16-12-17

DOON UNIVERSITY, DEHRADUN
Final Semester Examination, 2017
School of Social Sciences
Msc. Economics Integrated (Third semester)
Course Code: SSEI-215 Statistical Methods III

Time Allowed: 2 Hours ***Maximum Marks: 30***

Section A (Attempt any three parts of this section) **(3*6=18 marks)**

1. The table gives the yield on 15 sample fields under three varieties of seeds. *viz.*, A, B, C

A	B	C
20	18	25
21	20	28
23	17	22
16	25	28
20	15	32

Test at 5% L.O.S whether the average yield of land under different varieties of seeds show significant differences? (table value at 5% L.O.S for v1=3 and v2=5 is 2.88; v1=2 and v2=12 is 3.88)

2. What is the relationship of mental age and chronological age? How do we obtain I.Q. Also, explain the table of Herril's classification defining I.Q
3. Given 3 test 1, 2 and 3 passed by 60%, 30% and 20% respectively. On the assumption of normality, what % of this group must pass problem 4 in order to be as more difficult than 3 as 2 is more difficult from 1.
4. Differentiate between Test Retest Method, Parallel Test and Split half Method.

Section B (Attempt any two questions **(2*6= 12 marks)**

1. The reliability coefficient of a test of 25 items is 0.40.
   a) How much the test should be raised for the self correlation to be 0.90?
   b) What would be the effect of doubling and tripling the lengths of the test have upon reliability?
   c) If another 75 comparable items are added what would be the new reliability?
   d) What proportion of the score is the true variance in the original question?

2. Letter grades J, K, L, M, N (J being the lowest and N highest) are assigned by two teachers Mr. A and Mr. B for maintaining discipline. The table gives the distribution of the proportions of the individuals in each rating. Find the numerical scores corresponding each grade.

Discipline / Teacher	J	K	L	M	N
A	0.20	0.35	0.15	0.20	0.10
B	0.10	0.40	0.20	0.25	0.05

3. A) Explain Method of Rational Equivalence

B) Explain what is meant by normalization of scales and indicate why it is needed in educational measurements. The same set of answer scripts were examined by three persons and resulted in marks distributed with the following averages and standard deviation

Examiner	**I**	**II**	**III**
Average	48	56	50
Std dev	7	10	6

The marks of students A, B and C are given by examiners I, II and III respectively are 62, 64 and 59 .What do you think should be the ranking of the students?