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# DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – DECEMBER 2024

Semester: II

800FP202 HUMAN ANATOMY

Time: 3:00 Hours

Max. Marks: 100

Answer any FIVE Questions (5 x 20 = 100 Marks)

1. Human Anatomy, the study of the structure and organization of the human body. It is important that every nutritionist comprehends the human body as the profession is to shaping the human body into a healthy structure.
  - a) The basic functional unit of the body is the cell, draw, and label and write short notes on the function of each cell organelle in the animal cell. **(8 Marks)**
  - b) State the 4 purposes of cell division. **(2 Marks)**
  - c) Briefly explain the phases of mitotic cell division. **(10 Marks)**
2. It is important that every food and nutritionist understands the formation and development of the human body.
  - a) With the aid of a diagram, illustrate the process of fertilization. **(2 Marks)**
  - b) Define the Cleavage and illustrate it with the use of a diagram. **(10 Marks)**
  - c) Draw a well-labeled structure of a blastocyst and its parts as they appear at the point of implantation. **(8 Marks)**
3. After learning about epithelial tissue, you come across a colleague from another university. He then asks you the following questions, respond appropriately?
  - a) What are the four functions of epithelial tissue giving examples of organs? **(8 Marks)**
  - b) Discuss the classification of epithelial tissue and where in the body it is located. **(6 Marks)**
  - c) With the aid of a diagram, discuss the differences between the epithelium lining the alveoli and that of the mouth. **(6 Marks)**
4. Bones are an integral part of the body. Food and nutritionists are required to learn about bones because of the many functions they have in the body.

- a) Mention the functions of bones in the body. **(5 Marks)**
  - b) Discuss endochondral ossification with the aid of diagrams. **(10 Marks)**
  - c) Classify bones by morphology and give basic examples. **(5 Marks)**
5. Mr Chewe, a 69 year old man complaining about pain in her knees. He adds that it has not been easy for him to walk long distances, complaining that this joint pain has become a big problem as he becomes older.
- a) What is a joint? **(3 Marks)**
  - b) Discuss the three types of fibrous joints? **(6 Marks)**
  - c) Classify joints by the degree of movement they permit? **(6 Marks)**
  - d) Draw and label a synovial joint. **(5 Marks)**
6. It is important that every food and nutritionist understands the process of cell division
- a) What is the name given to a human cell with 23 chromosomes? **(2 Marks)**
  - b) What is the name given to the division of nucleus material? **(3 Marks)**
  - c) What is the name given to the division of cell cytoplasm? **(3 Marks)**
  - d) Discuss in detail meiosis. **(12 Marks)**
7. Your friend that is new in the medical fraternity asks for guidance on an assignment in embryology.
- a) Discuss the derivatives of the ectoderm. **(10 Marks)**
  - b) Discuss the derivatives of the mesoderm. **(10 Marks)**