

Total No. of Questions : 4]

SEAT No. :

PD28

[Total No. of Pages : 2

[6409]-225

S.E. (Artificial Intelligence & Data Science) (Insem)

STATISTICS

(2019 Pattern) (Semester - IV) (217528)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Attempt Q.1 or Q.2, Q.3 or Q.4.
- 2) Figures to the right indicate full marks.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Assume suitable data, if necessary.

- Q1)** a) Define Statistics. Give importance of Statistics. [5]
b) Define Sampling. Write a note on random sampling. [5]
c) Explain the Scope of Statistics in Engineering & Technology. [5]

OR

- Q2)** a) What are the reasons of distrust of statistics? Explain with suitable example. [5]
b) If the population size is 7 and sample size is 3, find total number of possible samples [5]
i) With replacement
ii) Without replacement
c) Write a short note on statistical inference. [5]

- Q3)** a) Draw a Histogram for the following frequency distribution. [5]

Classes	0-20	21-40	41-60	61-80	81-100
Frequencies	2	18	42	28	5

Also state the disadvantages of graphical representation of data (any two).

- b) For a certain frequency table which has only been partly reproduced here. The mean was found to be 1.46. [5]

No. of accidents	0	1	2	3	4	5
Frequency	46	-	-	25	10	5

If $N = \sum f = 200$, then find missing frequencies.

- c) Explain the merits and demerits of median and mode. [5]

OR

P.T.O.

Q4) a) Draw a frequency polygon for the following frequency distribution. [5]

Marks obtained	0-10	10-20	20-30	30-40	40-50
No. of students	5	12	43	32	8

b) Obtain median for the following frequency distribution. [5]

Marks obtained	0-20	21-40	41-60	61-80	81-100
No. of students	1	9	32	16	7

c) What are the merits and demerits of Harmonic mean (2 each). Also calculate Harmonic mean of the following series. [5]

Values	2	6	10	14	18
frequency	4	12	20	9	5

