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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, (NIET BUSINESS SCHOOL) GREATER NOIDA

## PGDM

## TRIMESTER-I THEORY EXAMINATION (2024-2025)

Subject: Quantitative Techniques for managers

Time: 2Hrs.30 min

## **General Instructions:**

**IMP:** Verify that you have received question paper with correct course, code, branch etc.

- 1. This Question paper comprises of three Sections -A, B, & C. It consists of Short type questions & 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.

Attemnt all narts.

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- 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
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1. 11	tempt <u>un</u> purts.	
1 <b>-</b> a.	Determine 10 is what percent of 50? (CO1)	1
1 <b>-</b> b.	Define the compound interest. (CO2)	1
1-c.	Define Mode. (CO3)	1
1-d.	Define independent events. (CO4)	1
1-e.	Define Regression. (CO5)	1
2. At	tempt <u>all parts:-</u>	
2.a.	A fruit seller had some apples. He sells 40% apples and still	2
	has 420 apples. Originally, how many apples he had? (CO1)	
2.b.	Give the formula of simple interest. (CO2)	2
2.c.	The first four central moments of a distribution are 0, 7, 36,	2
	409. Comment upon the nature of the distribution. (CO3)	
2.d.	Give classical definition of probability. (CO4)	2
2.e	Define correlation. (CO5)	2
	SECTION – B	15
3. Ar	nswer any <u>three</u> of the following-	
3-a.	Convert each from decimal to fraction:	5
	i) 0.04, ii) 0.25 (CO1)	
3-b.	How much time will it take for an amount of Rs. 450 to yield	5

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Max. Marks:60

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Rs. 81 as interest at 4.5% per annum of simple interest? (CO2)

- 3-c. Define measure of central tendency. (CO3)
- 3-d. Give classical definition of probability. One card is drawn from a deck of 52 cards, well-shuffled. Calculate the probability that the card will be an ace. (CO4)
- 3-e. Find the karl pearson Co-efficient of correlation for the following table:

Х	10	14	18	22	26		
Y	18	12	24	6	30		
(CO5)							

(CO5)

## SECTION – C

Case Let & Application Based

- 4. Answer any one of the following-
- 4-a. Three students contested an election and received 1000, 5000
  and 10000 votes, respectively. The student who won the votes got 10000 votes. What is the percentage of the total votes the winning student gets? (CO1)
- 4-b. If 20% of x = y, what is the value of y% of 20 in terms of x?(CO1)
- 5. Answer any one of the following-
- 5-a. A sum of money at simple interest amounts to Rs. 815 in 36 years and to Rs. 854 in 4 years. Find the sum.(CO2)
- 5-b. Find the compound interest (CI) on Rs. 12,600 for 2 years at6 10% per annum compounded annually.(CO2)
- 6. Answer any one of the following-
- 6-a. Define statistics. And its applications in industry and management. (CO3)
- 6-b. Find the mean for the following distribution :

C.I.	5-15	15-25	25-35	35-45	45-55
f	1	3	5	7	4
(CO3)					

- 7. Answer any one of the following-
- 7-a. State and prove addition theorem of probability.(CO4)
- 7-b. A card is drawn from a pack of cards and then another card is 6

6

6

5

5

5

6

6

6

Subject Code: PGDM017 drawn without the first being replaced. Find the probability of drawing i) two kings, ii) first is king and second is queen, iii) two red cards (CO4)

- 8. Answer any one of the following-
- 8-a. The equation of two regression lines : 2x y + 1 = 0 and 3x 62y + 7 = 0. Calculate the correlation Coefficient and mean values of x and y.(CO5)
- 8-b. Define Time series and also explain its components.(CO5) 6