DE-2916
First Year B. Sc. (Sem. I) Examination
March / April - 2016
Statistics : Paper - 101
(New Course)

Time : 2 Hours] [Total Marks : 50

सूचना / Instructions :

(1) Fill up strictly the details of signs on your answer book.

Name of the Examination : F. Y. B. Sc. (Sem. I)
Name of the Subject : STATISTICS : PAPER - 101 (NEW)

Subject Code No. : 2 9 1 6 Section No. (1, 2, ....... ) : Nil
Seat No.:

Student's Signature

(2) There are 50 questions, each question carries one (1) mark and all are compulsory.

(3) Read the question carefully before selecting the correct option.

(4) Statistical and logarithmic tables will be supplied on request.

(5) Use of non-programmable scientific calculator is allowed.

O.M.R. Sheet भरवा अंतर्गती अतन्तरी सूचनाओ आपेक्ष
O.M.R. Sheet-ल फाजं काम वरुतों.

Important instructions to fill up O.M.R. Sheet
are given on back side of the provided O.M.R. Sheet.
1. जो अवर्गलूक्त भाज्यति अंक व्यक्तां अवबोधने आपूर्त ये, तो आवी माहितीने क्रियवान: 
   (A) अंक व्यक्तां माहिती अर्ने द्विव भाज्यती बनाने
   (B) आपविचारी महत्त्व प्रमाण नहीं
   (C) अंक व्यक्तां माहिती
   (D) द्विव भाज्यती
If the raw data give observations on one variable, then such data are called:
   (A) Both Univariate data and Bivariate data
   (B) None of these
   (C) Univariate data
   (D) Bivariate data

2. 1-2, 3-4, 5-6, ............. वर्गांची वर्गविभाजन ने.
For the class 1 - 2, 3 - 4, 5 - 6,.... the class length is:
   (A) 1
   (B) 2
   (C) 0.5
   (D) 0

3. 9-19, 19-29, 29-39, ............. वर्गां ये:
   (A) निवार्तक वर्गां अर्ने अनिवार्तक वर्गां बनाने
   (B) आपविचारी महत्त्व प्रमाण नहीं
   (C) निवार्तक वर्गां
   (D) अनिवार्तक वर्गां
The classes 9-19, 19-29, 29-39,..... are:
   (A) Both Exclusive class and Inclusive class
   (B) None of these
   (C) Exclusive class
   (D) Inclusive class

4. चालना मूल्यविहृ तेंपु निर्णयावर्तन म्हणजेच चालनां संप्रभाने क्रियवान: 
   (A) संबंधी आधुनिक
   (B) आधुनिक
   (C) संबंधी
   (D) अवबोधन
The number of repeated observations of a variate value is called its:
   (A) Cumulative frequency
   (B) Frequency
   (C) Sample
   (D) Observation
5. The frequency distribution given below shows the height (in cm) of students in a class.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>5</td>
<td>15</td>
<td>27</td>
<td>41</td>
<td>48</td>
<td>52</td>
</tr>
</tbody>
</table>

Given the following frequency distribution, find the original frequency of the class 45-55:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative</td>
<td>5</td>
<td>15</td>
<td>27</td>
<td>41</td>
<td>48</td>
<td>52</td>
</tr>
</tbody>
</table>

(A) 14
(B) 41
(C) 7
(D) 17

6. Which of the following will affect the height of a student?
(A) Absent from school
(B) Height of the student
(C) Height of the student
(D) Height of the student

A series of data with exclusive classes along with the corresponding frequencies is called:

(A) Discrete frequency distribution
(B) None of these
(C) Cumulative frequency distribution
(D) Continuous frequency distribution

7. Which of the following will affect the height of a student?
(A) Absent from school
(B) Height of the student
(C) Height of the student
(D) Height of the student

The difference between upper boundary point and lower boundary point of a class is known as:

(A) Class interval
(B) Mid-value
(C) Upper class limit
(D) Lower class limit
8. नीचेना आयुवितरण के के से:

