

University of Ilorin
College of Health Sciences
Faculty of Basic Medical Sciences
Department of Anatomy

M.B; B.S CBD/IBS Examination

2013/2014 Session

Theory paper I

Maximum Time Allowed: 2 hour

ANSWER ALL THE QUESTIONS START EACH QUESTION ON A FRESH PAGE

- Draw a well labelled diagram of an animal cell and comment on any four organelles.
 - Write short notes on the following: i) Desmosomes; ii) Gap junction
- Classify epithelial tissue with relevant examples; and
 - write short notes on: i) Brown adipose tissue and; ii) Macrophages
- Classify neurones structurally with relevant examples; and b) List the characteristic of synovial joints
- A partial gene sequence from the data base reads:
GAGTTTTCGTGCGAGGTCAAGGAGGTCGAC
 - Write out the sequence of the template strand, the mRNA, and the amino acids.
 - If mutation occur as a form of deletion at position 20 and 25, what will be the mutant template strand, the mutant mRNA, and the mutant amino acids?
- Segun and Sade are intending couple. They were said to be heterozygous for sickle cell trait.
 - With the aid of punnet square, what is the probability that any of their children will be Hb^{sc}?
 - What is the molecular basis of this genetic disorder?
 - Counsel the intending couple appropriately.
- Explain the formation of the neurenteric canal and add a note on it clinical anatomy
- Define the process of fertilization and list the events that occur immediately after fertilization
- If two structures A and B are related to each other anatomically, list 10 relationships that may relate the two of them (use anatomical terminology only)

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Comprehensive Examination 2013/2014 session

Answer all the questions

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1. With the aid of a well labelled diagram, write short and concise notes on the following organelles of the cell;
 - a. Mitochondrion
 - b. Plasma Membrane
 - c. Golgi Apparatus
 - d. Endoplasmic Reticulum
2. a) Classify joints with relevant examples and b). List the characteristics of synovial joints
3. Write short notes on various types of blood cells and b) List the characteristic of long bones
4. Write a short note on the basic and applied anatomy of the intercostal space
5. Write on the formation of the placenta and list five congenital abnormalities of its formation.
6. In a particular race, tall stature (T) is dominant to short stature (t) and coiled hair (H) is dominant to uncoiled hair (h). A pure homozygous tall stature and coiled hair man married a pure short stature and uncoiled hair woman.
 - (a) What will be the phenotype of the offspring of the F1?
 - (b) Using pun net diagrams, show the result of selfing the F1 generation
 - (c) How many types of offspring are possible when two of the F1 generations are mated?
 - (d) If production of heterozygous tall and coiled hair trait (TtHh) is lethal. What will be the phenotypic ratio of the F2?
7. Briefly describe fetal circulation and list effects that occur immediately at birth
8. Discuss the anatomy of the shoulder joint and add notes on its clinical correlates

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CELL AND BODY DEFENCE / INTRODUCTION TO BODY SYSTEMS
PROGRESSIVE ASSESSMENT EXAMINATION 2012/2013 SESSION

ESSAY QUESTIONS

TIME: TWO HOURS

INSTRUCTIONS:

- ANSWER ALL QUESTIONS.
- ANSWER EACH QUESTION ON A SEPARATE ANSWER SHEET.
- WRITE YOUR MATRICULATION NUMBER ON EVERY SHEET USED.
- WRITE THE QUESTION NUMBER ON THE TOP OF THE SHEET USED.

1. Write a short note on the embryology of the trophoblast in the second week of development.
2. A lady had sex on the 14th day of her 28th day menstrual cycle and she is not pregnant. Explain possible reasons why this is so from your knowledge of General Embryology.
3. A man and his wife both have normal vision but a daughter has red-green colour blindness. The man sues his ^{wife} for divorce on the ground of infidelity_A
 - (a) What is this disorder?
 - (b) What is the pattern of inheritance of this condition?
 - (c) Can genetics provide evidence supporting this case?
 - (d) State five characteristics of this inheritance pattern.
4. A partial gene sequence from the data base reads:
CAGCTGGAGGAACTGGAGCGTGCTTTTGAG
 - (a) Write out the sequence of the template strand, the mRNA and the amino acids?
 - (b) If T and T at position 26 and 27 respectively were substituted by A and A respectively? What will be the mutant template strand, the mutant mRNA and mutant amino acids that will be formed?
5. Briefly classify epithelia tissues with examples
6. Describe arterial anastomosis and add notes on the clinical application

ANATOMY (ESSAY)

1. List 5 dominant and 5 recessive traits inherited in humans and what are the variables that determines the phenotypes of a human being?
2. Describe (a) a typical thoracic vertebrae (b) Lymphatic drainage of the breast
3. Write briefly on (i) the stability of the shoulder joint (ii) anastomosis around the scapular?
4. Discuss the conduction system of the heart with the aid of a diagram?
5. Describe the following: (a) Result of fertilization (b) intercellular junctions
6. Discuss the anatomy of the intercostal space?
7. Describe the anatomy of axilla?
8. List the bronchopulmonary segment of the left lung add a note on its clinical significance?
9. Describe endochondrial and membranous ossification?
10. With the aid of a diagram describe the human cell?
11. Discuss neurulation with diagrams and list out the derivatives of the neural crest?
12. (i) Discuss the tetralogy of fallot (ii) list the congenital anomalies of the CVS?