



BIOLOGY

BOOKS - BETTER CHOICE PUBLICATION

EVOLUTION

Very Short Answer Type Questions 1 Marks

1. What are Coacervates ?



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2. Which amino acids were formed in Miller's experiment in the direction of origin of the life on earth?



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3. When did life originated on earth?



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4. What is biogenesis?



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5. Name the era in geological scale when life had not originated on earth.



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6. Give an example of missing link.



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7. Define Organic Evolution in three words.



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8. Who proposed the theory of continuity of Germplasm.



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9. Which technique is used to know the age of fossils ?



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10. Name the scientist who proposed the Comsozoic theory of origin of life.



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11. Name the single land mass from which different continents have originated.



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12. Who performed Swan-necked flask experiment in support of Biogenesis?



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13. Who experimentally proved the formation of complex compounds in the laboratory for origin of life by heating a mixture of dry amino acids ?



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14. Name the plant in which mutations were observed by Hugo deVries.



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15. Who proposed the biogenetic law ?



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16. Who proposed abiogenesis ?



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17. What was the nature of atmosphere in the primitive earth ?



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18. Which gas was absent in the atmosphere of primitive earth ?



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19. To which galaxy our earth belongs.



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20. Why there is no life on moon ?



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21. What was the site of origin of life ?



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22. Which technique is used to know the age of fossils ?



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23. Which period is called age of fishes ?



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24. Explain: Speciation.



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25. Define Mimicry.



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26. What is industrial melanism ?



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27. Name two organisms associated to form lichens.



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Very Short Answer Type Questions 1 Marks Most Expected Questions

1. Who-proposed Big-Bang theory?



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2. Who used the term hot dilute soup?



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3. Which era is known as age of reptiles?



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4. Name the first possible compound molecules on earth.



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5. Who used the phrase "survival of the fittest" first time?



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6. Who is known as father of palaeontology?



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Short Answer Type Questions 2 Marks

1. Why the members of population do not breed with other populations.



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2. Explain antibiotic resistance observed in bacteria in light of Darwin's Natural selection Theory.



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3. What is genetic drift?



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4. Can we call human evolution as adaptive radiation?



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5. “Ontogeny repeats phylogeny.” Explain.



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6. Define atavism. Give two examples of atavism.



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7. Name the gases used by urey and miller for their experimnt



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8. Differentiate between Allopatric and Sympatric speciation.



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9. what are connecting links? Give two examples.



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10. Discuss natural selection and artificial selection. What are implications of the latter on the process of evolution?



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11. Write a note on Darwin's finches.



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12. What are vestigial organs ? Give two examples of vestigial organs in a human body.



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13. What is role of Archaeopteryx in the study of evolution ?



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14. Define reproductive isolation. Give its significance.



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15. What are analogous organs? Give examples



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16. What are homologous organs ? Give an example of it in an animal and in a plant.



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17. Differentiate between connecting links and missing links.



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Short Answer Type Questions 2 Marks Most Expected Questions

1. How did Darwin explain the existence of different varieties of finches on Galapagos Islands?



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2. The fitness according to Darwin, refers ultimately to reproductive fitness. Explain.



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3. Differentiate between gene frequency and gene pool.



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4. Fitness is the end result of the ability to adapt and get selected by Nature. Explain with suitable example.



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5. How is Darwin's concept of evolution different from that of de Vries?



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6. Explain the salient features of Hugo de Vries theory of mutation. How is Darwin's theory of natural selection different from it? Explain.



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7. Suppose in a sampled population, the frequency of the recessive trait is 36%. Find out the frequency of homozygous dominant and heterozygous individuals.



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Short Answer Type Questions 3 Marks

1. Discuss Natural selection with reference to industrial melanism.

(a) Before Industrialisation



(b) After Industrialisation



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2. Describe Miller and Urey's simulation experiment for organic synthesis.



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3. What are the homologous organs? Explain it by giving two examples.



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4. What are analogous organs ? Explain it by giving two examples.



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5. What are connecting links ? Explain it giving two examples.



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6. Define Hardy-Weinberg's Principle. What is the significance of this principle?



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Short Answer Type Questions 3 Marks Most Expected Questions

1. Who proposed the theory of origin of life?

What were the conditions prevailing about 3.6 billion years ago, to create life on primitive earth ?



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2. Describe adaptive radiation.



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3. Classify the following as (i) Homologous organs (ii) Analogous organs (iii) Vestigial organs (iv) Atavism (v) Divergent evolution.

(i) Fore limbs of Horse and Man.

(ii) Thorn of Citrus and tendril of

Bougainvillea.

(iii) Vermiform appendix.

(iv) Tendril of Pea and grape vine.

(v) Scale leaves of Ruscus.

(vi) Darwin finches.



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4. What is founder effect?



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5. How does a population become 'founders' of a new species?



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6. Explain Darwinian theory of evolution with the help of one suitable example. State the two key concepts of the theory.



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7. Difference between Ape and Man.



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8. Give graphic representation of Oparin-Haldane theory of origin of life.



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9. How does natural selection, operates according to Darwin's theory of natural

selection?



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Long Answer Type Questions 5 Marks

1. Describe the postulates of Darwin's theory of Natural selection.



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2. Briefly explain Oparin-Haldane theory of origin of life.



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3. What are vestigial organs ? Give two examples of vestigial organs in a human body.



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4. Explain the origin of long necked Giraffe in the light of Lamarckism.



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5. what are connecting links? Give two examples.



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6. Explain the factors of Lamarck's theory of Evolution.



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7. What are analogous organs? Give examples



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8. Write what do you know about Natural Selection or Survival of the fittest.



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9. How do paleontological and embryological evidences support the idea of Organic evolution?



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10. Define Speciation. How does a species originate gradually as well as abruptly? Explain.





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11. Explain embryological evidences to support the organic evolution.



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12. Explain embryological evidences to support the organic evolution.



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13. Describe De-Vries mutation theory of evolution.



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14. Describe in brief the biogeographical evidences in support of organic evolution.



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15. Describe Modern synthetic theory of Evolution.



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16. Explain morphological and anatomical evidences of organic evolution.



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17. State and explain Hardy Weinberg's Principle



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18. Explain the various factors which are known to affect Hardy-Weinberg equilibrium.



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19. Give Summary of steps of origin of life.



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Long Answer Type Questions 5 Marks Most Expected Questions

1. Explain Human Evolution.



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2. Branching descent and natural selection are the two key concepts of Darwinian Theory of Evolution. Explain each concept with the help of a suitable example.



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3. State the significance of Coelacanth in Evolution.



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4. What is gene frequency?



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5. How does the process of natural selection affect Hardy-Weinberg equilibrium? List the

other four factors that disturb the equilibrium.



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6. Explain operation of natural selection on different traits.



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7. What are the differences between Darwinism and Neo-Darwinism?



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8. Differentiate between homologous and analogous organs



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9. Why is Archaeopteryx called a connecting link between reptiles and birds?



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10. List the two main propositions of Oparin and Haldane.



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11. What is adaptive radiation? Explain with the help of a suitable example.



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12. With the help of any two suitable examples explain the effect of anthropogenic actions on organic evolution.



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13. State the hypothesis of oparin and haldane about the primeval earth condition what do you understand by haldane's hot dilute soup? State its significance



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