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MASTER OF BUSINESS ADMINISTRATION (M.B.A.)
EXAMINATION : JUNE – JULY - 2022
SEMESTER - I
Sub: Statistical & Quantitative Methods (MBA104)

Date: 05 /07/2022

Total marks: 60

Time: 2.00pm to 4.30pm

SECTION – I

Q. 1. Fill in the blanks. (5)

- LPP gives the graphical method to get the solutions.
 - feasible
 - percentage
 - improper
 - proper
- If Mean = 80.375 & $\sum xi^2 = 52315$ & $n = 8$ then Var =
 - 79.234
 - 7.9234
 - 79234
 - 792.34
- A matrix is a rectangular array of numbers arranged inand columns .
 - row
 - table
 - angle
 - format
- Mean = Mode = Median then distribution is
 - Normal
 - exponential
 - skewed
 - bivariate
- Line graph is dimensional graph .
 - One
 - two
 - three
 - zero

Q. 2. Answer the following. (Any Two) (20)

- Estimate Karl Persons Correlation coefficient -

X	14	16	18	12	13	23	27	11	19	16
Y	28	22	21	29	20	30	24	25	21	20

- In an agricultural experiment on the study of depth of water in the soil (x) in feet on yield of the crop in quintal per plot (y) the following data were obtained.

X	1.8	1.9	2.5	1.4	1.3	2.1	2.3
Y	200	370	450	160	90	440	380

Obtain the equation of line of regression of Y on X and estimate the yield when the depth of Water in the soil is 2 ft.

- On first 5 assignments of Business Statistics Pratik scores 72,86,92,63 and 77. What score he must earn on his sixth test so that his average (mean score) for all six tests will be 80?
- If $A = \begin{bmatrix} 2 & -3 \\ 3 & 4 \end{bmatrix}$ $B = \begin{bmatrix} 4 & 5 \\ 3 & -2 \end{bmatrix}$ $C = \begin{bmatrix} 3 & -1 \\ 0 & 6 \end{bmatrix}$ find $5A + 4B - AC$.

Q. 3. Write notes on. (Any Two)

(10)

1. LPP
2. Use Statistics in Business
3. Correlation Analysis

SECTION – II

Q. 4. Case Study

(15)

A research student from M.B.A. surveys the various students studying for different competitive examinations. To help these students department offer special coaching classes for the subjects like C.A. , Costing , Both C.A. and Costing and the reaming students from Management M.B.A. and Commerce M. Com. The Computer special practical subject. Total numbers of students are 810 from which M.B.A. students are 400. For C.A. total 260 enrolled 150 from M.Com. & 60 boys from M.B.A. where the number of boys are double of girls from M.COM. For Costing 95 from M.B.A. of which 35 are girls whereas 110 Students from M.Com.90 are boys. But some students are interested in both the courses C.A. and Costing they are 200 where 90 from M.Com. amongst which 20 are girls and 50 girls from M.B.A. The rest of the students offered the Computer practical course. Of those 50 boys from M.B.A. and the girls is less than number of boys by 15. But for M.Com the situation is different number of boys is double that number of girls.

Tabulate the data properly and with given information estimate the values.

Q. 5. Answer the following: .

(10)

- a) IN Manufacturing ready mades Two tailors A & B earn Rs. 150 & Rs. 200 per day respectively . A can stitch 6 shirts and 4 pants while B can stich 10 shirts & 4 pants per day. How many days shall each work if it is desired to produce (at least) 60 shirts & 32 pants at a minimum labour cost? Identify the variables. Formulate LPP. Solve LPP for minimum labour cost.

OR

- b) Calculate three yearly moving averages of the given following data –
Make table and draw the line graph.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
No. of workers	15	18	17	20	23	25	29	33	36	40	42