

**B.Sc. 3rd Semester (Honours) Practical Examination, 2019-20****GEOGRAPHY****Course ID : 31923****Course Code : SH/GEO/303/C-7**

Course Title: Statistical Methods in Geography

**Time: 3 Hours****Full Marks: 40***The figures in the right hand margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.***SET-I****Section-A**

1. What is random sampling? What is a normal frequency distribution? The percentage share of urban population to total population in eight districts of West Bengal during 2001 and 2011 are given below (Table-1). Calculate the standard deviation for both years and which year shows greater variability. 2+2+6=10

**Table-1**

| Sl. No. | District    | Percentage Share of Urban Population |       |
|---------|-------------|--------------------------------------|-------|
|         |             | 2001                                 | 2011  |
| 1       | Burdwan     | 36.94                                | 39.89 |
| 2       | Birbhum     | 8.57                                 | 12.83 |
| 3       | Bankura     | 7.37                                 | 8.33  |
| 4       | Hoogly      | 33.47                                | 38.57 |
| 5       | Purulia     | 10.07                                | 12.47 |
| 6       | Howrah      | 50.36                                | 63.38 |
| 7       | Nadia       | 21.27                                | 27.84 |
| 8       | Murshidabad | 12.49                                | 19.72 |

2. Differentiate between correlation with regression. The following table shows the literacy rate and work force participation rate for ten districts of West Bengal in 2011. Calculate the coefficient of correlation and interpret the result. 2+6+2=10

**Table-2**

| Sl. No. | District    | Literacy Rate (%) | Work Participation Rate (%) |
|---------|-------------|-------------------|-----------------------------|
| 1       | Burdwan     | 76.21             | 35.5                        |
| 2       | Bankura     | 70.26             | 44.7                        |
| 3       | Birbhum     | 70.68             | 37.4                        |
| 4       | Purulia     | 64.48             | 44.5                        |
| 5       | Kolkata     | 86.31             | 37.6                        |
| 6       | Howrah      | 83.31             | 33.7                        |
| 7       | Maldah      | 61.73             | 40.7                        |
| 8       | Murshidabad | 66.59             | 34.2                        |
| 9       | Cooch Behar | 74.78             | 39.0                        |
| 10      | Darjeeling  | 79.56             | 35.4                        |

3. Laboratory Notebook. 5

**Section-B**

4. What is scatter diagram? Draw histogram, frequency curve and ogive on the basis of following frequency distribution using MS Excel. Find out the mean from the drawing. 2+2+2+2+2=10

**Table-3**

|                 |       |       |       |       |       |       |       |       |       |       |       |       |       |        |         |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|
| Age Group       | 16-21 | 22-27 | 28-33 | 34-41 | 42-47 | 48-53 | 54-59 | 60-65 | 66-71 | 72-77 | 78-83 | 84-89 | 90-95 | 96-101 | 102-107 |
| No. of Students | 13    | 11    | 15    | 09    | 17    | 12    | 13    | 08    | 19    | 11    | 13    | 15    | 12    | 11     | 17      |

5. Viva voce 5