

B.Sc.-II (Information Technology) (CBCS Pattern) Semester - III  
**UBITT306 - Paper-VI : Statistical and Numerical Methods**

P. Pages : 2

Time : Three Hours



**GUG/S/23/10932**

Max. Marks : 40

- Notes :
1. All questions are compulsory and carry equal marks.
  2. Draw neat and labelled diagrams wherever necessary.
  3. Avoid vague answers and write answers relevant and specific to questions only.

**Either:**

1. a) What is Tabulation? Explain advantages and disadvantages. 4
- b) Calculate Upper and Lower Quartile. 4  
Income in Rs. : 30 70 10 70 505 8 43 250 40 35

**OR**

- c) Marks obtain by 50 students in statistics in a class test are given below. Find Mean, Median and Mode. 4

Marks	5	10	15	20	25	30	35	40
No. of Students	6	5	15	10	5	4	3	2

- d) Explain different Methods of Collection of Data? 4

**Either:**

2. a) What is mean by Dispersion? What are the methods of computing Dispersion? 4
- b) Monthly earning in Rs.: 239 250 251 251 252 257 258 260 262 273 275 4  
Calculate Quartile-Deviation and it's Coefficient.

**OR**

- c) Calculate Coefficient of Skewness. 4  
Marks : 10 20 20 30 40 50 60

- d) Calculate Standard-Deviation and its Coefficient by Direct Method. 4  
Income in Rs. : 54 62 63 65 68 71 73 78 82 84

**Either:**

3. a) Find out index number by 1)Fisher Method 2) Marshall and Edgeworth method. 4

Commodity	Quantity		Prinice	
	2010	2011	2010	2011
A	16	20	50	16
B	5	8	10	15
C	4	6	20	25

- b) Write a short note on Regression. 4

**OR**

c) Define Index Number. Explain its Limitations. 4

d) From the data given below. Estimate most likely height of father whose son height is 70 inches. 4

Particulars	Mean Height	Standard Deviation
Father	67 inches	3.5
Son	65 inches	2.5

**Either:**

4. a) Explain Error Estimation in detail. 4

b) Write a short note on: 4

i) Absolute Error

ii) Relative Error

**OR**

c) Find a Truncation error of following function for  $X=1/5$  when we use 4

i) First 3 terms

ii) First 4 terms

iii) First 5 terms

From the following sequence

$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \frac{x^5}{5!} + \frac{x^6}{6!} + \dots$$

d) What is Round off Error and Truncation Error? Explain in brief. 4

5. Attempt all the questions.

a) Explain Characteristics of Statistics. 2

b) Calculate Range and its Coefficient from the following 2

Family	A	B	C	D	E	F	G	H	I	J
Income in Rs.	30	70	10	70	505	8	42	250	40	35

c) Write a short note on Laspeyre's Method? 2

d) Write a short note on Data Error and Chopping. 2

\*\*\*\*\*