

## IMBA in BEM/FM/HRPA/BM Sem.-2 (Rep.) Examination

## BEM/HR/FM/BBA\_CC\_106

## B. S. - I

Time : 2-30 Hours]

May-2025

[Max. Marks : 70

- Q.1 The median of the following frequency distribution is 38. Find the value of a and b if the sum of frequencies is 400: (14)

Class	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequencies	42	38	a	54	b	36	32

- Q.2 If  $P_{20} = 9.375$ , for the following frequency distribution, Find the missing frequency. (14)

Class	3-6	6-9	9-12	12-15	15-18	18-21	21-24
Frequency	10	25	?	60	30	20	15

Or

- Q.2 What is probability distribution? Explain the types of probability distribution giving examples in detail. (14)

- Q.3 If a call center receives 3 calls per minute on average, find the probability that in a given minute: (14)

- No call is received
- Exactly 2 calls are received
- More than 4 calls are received

Or

- Q.3 What is hypothesis testing? Explain the steps involved and significance of hypothesis testing. (14)

- Q.4 The sales in 6 shops before and after 'the more sale campaign' are as shown below: (14)

SHOP	1	2	3	4	5	6
Sales before Campaign	53	28	32	30	50	42
Sales after Campaign	58	32	30	50	56	45

Can we say that the campaign is successful? Use 5% level of significance, stating null hypothesis vs alternate hypothesis. ( $t_{(0.05, 13)} = 2.571$ )

Or

- Q.4 A certain drug was administered to 458 males out of 720 in a certain locality to test its efficacy against typhoid. Relevant data is given below: (14)

	Infection	No infection	Total
Administered the drug	146	312	458
Not Administered	190	72	262
Total	336	384	720

Test the hypothesis if the infection is caused due to administration of drug or otherwise. ( $\chi^2_{(0.05)} = 3.84$ )

- Q.5 What is statistics? Explain the different measures of central tendency and measures of dispersion. (14)