



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS
2022_2 EXAMINATION**

COURSE TITLE: APPLIED STATISTICS

COURSE CODE: ECO 726

UNITS: 2

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER ANY THREE QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS

Question One

The distribution (X) of the scores of 10 students in Applied Statistics is given as

$X = 30, 45, 18, 35, 55, 60, 63, 57, 17, 20$

If the pass mark is 50, compute:

- | | |
|--|------------------|
| (i) The mean of all the students | (8 Marks) |
| (ii) The mean of students that passed the examination | (8 Marks) |
| (iii) The variance of students that fail the examination | (7 Marks) |

Question Two

If 120 tosses are made of a fair coin;

- | | |
|---|------------------|
| a. Find the probability that between 35% and 62% will be heads. | (8 Marks) |
| b. Find the expected number of heads | (8 Marks) |
| c. Find the standard deviation of the number of heads | (7 Marks) |

Question Three

Write short notes on the followings

- | | |
|--------------------------|------------------|
| i. Convenience sampling: | (6 Marks) |
| ii. Purposive sampling: | (6 Marks) |
| iii. Voluntary sample | (6 Marks) |
| iv. Quota sampling | (5 Marks) |

Question Four

What are the properties of good point estimators? **(23 Marks)**