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|  | **Questions** | **Book No-Page No/ Link** |
| 1 | Define Statistics. Explain five stages for Statistics | All 21 Questions from S.C. Gupta  Chapter1,5 and 6  You may also refer to the first chapters of Agarwal, and the introductory chapters of S.P Gupta |
| 2 | Difference between Population and Sample. |
| 3 | Classify Statistics on the Basis of function and Distribution  Basis of Function: a) Descriptive b) Inferential c)Correlational  Basis of distribution: a) Parametric b) Non parametric |
| 4 | Functions of Statistics on following points.  1. Definiteness  2. Condensation  3. Comparison  4. Formulating and Testing Hypothesis  5. Prediction |
| 5 | Explain Uses/Scope of Statistics? |
| 6 | Explain Limitations of Statistics with example. |
| 8 | Explain Types of Classification with example  a. Geographical Classification  b. Chronological Classification  c. Qualitative Classification  d. Quantitative Classification |
| 9 | Explain Relative & Cumulative Frequency Distribution |
| 10 | Define Classification. Explain objectives of classification. |
| 11 | Explain Following types of table with example.  1. Simple and Complex Tables [Simple Table: One way table. Complex Table: Two way table, treble table and manifold tabulation]  2. General Purpose and Special Purpose Tables |
| 12 | What is Diagrammatic presentation of data? Give Significance of Diagrammatic Presentation of Data. |
| 13 | Explain following types of Bar diagram with example   1. Simple Bar Diagram 2. Subdivided Bar Diagram 3. Multiple Bar Diagram 4. Percentage Bar Diagram 5. Deviation Bars 6. Broken Bar Diagram |
| 14 | Explain following types Two Dimensional Diagrams (Surface diagrams or area diagrams) with example.   1. Rectangle 2. Square 3. Circle 4. Pie Diagram |
| 15 | Explain three dimensional Diagrams (Sphere) With examples. |  |
| 16 | Explain Pie Chart with example. List advantages and disadvantages of Pie Chart.  Compare Bar chart & Pie chart. |
| 17 | Explain Pictogram and Cartogram with examples. |  |
| 18 | Explain Graph Classification method for following types.   1. Graphs of time series 2. Graphs of frequency distributions |
| 19 | Explain following terms with application  Range Chart  Band Graph  Semi-logarithmic Line Graphs or Ratio Charts |
| 20 | Explain following types of Graphs of frequency distributions with examples   1. Histogram 2. Frequency polygon 3. Smoothed frequency curve 4. Ogives or Cumulative Frequency Curves. |
| 21 | Difference Between Histogram and Bar Diagram |
| 22 | Differentiate between Qualitative and Quantitative Analysis |  |
| 23 | What do you mean by a questionnaire? What is the difference between a questionnaire and a schedule? State the essential points to be remembered in drafting a questionnaire. |  |
| 24 | What are the different methods of collection of data? Why are personal interviews usually preferred to questionnaire? Under what conditions may a questionnaire prove as satisfactory as a personal interview? |  |
| 25 | Mention characteristics of a good questionnaires. Mention its merits and demerits. |  |
| 26 | What do you mean by tabulation? State the different types of tables. Explain the terms ‘classification’ and ‘tabulation’ and point out their importance in a statistical investigation. Distinguish between classification and tabulation of statistical data. Mention the requisites of a good statistical table.  Explain the purpose of classification and tabulation of data. State the rules that serve as a guide in tabulation of data |  |
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|  | Numericals on Module 1 |  |
| 27 | The amount of production of wheat (in, 000 kg.) are 230, 376, 136, 583 for the cities Bhopal, Agra, Mumbai and Chandigarh respectively. Classify the data. |  |
| 28 | If a company is manufacturing a product from 2001 to 2010 and earning the profits (in crores of rupees) as 10, 15, 13, 17, 12, 16, 17, 21, 20, 18 for the last 10 years respectively. Classify the given data. |  |
| 29 | Construct a discrete frequency distribution for 25 students studying in a class having the following ages (in years): 20. 21. 19. 18. 20, 20. 19. 18. 21, 19. 21 21. 18. 19. 21. 22. 19. 18.20. 19. 20. 22. 20, 21.20. |  |
| 30 | Construct a continuous frequency distribution for the 50 students studying in a class having the following heights (in cm): 146. 156. 152,  167. 178. 180. 172. 162. 148. 153, 161. 173. 163. 174. 147. 179. 148. 151. 168. 172. 165. 173. 171 180. 175. 145. 153. 154. 162. 164. 170, 172, 160, 161. 158. 152, 163, 165, 170, 168, 158. 149. 155. 160. 150, 149, 167, 176, 169. 159. |  |
