

CLASS: XII

CYCLE TEST- BIOLOGY

MARKS : 20

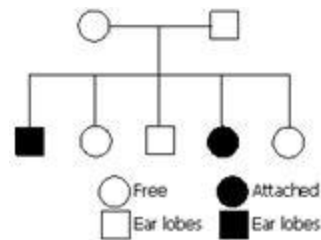
DATE: 19.9.19

Time: 40min

I. Choose the best answer:

1. Given below is a pedigree chart of a family with five children. It shows the inheritance of attached ear lobes as opposed to the free ones. The squares represent the male individuals and circles the female individuals. Which one of the following conclusions drawn is correct?

- a. The parents are heterozygous
- b. The parents are homozygous dominant
- c. The parents are homozygous recessive
- d. The trait is Y-linked

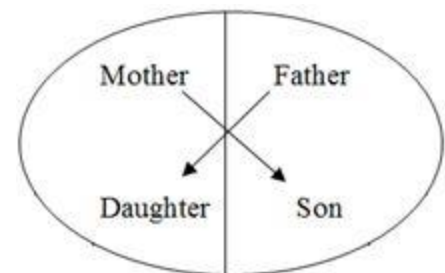


2. A man and a woman, who do not show any apparent signs of a certain inherited disease, have seven children (2 daughter and 5 sons). Three of the sons suffer from the given disease but none of the daughters are affected. Which of the following mode of inheritance do you suggest for this disease?

- a. Sex-linked dominant
- b. Sex-linked recessive
- c. Sex-limited recessive
- d. Autosomal dominant

3. Represented below is the inheritance pattern of a certain type of trait in humans. Which one of the following conditions could be an example of this pattern?

- a. Haemophilia
- b. Phenyl ketonuria
- c. Thalassemia
- d. Sickle Cell anemia



4. In pedigree analysis the symbol shown below represent



- a. Matting between relative
- b. Affected individuals
- c. Sex unspecified
- d. Normal individuals

5. Which of the following genetic disease is autosome liked recessive trait?

a. Phenylketonuria

b. Sickle cell anemia

c. Hemophilia

d. Colour blindness

II. Answer the following questions:

6. Mention any two autosomal genetic disorders with their symptoms. (2)

7. Name the disorders in human with the following karyotype. (2)

a. 22 pairs of autosomes +XO

b. 22 pairs of autosomes + 21st chromosome + XY

8. Contrast the inheritance pattern of Haemophilia and Sickle Cell Anaemia in human. (3)

9. Why are colourblindness and thalassemia categorized as Mendelian disorder? Write the symptoms. (3)

10. Thalassemia and Haemophilia are both Mendelian disorders related to blood. Write the symptoms of the disease. Explain with the help of crosses the difference in the inheritance pattern of the two diseases. (5)

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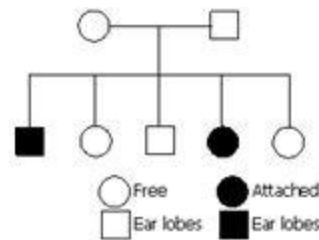
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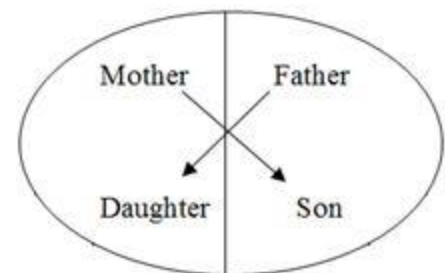


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