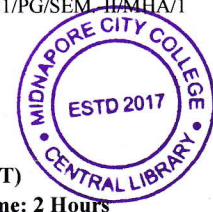


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M.H.A. Semester-II Examination, 2022
MASTER IN HOSPITAL ADMINISTRATION
 PAPER: MHA 207
(QUANTITATIVE METHODS OF MANAGEMENT)



Full Marks: 40

Time: 2 Hours

GROUP-A**Answer any four questions of the following:****4×5=20**

1. Prove that the value of r lies between -1 to +1. 5
2. Explain the concepts of normal and exponential distributions. 5
3. State classical definition of probability. Prove that $0 \leq P(A) \leq 1$, for any event A using classical definition of probability. If A and B are two events such that $P(A) = P(B) = 1$, show that $P(A + B) = 1$. 1+2+2
4. Explain the primary & secondary sources of collection of data.
5. What is regression? Explain the relations between correlation and regression. 2+3
6. Distinguish between Type I error and Type II error in testing of a hypothesis.

GROUP-B**Answer any two questions of the following:****2×10=20**

1. Determine the mean and median for the following distribution of Indian adult males:

Class-	51-53	54-56	57-59	60-62	63-65	66-68	69-71
interval							
Frequency	5	7	14	28	15	8	3

Then find the mode of the distribution.

8+2

2. Calculate (i) Laspeyre's and (iv) Fisher's Index numbers for following data. Index numbers for following data.

Items	2020		2021	
	Quantity	Value	Quantity	Value
A	10	120	12	156
B	50	700	40	600
C	15	240	25	475
D	12	216	15	240

(P.T.O.)

(2)

3. Calculate the correlation coefficient and determine the regression lines of Y on X and X on Y for the sample

8	10	5	8	9
1	3	1	2	3

10