semester III/V (B.Tech./B.Sc.)

Er. No.....

Academic Year: 2021-22

Jaypee University of Engineering & Technology, Guna

T-1 (Odd Semester 2021)

18B11CI916 - Statistical Methods and Data Analysis /

BS2MA508 - Statistical Techniques

Maximum duration: 1 Hour

Maximum Marks: 15

Notes:

- 1. This question paper has 4 questions.
- Write relevant answers only.
- 3. Do not write anything on question paper.

0.56

[04]

To better understand how husbands and wives feel about their finances, Money Magazine [04] conducted a national poll of 1010 married adults aged 25 and older with household incomes Q1. of Rs 50,000 or more. Consider the following example set of responses to the question, "Who is better at getting deals?"

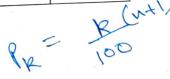
'Who is better at go	etting deals?"	Who is Better?			
7 14	I am	My Spouse	We are Equal		
Respondent	278	0.126 127	102		
Husband Wife	290	& lo\ 111	102		
	bability table.	0-235	6.20 \		

- (a) Develop a joint probability table. Construct the marginal probabilities for Who is Better (I am, My Spouse, We are Equal)
- Given that the respondent is a husband, what is the probability that he feels he is better at getting deals than his wife?
- Annual sales, in millions of dollars, for 21 textile companies follow: Q2̂.

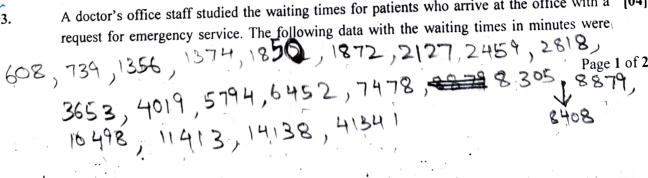
Annual sales, in millions of dollars, for 21 textile companies follow.									
Annual sales	5, 111 1111111011.	01 4077	-8879-	2459	11413				
8408	1374	1872	-0017		1256				
0100	14120	6452	-1850 -	2818-	1356				
608	14138	,	11011-	720	2127-				
10498	7478	-4019 -	41341	139	2127				
101 70		0205-	500 A L						
3653	-5794 -	8305	100		^				
					(

Provide a five-number summary.

- Compute the lower and upper limits.
- Do the data contain any outliers?
- Show a box plot.



A doctor's office staff studied the waiting times for patients who arrive at the office with a [04] **O**3.



collected over a one-month period (20 working days).

2	8	10.	12	A	1	8	17	11	8
9.	8	12	21	6	8	7	13	18	3

Use classes of 0-4, 5-9, and so on in the following:

- (a) Show the frequency distribution.
- (b) Show the relative frequency distribution.
- (c) Show the cumulative frequency distribution.
- (d) What proportion of patients need emergency service wait of 9 minutes or less?

Explain the difference between qualitative and quantitative data. Discuss the various [3] measurement scales with examples.
