

M.A. Semester-II Examination 2017
Course : EDN-321
(Analysis Techniques in Educational Research)

Time : 3 Hours

Full Marks : 70

Questions are of value as indicated in the margin

Group - A

Answer **any two** questions :

15×2=30

1. (a) Define normal probability curve. Discuss the characteristics of Normal probability curve.
(b) A normal distribution mean = 15, sd = 5
 - i. What percentages of cases will be between 12 and 22?
 - ii. What percentages of cases will be below 8?
 - iii. What percentages of cases will be above 22?(c) what are the causes of non-normality? (2+4)+6+3=15
2. What is regression? The number of years of education(X) and the salaries (Y) in thousands rupees of eight working women chosen random are as follows:
X : 12 16 19 10 13 16 12 14
Y : 10 19 20 18 16 18 19 17

Answer the following -

- (i) Find the co-efficient of correlation between the number of years of education and the salary earned by these women. Interpret your result.
- (ii) What salary would you predict for a women with 17 years of education? 2+8(6+2)+5=15
3. (a) The SD of a group of 48 boys in a Mathematics Achievement Test in the beginning of academic session was 8.5. At the end of the session the SD was 6.2 in an equivalent Mathematics Achievement Test for the said group. The coefficient of correlation between the initial and final scores was 0.69. Is there any significant drop in the variability in Mathematics after completion of one academic session?
(b) In a study, 104 out of 300 urban children were found watching different programmes on Doordarshan channel. In the same study, 193 out of 225 rural children were also found watching programmes on the same channel. Is there any true difference between urban and rural children on viewing programmes in Doordarshan channel? 7+8=15
4. In an Emotional Intelligence Test, students belonging to sixth, eighth and tenth grades obtained the following scores:
Sixth Grade : 10, 15, 9, 11, 17, 16
English Grade 8, 10, 15, 9, 11, 10, 7
Tenth Grade 25, 14, 21, 19, 17
Do the students belonging to sixth, eighth and tenth grades differ significantly in their emotional intelligence? Interpret the findings. 12+3=15

P.T.O.

Group – B

5. Answer **any six** questions : 6×5=30
- (a) How do One-Tailed Test of Significance and Two-Tailed Test of Significance operate in hypothesis testing? Explain with examples. 5
 - (b) The mean and SD on a moral Reasoning Test for a sample of 105 tenth graders were 23.49 and 6.72. Determine the confidence interval for the population mean (0.05 and 0.01 levels). 5
 - (c) Why ANOVA is preferred over t test? When does a researcher use ANCOVA instead of ANOVA? 5
 - (d) A group of 84 teachers were classified into the following three groups on the basis of their opinion about two-year B.Ed. Programme: Strongly Agree (n=30), undecided (n = 14), and Strongly Disagree (n = 40). Does this distribution of opinions differ significantly from that to be expected if opinion about two-year B.Ed. Programme is normally distributed in this teacher population? 5
 - (e) What are degrees of freedom and levels of significance? 2.5+2.5=10
 - (f) What is phi-coefficient of correlation? State the relationship between phi-coefficient of correlation and chi square test. 2+3=5
 - (g) What do you mean by Skewness? 5
 - (h) Discuss the difference between parametric and non-parametric test. 2.5+2.5=5

Group – C

6. Answer all the questions : 5×2=10
- (a) 'The difference between means of two independent samples is found significant at the .05 level of significance.' Does it reflect any error? Clarify.
 - (b) Under what conditions non-parametric statistics can be used in analysis of data in educational research?
 - (c) What does the standard error of Mean of a certain distribution measure?
 - (d) What is partial correlation?
 - (e) State the uses of normal probability curve.
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