

- Note :**
- 1) Attempt all questions.
 - 2) Figures to the right indicate marks.
 - 3) Graph papers, log tables will be supplied on request.
 - 4) Use of calculator is allowed.

- Q. 1 a) i)** Define the following terms with suitable example (i) Variable (ii) Attribute (2)
- ii) What are the requirements of a good Statistical table ? (2)

- b)** Draw less than ogive curve for the following data. Hence find Q_1, Q_2, Q_3 graphically. (5)

Weight (in kg)	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80
No. of Persons	4	15	20	32	18	10	8	4

- c)** The following is the distribution of annual rainfall (in inches) recorded at a certain place in India in 1921-1970. (5)

Rainfall (in inches)	20-25	25-30	30-35	35-40	40-45	45-50	50-55
No. of Yrs.	2	5	8	12	10	7	6

Find (i) Average Rainfall (ii) Mode

OR

- Q. 1 p)** What are different scales of measurement ? Give atleast two examples of each type. (4)

- q)** In the budget for 2003-04, how the rupee comes from is given below. (5)

Head	Percentage
Borrowing and liabilities	30
Various taxes	21
Customs and excise duties	29
Non-dept capital receipts	6
Non-tax revenue	14

- i) Draw a suitable diagram.
- ii) Which head shows the highest and lowest percentage?
- iii) For which heads are the angles greater than 100 degrees.
- r) The A. M. of weight of 98 students as calculated from a frequency distribution is 50 Kg. It was later found that the frequency of the class 30-40 was wrongly taken as 8 instead of 10 Calculate the correct A. M. (5)

Q. 2 a) Prepare a complete neat table from the following information. (6)
 There were 100 students in a class who were given a test in English. Out of 60 boys in all 40 passed the test. In all 20 students used to wear glasses and of them 18 succeeded in the test including 10 boys. A total of 75 students from the class succeeded in the test while 12 boys used to wear glasses.

b) Explain the construction of the following graphs along with the rough sketches. (6)

- i) Histogram
- ii) Frequency polygon
- iii) Frequency curve

OR

Q. 2 p) i) What are the methods of collecting data ? (3)

ii) Define : tabulation

What are the different parts of a table ? (3)

q) Distinguish between :

- (i) Qualitative Data and Quantitative Data
- (ii) Discrete Data and Continuous Data
- (iii) Primary Data and Secondary Data

Q. 3 a) The following data gives the fine paid by defaulters in a particular class. (6)

Fine paid	20-40	40-60	60-80	80-100	100-120
Defaulters	7	22	48	33	21

Draw histogram and hence find mode.

Also draw frequency polygon, frequency curve.

b) What is diagrammatic representation of statistical data ?

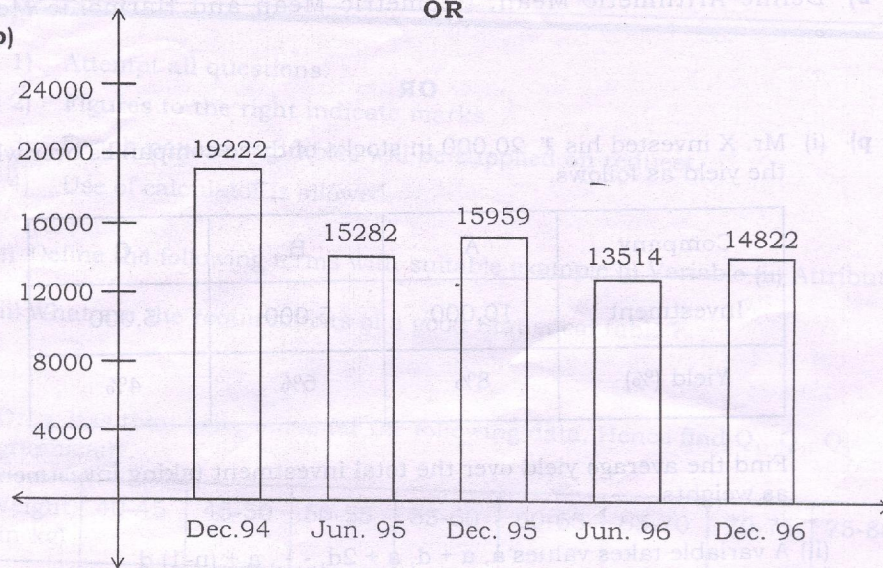
Explain the different types of diagrams.

(6)

Q. 3 p)

OR

(6)



Answer the following questions based on above diagram.

- Name the diagram.
- Which period shows the highest capital ?
- Which period shows the lowest capital ?
- Which period shows the highest decline in unit capital compared to the previous year ?
- Do we see any trend, rising or falling in the diagram.

q) Distribution of life times of 350 radio tubes is given below.

(6)

Lite-time (in hrs.)	300-400	400-500	500-600	600-700	700-800	800-900	900-1000
No. of tubes	6	18	73	165	62	22	4

Draw more than ogive curve.

Hence (1) Find the number of tubes having life more than 750 hrs.

(2) Find the number of tubes having life between 650 and 825 hours.

Q. 4 a) Following is the distribution of height (in cm) of 25 students of a college. (6)

Height (in cm)	150-155	155-160	160-165	165-170	170-175	175-180
No. of Students	3	6	8	4	3	1

- b) Define Arithmetic Mean, Geometric Mean and Harmonic Mean. (6)

OR

- Q. 4 p) (i) Mr. X invested his ₹ 20,000 in stocks of three companies over which the yield as follows.

Company	A	B	C
Investment	10,000	5,000	5,000
Yield (%)	8%	6%	4%

Find the average yield over the total investment taking investments as weights. (3)

- (ii) A variable takes values $a, a + d, a + 2d, \dots, a + (n-1)d$
Find its A. M. (3)

- q) Discuss the merits and de-merits of A. M., median, mode. (6)

