

REPRODUCTION IN PLANTS AND ANIMALS

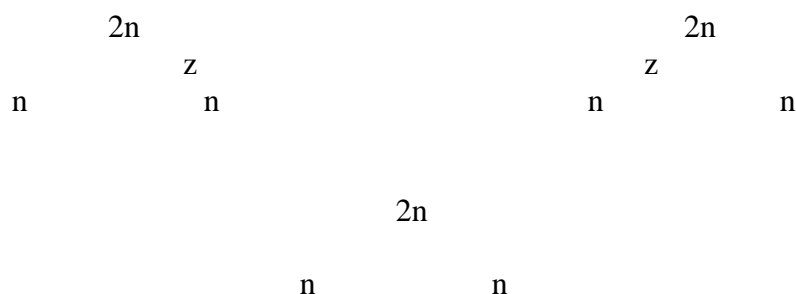
PAST KCSE QUESTIONS ON THE TOPIC

1. At what stage of mitosis do chromosomes replicate to form daughter chromatid?
(1 mark)
2. Fill in the blank spaces in the statement below
After fertilization of an ovule _____ develops into a testa and _____ develops into a testa and _____ develops into endosperm. (2 marks)
3. State the difference between the composition of maternal blood entering the placenta and material blood leaving the placenta (3 marks)
4. After four months of pregnancy the ovaries of a woman can be removed without terminating pregnancy. However during the first four months of pregnancy the ovaries must remain intact if pregnancy is to be maintained. Explain these observations
(3 marks)
5. Name two mechanisms that prevent self pollination in flowers that have both male and female parts (2 marks)
6. State three characteristics that ensure cross pollination takes place in flowering plants
(3 marks)
7. Give a reason why it is necessary for frogs to lay many eggs (1 mark)
8. A flower was found to have the following characteristics
 - Inconspicuous petals
 - Long feathery stigma
 - Small light pollen grains

(a) What is the likely agent of pollination of the flower?

(1 mark)

- (b) What is the significance of the long feathery stigma in the flower (1 mark)
9. State two ways by which the human Immuno Deficiency virus (HIV) is transmitted other than sexual intercourse? (2 marks)
10. Explain why sexual reproduction is important in organisms (3 marks)
11. State two disadvantages of self- pollination (2 marks)
12. The chart below shows the number of chromosomes before and after cell division and fertilization in a mammal.



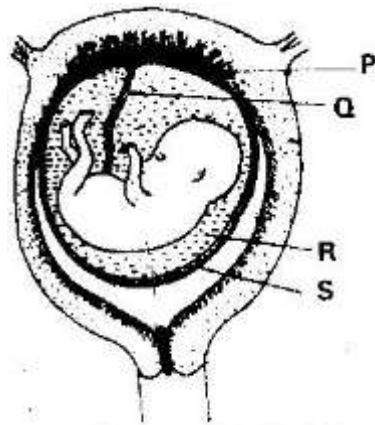
- (a) What type of cell division takes place at Z? (1 mark)
- (b) Where in the body of a female does process Z occur? (1 mark)
- (c) On the chart indicate the position of parent and gametes (2 marks)
13. (a) What is meant by the terms
- (i) Epigynous flower (1 mark)
- (ii) Staminate flower (1 mark)
- (b) How are the male parts of wind- pollinated flowers adapted to their function? (4 marks)

14. Name the part of a flower that developed into:

(a) Seed

(1 mark)

- (b) Fruit (1 mark)
15. (a) State two processes which occur during anaphase of mitosis (2 marks)
- (b) What is the significance of meiosis? (2 marks)
16. (a) Explain how the following prevents self- pollination:
- (i) Protoandry (1 mark)
- (ii) Self- sterility (1 mark)
- (b) Give three advantages of cross- pollination (3 marks)
17. The diagram below represents a human foetus in a uterus



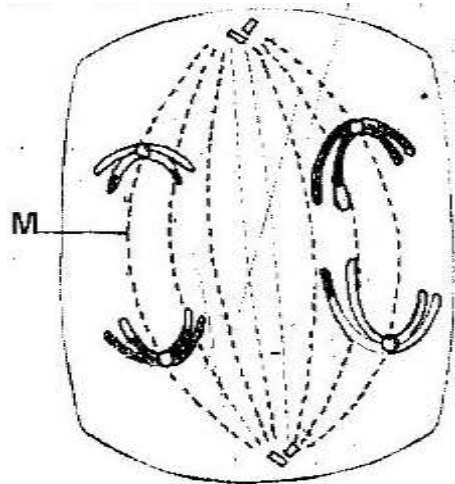
- (a) Name the part labeled S (1 mark)
- (b) (i) Name the types of blood vessels found in the structure labeled Q (2 marks)
- (ii) State the difference in composition of blood in the vessels named (b) (i) above (2 marks)
- (c) Name two features that enable the structure labeled P carry out its function

(2 mark)

(d) State the role of the part labeled R

(1 mark)

18. The diagram below represents a stage during cell division



- (a) (i) Identify the stage of cell division (1 mark)
(ii) Give three reasons for your answer (a) (i) above (2 marks)
- (b) Name the structure labeled M (1 mark)

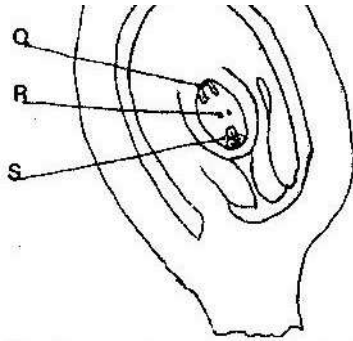
19. State two disadvantages of sexual reproduction in animals (2 marks)

20.

(a) What is meant by the following terms?

- (i) Protandry (1 mark)
(ii) Self- sterility (1 mark)

(b) The diagram below shows a stage during fertilization in plant



- (i) Name the parts labeled Q, R, and S (3 marks)
 - (ii) State two functions of the pollen tube (2 marks)
 - (c) On the diagram, label the micropyle (1 mark)
21. (a) Describe how insect pollinated flowers are adopted to pollination (6 marks)
- (b) Describe the role of each of the following hormones in the human menstrual cycle.
- (i) Oestrogen
 - (ii) Progesterone
 - (iii) Luteinizing hormone (3 marks)
22. Describe the role of hormones in the human menstrual cycle (20 marks)
23. What part does the placenta play in the
- (i) Nutrition of the embryo
 - (ii) Protection of the embryo (4 marks)