Instructions:

1. Answer all the questions.
2. Read each question carefully and write the correct answer for each question chosen by you with black/blue pen in the answer sheet provided.
3. No negative marks for wrong answers.

Time: 90 Minutes   Marks: 70

Venue: --------

Part-A   (Common for all)   (35X1=35)

1.   Which of the following variable belong to Interval scale
   a. Age in years
   b. Gender
   c. Temperature in Celsius scale
   d. Family size

2. Sampling fraction is used in
   a. Systematic random sampling
   b. Cluster sampling
   c. Quota sampling
   d. Stratified sampling

3. Which is a type of random sampling
   a. Convenience sampling
   b. Cluster sampling
   c. Quota sampling
   d. Purposive sampling

4. Which is an example of measure of spread
   a. Coefficient of variation
   b. Geometric mean
   c. Mid range
   d. Trimean

5. Most appropriate measure of central tendency in skewed data is
   a. Arithmetic mean
   b. Mid range
   c. Harmonic mean
   d. Median

6. All the following are used to show the relation between two quantitative variables, except
   a. Pearson coefficient
   b. Kappa statistics
   c. Kendall's tau
   d. Spearman coefficient

7. Most appropriate test to compare means between the two group are
   a. Chi square test
   b. Correlation coefficient
   c. Fisher exact test
   d. Students t test

8. Non parametric equivalent of ANOVA test is
   a. Median test
   b. Mann Whitney U test
   c. Mc Nemar's Chi square test
   d. Sign test

9. All of the following are the different types of rotation used in factor analysis except
   a. Varimax
   b. Minimax
   c. Quartimax
   d. Equamax

10. Chance of Beta error is usually limited in studies to less than
   a. 5%
   b. 10%
   c. 15%
   d. 20%

11. Primary purpose of randomization in a randomized clinical trial is
   a. Avoiding confounding
   b. Avoiding effect modification
   c. Avoiding selection bias
   d. Avoiding measurement Bias

12. Box plot is used to represent what type of variable
   a. Ordinal variable
   b. Nominal variable
   c. Binary variable
   d. Continuous variable

13. All the following conditions are required for plotting a pie diagram except
   a. The different categories should be mutually inclusive of each other
   b. Percentage of all categories when added together should be equal to 100%
   c. Variable should be a quantitative in nature
   d. Number of pie segments should be preferably limited to 5 or 6

14. Which is a continuous probability distribution
    a. Exponential distribution
    b. Binomial distribution
    c. Bernoulli's distribution
    d. Hypergeometric distribution

15. All the following graphs are specifically used for continuous variables except
    a. Histogram
    b. Frequency curve
    c. Ogive
    d. Bar plot

16. All of the following are Boolean operators used in literature search using internet except
    a. AND
    b. NOT
    c. IF
    d. OR

17. Confounding variable is
    a. An outcome variable which is missed
    b. A dependent variable which was not studied so its effect cannot be estimated
    c. An extraneous variable which influence the exposure outcome relationship
    d. A variable which is not studied and so its effect cannot be estimated

18. Type 2 error is
    a. Accepting a Null hypothesis when it is correct
    b. Rejecting a Null hypothesis when it is correct
    c. Accepting an Null hypothesis when it is wrong
    d. Rejecting an Null hypothesis when it is wrong

19. Which of the following is primary source of data collection
    a. Earlier research publication
    b. Questionnaires
    c. Government publication
    d. Record books

20. All of the following are advantages of an Interview except
    a. Help to collect in-depth information
    b. Independent of the literary status of the participants
    c. Opportunity to clarify questions are present
    d. Not a time consuming process
21. Sensitivity and Specificity are a measure of
    a. Face validity
    b. Content validity
    c. Construct validity
    d. Criterion validity

22. Which is not a style of citation and referencing
    a. Chicago style
    b. Washington style
    c. Vancouver style
    d. IEEE style

23. Stealing another researcher's word, which is published in articles and using it in our article without citing the original source is called as
    a. Hacking
    b. Plagiarism
    c. Paraphrasing
    d. Ghost writing

24. Which is not included in the main body of the research report
    a. Introduction
    b. Methods
    c. Results
    d. Questionnaire

25. Null hypothesis is
    a. Assuming that there is no difference in the two population
    b. Assuming that the two population differ
    c. Assuming that there is no difference in the two sample
    d. Assuming that the two sample differ

26. All are advantages of studying a sample compared to studying the population, except
    a. Cost effective
    b. Better control of measurement errors
    c. Easiness
    d. Better precision

27. Which of the following design has the highest internal validity
    a. Laboratory based experimental design
    b. Descriptive design
    c. Exploratory design
    d. Field based experimental design

28. Mean and median weight in a study was 54.8 kg and 51 kg respectively. Which of the following statement is correct about the distribution of weight
    a. It is a normal distribution
    b. It a negatively skewed distribution
    c. It is a positively skewed distribution
    d. It is a left skewed distribution

29. Which of the following statement is not true about standard deviation
    a. It is not useful in normally distributed data
    b. It is highly influenced by extreme values
    c. Standard error is calculated based on this
    d. 95% observations will be with in 2 standard deviations around the mean, if the data is normally distributed

30. Ogive is also called as
    a. Component bar plot
    b. Scatter plot
    c. Cumulative frequency plot
    d. Histogram

31. External validity is related to
    a. Choosing the correct design
    b. Choosing the correct way of sampling
    c. Choosing the correct analytical methods
    d. Choosing the correct outcome variable

32. Getting the results close to the truth is called as
    a. Reliability
    b. Consistency
    c. Validity
    d. Stability

33. Intra class correlation coefficient is used for measuring
    a. Reliability of a quantitative variable
    b. Reliability of a qualitative variable
    c. Validity of a qualitative variable
    d. Validity of a quantitative variable

34. Equation obtained in a linear regression analysis was
    Weight in kg =   (1.2* Height in centimeter) – 100
    Which of the following is not a correct statement
    a. Beta coefficient is 1.2
    b. Alpha coefficient is 1.2
    c. Outcome is Weight
    d. Exposure is Height

35. Sample size concept in qualitative study is linked with
    a. Reaching Saturation point
    b. Fixed sample size as used in previous study
    c. Sample size based on the results in previous study
    d. No sample size concept in qualitative study