Reg. No ..... Name 19P2057

M. A. DEGREE END SEMESTER EXAMINATION - MARCH/APRIL 2019

SEMESTER 2 : SOCIOLOGY

COURSE : **15P2SOCT10 : STATISTICS FOR SOCIOLOGY**

(For Regular - 2018 Admission and Supplementary - 2017/2016/2015 Admissions)

Time : Three Hours Max. Marks: 75

Section A

Answer any 8 (2 marks each)

1. Describe what is Pie diagram
2. What is a Discrete variable?
3. Describe Median class
4. Define Median and determine the median from the following figures
   25, 15, 23, 40, 27, 25, 23, 25 and 20
5. Write any 2 uses of Standard Deviation
6. Write any two merit of Correlation.
7. Define Positive Correlation
8. Write ant two demerits of Rank Correlation.
9. What is the probability of getting a total more than 10 in a single throw with two dice ?
10. What is meant by Complimentary events?
11. There are 19 cards numbered 1 to 19 in a box. If a person draws one at random, what is the probability that the number printed on the card be an even number greater than 10?
12. Define Event

(2 x 8 = 16)

Section B

Answer any 7 (5 marks each)

13. Distinguish between classification and tabulation
14. Draw the Ogive for the following distribution

Age (in years)	0-9	10-19	20-29	30-39	40-49	50-59	60-69
No. of persons	5	15	20	25	15	12	8

15. From the data given below, calculate the mean deviation from mean

Size	2	4	6	8	10	12	14	16
Frequency	2	2	4	5	3	2	1	1

16. From the following frequency distribution draw a cumulative frequency curve and read off the values of the Median

Marks	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
No. of students	4	6	10	10	55	22	18	5

17. Find the regression equation of y on x from the following data :

Age of husband(x)	18	19	20	21	22	23	24	25	26	27
Age of wife(y)	17	17	18	18	19	19	19	20	21	22

18. Calculate Karl Pearson's coefficient of correlation from the data given below

Age of husband (X)	25	26	27	28	30	32	35
Age of wife (Y)	20	22	24	25	26	27	34

19. The following table gives the two kinds of assessment in practical classes of 10 post graduate students

Students	1	2	3	4	5	6	7	8	9	10
Internal assesment	45	62	66	32	12	38	47	67	42	85
External assesment	39	48	65	32	20	35	45	77	30	62

Find Spearman's Rank Correlation coefficient and interpret the result.

20. Explain with examples the concepts of independent and mutually exclusive events in probability.
21. Define Chi-square test.Discuss its properties and limitations
22. How does Poisson distribution differ from Binomial distribution?

(5 x 7 = 35)

Section C

Answer any 2 (12 marks each)

23. Define statistics and explain its scope, functions and limitations.
24. Calculate mean and standard deviation from the following data:

Value	90-99	80-89	70-79	60-69	50-59	40-49	30-39
Frequency	2	12	22	20	14	4	1

25. Calculate Pearson's coefficient of correlation from the following data and interpret the result.

A	104	111	104	114	118	117	105	108	106	100	104	105
B	57	55	47	45	45	50	64	63	66	62	69	61

26. Calculate the expected frequencies for the following data presenting the two attributes viz. condition at home and condition of child as independent.

	Condition of Home	
	Clean	Dirty
Clean	70	51
Fairly clean	81	20
Dirty	35	44

Use chi-sqaure test at 5% to state whether the two attributes are dependent. (Table value of chi-sqaure at 5% for 2 d.o.f =5.99 and for 3 d.o.f is 7.815 and for 4 d.o.f is 9.488)

(12 x 2 = 24)