<table>
<thead>
<tr>
<th>वर्ग</th>
<th>0-30</th>
<th>0-20</th>
<th>0-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>आयुवितरण</td>
<td>27</td>
<td>18</td>
<td>5</td>
</tr>
</tbody>
</table>

(A) अस्तत्त आयुवितरण
(B) सतत आयुवितरण
(C) ‘थी ओस्त्रा’ प्रकारांत संख्या आयुवितरण
(D) ‘थी पुष्प’ प्रकारांत संख्या आयुवितरण

The following frequency distribution

<table>
<thead>
<tr>
<th>Class</th>
<th>0-30</th>
<th>0-20</th>
<th>0-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>27</td>
<td>18</td>
<td>5</td>
</tr>
</tbody>
</table>

is classified as

(A) Discrete frequency distribution
(B) Continuous frequency distribution
(C) Cumulative distribution in less than type
(D) Cumulative distribution in more than type

9. आयुवितरण को होत शके:

(A) अस्तत्त अने सतत अने
(B) आपेक्षिक अंकणशी नसली
(C) अस्तत्त
(D) सतत

A frequency distribution can be:

(A) Both Discrete and Continuous
(B) None of these
(C) Discrete
(D) Continuous

10. नीचे आयुवितरण मध्यांतरांतील पर्यंत, आयुवितरण अंतिम वर्ग:

For the mid-values given below, the last class of the frequency distribution is:

24, 34, 44, 54, 64, 74

(A) 69 – 79
(B) None of these
(C) 75 – 85
(D) 70 – 80
11 0-19, 20-39, 40-49; वर्षाँ मध्ये, 20-39 वर्षांना अम्लसमांकांड:

For the class 0-19, 20-39, 40-49; lower boundary point of the class 20-39 is:
(A) 19.50
(B) None of these
(C) 19.95
(D) 19.05

12 आयुष्टितित वितरणामध्ये दररोप तयार अथवा मूल्यदिश आयुष्टितः:

(A) शून्य शून्य एवे.
(B) आपेक्षिकीय अंशक नाही
(C) एकेदिशी अंशकांशी एवे.
(D) एके एवे.

In frequency distribution, frequency of each variate value:
(A) Has varied
(B) None of these
(C) Has always same
(D) Has one

13 अवरूद्ध आयुष्टित अंशेशा आपासः:

(A) पूर्णांकां
(B) आपेक्षिकीय अंशक नाही
(C) टकमां
(D) अपूर्णांकां

Frequency of a variable is always:
(A) An integer
(B) None of these
(C) In percentage
(D) A fraction
14. Which of the following is a measure of dispersion?
(A) Mean
(B) Median
(C) Standard deviation
(D) Mode

15. Which scale is used to measure money?
(A) Interval
(B) Ordinal
(C) Nominal
(D) Ratio

16. Indicate which level of measurement is being used?
A film magazine lists the best 50 movies for the year 2015.
(A) Interval
(B) Ordinal
(C) Ratio
(D) Nominal
23, 78, 68, 87, 71, 82, 73

Which stem and leaf plot correctly displays the data?

\[ \begin{array}{c|c|c}
2 & 3 & \quad & 2 & 3 \\
6 & 8 & \quad & 6 & 8 \\
(A) & \quad & 7 & 1,3,8 \\
8 & 2,7 & \quad & 8 & 7 \\
\end{array} \]

\[ \begin{array}{c|c|c}
2 & 3,8 & \quad & 2 & 3 \\
6 & 8 & \quad & 6 & 8 \\
(C) & \quad & 7 & 1,3 \\
8 & 7 & \quad & 9 & 7 \\
\end{array} \]

Key: 23 means 23

\[ \begin{array}{c|c|c}
2 & 3 & \quad & 2 & 3 \\
6 & 8 & \quad & 6 & 8 \\
(B) & \quad & 7 & 1,7,8 \\
8 & 7 & \quad & 8 & 7 \\
\end{array} \]

\[ \begin{array}{c|c|c}
2 & 3,8 & \quad & 2 & 3 \\
6 & 8 & \quad & 6 & 8 \\
(D) & \quad & 7 & 1,3,8 \\
8 & 7 & \quad & 9 & 7 \\
\end{array} \]

