DEPARTMENT OF EDUCATIONAL FOUNDATIONS AND COUNSELLING, FACULTY OF EDUCATION, OBAFEMI AWOLOWO UNIVERSITY, ILE IFE, NIGERIA

M. A. EDUCATION (TESTS AND MEASUREMENT) 2012/2013 HARMATTARN SEMESTER EXAMINATION EFC 681: TEST THEORIES

Instruction: Answer ALL Questions in the Two Sections
Duration: 3 Hours

- 1. List five advantages of standardised measures
 - 2. Draw an Item Response Function and label the various parts
 - 3. List five measurement problems common to all psychological measures
 - 4. Identify two primary roles of test theory
 - 5. Distinguish Reference Group from Focal Group in Test Item Bias
 - 6. Identify one major early contributor to the growth of test theory in Germany, France, Great Britain and the United State of America.
 - 7. What is the parameter relating to the individual in examinee in Item response Theory (IRT)? How is it denoted?
 - 8. Identify three parameters relating to each of the test items of the test.
 - 9. In not more than one sentence, define latent trail.
 - 10. State in only one sentence the assumption of the one-parameter model of item response theory.
 - 11. When is a latent variable continuous?
 - 12. What is the process of establishing correspondence between the observation data and the person's location on the latent variable?
 - 13. Which of the parameter models of IRT is this logistic function?
 - 14. Write the equation for the Three Parameter Model of IRT
 - 15. In not more than one sentence, define Local Item Dependence
 - 16. Identify the four major assumptions of IRT
 - 17. In the Classical Test Theory model, $X_P = T_p + E_p$ How could T_p be estimated?

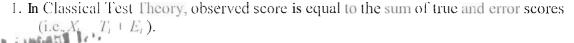


18. Decompose the observed score in equation (1):

$$X_{pi} = \mu + (\mu_p - \mu) + (\mu_i - \mu) + (x_{pi} - \mu_p - \mu_i + \mu)$$
(1)

- 19. What is the name of the One Facet pX i design presented in equation (1)?
- 20. Itemise the approaches to determining the reliability of test scores.

Section B



Show that
$$T_i - \frac{X_i + X_2 + \dots + X_n}{N}$$

2. If a test was administered twice **on** the same set of test takers and the results **arc** as presented below:

X	Y
5	2
3	8
4	7
7	4
4	3
5	6
4	7
7	4
4	2
1	6



- a. Determine the test re-test reliability coefficient of the test.
- b Which of the two sets of scores is more homogenous?
- 3. Demonstrate how the convergent validity of a measure could be obtained.
- 4. If the obtained feature of a sample results in the following estimate, such that the Mean Square for Person = 22, and Means Square for residual is 13. To what extent can we generalize sample characteristics over the population?

Note that:
$$EP_{rel}^2 = \frac{MS_p - MS_{pi,e}}{MS_p}$$