



National Open University Of Nigeria

Plot 91, Cadastral Zone, NnamdiAzikiwe Expressway, Jabi - Abuja

Faculty of Science

JANUARY/FEBRUARY 2018 EXAMINATIONS

COURSE CODE: BIO 413 CREDIT UNITS: 2

COURSE TITLE: DEVELOPMENTAL BIOLOGY

TIME ALLOWED: 2 Hours

INTRUCTION: Answer question ONE (1) and any other THREE (3) questions

- 1a. What is differentiation? (2marks)
- b. Explain the six general questions scrutinized by developmental biologists. (6marks)
- c. List the five sequential stages of the first meiotic division during gametogenesis. (5marks)
- d. Name the three accessory glands that contain varieties of energy substrates of the ejaculates. (6marks)
- e. What are the major functions of meiosis? (4marks)
- f. Define gastrulation (2marks)

- 2a. What are the three important approaches to studying embryology? (6marks)
- b. Explain sperm attraction at a distance. (9marks)

3. The penetration of the egg cell by the chromosome containing part of the sperm cell causes a reaction which prevents additional sperm cells from entering the egg. Explain how this process happen. (15marks)

- 4a. Explain the term organogenesis. (3marks)
- b. Describe the process of gastrulation in amphibians. (12marks)

- 5a. Explain the following terms: i. Isolecithal ii. Telolecithal iii. Centrolecithal (6marks)
- b. Discuss the function of placenta in mammals (9marks)