Printed page: 02

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

TRIMESTER-I THEORY EXAMINATION (2024-2025)

Roll No:

Subject : Business Statistics

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.
- 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. At	tempt <u>all</u> parts:-	
1 - a.	Define mode. (CO1,K2)	1
1-b.	Write formula of correlation.(CO2,K3)	1
1-c.	Define Probability. (CO3,K2)	1
1-d.	Define normal distribution. (CO4,K2)	1
1-e.	Write formula of Paasche index. (CO5,K3)	1
2. At	tempt <u>all parts:-</u>	
2.a.	Discuss skewness with examples.(CO1,K2)	2
2.b.	Give properties of regression. (CO2,K3)	2
2.c.	Write addition law of probability. (CO3,K2)	2
2.d.	Give difference between binomial and normal distribution.	2
	(CO4,K2)	
2.e	Write two properties of Time series. (CO5,K3)	2
	SECTION – B	15
3. Ar	nswer any <u>three</u> of the following-	
3-a.	Discuss uses of statistics in business. (CO1,K2)	5
3-b.	Write difference between correlation and regression . (CO2,K3)	5





Max. Marks:60

- Subject Code: NPGDM013 Find the probability that a leap year selected at random will 5 contain either 53 Monday or 53 Tuesday. (CO3,K2)
- 3-d. The scores in an undergraduate class of first year were found to 5 be normally distributed with mean 60 and S.D. 10 .If a student from this class is selected at random ,find the probability that

i)The student scored between 60 to 80 marks.

ii The student scored between 50 to 60 marks (CO4,K2)

3-e. Discuss the Index number and its types. (CO5,K3)

SECTION – C 30

Case Let & Application Based

4. Answer any <u>one</u> of the following-

3-c.

- 4-a. Compute range and coefficient of range of given data: 6 57, 84, 63, 34, 87, 69, 48, 72. (CO1,K2)
- 4-b. Discuss the merit and demerit of range. (CO1,K2)
- 5. Answer any <u>one</u> of the following-
- 5-a. Discuss the properties of regression coefficients. (CO2,K3)
- 5-b. The following figures relate to heights of eight fathers and their 6 sons :

Father's	65	66	67	67	68	69	71	73
h(inch.)								
sons	67	68	64	68	72	70	69	70
h(inch.)								

Obtain regression equations by calculate both regression coefficients.(CO2,K3)

- 6. Answer any <u>one</u> of the following-
- 6-a. State and prove Bayes theorem.(CO3,K2)
- 6-b. Discuss random variables and its types.(CO3,K2)
- 7. Answer any <u>one</u> of the following-
- 7-a. Metro rail is concerned about the safe maintenance of its 6 property and found that a vandal will be caught is 0.3Find the probability that exactly 3 vandals will be arrested in the next five cases of vandalism. (CO4,K2)
- 7-b. Define Poisson distribution and give an example showing its 6 general equation.(CO4,K2)

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- 8. Answer any <u>one</u> of the following-
- 8-a. Discuss Tests of Consistency for calculation of Index number. 6 (CO5,K3)
- 8-b. Discuss the component of Time Series. (CO5,K3) 6