



NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
MARCH/APRIL 2014 EXAMINATION

COURSE CODE: BIO 413

COURSE TITLE: DEVELOPMENTAL BIOLOGY

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER ANY FOUR QUESTIONS

1a. Explain the six general questions scrutinized by developmental biologists.

bi. What do you understand by the term Assisted Reproductive Technology?

ii. Describe the common methods of Assisted Reproductive Technology you know.

2a. Classify placenta based on their histology.

b. Write short notes on any three of the following birth control methods:

(i) Copper T LUD (Intrauterine device) (ii) Depo-provera (iii)
Contraceptive sponge (iv) The patch (v) The mini-pill

3ai. List the steps involved in the interaction of sperm and egg in sea urchin.

ii. Describe the term fertilization.

bi. State the different patterns of embryonic cleavage.

ii. DNA polymerase has two special properties that must be taken into account. Discuss.

4ai. Describe the structure of a placenta.

ii. Explain the functions of a placenta.

b. Write a short note on each of the following:

i. Amnion ii. Chorion iii. Allantois

5ai. What do you understand by the term organogenesis?

ii. How can eggs be classified?

bi. Define primary egg membrane.

ii. Describe the different types of primary egg membranes you know.

6ai. Define gametogenesis.

ii. How can male infertility be treated?

bi. Outline the major differences between mitotic and meiotic cell divisions.

ii. What are the significance of mitosis and meiosis in animal reproduction?

