Printed Page:-03 Subject Code:- AMIBA0203 Roll. No: NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA (An Autonomous Institute Affiliated to AKTU, Lucknow) MBA (Integrated) SEM: II - THEORY EXAMINATION (2024 - 2025) Subject: Business Communication Time: 2.5 Hours Max. Marks: 60 General Instructions: IMP: Verify that you have received the question paper with the correct course, code, branch etc. 1. This Question paper comprises of three Sections -A, B, & C. It consists of Multiple Choice *Questions (MCQ's) & Subjective type questions.* 2. Maximum marks for each question are indicated on right -hand side of each question. 3. Illustrate your answers with neat sketches wherever necessary. 4. Assume suitable data if necessary. 5. Preferably, write the answers in sequential order. 6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked. **SECTION-A** 15 1. Attempt all parts:-1-a. Which of the following is not a measure of central tendency? (CO1) 1 Standard deviation (a) Mean (b) (c) Median Mode (d) 1-b. Which of the following is not a type of correlation? (CO2) 1 Positive (a) (b) Negative Circular (c) Zero (d) 1-c. If A and B are independent events, then: (CO3) 1 $P(A \cap B) = P(A) + P(B)$ (a) $P(A \cap B) = P(A) \times P(B)$ (b) $P(A \cup B) = 0$ (c) $P(A \cap B) = P(A)/P(B)$ (d) In a binomial distribution with n = 5 and p = 0.6, the variance is: (CO4) 1-d. 1 1.2 (a) 1.8 (b)

	(c) 2.4					
	(d) 3.0					
1-e.	The t-test is mainly used v	when: (CO5)				1
	(a) Sample size is large					
	(b) Population variance is	known				
	(c) Sample size is small an	d population	n variance is u	nknown		
	(d) Only comparing propo	rtions				
2. Att	empt all parts:-					
2.a.	Find the median and mode 7,4,3,5,6,3,3,2,4,3,4,3,3,4,	of the follow 4,2,3	wing distribut	ion: (CO1)		2
2.b.	Write a short note on Cor	relation. (CC	02)			2
2.c.	A coin is tossed twice. Let	X be the nu	mber of head	s. Find E(X).	(CO3)	2
2.d.	State one real-life applicat	ion of Poisso	on distributior	n. (CO4)		2
2.e.	Define Type-I error and it	s causes. (CC	05)			2
SEC	<u> TION-B</u>					15
3. An	swer any <u>three</u> of the following	; -				
3-a.	Finding Missing Frequen value of x. A frequency (CO1)	ding Missing Frequency Using Median. If the median age is 42, find the ue of x. A frequency distribution table of ages in a survey is as follows: 01 arks $20-30$ $30-40$ $40-50$ $50-60$	42, find the s follows:	5		
	Marks	20-30	30-40	40-50	50-60	
	No. of Students	10	X	15	10	
3-b.	Explain Karl Pearson's co its interpretation. (CO2)	efficient of c	correlation. De	erive the form	ula and explain	5
3.c.	If a fair die is rolled once, (CO3)	calculate the	e expected val	ue of the num	ber shown.	5
3.d.	List the assumptions of binomial distribution. Give an example where this 5 distribution is applicable. (CO4)					5
3.e.	Write the steps involved in	hypothesis	testing. Expla	in with examp	ples. (CO5)	5
<u>SEC</u>	<u>FION-C</u>					30
4. An	swer any <u>one</u> of the following:	-				
4-a.	Distinguish between i)Quartiles and Deciles ii) Deciles and Percentiles iii) Quartiles and Percentil	es (CO1)				6
4-b.	Define the Mode and calcu Libraries in Karnataka as	ılate Mode f given below:	or the distribu (CO1)	tion of month	ly rent Paid by	6

•

Rent	500-1000	1000-1500	1500-2000	2000-2500	2500-3000	3000 & above
Number of Libraries	5	10	8	16	14	12

5. Answer any one of the following:-

- 5-a. Define regression? Explain the types of regression. (CO2)
- 5-b. From the following table calculate the coefficient of correlation by Karl Pearson's 6 method.

Χ	6	2	10	4	8
Y	9	11	?	8	7

6

6

6

Arithmetic means of X and Y series are 6 and 8 respectively. (CO2)

6. Answer any one of the following:-

- 6-a. Two cards are drawn from a well-shuffled pack of cards, Calculate the probability 6 that the second card is a club given that the first card is a club. (CO3)
- 6-b. Distinguish between:-

i. Probability and Expectation

ii. Discrete and Continuous Random Variable (CO3)

7. Answer any one of the following:-

7-a. As a result of a certain experiment, the data obtained were:

X	0	1	2	3	4
Freq.	8	32	34	24	5

Fit a Poisson distribution to the above data. (CO4)

7-b. Explain the characteristics of binomial distribution. Write the probability mass 6 function and formulas for mean and variance also. (CO4)

8. Answer any one of the following:-

- 8-a. The mean value of a random sample of 60 items was found to be 145 with SD of 6 40. Find the 95% confidence limits for the Population mean. $(Z_{0.05}=1.96)$ (CO5)
- 8-b. Write a note on large sample and small sample tests with suitable illustrations. 6 (CO5)