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MBA (INT)
(SEM-II) THEORY EXAMINATION 2018-19
BUSINESS STATISTICS

Time: 3 Hours   *Total Marks: 100*

Note: **1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1.   **Attempt *all* questions in brief.**   2 x 10 = 20

                                                                      Marks

a.   What is the definition of Statistics?   2
b.   What are quartile deviation and its coefficient?   2
c.   What do you mean by moments about mean?   2
d.   What is coefficient of variation?   2
e.   Explain positive and negative correlation with suitable examples. 2
f.   Explain mathematical properties of coefficient of correlation. 2
g.   What are the regression coefficients? How are they computed?   2
h.   What do you mean by regression?   2
i.   Find the probability of throwing a sum of 7 in a single throw of two dice. 2
j.   From a pack of 52 Cards, 2 Cards are drawn at random. Find the   2
       probability that both are of spade.

SECTION B

2.   **Attempt any *three* of the following:**

                                                                      Marks

a.   "Statistics plays an important role not only in the study of Economics 10
       and commerce, but also in actual business." Explain this statement.
b.   What are the measures of dispersion? Why is standard deviation   10
       considered to be the most reliable measure of dispersion?
c.   What is meant by correlation? Discuss the applications of Correlation 10
       analysis in business decision-making.
d.   Distinguish between correlation and regression analysis.   10
e.   What do you mean by probability? Discuss the uses of the theory of 10
       probability in business decision-making.

SECTION C

3.   **Attempt any *one* part of the following:**

                                                                      Marks

a.   Calculate mode from the following series:-   10

Class-interval	Frequency	Class-Interval	Frequency
0–9	32	40–59	48
10–19	36	60–79	24
20–29	20	80–99	2
30–39	30		

b.   For a distribution based on 200 observation partly reproduced below, 10
       mean is 1·46, find the missing frequencies:-

No. of Accidents :	0	1	2	3	4	5
Frequencies:	46	?	?	25	10	5

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4. **Attempt any *one* part of the following:**

Marks

a. The runs scored by two batsman A and B in various innings are: 10
A: 25 79 31 114 14 02 68 01 11007
B: 05 18 42 5309 47 52 17 81 56
Who is the better run getter? Who is more consistent?

b. What is meant by skeweness in a frequency distribution? Explain the 10
different measures of skewness.

5. **Attempt any *one* part of the following:**

Marks

a. Find Karl Pearson's Coefficient of correlation between age and playing 10
habits of the people from the following informations:-

Age group (in years)	No. of people	No. of Players
15 and less than 20	200	150
20 and less than 25	270	162
25 and less than 30	340	170
30 and less than 35	360	180
35 and less than 40	400	180
40 and less than 45	300	120

b. Find out the spearman's coefficient of rank correlation from the 10
following data relating to the ranks assigned by the two judges on a
certain competition:-
Candidates: A B C D E F G H
Marks of Judge I: 60 80 90 60 100 130 120 110
Marks by Judge II: 30 40 50 40 60 70 40 75

6. **Attempt any *one* part of the following:**

Marks

a. Find out both regression equations and calculate coefficient of 10
correlation with the help of regression coefficients:-
X: 11 14 14 17 17 21 25
Y: 15 27 27 30 34 38 46

b. Explain the types of regression and discuss the importance of regression 10
analysis.

7. **Attempt any *one* part of the following:**

Marks

a. In a bolt factory machines A, B and C manufacture respectively 25%, 10
35% and 40% of the total. Of their output 5, 4 and 2 percents are
defective botls. A bolt is drawn at random from the product and is found
to be defective. What is the probability that it was manufactured by
machine A?

b. Define probability and explain the laws of addition and multiplication of 10
probability.

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