



**ELIZADE UNIVERSITY, ILARA-MOKIN,
ONDO STATE, NIGERIA**

**BASIC & APPLIED SCIENCES
BIOLOGICAL SCIENCES
FIRST SEMESTER EXAMINATION
2018/2019 ACADEMIC SESSION**

COURSE CODE: BIO 201

COURSE TITLE: INTRODUCTORY GENETICS

DURATION: 2 HOURS

HOD's SIGNATURE

NAME:.....MAT. No:.....

INSTRUCTION

Answer question one and any two questions

- 1(a) Differentiate between Mendelian Genetics and Non-Mendelian Genetics.
- (b) (i) What is a Pedigree?
- (ii) Differentiate between maternal effects and genomic imprinting.
- (c) Why is the mitochondrial inherited through the maternal line?
- 2(a) State Mendel's first and second law, otherwise known as law of segregation and law of independent assortment.
- (b). Ojo and Yetunde were planning to marry and the blood genotype of the two of them is "AS". As a genetist;
- (i) predict the phenotypic and genotypic ratio of their F_1 generation using punnet square
- (ii) what type of counsel should be given to them?
- 3(a) In a dihybrid crosses, during the F_2 generation. A breeder observed 400, 250, 150 and 200 on the field. Does this fit into Mendelians theory.
- (b) Write short note on the followings:
- | | | |
|----------------|--------------|-------------------|
| i. Genomes | ii. Mutation | iii. Chromosomes |
| iv. Phenotypes | v. Genetics | vi. Gregor Mendel |
- 4(a) Draw and label a plant cell
- (b) Give a list of the importance of genetics as a biology student
- 5(a) Enumerate and discuss three ways by which you can classify mutation.
- (b) Why is AUG a significant codon in the genetic code?
- (c) Outline and explain the features of the genetic code.