SHRI VISHWAKARMA SKILL UNIVERSITY

(A State Skill University, setup by an Act of Legislature in 2016)

188054

Course	:	PGD in Geo Informatics
Subject	:	Basic of Statistics, Computers & Communication
Subject Code	:	KPGE-102
Semester	:	First
Duration	:	3 Hours
Maximum Marks	:	70

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. **Section A** comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 2 marks.
3. **Section B** comprises 8 essay type questions out of which students need to do any 5. Each question carries 10 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled.

Roll Number

SECTION –A (OBJECTIVE TYPE QUESTIONS)

(10x2=20 Marks)

1. Define geometrics mean and harmonic mean.
2. Find the median of the following set of points in a game:

   15, 14, 10, 8, 12, 8, 16
3. Define the mean deviation.
4. What are the formulas of variance and standard deviation?
5. Find the mean of the following data:

   9, 7, 11, 13, 2, 4, 5, 5
6. Define basics of communication.
7. Define the component of computer system.
8. Define types of correlation.
9. Find the mean of first ***n*** natural number.
10. What is Virtual Memory? How is it implemented?

SECTION –B (ESSAY TYPE QUESTIONS)

(5x10=50 Marks)

1. (a) Find the sum to n-terms of the series

   $1/1.2 + 1/2.3 + 1/3.4 + \ldots\ldots + 1/n(n+1)$

   (b) Find the mean of the following distribution.

   The age of 20 boys in a locality is given below.

Age in Years	12	10	15	14	8
Number of Boys	5	3	2	6	4

2. (a) Find the mean deviation about the median for the following data:

x_i	3	6	9	12	13	15	21	22
f_i	3	4	5	2	4	5	4	3

   (b) Find the variance and standard deviation of the following data:

   6, 8, 10, 12, 14, 16, 18, 20, 22, 24

3. (a) From the prices of shares X and Y below, find out which is more stable in value:

X	35	54	52	53	56	58	52	50	51	49
Y	108	107	105	105	106	107	104	103	104	101

(b) Find Spearman's rank correlation coefficient between X and Y for this set of data:

X	13	20	22	18	19	11	10	15
Y	17	19	23	16	20	10	11	18

4. (a) The values of x and their corresponding values of y are shown in the table below

x	0	1	2	3	4
y	2	3	5	4	6

i) Find the least square regression line $y = a x + b$.

ii) Estimate the value of y when $x = 10$.

(b) The table below shows the scores for 12 students on two Mathematic exam papers. For the first paper calculators were allowed and for the second paper they were not.

Paper 1 (x)	74	73	65	75	68	72	69	71	83	68	68	73
Paper 2 (y)	75	83	69	77	71	77	68	76	84	69	71	75

i) Find out the mean score on Paper 1.

ii) Find out the correlation coefficient.

5. (a) Write a short note on types of communication.

(b) Describe communication interface and GIS technology.

6. (a) Explain computer networking system.

(b) Explain use of internet in Geospatial technology.

7. (a) The mean of the following distribution is 26. Find the value of p and also the value of the observation.

x_i	0	1	2	3	4	5
f_i	3	3	p	7	p -1	4

Also, find the mode and the given data.

(b) Draw a scatter diagram and indicate the nature of correlation

X	10	20	30	40	50	60	70	80
Y	5	10	15	20	25	30	35	40

8. (a) Make a frequency table and histogram of the following data:
3,5,8,11,13,2,19,23,22,25,3,10,21,14,9,12,17,22,23,14

(b) What are the limitations of measures of Central Tendency?

------End of Paper------