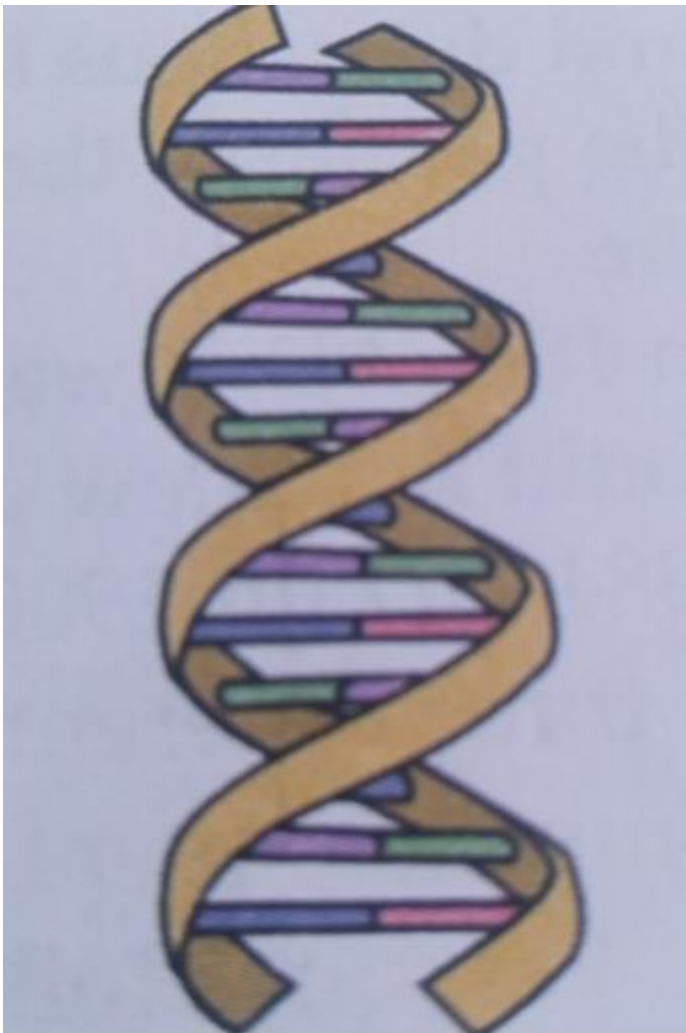


Heredity

1. Describe the three steps of cell division in short
2. What is cell division? What are the different types of cell division? Elucidate.
3. Describe nucleic acid and their types.
4. How is a son or a daughter determined? Explain with illustration.
5. Why is DNA a genetic agent?
6. Meiosis cell division causes variation in offspring why?
7. Define genes and nucleotides.
8. Introduce homogametic organisms.
9. What is a chromosome? Write a brief about the structure of a chromosome/
10. What is a chromosome made up of? Write the number of chromosomes in the diploid cells of the following organisms.
11. The diagram shows a type of acid found inside cells. Answer the following questions based on it.
12. Why are Honeybees called social insects?
13. Why honeybees are important pollinators.

14. What purpose is served by keeping bee hives near crop fields?



- i. Name the bases found in it.
- ii. What are the components of the ribbon-like structures wrapped one over the other?
- iii. How is the structure related to genetic activities? Explain in short.
- iv. How does nucleic acid differ from the other types of nucleic acid found in cells? Mention any two points.

15. What is heredity and what defines genetics?

16. Define artificial insemination.

17. Define in vitro fertilization.

18. Why did Mendel select pea plants for his experiment? What character of pea plants were selected by Mendel for his experiment?
19. Describe cross-breeding and selective breeding in short.
20. Describe the law of dominance in short with a chart.
21. In what ratio will red-flowered and white-flowered pea plants be seen when red (RR) and white (rr) flowered pea plants are crossed together? Show with the help of a chart up to F₂ generation.
22. Why is genetic engineering a boon of science and technology for human beings?
23. Study the given diagram to answer the following questions.

RR	Rr
Rr	rr

- Which filial generation is shown in the given diagram?
- How does it support the law of purity of gametes?
- Write the phenotype and genotype of the generation.
- Mention the character of the parents who participated in it.