



BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

ORIGIN AND EVOLUTION OF LIFE

Textual Evaluation Solved | Choose The Correct Answer

1. Biogenetic law states that

- A. Ontogeny and phylogeny go together
- B. Ontogeny recapitulates phylogeny
- C. Phylogeny recapitulates ontogeny
- D. There is no relationship between phylogeny and ontogeny

Answer: B



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2. The 'use and disuse theory' was proposed by_____.

A. Charles Darwin

B. Ernst Haeckel

C. Jean Baptiste

D. Gregor Mendel

Answer: C



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3. Paleontologists deal with

- A. Embryological evidences
- B. Fossil evidences
- C. Vestigial organ evidences
- D. All the above

Answer: B



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4. The best way of direct dating fossils of recent origin is by.....

- A. Radio-carbon method
- B. Uranium lead method
- C. Potassium - argon method
- D. Both (a) and (c)

Answer: A



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5. The term Ethnobotany was coined by

- A. Khorana
- B. J.W. Harshberger
- C. Ronald Ross
- D. Hugo de Vries

Answer: B



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Textual Evaluation Solved li Fill In The Blanks

1. The characters developed by the animals during their life time, in response to the environmental changes are called



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2. The degenerated and non - functional organs found in an organism are called



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3. The forelimbs of bat and human are examples of organs.



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4. Fill in the blanks:

(i) The degenerated and non-functional organs found in an

organism are called_____.

(ii) The theory of natural selection for evolution was proposed by _____.



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Textual Evaluation Solved Iii State Whether True Or False If False Write The Correct Statement

1. The use and misuse theory of organs' was postulated by Charles Darwin



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2. The homologous organs look similar and perform similar functions but they have different origin and developmental pattern.



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3. Birds have evolved from reptiles.



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Textual Evaluation Solved Iv Match The Following

1. Match the following:

- | | |
|-----------------------|--|
| (a) Atavism | (i) A wing of a bat an A a wing of an insect |
| (b) Atavism | (ii) Rudimentary tail |
| (c) Homologous organs | (iii) Vermiform appendix |
| (d) Analogous organs | (iv) a forelimb of cat and a bats wing |



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Textual Evaluation Solved V Answer In A Word Or Sentence

1. A human hand, a front leg of a cat, a front flipper of a whale and a bat's wing look dissimilar and adapted for different functions. What is the name given to these organs ?



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2. Which organism is considered to be the fossil bird ?



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3. What is the study of fossils called ?



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Textual Evaluation Solved Vi Short Answer Questions

1. The degenerated wing of a Kiwi is an acquired character. Why is it an acquired character?



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2. Why is Archaeopteryx considered to be a connecting link?



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3. Define Ethnobotany and write its importance.



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4. How can you find the age of fossils ?



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1. Natural selection is a driving force for evolution-How ?



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2. How do you differentiate homologous organs from analogous organs?



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3. How does fossilization occurs in plants?



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1. Arun was playing in the garden. Suddenly he saw a dragon fly sitting on a plant. He observed the wings of it. He thought it looked similar to a wing of a crow. Is he correct? Give reason for your answer.



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2. Imprints of fossils tell us about evolution- How ?



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3. Octopus, cockroach and frog all have eyes. Can we group these animals together to establish a common evolutionary origin. Justify your answer.



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Additional Question I Fill In The Blanks

1. The history of has two aspects namely and



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2. Which theory states that life arose from pre-existing life. Explain.



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3. Is a gradual change occurring in living organisms over a long duration.



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4. Sexual reproduction, which involves meiosis help in recombination of during gametic fusion



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5. The major concept in astrobiology is the



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6. The organisms, which live in extreme environmental conditions on Earth are called



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7. Fossil records show that the evolution has taken a gradual process from simple to organisms



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Additional Question II Match The Following

1. (a) Match the following

- | | |
|--------------------|--|
| 1. Big Bang theory | - (a) study of regions and practical use of plants |
| 2. Petrification | - (b) organisms buried and cause depression |
| 3. Archaeopterys | - (c) other name for astrobiology |
| 4. Ethnobotany | - (d) preserve hard and soft parts |
| 5. Mold | - (e) origin of universe |
| 6. Exobiologi | - (f) fossil bird |

(b) Match the following

- | | |
|--------------------------|------------------------------------|
| 1. Oparin and haldane | (a) use and disuse theory |
| 2. Ernest Haeckel | - (b) Mutation theory |
| 3. Leonardo da vinci | - (c) Father of Indian paleobotany |
| 4. Jean Baptiste Lamarck | - (d) Life from chemical reaction |
| 5. Darwin | - (e) Father of paleontology |
| 6. De vries | - (f) Radioactive carbon |
| 7. Birbal sahani | - (g) Ethnobotany |
| 8. W.F. Libby | - (h) Origin of species |
| 9. J.W. Harshberger | - (i) Biogenetic law |



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Additional Question Iii Choose The Correct Answer

1. The theory of idea embodies that life on Earth is a divine creation

.....

- A. chemical reaction
- B. special creation
- C. spontaneous generation
- D. Biogenesis

Answer: B



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2. Palaeontology deals with the study of

- A. analogous organs
- B. fossils
- C. gradual change
- D. homologous organ

Answer: C



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3. The other name for continuous variation is

- A. germinal variation
- B. somatic variation
- C. discontinuous variation
- D. fluctuation variation

Answer: D



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4. If is branch of paleontology that deals with the recovery and identification of plant remains of geological past

- A. paleobotany
- B. Embryology
- C. mutation
- D. palaeontology

Answer: A



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5. The distance need to be neither too hot not too cold is called
....



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Additional Question Iv Answer The Following Shortly

1. What is Abiogenesis ?



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2. What is cosmic origin ?



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3. What is chemical evolution?



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4. Name the evidences of evolution, What do they support ?



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5. Explain the evidences of evolution from Embryology.



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6. Represent a flow chart showing the postulates of Lamarckism.



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7. Explain the evidences of evolution from palaeontology.



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8. Evolution



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9. Represent a flow chart showing the postulates of Lamarckism.



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10. Explain the types of variation ?



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11. Explain the importance of fossils.



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12. What are extremophiles?



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13. What is Astrobiology or Exobiology ? What does it deal ?



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Additional Question V Answer The Following In Detail

1. Explain in detail with diagrams, the evidences of evolution, through morphology and anatomy.



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2. Explain the principles of Lamarckian theory.



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Additional Question Vi Higher Order Thinking Skills Hots

1. What is the relationship between mutation and variation ?



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2. What are living fossils ?



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3. What is Mars 2020 Astrobiology ?



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