INTERIM JOINT MATRICULATION BOARD
AHMADU BELLO UNIVERSITY
ZARIA

INTERIM JOINT MATRICULATION BOARD EXAMINATION 2016

SUBJECT: BIOLOGY PAPER II: GENERAL BIOLOGY AND ZOOLOGY

DATE SCHEDULED: SATURDAY 13TH FEBRUARY, 2016

TIME ALLOWED: THREE HOURS (3 HRS)

INSTRUCTION: Answer questions **ONE (1)** and any **THREE (3)** other questions. Question ONE carries 40 marks. The others carry 20 marks each. Use clearly labelled diagrams and examples to illustrate your answer wherever appropriate.

1. a) Explain the following terms:

   i. Genetic variations
   ii. Linkage
   iii. Crossing over
   iv. Colour blindness

   b) A child with blood group AB is a source of dispute between two contesting fathers one with blood group B and the other father with blood group O. the mother of the child has blood group A. Show using crossings how the blood group of the child, disputing fathers and that of the child's mother can be used in resolving the dispute.

   c) Fill in the blank spaces.

   i. A nucleotide has three components, namely, _____, _____ and _____.

   ii. The animal kingdom is made up of many phylogenetic phyla which include the followings.

   1. Protozoa
   2. Coelenterata/cnidaria
   3. Platyhelminthes
   4. Nematoda
   5. Annelida

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6. Mollusca
7. Arthropoda
8. Vertebrata

iii. Three types of animal connectic tissues are _____, _____ and _____.

2. a) List any ten characteristics of the phylum. Annelida

   b) Give TEN (10) importance of earth worms in agriculture.

3. a) Using a suitable labeled diagram, show the path of a sound vibration from the pinna to the inner ear naming the structures encountered at each point.

   b) Briefly discuss the mechanism of hearing.

4. a) Explain the term evolution

   b) In a tabular form state the differences between Darwinism and Lamarkism.

5. Write notes on any FOUR (4) of the following:

   a) Pituitary gland

   b) Sexual reproduction

   c) Factors affecting growth

   d) Competitive inhibitors

   e) Insulin

   f) Transportation of carbon dioxide in man.

6. Discuss in detail the genetic basis of Natural selection.