DOON UNIVERSITY, DEHRADUN
Final Semester Examination, 2016
School of Social Sciences
Msc.Economics Integrated (Third Semester)
Course Code: SSEI-215 Statistical Methods III

Time Allowed: 2 Hours   *Maximum Marks: 30*

All the best☺

Section A (Attempt all questions)   (1*6=6 marks)

1) According to Terman & Merill for every 3 months increase in the chronological age, there is only _____ months increase in mental age.
2) If M.R calculated is 1.75 for a person, what would be the I.Q of the person?
3) In the above question, classify the person's category of I.Q according to Terman's and Herril's classification.
4) The reliability of any set of measurements is defined as that part of the variance which is

   _____ .

5) What do you understand by index of reliability?
6) Define the two components of obtained score with the help of linear model. Also explain both the components.

Section B Attempt any three questions.   (3*3=9 marks)

1) Given four test, 60%, 70% and 80% could not pass the first, second and third test respectively, on the assumption of normality, what percentage of the group must pass test **four** in order of maintaining same level of difficulty of fourth test from third as much as second from first.
2) 35 students are ranked by their sports teacher in order of playing basket ball. Assuming the trait distributed normally, show how to convert these ranks into normalized scored on a scale of ten units. A girl who obtained 14th rank and a boy who obtained 26th rank.
3) If a test has 25 items having a reliability of 0.85 and validity of 0.7. If another 125 comparable items are added, what will be the validity?
4) A test was given to 300 individuals with the result that the reliability coefficient was 0.88 and standard deviation was 11.50. What is the probable coefficient of reliability for the another group with 50 individuals and standard deviation 9.60 (Assume S.E same for both groups)

1. The reliability coefficient of test of 60 items is 0.70.
   A) How much the test should be lengthened to raise the self correlation to 0.90?
   B) What will be the impact of tripling the test upon reliability?'
   C) What is the new reliability of a test having 210 comparable items?
   D) Calculate the reliability by split half method of the following

Score in Odd Questions	70	78	75	76	82	81	89	88	87
Score in Even No. Questions	66	69	72	76	77	78	77	64	65

2. Calculate the T scores and the normalized scores for the following frequency distribution

X (test Score)	1	2	3	4	5	6	7
Frequency	5	12	18	40	15	7	3

3. Letter V, W, X, Y, Z (Z being the lowest grade and V being the highest) are assigned by two invigilators on inspecting the production output for sincerity of the employees. The table given below gives the distribution for the proportion of employees, find the numerical score corresponding to each employee and invigilator

Sincerity→ Invigilator↓	V	W	X	Y	Z
A	0.20	0.20	0.05	0.15	0.40
B	0.35	0.05	0.25	0.30	0.05