

## 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

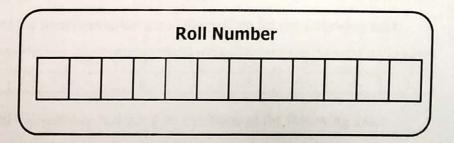
3 Hours

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.



## 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

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

(b) Find the mean of the following distribution.

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

Age in Years	12	10	1.5		
Number of Boys	- 12	10	15	14	8
rumber of boys	5	3	2	6	1

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

r.	2	1	0	1				
Ai C	3	0	9	12	13	15	21	22
$f_i$	3	4	5	2	1	5	41	22
					Т.	3	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	5.0	1		Miles Haller			
Y	108	107	105	33	56	58	52	50	51	10	1
	100	107	105	105	106	107	104	103	104	101	
							101	103	104	101	ı

Page 1 of 2

(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
у	2	3	5	4	6

- i) Find the least square regression line  $y = a \times + b$ .
- 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-----