QP CODE: 24801171

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Reg No : .....

Name : .....

INTEGRATED MSC DEGREE EXAMINATION, FEBRUARY 2024

First Semester

INTEGRATED MSC BASIC SCIENCE-STATISTICS

CORE - IST1CR04 - STATISTICAL COMPUTING USING EXCEL/R-I

2020 Admission Onwards

96512C27

Time: 3 Hours Weightage: 30

(Answer any **THREE** questions. Each question carries a weight of **10**)

1. a)Following table gives the birth rate per thousand of different countries over a certain period.

Country	India	Germany	U. K	China	New Zealand	Sweden
Birth Rate	33	16	20	40	30	15

Represent the above data by a suitable diagram and also explain how this can be done using Excel and R.

b)The following table shows the expenditure in percentage incurred on the construction of a house in a city.

ITEM	*BRICK*	*CEMENT*	*STEEL*	*LABOUR*	*MISCELLANEOUS*
EXPENDITURE	*18%*	*30%*	*10%*	*12%*	*30%*

Draw a pie chart for the above data and also explain how we can construct pie chart in excel and R.

2. a) From the following data of the marks obtained by 60 students of a class , calculate arithmetic mean.

Marks	20	30	40	50	60	70
No: of Students	8	12	20	10	6	4

Write down the steps needed to find mean using excel and R.

b) The following table gives the average earnings of the workers in a certain village.

Weekly Wages In Rupees	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
Frequency	21	29	19	39	43	94	73	68	36	45	27	48	21	12	5

Draw a histogram for the data given above.How this diagram can be drawn using excel and R?

3. a) calculate mode of the following distribution .

Class	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	7	15	25	24	20	9

Also write down the steps needed to find mode in excel.

b) Find the median of the following two sets of data of monthly incomes of workers.

i) 150,80,200,100,125,180,112

ii) 500,480,320,70,600,540

Explain how we can find median using R.

4. The no: of vehicles sold by a major toyota showroom in a day was recorded for 10 working days.The data is given as

Day	1	2	3	4	5	6	7	8	9	10
Frequency	20	15	18	5	10	17	21	19	25	28

a) i) Compute range for the above data.

ii) Explain how will you find range using Excel and R?

b) i) Compute quaritle deviation for the above data.

ii) Can you find quartile deviation using Excel? if yes then Explain with steps.

5. a) In the table below is given the number of companies belonging to two areas A and B according to the amount of profits erned by them.raw their lorenz curves and interpret them.

Profits earned (in thousands)	**No: of companies**	
	Area A	**Area B**
6	6	2
25	11	38
60	13	52
84	14	28
105	15	38
150	17	26
170	10	12
400	14	4

b) Write down the procedure to be followed to draw lorenz curve and Box- Whisker plot using statistical software like Excel and R?

6. a) Calculate skewness and kutosis based on moments for the following distribution.

Class	1-5	6-10	11-15	16-20	21-25	26-30	31-35
Frequency	6	8	136	60	20	12	4

How we can do the above problem using Excel?

b) Find the first four raw moments for the following data.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	7	10	28	20	15	12	8

Wite down the steps needed to do the above problem in R.