

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
M.Sc. Winter 2019-20 Examination

Semester: 1
Subject Code: 11209113
Subject Name: Computer Aided Biostatistics

Date: 25/11/2019
Time: 10:30 am to 01:00 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)

- (a) Short note on need to integrate Qualitative and Quantitative data
- (b) Compute Karl Pearsons Coefficient

X	51	63	73	46	50	60	47	36	60
Y	49	72	74	44	58	66	50	30	35

Q.1. B) Answer the following questions (Any two)

- (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2)(Each of 02 marks) (04)
 1. Compute the median of – 2,3,6,7,8,9,11
 2. Compute the mean of – 5,15,20,25,30,35,40,45,50
- (b) In a survey of 200 girls of which 75 were intelligent and 40 had skilled mothers while 85 of non- intelligent girls had non skilled mothers. Do these figures support that skilled mothers had intelligent daughters. $X^2_{tab} = 9.0$ (04)
- (c) Short note on how SPSS is helpful in data analysis. (04)

Q.2. A) Answer the following questions.

- (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)

1. The following table shows the record of absent students of class during a month. Find **median** number of absent days per student.

No. Of absent days of student	0	1	2	3	4	5
No. of students	8	12	18	9	5	1

2. The following table shows the number of children per family in Limda Village. Find the **mean** number of children per family.

No. of Children	0	1	2	3	4	5
No. of families	4	8	23	8	6	3

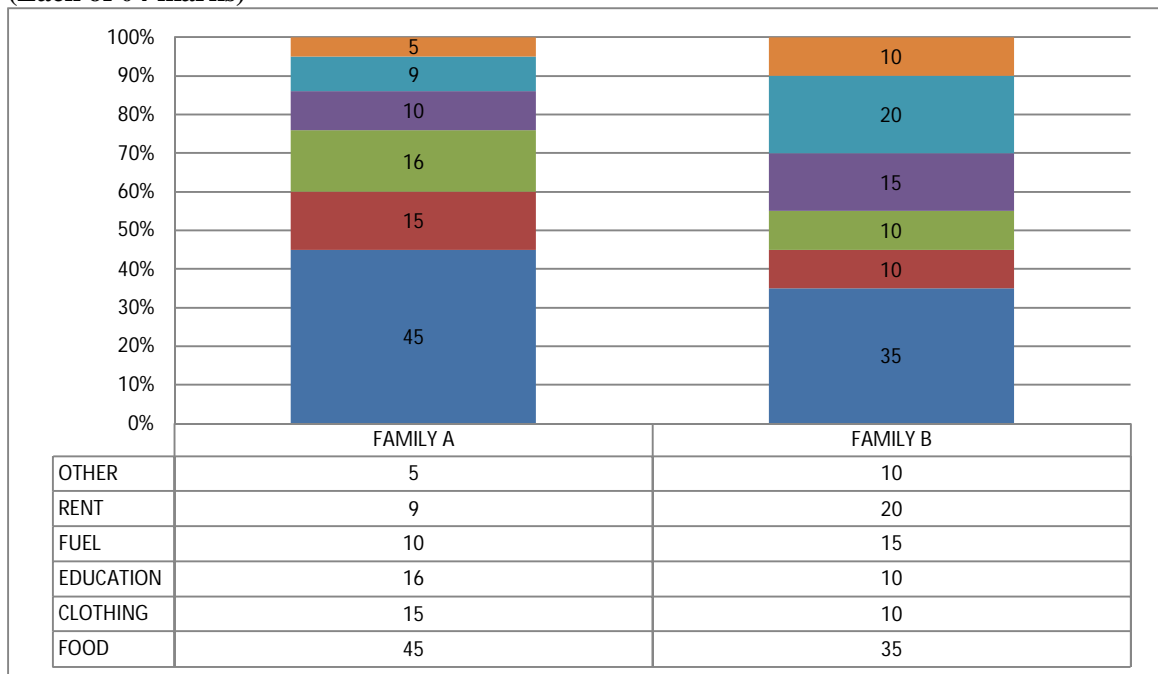
- (b) Calculate the Mean, Median and Mode of the following:- (04)
 35, 48, 65, 36, 52, 50, 36, 38, 55, 25, 20, 18, 92, 98, 95, 45, 33, 22, 25, 45, 58, 36, 75, 78, 80, 66, 58, 35, 69, 85, 8, 12, 28, 64

Q.2. B) Answer the following questions (Any two)

- (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. State the type of Hypothesis: Girls and Boys do not perform equally well in mathematics test.
 2. _____ is the positive square root of mean of squares of deviations measured from mean.
 3. Mode of 5, 2, 15, 4, 3, 2, 5, 15, 1, 2, 15, 4, 15, 3, 15, 6, 15 is _____
- (b) Explain Type 2 Error with example (03)
- (c) Explain Type 1 Error with example (03)

Q.3. A) (Each of 04 marks)

(08)



(a) Comparison of data on expenditure done by 2 families.

Answer the following from the given data

1. Maximum expenditure by both families was done on _____
2. State the type of Bar Diagram
3. Which family spent more on rent
4. Mention the things on which Family A spent more than Family B

(b) From the graph given above

If the expenditure done by Family A is Rs. 18000 and

Expenditure done by Family B is Rs.20000

Calculate the actual amount in Rs. spent on each of the following :

Particulars	Family A	Family B
Others	Rs.	Rs.
Rent	Rs.	Rs.
Fuel	Rs.	Rs.
Education	Rs.	Rs.
Clothing	Rs.	Rs.
Food	Rs.	Rs.
TOTAL	18000	20000

Q.3. B) Answer the following questions (Any two)

(a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks)

(04)

1. Define Correlation
2. Write in short about Types of Correlation

(b) Calculate standard Deviation for – 52, 58, 40, 60, 54, 38, 48

(04)

(c) What is tabulation and what are the essential parts of a table.

(04)

Q.4. A) Answer the following questions.

(a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks)

(04)

1. Define Regression
2. Display the data in Stem and Leaf Pattern and calculate the frequency
32, 45, 65, 45, 68, 78, 98, 45, 45, 42, 46, 55, 58, 47

(b) Define Hypothesis and write in brief about Characteristics and functions of a Good Hypothesis

(04)

Q.4. B) Answer the following questions (Any two)

(a) Define (Each of 01 marks)

(03)

1. Bi-variate data
2. BIOSTATISTICS
3. POPULATION in terms of Sampling

(b) Short note on Cluster Sampling

(03)

(c) Short note on Stratified Random Sampling

(03)