| 31 | Point out the mistakes in the following table drawn to show the distribution population according to sex, age and literacy   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Sex | 0 to 25 | 25 to 50 | 50 to 75 | 75 to 100 | | Males |  |  |  |  | | Females |  |  |  |  | |  |
| 32 | Prepare a blank table to show the distribution of personnel in a manufacturing concern according to   1. Sex : male and female; 2. Three grades of salary: below Rs 10,000 , Rs 10,000-Rs 20,000 , Rs 20,000 and above; 3. Two periods: 2010 and 2011 4. Three age groups : below 25, 25 and under 40,40 and over. |  |
| 33 | Present the following information in a suitable table :  • In 2000 out of a total of 1750 workers of a factory 1200 workers were members of a trade union . The number of women employed was 200 of which 175 did not belong to trade union.  • In 2005, the number of union workers increased to 1580 of which 1290 were men. On the other hand , the number of non-union workers fell down to 208 of which 180 were men.  • In 2010, there were on the pay rolls of factory, 1850 workers of whom 1800 belong to a trade union . Of all the employees in 2010, 300 were women of whom only 8 did not belong to a trade union. |  |
| 34 | (a) Present the following data of the percentage marks of 60 students in the form of a frequency table with 10 classes of equal width, one class being 50-59.  41 17 33 63 54 92 60 58 70 06 67 82  33 44 57 49 34 73 54 63 36 52 32 75  60 33 09 79 28 30 42 93 43 80 03 32  57 67 24 64 63 11 35 82 10 23 00 41  60 32 72 53 92 88 62 55 60 33 40 57  (b) A sample consists of 34 observations recorded correct to the nearest integer, ranging in value from 201 to 337. If it is decided in the first class at 199.5, find the class limits and class marks of the seven classes. use seven classes of width 20 integers and to begin |  |
| 35 | In a trip, organised by a college, there were 80 people, each of whom paid Rs 15.50 on an average. There were 60 students, each of whom paid Rs 16. Members of teaching staff were charged at a higher rate, the number of servants (all males) was six and they were not charged anything. The number of ladies were 20% of the total and there was only one lady staff member. Tabulate this information. |  |
| 36 | In certain data the following four main characteristics with their sub characteristic are present  Prepare a suitable form of table   |  |  | | --- | --- | | Main characteristics | Sub-characteristics | | Locality | Urban, Rural | | Religion | Hindus, Non Hindus | | Sex | Males, Females | | Age | 0-30, 30-60 and over | |  |
| 37 | A survey of 370 students from Commerce Faculty and 130 students from Science Facurty revealed that 180 students were studving for only C.A. Examinations, 140 for oniy Cosing Examinations and 80 for both C.A. and Costing Examinations. The rest had offered part-time Management Courses. Of those studying for Costing only, 13 were girls and 90 boys belonged to Commerce Faculty. Out of 80 studving for both C.A. and Costing, 72 were from Commerce Faculty amongst which 70 were boys. Amongst those who offered part-time Management Courses, 50 boys were from Science Faculty and 30 bovs and 10 girls from Commerce Faculty. In all there were 110 boys in Science Faculty. Present the above information in a tabular form. Find the number of students from Science Faculty studying for part-time Management courses. |  |
| 38 | 30 pairs of values of two variable X and Y are give below. Form a two-way table  Take class intervals of X as 10 to20, 20 to 30 etc. And Y as 100 to 200, 200 to 300 etc. |  |
| 39 | Represent the following information in a suitable tabular form with the proper rulings and headings:  The annual report of Ishapore Public Library reveals the following points, regarding the reading habits of their members:  Out of total 3713 books issued to the members in the month of July 2009, 2100 were fictions. There were 467 members of the library during that period and they were classified into five classes A, B, C, D & E. The no. of members belonging to the first four classes were respectively, 15, 176, 98 and 129; and the number of fictions issued to them were 103, 1187, 647 & 58 respectively. The number of books, other than the text-books and fictions issued to these four classes of members were respectively 4390, 217 and 341. The text books were issued only to members belonging to the classes C and D .The numbers of text-books issued to them were respectively 3317 and 160.  During the same time period, 1246 periodicals were issued to members of class B, 45 to class D and 315 to class E.  To the members of the classes B, C, D and E the number of other journals issued over the last month, though there was a corresponding decrease by 6.1% in the number of periodicals and journals issued to members. |  |
