



BIOLOGY

BOOKS - NAND LAL PUBLICATION

HEREDITY AND EVOLUTION

Intext Questions

1. If a trait A exists in 10 % population an a sexually reproducing species and a trait B like to have arisen earlier ?



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2. How does the creation of variations in a species ensure survival?



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3. How do Mendel's experiment show the traits may be dominant or recessive ?



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4. How do Mendel's experiment show that traits inherited independently ?



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5. a man with blood group A married woman with blood group B. they have a son with AB blood group and a daughter with blood group O. work out the cross and show the possibility of such inheritance.



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6. How Is sex determined in human beings?



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7. What are different ways in which individuals with a particular trait may increase in a population?



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8. Why are traits acquired during life-time of an individual not inherited?



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9. Why are the small number of surviving tigers is a cause of worry from the point of view of genetics?



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10. What factors could lead to the rise of new species?



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11. Will geographical isolation be a major factor in the speciation by a self-pollinating plant species? Why or why not?



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12. Will geographical isolation be a major factor in the speciation of an organism that reproduces asexually? Why or why not



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13. Give an example of a characteristic being used to determine how close two species are in evolutionary terms?



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14. Can the wing of butterfly and wing of a bat be considered homologous organs? Why or why not



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15. What are fossils? What do they tell us about the process of evolution?



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16. Why are human beings which look so different from each other in terms of size. Colour and looks are said to be belonging to the same species?



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17. In evolutionary terms can we say that which among bacteria, spider, fish and chimpanzee have a better body design? Why or why not?



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Exercises

1. A Mendelian experiment consisted of breeding tall pea plants bearing violet flowers with short pea plants bearing white flowers. The progeny all bore violet flowers, but almost half of them were short. This suggests that the genetic make-up of the tall parent can be depicted as:

A. TTWW

B. TTww

C. TtWW

D. TTWw

Answer: C



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2. An example of homologous organs is:

A. our arm and a dog's fore -leg

B. our teeth and an elephant's tusks

C. potato and runners of grass

D. all of the above

Answer: D



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3. In evolutionary terms , we have more in common with:

A. a Chinese school boy

B. a chimpanzee

C. a spider

D. a bacterium

Answer: A



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4. A study found that children with light-coloured eyes are likely to have parents with light-coloured eyes. On this basis, can we say anything about whether the light- eye colour

trait is dominant or recessive ? Why or why not?



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5. How are the areas of study of evolution and classification interlinked?



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6. Explain the terms homologous and analogous organs with example



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7. Outline a project which aims to find the dominant coat colour in dogs



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8. Explain the importance of fossils in deciding evolutionary relationship



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9. What evidence do we have for the origin of life from inanimate matter?



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10. Explain how sexual reproduction gives rise to more viable variation than asexual reproduction how does this affect the evolution of those organisms that reproduce sexually?



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11. How is equal genetic contribution of male and female presents assured in the progeny ?



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12. Only variations that confer an advantage to an individual organism will survive in a population. Do you agree with statKHOent? Why or why not?



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Additional Questions

1. What are traits ?



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2. Name the biological term used to show similarities among individuals .



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3. Who is the father of genetics?



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4. What is variation ? Name two types of variations . What is the condition for two quantities to be in inverse variation .



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5. What are the sex chromosomes in males and females?



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6. Write contribution of mendel



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