From the following information

23, 78, 68, 87, 71, 82, 73

Which stem and leaf plot correctly displays the data?
18 Which diagram is used to compare sub data of the data in proper way?
(A) Percentage divided bar diagram
(B) Simple dividend bar diagram
(C) Bar diagram
(D) Multiple bar diagram

19 Which diagram is used when the difference is large for two or more types of data?
(A) Bar diagram
(B) None of these
(C) Pie diagram
(D) Histogram

20 Which unite is taken as measurement in bar diagram?
(A) Both Width and Weight
(B) None of these
(C) Width
(D) Weight
21. How much area does every degree shows in pie diagram?
   (A) \( \frac{1}{360} \)  \( \circ \)  (B) None of these
   (C) \( 360 \)  \( \circ \)  (D) \( 90 \)  \( \circ \)

22. In percentage divided bar diagram, the length of bar is taken as:
   (A) 100%  (B) 200%
   (C) 360%  (D) 50%

23. Classification is the process of arranging data in:
   (A) Different columns and rows
   (B) None of these
   (C) Different columns
   (D) Different rows

24. Diagrams and graphs are tools of:
   (A) Presentation of data
   (B) None of these
   (C) Collection of data
   (D) Analysis of data

25. Which diagram displays quartiles and range of a data set?
   (A) Pie diagram  (B) Box plot
   (C) Stem and Leaf Plot  (D) Circle diagram

26. Which type of graph is obtained after joining the mid values of histogram by straight line?
   (A) Cumulative Frequency Curve
   (B) None of these
   (C) Frequency Polygon
   (D) Frequency Curve
27. Which of the following is a one-dimensional diagram?
   (A) Cylinder
   (B) None of these
   (C) Circle
   (D) Pie-chart

28. Which of the following are topological strata?
   (A) Surface
   (B) Edge
   (C) Vertex
   (D) None of these

29. What is the difference between a normal distribution and a lognormal distribution?
   (A) The normal distribution is symmetric, while the lognormal distribution is skewed.
   (B) The normal distribution is skew symmetric, while the lognormal distribution is skewed.
   (C) The normal distribution is skew symmetric, while the lognormal distribution is symmetric.
   (D) The normal distribution is symmetric, while the lognormal distribution is skew symmetric.

30. What is the difference between a continuous and a discrete data type?
   (A) Continuous data is measured, while discrete data is counted.
   (B) Continuous data is counted, while discrete data is measured.
   (C) Continuous data is counted, while discrete data is counted.
   (D) Continuous data is measured, while discrete data is measured.
31. The method of collecting secondary data is:
   (A) Method of questionnaire
   (B) None of these
   (C) Direct inquiry
   (D) Indirect inquiry

32. The sources of primary data is:
   (A) International publications
   (B) None of these
   (C) Government publications
   (D) Semi government publications

33. The data collected from census reports is known as
   (A) Both Primary data and Secondary data
   (B) None of these
   (C) Primary data
   (D) Secondary data
34. The data regarding the household to whom the survey was conducted should be 
(A) Questionnaire
(B) Questionary
(C) Continuous
(D) Continuous

Mailed questionnaire method of enquiry can be adopted if respondents:
(A) Are educated
(B) Are known
(C) Are uneducated
(D) Have high income

35. The characteristic under study whose measure changes from unit to unit is called
(A) A variable
(B) None of these
(C) An attribute
(D) A sample

36. 100 numbers between 1 and 999 are selected randomly.
(A) Selection without replacement
(B) Selection with replacement

