MULTIPLE CHOICE QUESTIONS

REPRODUCTIVE STRATEGIES

1.1.1 The following is a list of functions performed by different organs in an organism:

(i) Protection
(ii) Gaseous exchange
(iii) Nutrition
(iv) Excretion

Which ONE of the following combinations refers to the functions performed by parts of an amniotic egg?

A (i), (ii) and (iii) only
B (i), (iii) and (iv) only
C (ii), (iii) and (iv) only
D (i), (ii), (iii) and (iv)

1.1.2 Development of the embryo inside the body of the mother, eventually leading to live birth.

A Vivipary
B Ovovivipary
C Fertilisation
D Ovipary

1.1.3 Which one of the following structures of the amniotic egg has similar functions as the umbilical cord in gaseous exchange.

A Amnion
B Allantois
C Yolk sac
D Chorion

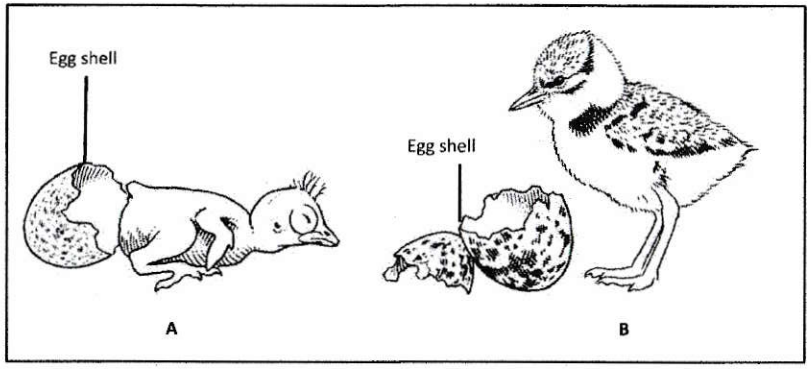
1.1.4 The structure in the amniotic egg that supplies nutrients:

A Shell
B Allantois
C Chorion
D Yolk sac

DIAGRAMS (SHORT QUESTIONS)

REPRODUCTIVE STRATEGIES

1.1 Study the diagram of one-day-old hatchlings **A** and **B** below. The diagram is not drawn to scale.



1.1.1 State TWO visible features in hatchling **A** which indicate altricial development. (2)

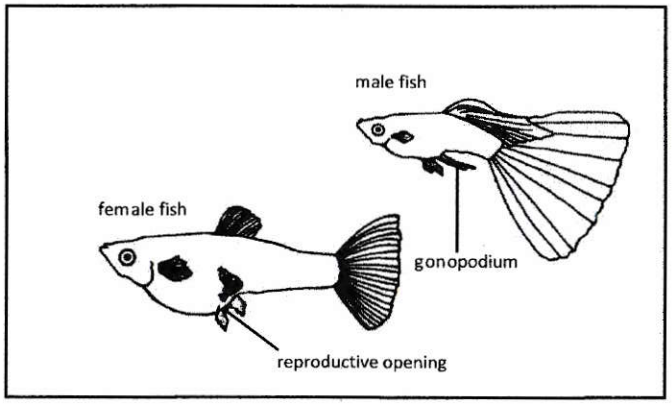
1.1.2 The diagram represents ovipary.

Explain ONE possible advantage of vivipary when compared to ovipary. (2)

1.1.3 Explain why you would expect that the yolk content of the egg of hatchling **B** was more than that of hatchling **A**. (2)

1.2

Guppy fish have a very interesting method of breeding. During mating the male deposits packets of sperm inside the female's reproductive opening using an organ called the 'gonopodium'. This process takes place several times and the female stores some of the extra sperm. The fertilised eggs remain in the female's body until they hatch and the young are born live. The gestation period is usually between 22 and 28 days.

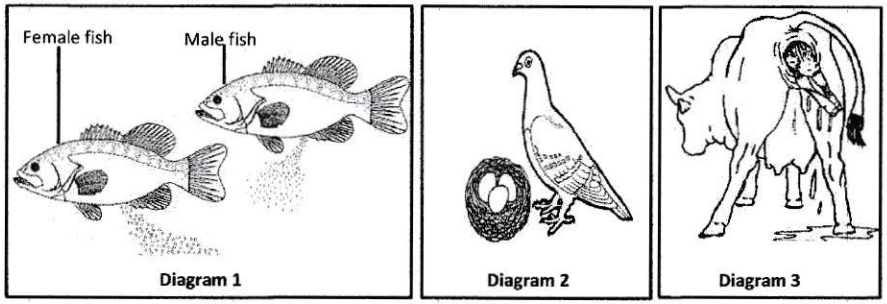


1.2.1 Name the type of fertilisation in guppies. (1)

1.2.2 Explain TWO ways in which the type of fertilisation named in QUESTION 1.2.1 increases reproductive success. (4)

1.2.3 Why are guppies regarded as being ovoviviparous? (2)

1.3 The diagrams below represent organisms with different reproductive strategies.



1.3.1 Which diagram(s) (**1**, **2** or **3**) represent(s) organism(s):

(a) Where external fertilisation takes place (1)

(b) Where extra-embryonic membranes develop to assist with the protection and nutrition of the embryo (2)

DIAGRAMS (SHORT QUESTIONS)

REPRODUCTIVE STRATEGIES

1.1.1
- The hatchling's eyes are closed√
- The hatchling can't move (√away from predators)
- The hatchling can't feed on its own √
- The hatchling has no feathers√/The wings are not developed

1.1.2
- Foetus develops inside the uterus or greater protection√
- Food is supplied by the mother√ and is therefore supplied for a longer period. √

1.1.3
- More yolk allows for greater development√ of the chick
- so that it can be more independent so that it can be more independent√ after hatching

1.2.1 Internal√ fertilisation

1.2.2 -Sperm are deposited inside the female body√
thereby increasing the chances of fertilisation√
-Gametes/zygote are inside the body√
therefore protected from the predators√/environmental dangers

1.2.3 - The eggs hatch inside the female's body√
-and the young are born alive√

1.3.1 (a) Diagram 1√

(b) Diagram 2√and Diagram 3√

(c) Diagram I√ and Diagram 2√

1.3.2 Amniotic egg√

