



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SEPTEMBER/OCTOBER 2015 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: BIO 413

COURSE TITLE: DEVELOPMENTAL BIOLOGY

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER THREE QUESTIONS

- 1 (a) Enumerate the various types of eggs based on the **distribution** and **amount** of yolk (6 marks)
(b) Indicate the six general questions scrutinized by developmental biologists. (9 marks)
(c) Describe the structure of a placenta. (10 marks)
2. (a) List the functions of the human placenta. (3 marks)
(b) Write **short notes** on the following:
 - (i) Amnion (4 marks)
 - (ii) Chorion (4 marks)
 - (iii) Allantois (4 marks)
- 3 (a) Explain how male infertility may be treated? (6 marks)
b. Enumerate and describe the types of placenta in animals, based on **histology** (4 marks), **degree of association** (3 marks) and **distribution of villi** (2 marks)
- 4 (a) What do you understand by Assisted Reproductive Technology? (2 marks)
(b) Give an account of the common methods of assisted reproductive technology. (13 marks)
- 5 (a) State the **3** germ layers that produce the various animal tissues. (3 marks)
(b) Write **short notes** on any **3** of the following birth control methods:
 - (i) Copper T IUD (Intrauterine device) (4 marks)
 - (ii) Depo-provera (4 marks)
 - (iii) Contraceptive sponge (4 marks)
- 6 (a) Enumerate the functions of Sertoli cells? (3 marks)
(b) State the differences between cleavage and gastrulation. (5 marks)
(c) In a tabular form distinguish between mitotic and meiotic cell divisions. (7 marks)