First Semester Examination-2017

M.Sc. GEOGRAPHY

Paper Code: GEO-106

Full Marks : 25 **Time: 2 Hours**

Unit-11

Basic Statistics in Geography

1. Prepare a residual map showing correspondence between rural area and rural population on Maldah district and interpret it.

Sl. No.	C.D Block	Rural Area in Sq. Km	Rural Population
1.	Harishchandrapur-I	171.42	199493
2.	Harishchandrapur-II	217.20	251345
3.	Chanchal-I	160.36	199170
4.	Chanchal-II	205.22	205333
5.	Ratua-I	230.53	275388
6.	Ratua-II	173.93	202080
7.	Gajole	511.33	332191
8.	Bamangola	205.49	143906
9.	Habibpur	392.02	185342
10.	Madah	208.95	135855
11.	English Bazar	239.62	242797
12.	Manikchack	321.78	269813
13.	Kaliachak-I	84.09	269058

6+1=7

2. i) The following table shows the observed and expected frequency in a tossing dice 120 times. Test the hypothesis that the dice is fair using a significance level of 0.05.

(From chi-square table, Tabulated value 11.07)

Dice Face	Observed frequency	Expected frequency
1	22	20
2	20	20
3	16	20
4	22	20
5	22	20
6	18	20

ii) The sales data of an item in 6 shops, before and after a special proportional campaign as are as under.

Shops	Before Campaign	After Campaign
1	52	60
2	25	30
3	31	28
4	48	50
5	50	56
6	42	45

Can the campaign be judge to be a success?
(Using T-test, Test at 5% significance level, Degree of freedom=5, Tabulated value=2.57)

3+4=7

3. i) In a sample of 600 populations from a village, 330 are found to be eaters of vegetarian and the rest non-vegetarian item. Can we assume that both vegetarian and non-vegetarian foods are equally popular?

(Tabulated value 1.96)

ii) What do you mean by Interval Scale?

4+2=6

4. Laboratory note book and viva-voce.

5

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Unit-12

Principles of Remote Sensing and Aerial Photograph

1. i) What is Electro Magnetic Spectrum (EMS)?
   ii) Briefly illumerate the different laws of radiation.
   iii) The Sun's has a temperature of 5800K. What is the sun wave length of maximum emission?

   2+4+1=7

2. i) What do you mean by eccentricity?
   ii) What are the laws of Kepler?
   iii) How does formulate the velocity of a Satellite?

   2+3+2=7

3. i) Distinguish between spatial resolution and spectral resolution.
   ii) What is relief displacement?
   iii) A terrain is photograph with a camera having focal length 45 mm. Calculate the scale of the aerial photo when the camera is located at an altitude of 6000 m and the height of the terrain from the sea level is 300 m.

   2+2+2=6

4. Laboratory notebook and viva-voce. 5

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MCC/17/M.Sc./Sem.-1/GEO/1

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