibliography (C) Index   (D) Title page

7. What does DOI stand for ?
   (A) Digital object identifier   (B) Digital object indexing
   (C) Design object indexing   (D) Design object identifier

8. The impact factor depends on :
(A) Number of citations
(B) Number of publications
(C) Number of downloads
(D) Both (A) and (B)

9. The process that is not required in experimental research is :
(A) Manipulation
(B) Controlling
(C) Content analysis
(D) Observation

10. i10-index is :
(A) Number of publications with less than 10 citations
(B) Number of publications with at least 10 citations
(C) Both (A) and (B)
(D) None of the above

11. The collection of research data involves :
(A) Observation
(B) Interview schedules and questionnaires
(C) Scientific equipment, observation and computations
(D) All of the above

12. A hypothesis that states zero difference between the parameters and their assumed value is :
(A) Simple hypothesis
(B) Directional hypothesis
(C) Non-directional hypothesis
(D) Null hypothesis

13. Questionnaires are filled by the :
(A) Respondents
(B) Everybody
(C) Enumerator
(D) None of the above

14. Laboratory practice is :
(A) Anything you write while working
(B) Primary record of any research or experiment
(C) Paper that you write your results from an experiment
(D) None of the above

15. A set of predicted questions is :
(A) Structured interview
(B) Unstructured interview
(C) Both (A) and (B)
(D) None of the above

16. A comprehensive full report of the research process is called :
(A) Summary Report
(B) Thesis
(C) Abstract
(D) Article

17. ANOVA is _____.
(A) The name of a statistical software package
(B) A one-way analysis of variance
(C) A two-way analysis of variance
(D) Both (B) and (C)

18. Research design is :
(A) A way of conducting research that is not grounded in theory
(B) The choice between using qualitative and quantitative method
(C) The style in which you present your research finding
(D) A framework for every state of collection and analysis of data

19. Research data collection happens through :
(A) Observation   (B) Schedules   (C) Interview   (D) All the above

20. The research papers are written in order to :
(A) Gain name and fame   (B) Communicate the research
(C) Get promotions   (D) None of the above

21. Mean, Median and Mode are :
(A) Measurements of the deviation
(B) Ways of sampling
(C) Measures of control tendency
(D) None of the above

22. Which of the following cannot be considered as a part of technical report writing ?
(A) Methodology   (B) Objectives
(C) Conclusions   (D) Oral presentation

23. If a researcher has to test a hypothesis whether the difference between the means of two groups is significant, it will be :
(A) Chi-square test   (B) Correlation coefficient
(C) Sign-test   (D) Student's t-test

24. The degree to which two or more variables are related is called :
(A) Correlation   (B) Mean deviation
(C) Regression   (D) None of the above

25. What is the meaning of the testing of the hypothesis ?
(A) It is a significant estimation of the problem
(B) It is a rule for acceptance or rejection of the hypothesis of the research problem
(C) It is a method of making a significant statement
(D) None of the above

26. The coefficient of skewness of normal distribution is :
(A)   Positive   (B)   Negative   (C)   Zero   (D)   None

27. If the frequency curve has a longer tail to the left the distribution is said to be :
(A)   Negative skewed   (B)   Positive skewed
(C)   Symmetrical   (D)   None of the above

28. In a pie chart, the angle of each sector is calculated by using the formula :

(A) $\dfrac{\text{component part}}{\text{total}} \times 100$ (B) $\dfrac{\text{component part}}{\text{total}} \times \pi$

(C) $\dfrac{\text{total}}{\text{component part}} \times 360°$ (D) $\dfrac{\text{component part}}{\text{total}} \times 360°$

29. A circle in which sectors represent various quantities is called :
(A)   Frequency Polygon   (B)   Histogram
(C)   Pie chart   (D)   Bar chart

30. The range of normal distribution is :
(A)   0 to n   (B) -1 to $+1$ (C)   0 to ∞ (D) $-\infty$ to $+\infty$

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