

University of Ibadan, Ibadan, Nigeria.  
Department of Zoology  
Continuous Assessment Test (CAT) 2007/2008  
Principles of Animal Biology (ZOO 111)  
Answer all questions. 30 minutes

AKOZ

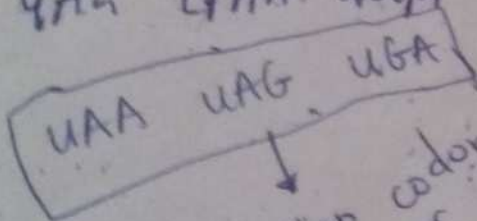
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1. The prokaryotic cells are the most Primitive cells from the morphological point of view.
2. The cytoplasm of a prokaryotic cell lacks a well defined nucleus and other cytoplasmic membrane.
3. In the Citric Acid Cycle what is the enzyme involved in the oxidative decarboxylation of  $\alpha$ -ketoglutarate?  $\alpha$ -ketoglutarate dehydrogenase
4. The cytoplasm of a eukaryotic cell contains three of the following.
  - (a) Cytosol
  - (b) Cytoplasmic Structures cell organelle
  - (c) Nucleus
5. The three main stages of the cell cycle are
  - (a) Mitosis / or meiosis  $\rightarrow$  cell division
  - (b) Cytokinesis  $\rightarrow$  reduction
  - (c) Interphase
6. The first reaction in glycolysis is the phosphorylation of glucose.
7. The components of the electron transport chain are located in the inner mitochondrial membrane.
8. The Phosphofructokinase 1 reaction is a rate-limiting step in the breakdown of glucose.
9. Mathematical models and analyses use in ecology is Systems Ecology.
10. Fish ponds are Human-substituted level of ecosystem types.
11. Inorganic components of soils are derived from ROCKS Geology Basement.
12. Structure, function, context, intercourse and change with time are important features of ecosystem. True/False. True

13. An alternate form of a gene is termed its Allele
14. The outward physical appearance of a trait is called the phenotype while the term Genotype applies to the genetic composition
15. When an allele is expressed regardless of the second allele, that allele is said to be Dominant over the second
16. The law of Independent Assortment is Mendel's 2nd law of heredity
17. The macromolecule called DNA is the substance of heredity and the information encoded therein is convertible into proteins in 2 major stages called Transcription and Translation
18. The genetic code is read in triplets of nucleotides called codons
19. The first amino acid incorporated in polypeptide synthesis is called methionine
20. The blastula is a ball of cells surrounding a fluid filled cavity called the blastocoel
21. The three primary cell layers - ectoderm, mesoderm and endoderm are established during Gastrulation stage of embryogenesis.
22. All ecosystems have the innate ability to self-purify. True False.
23. It is possible to enumerate all organisms in all ecosystems all of the time. True False.

blastocoel

GAG GAA UGA



AUG → start codons,  
or  
Methionine

True

UNIVERSITY OF IBADAN, NIGERIA.  
 DEPARTMENT OF ZOOLOGY  
 FIRST SEMESTER 2008/2009 SESSION CONTINUOUS ASSESSMENT  
 PRINCIPLES OF ANIMAL BIOLOGY (ZOO 111)  
 WEDNESDAY 04/01/2009

INSTRUCTIONS: Answer all questions  
 Name.....  
 Surname.....  
 Matric No.....  
 Department.....  
 Other names.....  
 Time allowed: 30 MINUTES  
 AK021

1. Mendel's 2<sup>nd</sup> law of inheritance is called the law of Independent assortment
2. The physical manifestation of a trait is termed Phenotype
3. Alternate forms of a gene are called Alleles and the genetic distance is
4. The F<sub>2</sub> phenotypic ratio in a monohybrid cross is 3:1, while that of a dihybrid cross is 16:1
5. The master molecule of life from generation to generation is called DNA. The information in the master molecule is decoded in triplets of nitrogenous bases called codons
6. The first amino acid incorporated in a peptide is Methionine
7. A mass of rapidly dividing cells in embryogenesis is called blastula
8. The purpose of the dramatic movement and migration of cells in gastrulation is to establish the body plan
9. The 32-cell stage of embryogenesis is also known as the morula
10. Ecology defines the study of organisms in relation to the environment and ecosystems
11. Lagos lagoon is an example of an estuary
12. Salinity is used for subsurface water sampling
13. Wind speed is measurable parameters are associated with wind
14. The eukaryotic cell consist of the following distinct components:  
 a. Nucleus  
 b. Mitochondria  
 c. Ribosomes
15. Ribosomes consist of two separate populations in the Cytosol. a. 80S b. 60S
16. Apart from the centromere homologous pair of chromosomes normally contain the same genes.
17. The cytoplasm divides to form two daughter cells during cytokinesis
18. The spindle apparatus is made up of microtubules which controls the movement of the chromosomes
19. The second reaction in glycolysis is an isomerization reaction, catalyzed by the enzyme phosphoglucose isomerase which converts glucose-6-phosphate to fructose-1,6-bisphosphate
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