

Time: 3Hrs

Marks:80

- N.B.** 1. Question No. 1 is compulsory.  
 2. Attempt any three questions out of remaining five.  
 3. All questions carry equal marks  
 4. Assume Suitable data, if required and state it clearly.

- 1 Attempt any four: 20  
 (a) What is sampling in statistics? Explain different sampling methods ?  
 (b) Explain Histogram and Bar graph?  
 (c) What do you understand by the term Test significance?  
 (d) Define mean ,Weighted mean ,Median and Weighted Median?  
 (e) State the central limit theorem ?  
 2 (a) Following data is the growth of employment in India in lakhs between 1988 10  
 to 1995

Find corelation coefficient of the given data between public and private sector and give your comments

Year	1988	89	90	91	92	93	94	95
Public sector	98	101	104	107	113	120	125	128
Private sector	65	65	67	68	68	69	68	68

- (b) Out of 1000 families with 4 children each,how many would you except to have 10  
 i) At least one boy  
 ii) No girl  
 iii) At most 2 girls  
 3 (a) You have just taken ownership of a pizza shop. previous owner told you that 10  
 you would save money if you bought the mozzarella cheese in a 4.5 pound slab on the average. Each time you purchase a slab of cheese, you weigh it to ensure that you are receiving a standard deviation of 72 ounces of cheese. The results of 7 random measurements are 70, 69, 73, 68, 71, 69 The and 71 ounces. Are these differences due to chance or is the distributor giving you less cheese than you deserve? i. State the hypotheses. ii. Calculate the test statistic. iii. Would the null hypothesis be rejected at the 10% level? The 5% level? The 1% level?

- (b) Solve using one-way Annova method 10

Observation	A	B	C
1	25	31	24
2	30	39	30
3	36	38	28
4	38	42	25
5	31	35	28