A) Theory Questions:

1	Write short note on bar diagrams.
2	Write down the names of all the diagrams you have studied. Also state the merits and demerits of the diagrams.
3	Distinguish between One dimensional and two dimensional diagrams.
4	Give all steps in the construction of a pie diagram.
5	With the help of suitable example explain the construction of ogives. Also state its uses.
6	Distinguish between diagrams and graphs.
7	Explain the construction of histogram with a suitable example. How would you proceed in case of unequal width class intervals?
8	What is classification? What are its objectives? Distinguish between Classification and tabulation.
9	Discuss different types of classification you know.
10	State the rules used for deciding i) number of classes and ii) width of class interval.
11	Distinguish between inclusive type of classification and exclusive type of classification.
12	With the help of suitable example, explain stem and leaf diagram
13	Explain histogram. How are they different from simple bar diagram?
14	With the help of an example explain frequency polygon and frequency curve.
15	Explain the concept of i) bivariate frequency distribution ii) marginal frequency distribution iii) conditional frequency distribution
16	Explain the terms i) Relative frequency ii) Percentage frequency

B)Problems:

1 The following data represents number of foreign tourist from various countries visited India in the year 2005.
Represent the data by suitable diagram.

Country	Number of tourist (in '000)
Africa	7.8
Australia	24.2
Canada	30.2
France	20.5
Germany	18.2
Japan	15.5
USA	3507

2 The following data represents number of small scale industries in Mumbai for four years . Represent the data by suitable diagram.

Year	Number of small scale units (in '000)
2000	130.2
2001	102.5
2002	98.2
2004	75.9

3 The following data give population divided according to sex, of a few district. Draw an appropriate diagram.

District	Number in Thousands		
	Male	Female	Total
Ahmednagar	1160	1109	2269
Poona	1644	1554	3198
Satara	848	879	1727
Sangli	790	750	1540
Sholapur	1166	1088	2254
Kolhapur	1045	1003	2048

4

5 Represent the following data to compare the population in two successive years with the help of a suitable diagram.

Year	Men	Women	Children	Total
1990	1,80,000	1,10,000	70,000	3,60,000
1991	3,50,000	2,10,000	1,60.000	7,20,000

6 Represent the following data by a suitable diagram.

	Electricity Undertaking (Dec.1996) Number of Undertakings	
	Private Sector	Public Sector
Steam	23	33
Oil	154	212
Hydro	2	27
Total	179	272

7 Draw suitable diagram to represent the following information:

Factory	A	B	C
Quantity produced	100	150	200
Selling price per unit	Rs. 30	Rs. 50	Rs. 60
Cost per unit			
Raw material	Rs. 18	Rs. 34	Rs. 50
Labour	Rs. 6	Rs. 8	Rs. 12

8 A rupee spent on *Khadi* is distributed as follows:

Farmer	20 paise
Carder & spinner	35 paise
Waiver	27 paise
Washer man , dyer	8 paise

<table>
<tr><td></td><td>Administrative charges 10 paise.
Draw suitable diagram to represent the data</td></tr>
<tr><td>9</td><td>The following is the break up of the average expenditure of a family. Draw a pie diagram to represent the data

<table><tr><th>Item</th><th>Expenditure in Rs.</th></tr><tr><td>Food</td><td>240</td></tr><tr><td>Clothing</td><td>66</td></tr><tr><td>Rent</td><td>125</td></tr><tr><td>Fuel and lighting</td><td>57</td></tr><tr><td>Education</td><td>42</td></tr><tr><td>Miscellaneous</td><td>190</td></tr></table></td></tr>
<tr><td>10</td><td>The following data gives the distribution of marks(out of 100) secured by 40 students in a class test. Prepare a grouped frequency distribution table for this data.
23, 25, 0, 10, 5, 24, 12, 70, 21, 37
49, 47, 22, 57, 9, 62, 79, 44, 85, 26,
89, 14, 67, 10, 87, 0, 29, 9, 34, 19,
53, 32, 28, 16, 6, 78, 75, 72, 11, 50,
(Take equal class interval is 15? Draw histogram and frequency polygon again</td></tr>
<tr><td>11</td><td>Represent the following data by Stem and leaf diagram
30, 45, 56 , 49, 39, 64, 72, 78, 65, 69, 55, 58, 47, 53, 44, 57, 76, 66, 61, 53</td></tr>
<tr><td>12</td><td>The following data shows the number of tenements in 50 co-operative housing societies. Prepare a frequency distribution table with equal class interval of 10 and the lower class limit of the first class at 70.
106, 76, 109, 93, 95, 129, 119, 128, 84, 113.
111, 90, 81, 75, 110, 118, 123, 111, 86, 68,
70, 136, 90, 110, 115, 139, 115, 101, 99, 86,
107, 82, 107, 187, 115, 104,,141, 123, 98, 78,
82, 125, 92, 126, 130, 107, 131, 84, 81, 104</td></tr>
</table>

	Draw histogram and frequency polygon for this data. Draw the both types of ogives
13	From the data information is given as:- Daily Income — No. of workers. — Marks — No. of workers Below 100 — 15 — Below 500 — 96 Below 200 — 35 — Below 600 — 187 Below 300 — 60 — Below 700 — 198 Below 400 — 84 — Below 800 — 250 i) Prepare frequency distribution ii) Draw Histogram, frequency curve and frequency polygon.
14	Construct a frequency table for the following data regarding annual profits, in thousands of Rs. In 50 firms, taking 25-34, 35-44, etc, as class intervals. 28 35 61 29 36 48 57 67 69 50 48 40 47 42 41 37 51 62 63 33 31 32 35 40 33 37 60 51 54 56 37 46 42 38 61 59 58 44 39 57 38 44 45 45 47 38 44 47 47 64 Construct a less than ogive and find (i) Number of firms having profit between Rs. 35,000 and R$s. 54,000. (ii) Maximum profits of bottom 10% of firms. Mini9mum profits of top 40% of firms.
15	The following table gives the distribution of wages of 65 employees in a company.

Wages in Rs. (equal to or more than)	No. of employees
50	65
60	57
70	47
80	31
90	17

		100 110 120	7 2 0	

16 Recast the following cumulative table in the form of an ordinary frequency distribution. Draw the histogram.

No. of days absent Less than	No. of Students
5	29
10	224
15	465
20	582
25	634
30	644
35	650
40	653
45	655

17 A survey of domestic consumption of electricity gave the following distribution of current consumed.

Number of units	No. of consumers
up to- 200	9
200 – 400	18
400 – 600	27
600 – 800	32
800 – 1000	45
1000-1500	38
1500-2000	20
2000- onwards	11

	Draw a less than ogive and locate graphically the median and the two quartiles.
18	
19	
20	