2015

M.ED.

2nd Semester Examination

EDUCATION

PAPER—MED-203

Full Marks : 70

Time : 3 Hours

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.

(Statistical Methods for Data Analysis)

Group—A

Answer any *five* questions from the following :   5×4

1. What is meant by Scales of measurement ?

2. Distinguish between Percentile Point and Percentile Rank.

3. What are the uses of the measures of dispersion ?

4. How do non-parametric tests differ from parametric tests ?

5. What is meant by Type-I and Type-II error ?

6. What are the advantages of ANOVA over t-test ?

7. Discuss the uses of computer for data analysis.

8. Mention the merits of a Mixed Research.

Group—B

Answer any *five* questions from the following :   5×10

9. (a) Mention different measures of central tendency.

    (b) Calculate the Mean and Standard Deviation of the following distribution :

Scores	80–84	75–79	70–74	65–69	60–64
Frequencies	6	7	8	12	16

Scores	55–59	50–54	45–49	40–44
Frequencies	11	6	5	4

N = 75

2+4+4

10. (a) What are the characteristics of Normal Probability Curve ?

    (b) Given a normal distribution of 500 scores with Mean = 40 and Standard Deviation = 8, what percentages of cases lie between 36 and 48 ?

    [Given percentages of cases between Mean and $0.5\,\sigma$ is 19.15 ; between Mean and $1\,\sigma$ is 34.13 and between Mean $-1\,\sigma$ and $+1\,\sigma$ is 68.26].

4+6

         (Continued)

11. (a) Define Correlation.

(b) Calculate co-efficient of correlation from the following achievement scores of 10 students :

Students	1	2	3	4	5	6	7	8	9	10
Marks in History	15	17	21	23	13	17	19	23	25	30
Marks in Geography	26	25	24	20	22	23	30	25	21	19

(c) Interpret the result.

$2+6+2$

12. (a) Draw an ogive using the following data :

Scores	90–99	80–89	70–79	60–69	50–59	40–49	30–39
Frequencies	11	18	20	25	21	18	7

N = 120

(b) Compute the percentile rank of the score 55 from the distribution and also show it graphically. $6+4$

13. Two groups of students in two different areas of Paschim Medinipur were asked about the number of books on their study table. The results are shown below :

Group A	16	9	4	23	19	10	5	2
Group B	20	5	1	16	2	4		

Test at 5% level whether there is a significant difference in the mean number of books in the study table of students between the two groups. Is it worth checking whether the mean difference is significant at 1% level ? Justify your answer.

$7+3$

(Turn Over)

14. (a) What is ANOVA ?

(b) Students are taught Statistics by three different methods : (A) using audio tapes. (B) using TV tapes, (c) with a line instructor. A random sample of five students taught by each method shows the following scores on the final examination :

A	B	C
80	75	90
75	78	95
70	80	60
75	60	80
80	95	80

By using ANOVA, find out whether there is any difference in method of teaching.

2+8

15. (a) What would we need to conduct a median test ?

(b) The following are data for two groups of students. Apply a statistical test to find out whether the two samples come from populations with the same median :

Group–1   104   109   127   143   187   204   209   226   277

Group–2   62   82   89   90   101   106   109   109   205

2+8

16. Discuss briefly the method of data analysis in Qualitative Research.

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