



NBO-010-002107

Seat No. _____

P.G.D.H.M. (Sem. I) (CBCS) (External) Examination

April / May – 2017

Biostatistics

Faculty Code : 010

Subject Code : 002107

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (i) Attempt all questions.
(ii) Each question carries equal marks.

- 1 Answer the following questions : (any seven) 14
- (1) _____ test is used to test the association between two events in binomial samples.
 - (2) The degrees of freedom in paired t-test are _____.
 - (3) The curve of normal distribution is _____.
 - (4) The t-test is applied when sample size is _____.
 - (5) Write types of statistical data.
 - (6) Write the limits for correlation coefficient.
 - (7) Define zone of rejection.
 - (8) Define Pearson's correlation coefficient.
 - (9) Define zone of acceptance.

2 Answer the following questions : 14

(a) Draw the frequency polygon of the following data.

Reaction mm	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
Frequency	24	52	42	48	12	8	14	6

(b) State the characteristics of normal curve.

OR

2 Answer the following questions : 14

(a) Draw the scatter diagram of the following data.

Price	3	5	7	10	12	13
Demand	15	12	10	9	7	3

(b) Define following terms :

- (i) Interquartile range
- (ii) Standard deviation
- (iii) Co-efficient of variation.

3 Answer the following questions : 14

(a) Find standard deviation of the erythrocyte sedimentation rate (ESR), found to be 3, 4, 5, 4, 2, 4, 5 and 3 in 8 normal individuals.

(b) Explain types of correlation.

OR

3 Answer the following questions : 14

- (a) Find the equation of line of regression of Y on X from the following data.

X	3	2	-1	6	4	-2	5	7
Y	5	13	12	-1	2	20	0	-3

- (b) Explain tabulation method of presenting frequencies of a variable.

4 Answer the following questions : 14

- (a) Calculate the correlation coefficient for the following intelligence test score (X) and marks in examination (Y) of eight children.

X	6	4	6	8	8	10	8	6
Y	4	4	7	10	4	7	7	1

- (b) Discuss the two types of errors in testing of hypothesis.

OR

4 Answer the following questions : 14

- (a) The incubation period of 9 polio cases are 24, 16, 17, 18, 23, 22, 20, 19 and 21. Find the mean and median incubation period.

- (b) Discuss test of association for χ^2 -test.

5 Answer the following questions : 14

- (a) In a study on growth of children, one group of 100 children had a mean height of 60 cm and SD of 2.5 cm while another group of 150 children had a mean height of 62 cm and SD of 3 cm. Is the difference between the two groups statistically significant ?
- (b) Explain the Binomial law of probability.

OR

5 Answer the following questions : 14

- (a) The weights of 10 tuberculosis patients on admission and at the end of 12 months of treatment with PAS plus isonizid daily are given below. Examine whether the gain in weight is statistically significant.

Weight on admission (kg)	49	41	37	41	42	37	39	38	41	35
Weight at 12 months (kg)	52	43	46	52	46	38	42	41	42	38

- (b) Discuss the uses of the standard error of means in large samples.
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