

Question Booklet Code

**A**

Question Booklet  
Serial Number

**M.Sc. III Semester Degree Examination, April/May - 2023**

**Skill Enhancement Courses (SEC)**

**MATHEMATICS**

**Research Methodology**

Time : 1 Hour

Maximum Marks : 30

**INSTRUCTIONS TO CANDIDATES**

1. The Question Paper will be given in the form of a Question Booklet. There will be four/two/one versions of Question Booklets with Question Booklet Code viz. **A, B, C & D / A & B / A**.
2. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your Question Booklet is un-numbered, please get it replaced by new Question Booklet with same Code.
3. Immediately after the commencement of the examination, the candidate should check that the Question Booklet supplied to him contains all the 30 questions in serial order. The Question Booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same Code. This is most important.
4. A blank sheet of paper is attached to the Question Booklet. This may be used for Rough Work.
5. **Please read carefully all the instructions on the top of the Answer Sheet before marking your answers.**
6. Each question is provided with four choices **(A), (B), (C)** and **(D)** having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using **Black Ball-Point Pen** in the OMR Answer Sheet.
7. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator.
8. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.
9. First fifteen minutes is provided to fill the general information of the Student. Eg. Student Name, Student ID, etc. in the OMR Answer Sheet.
10. Without the instruction of the Invigilator do not open the Question Paper Booklet Seal.



1. A data set has a positive skewness when the curve is stretched towards :  
(A) Right side more                      (B) Left side more  
(C) Upwards more                      (D) Downwards more
  
2. Glucose in blood can be quantitatively determined with :  
(A) Tollen's reagent  
(B) Benedict's solution  
(C) Alkaline iodine solution  
(D) Bromine water
  
3. Which data is cheaper to collect ?  
(A) Primary data                      (B) Secondary data  
(C) New data                      (D) Collective data
  
4. What do you mean by synopsis of a research project ?  
(A) The blue print of research.  
(B) Extracts from the research observations.  
(C) A plan of the research.  
(D) Summary of the findings of the research.
  
5. The rice water turns blue-black on addition of a few drops of iodine solution. This indicates the presence of :  
(A) Fats                      (B) Cholesterol  
(C) Complex Proteins                      (D) Starch
  
6. In normal distribution :  
(A) mean = median = mode  
(B) mean < median < mode  
(C) mean > median > mode  
(D) mean  $\neq$  median  $\neq$  mode
  
7. A researcher wants to study the association between gender and using a mobile phone. Data collected for this study will be :  
(A) Quantitative data                      (B) Qualitative data  
(C) Continuous data                      (D) Classified data



8. The techniques by which we can study an individual's personality by observing his/her style of life, behaviour, manner, thoughts and feelings is called :
- (A) Inventory (B) Case history  
(C) Rating scale (D) Projective
9. If  $\bar{m} = \text{mean}(10, 5, 7, 23, 33, \text{weight})$ ; then  $\bar{m} =$
- (A) 15.4 (B) 15.8  
(C) 16.4 (D) 16.8
10. Who can successfully conduct Research ?
- (A) Some who is hard worker  
(B) Possesses post-graduation degree  
(C) Has studied research methodology  
(D) Possesses thinking and reasoning ability
11.  $\bar{m} = \text{median}(5, 6, 11, 59, \text{height})$  then  $\bar{m} =$
- (A) 6 (B) 11  
(C) 8.5 (D) 5
12. Which of the following options are the main tasks of research in modern society ?
- (A) To learn new things  
(B) To keep pace with the advancement in knowledge.  
(C) To systematically examine and critically analyze the investigations/sources with the objective.  
(D) All of the above
13. In which of the following, each number speaks on a pre-planned subject ?
- (A) Seminar (B) Conference  
(C) Panel Discussion (D) None of the above
14. Consider the population of size four : 18, 20, 22 and 24 then population variance :
- (A) 10 (B) 21  
(C) 5 (D) 20



15. Analysis of variance is a statistical method of comparing the \_\_\_\_\_ of several populations.
- (A) Standard deviations (B) Variances  
(C) means (D) Proportions
16. Which of the following is objective of research ?
- (A) To become familiar with a phenomenon.  
(B) To test a hypothesis of a causal relationship between variables.  
(C) To determine the frequency with which something occurs or with it is associated with something else.  
(D) All the above.
17. Plagiarism in research is :
- (A) Creative use of previous data.  
(B) Copying unscrupulously and making use of it.  
(C) Quoting someone and citing him/her.  
(D) Referring to previous data and working over it with new objectives.
18. What are the core elements of a dissertation ?
- (A) Introduction; Data collection; Data Analysis; conclusions and Recommendations.  
(B) Executive summary; Literature review; Data gathered; conclusions; Bibliography.  
(C) Research plan; Research data; Analysis; References.  
(D) Introduction; Literature Review; Research methodology; Results; Discussions and conclusions.
19. The shape of the normal curve depends upon the value of :
- (A) Standard deviation (B)  $Q_1$   
(C) Mean deviation (D) Quartile deviation
20. Which of these is not used to organize a seminar ?
- (A) Oral reports (B) Written reports  
(C) Exchange of Ideas (D) Recommendations



21. A research problem is feasible only when :
- (A) It has utility and relevance
  - (B) It is new and adds something to knowledge
  - (C) It is researchable
  - (D) All of the above
22. The range of student's t-distribution :
- (A)  $(-\infty, 0)$
  - (B)  $(0, \infty)$
  - (C)  $(0, a)$  a is finite
  - (D)  $(-\infty, \infty)$
23. How is random sampling helpful ?
- (A) Reasonably accurate
  - (B) An economical method of data collection
  - (C) Free from personal biases
  - (D) All of the above
24. Which of the following is not the method of Research ?
- (A) Survey
  - (B) Historical
  - (C) Observation
  - (D) Philosophical
25. A college principal conduct an ethnographic probe into the problems faced by tribal students. Which method of sampling will be most appropriate ?
- (A) Random Sampling
  - (B) Stratified Sampling
  - (C) Cluster Sampling
  - (D) Systematic Sampling
26. The limit of the co-efficient of skewness are :
- (A) 3
  - (B)  $\pm 3$
  - (C) 4
  - (D)  $\pm 4$
27. Scopus is :
- (A) The largest database of peer-reviewed literature and produced by Elsevier
  - (B) High influence publications
  - (C) International and specialized disciplinary coverage
  - (D) All of the above



28. In a normal curve, the highest point on the curve occurs at the mean,  $\mu$ , which is also the :
- (A) Median and mode
  - (B) Geometric mean and harmonic mean
  - (C) Lower and upper quartiles
  - (D) Variance and standard deviation
29. Which one of the following is a non probability sampling method ?
- (A) Simple random sampling
  - (B) Stratified sampling
  - (C) Cluster sampling
  - (D) Quota sampling
30. Which one of the following is a type of self-reporting technique ?
- (A) Field Analysis
  - (B) Questionnaire
  - (C) Case Study
  - (D) Focus Groups

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**SPACE FOR ROUGH WORK**

