

**Ph.D. Course Work Examination, December - 2021**  
**ADVANCED RESEARCH METHODOLOGY IN SPEECH &  
HEARING**

Time : 3 Hours

Max. Marks : 70

Part-A

Multiple Choice questions :

[20 × 1 = 20]

- 1) We need to review the existing literature because
  - a)  To know what is already there in the literature
  - b)  To understand the flow of writing
  - c)  To list more references for your final project submission
  - d)  None of the above
  
- 2) Major limitation of systematic review is
  - a)  It is too technical
  - b)  Needs access to many paid softwares
  - c)  Cannot interpret qualitative data
  - d)  Very difficult to perform
  
- 3) Dividing the population into comparable groups such as schools, cities represent
  - a)  Stratification
  - b)  Clustering
  - c)  Group sampling
  - d)  Snowball sampling
  
- 4) Sampling error=
  - a)  Frame error + chance error
  - b)  Frame error + Response error
  - c)  Chance error + Response error
  - d)  Frame error + Chance error + Response error

P.T.O.

- 5) Proportion of people in a population that is initially free of disease and who develops the disease during a specified period of time refers to
- a) Incidence rate
  - b)  Incidence proportion ✓
  - c) Period prevalence
  - d) Point prevalence
- 6) Relative risk ratio is measured in
- a) Cohort study
  - b) Case control study
  - c) Cross-sectional study
  - d)  RCT ✗
- 7) Two way stratified randomization is followed in
- a) Crossover designs
  - b) Latin square designs ✗
  - c) Randomized complete block design
  - d)  All the above
- 8) Percentage of positive results that are true positives refers to
- a) Sensitivity
  - b) Specificity ✗
  - c)  Positive predictive value
  - d) Negative predictive value
- 9) X axis in a ROC curve represents
- a) Sensitivity
  - b) Specificity ✗
  - c)  1-sensitivity
  - d) 1-Specificity
- 10) Rejecting a true null hypothesis is
- a) Alpha error
  - b)  Beta error ✗
  - c) Gamma error
  - d) Lamda error
- 11) Following are the components of research article except
- a)  Review of literature
  - b) Results ✗
  - c) Discussion
  - d) Budget details

- 12) Following are the methods used in qualitative research except
- a) Ethnography
  - b) Grounded theory ✓
  - c) Case study
  - d) Case control study ✓
- 13) Characteristics of good research question
- a) Feasible
  - b) Ethical
  - c) Novel
  - d) All the above ✓
- 14) T in the acronym PICOT refers to
- a) Template
  - b) Time ✓
  - c) Test
  - d) Tool ✓
- 15) In a normal distribution, mean-2SD, Mean+2SD includes
- a) 68.27% of observations
  - b) 95.45% of observations
  - c) 99.73% of observations ✓
  - d) 100% of observations
- 16) Too small sample size in the study leads to
- a) Fails to detect clinically important effect
  - b) Underpowered study
  - c) Unable to yield useful results
  - d) All the above ✓
- 17) Randomization
- a) Eliminates allocation bias ✓
  - b) Makes the treatment group comparable
  - c) Helps to achieve balance w.r.t distribution of factors that may influence the outcome
  - d) All the above

18) Minimum acceptable response rate for survey research through Email is

- a) 30%
- b) 50%
- c) 70%
- d) 20%

19) Major Strengths in survey research except

- a) Able to study the attitudes which are otherwise difficult to study
- b) Quick to complete
- c) Good response rate
- d) Provides estimates of the true population characteristics

20) SPSS refers to

- a) Social science Package for Statistical Science
- b) Statistical Package for Social Sciences
- c) Statistical Package for Scientific Studies
- d) None of the above

**Part-B**

Write an essay any five of the following :

[5 × 10 = 50]

- 1) How do you conduct a systematic review and Meta analysis?
- 2) Describe APA version of Reference writing and give 5 examples
- 3) Explain qualitative research method using ethnography technique
- 4) Compare and contrast cohort study and case control study
- 5) How do you conduct Delphi survey for the purpose of test development?
- 6) Explain the factors to be considered while planning a research study.
- 7) Discuss the applications of tests of reliability and validity