Data about marks of 100 students is:
(A) Both Numerical data and Qualitative data
(B) None of these
(C) Numerical data
(D) Qualitative data
37. देखीक अविलम्बः न देखीक दर्शन अंगेनी माहिती छोः
(A) संपूर्णतेक माहिती अनेक गृहस्थालेक माहिती बने
(B) आपावाही अंकणाला नहीं
(C) संपूर्णतेक माहिती
(D) गृहस्थालेक माहिती
Data collected about Marital Status of some persons is:
(A) Both Numerical data and Qualitative data
(B) None of these
(C) Numerical data
(D) Qualitative data

38. नीचेनावाही तयार कोने वजळासो?
(A) अकस्मिई संभारा
(B) आपेक्षावाही अंकणाला नहीं
(C) टेवल
(D) प्रभावितात
Which of the following would you consider as a variable?
(A) Number of accidents
(B) None of these
(C) Habit
(D) Honesty

39. नीचेनावाही तयार कोने गृहस्थाले गळाशो?
(A) गर्दीभाग
(B) आपेक्षावाही अंकणाला नहीं
(C) उमेर
(D) वजन
Which of the following would you consider as an attribute?
(A) Poverty
(B) None of these
(C) Age
(D) Weight

40. कपीरे तपास्तुं केन दिशा न कोप तपासे केले रीत पुघू उपयोजी छो?
(A) प्रत्येक तपास अनेक परेशांतर तपास बने
(B) आपेक्षावाही अंकणाला नहीं
(C) प्रत्येक तपास
(D) परेशांतर तपास
Which method is more useful when the field of inquiry is not very large?
(A) Direct inquiry and Indirect inquiry both
(B) None of these
(C) Direct inquiry
(D) Indirect inquiry
41 Which method is used to collect the information in Census?
(A) Method of questionnaire by enumerator
(B) None of these
(C) Method of questionnaire by post
(D) Method of questionnaire by telephone

42 Which of the following points is not proper for preparing a good questionnaire?
(A) The questions should be short and clear
(B) The questions should be arranged logically.
(C) Personal questions should be asked in questionnaire
(D) The language of the questions should be easy and simple

43 In which method data are originally collected?
(A) All of these
(B) None of these
(C) Primary method
(D) Secondary method
44  आजनी प्राथमिक माध्यम से आवश्यकता कीती ............. थी।
   (A) प्राथमिक माध्यम से आवश्यकता कीती बनाने
   (B) आपेक्षिकता अद्यतन नहीं
   (C) प्राथमिक माध्यम
   (D) आवश्यकता
   Today’s primary data will tomorrow’s ___________.
   (A) Primary methods and Secondary method both
   (B) None of these
   (C) Primary methods
   (D) Secondary method

45  किस एक रीतमां प्रतिबार हर सीसी नीयो घोषण छै?
   (A) नीति द्वारा
   (B) टपाव द्वारा
   (C) आनंदार्जन
   (D) आडित्यमत
   Which one of these methods has the lowest response rate?
   (A) Phone
   (B) Postal
   (C) Online
   (D) Personal

46  धर्म माते किस मापन क्षेत्रा व्यरूपम छे?
   (A) भूमितर्कवशी
   (B) कमवशी
   (C) नामवशी
   (D) पुष्पोत्तरवशी
   Which scale is used to measure religion?
   (A) Interval
   (B) Ordinal
   (C) Nominal
   (D) Ratio
47. Which classification is done first or tabulation?
   (A) Both are done simultaneously
   (B) No criterion
   (C) Classification follows tabulation
   (D) Classification precedes tabulation

48. Which of the following is true:
   (A) The alphabet is a word
   (B) A sentence
   (C) A paragraph
   (D) The sentence is a word
   A complex table represents:
   (A) Two or more number of factors or variables
   (B) All of these
   (C) Only one factor or variable
   (D) Always two factors or variables

49. What are the three major categories of classification:
   (A) Qualitative
   (B) Quantitative
   (C) Both
   (D) None of these
   An arrangement of data in rows and columns is known as:
   (A) Classification and tabulation
   (B) None of these
   (C) Classification
   (D) Tabulation

50. The class length of a class is 15 and the mid-value is 22.5. The lower limit of the class is:
   (A) 37.5
   (B) 7.5
   (C) 30
   (D) 15