| 40 | In a sample study about coffee habit in two towns, the following information was received:  (i) Town A: Females were 40%; Total coffee drinkers were 45% and Males non-coffee drinkers were 20%. (ii) Town B: Males were 55%; Males non-coffee drinkers were 30% and Females coffee drinkers were 15%. Present the data in a tabular form. |  |
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| 50 | Draw Circle Diagram |  |
| 51 | Draw Pie Chart |  |
| 52 | Draw Pie Chart |  |
| 53 | Draw Spherical Diagram. Use suitable scale |  |
| 54 | Draw Histogram |  |
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| 59 | Draw a simple bar diagram and line chart for the following data relating to profit achieved by a business firm during 2000 -2007.    Year Profit  (in Rs. Lakhs)  2000 10.5  2001 12.3  2002 15.6  2003 19.2  2004 20.1  2005 19.1  2006 17.7  2007 16.9 |  |
| 60 | The following table represents the details of sales and profit achieved by a business firm during 2000-2007. Draw a simple bar diagram to represent both series of data.  Year Sales (in Rs. Lakhs) Profit (in Rs. Lakhs)  2000 125.3 10.5  2001 130.9 12.3  2002 140.3 15.6  2003 162.8 19.2  2004 168.2 20.1  2005 161.7 19.1  2006 158.3 17.7  2007 155.1 16.9 |  |
| 61 | Annual Budget allocation for a Business firm under various heads of expenditure for the financial year 2020-21 is given. Draw a Pie Chart.    Heads of Expenditure Budget Allocation (in Rs. lakhs)  Salary 100  Purchase 30  Board Meetings 5  Travel 7  Reports 2  Overhead 5  Miscellaneous 10  Draw a histogram for the following data: |  |
| 62 | Interpret the following data and present it using subdivided bar chart diagram: |  |
| 63 | Interpret the following data and present it using subdivided bar chart diagram:   |  |  |  |  | | --- | --- | --- | --- | | **Year** | **2007-08** | **2008-09** | **2009-10** | | Grose Income | 440 | 480 | 520 | | Grose Expenditure | 410 | 440 | 490 | | Net Income | 160 | 180 | 175 | | Tax | 180 | 165 | 190 | |  |
|  | 24 students appeared in an entrance test where all questions are  objective type with 25% –ve marking. The marks obtained out of 50 maximum marks are as follows:  17, 16, 7, 30, 21, 42, 44, 36, 22, 22, 25, 31, 31, 34, 30, 36, 35, 45, 25, 15, 20, 42, 40, 30. Prepare a frequency distribution. |  |
| 64 | The marks of 30 students in statistics are given below:  10, 12, 25, 32, 27, 32, 38, 43, 39, 55, 29, 38, 57, 08, 06, 13, 27, 25, 29, 53,  55, 45, 35, 48, 47, 59, 15, 19, 48, 55  Classify the above data by taking a suitable class interval. |  |
| 65 | Table below gives the availability of hydro-electricity in Rajasthan from various sources   |  |  | | --- | --- | | Source | Availability hydro-electricity (MW) | | Bhakra Nangal | 195.27 | | Beas Unit (First) | 132.00 | | Beas Unit (second) | 140.40 | | Gandhi Sagar | 57.50 | | Rana Pratap Sagar | 86.00 | | Jawahar Sagar | 49.50 |   Display the supply of electricity data by a pie-chart. |  |
| 66 | In a sample study about coffee habits in two towns A and B, the following information given.  Town A: Females were 40%, total coffee drinkers were 45% and female non-coffee drinkers were 20%.  Town B: Males were 55%, male non-coffee drinkers were 30% and female coffee drinkers were 15%.  Present the data into a table form. |  |
| 67 | In a simple study about coffee habits in two towns A and B the following information is given  Town A: Females were 40%, total coffee drinkers were 45% and female non coffee drinkers were 20%.  Town B: males were 55%, male non coffee drinkers were 30% and female coffee drinkers were 15%  Present the data into a table format |  |
| 68 | Frequency Distribution, Types of Univariate Frequency Distribution, Cumulative Frequency Distribution, Bivariate/Two-way classification of data, Cumulative frequency curve or ogive (i.e., more than ogive and less than ogive) | <https://drive.google.com/file/d/1BTt5rYkf3VBUsFutBsuYNo-0ybVwMtJ8/view?usp=sharing> |
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**Objective questions**