SEAT No. :

PA-10005

[6008]-261

S.E. (Artificial Intelligence & Data Science)(Insem)
STATISTICS
(2019 Pattern) (Semester - II) (217528)

Time : 1 Hour]   *[Max. Marks : 30*

Instructions to the candidates:

1) *Answer Q1 or Q2, Q3 or Q4.*
2) *Figures to the right indicate full marks.*
3) *Neat diagrams must be drawn wherever necessary.*
4) *Make suitable assumption whenever necessary.*

Q1) a) What are the limitations and importance of Statistics. **[5]**

b) What are the methods of estimation? Give brief on testing of hypothesis. **[5]**

c) Explain the Scope of Statistics in engineering & Technology. **[5]**

OR

Q2) a) What is population and sample? Explain the type of sampling in brief. **[5]**

b) What are random sample? Explain lottery method and random numbers in detail. **[5]**

c) What is Statistics? Explain the scope of statistics in medical and biological fields. **[5]**

Q3) a) Draw a frequency polygon for the following data. **[5]**

Marks	0-20	20-40	40-60	60-80	80-100
No. of students	2	18	42	28	5

Also state the advantages of graphical representation of data (any four).

P.T.O.

b) Calculate the mean for the following frequency distribution. **[5]**

Class	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	12	18	27	20	17	6

Also state merits of Mean (any four).

c) Age distribution of hundred life insurance policy holders is as follows : **[5]**

Age	17-19	20-22	23-25	26-28	29-31	32-34	35-37	38-40
Number	9	16	12	26	14	12	6	5

Calculate mode

OR

Q4) a) What is histogram? Draw the histogram for the following data. **[5]**

Age group (in years)	0-20	21-40	41-60	61-80	81-100	101-120
Population	500	2100	2200	2000	1600	400

b) Calculate median for the following distribution. **[5]**

Class	0-10	10-20	20-30	30-40	40-50
Frequency	5	14	29	21	25

Also write merits of median (any 2).

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

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