

### **BIOLOGY**

### **BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)**

### **ORIGIN AND EVOLUTION OF LIFE**

### Textual Evaluation Solved I 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



- **2.** The 'use and disuse theory' was proposed by .
  - A. Charles Darwin
  - B. Ernst Haeckel
  - C. Jean Baptiste
  - D. Gregor Mendel

### **Answer: C**



**Watch Video Solution** 

**3.** Paleontologists deal with ......

A. Embryological evidences B. Fossil evidences C. Vestigial organ evidences D. All the above **Answer: B Watch Video Solution** 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



- **5.** The term Ethnobotany was coined by .....
  - A. Khorana
  - B. J.W. Harshberger
  - C. Ronald Ross
  - D. Hugo de Vries

**Answer: B** 



Textual Evaluation Solved Ii Fill In The Blanks

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

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



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



- 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
·
Watch Video Solution
Textual Evaluation Solved Iii State Whether True Or Fasle If False Write
The Correct Statement
1. The use and sisuse theory of organs' was postulated by Charles
Darwin
Watch Video Solution
2. The homologous organs look similar and perform similar
functions but they have different origin and developmental pattern.
Watch Video Solution

3. Birds have evolved from reptiles.



**Watch Video Solution** 

## **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



**Watch Video Solution** 

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?



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



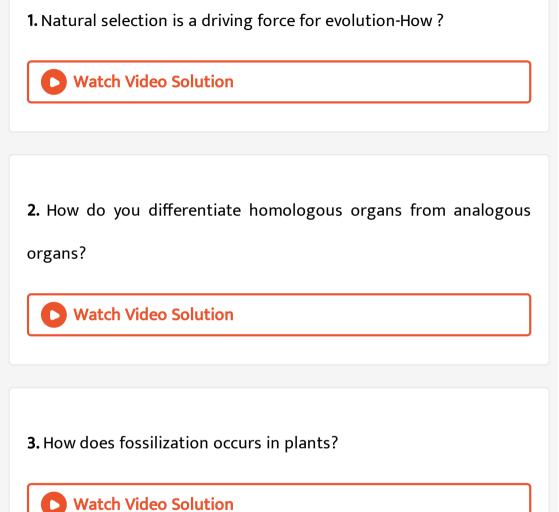
3. What is the study of fossils called?



**Textual Evaluation Solved Vi Short Answer Questions** 

1. The degenerated wing of a Kiwi is an acquired character. Why is it
an acquired character?
Watch Video Solution
2. Why is Archaeopteryx considered to be a connecting link?
Watch Video Solution
3. Define Ethnobotany and write its importance.
Watch Video Solution
4. How can you find the age of fossiles ?
Watch Video Solution

## Textual Evaluation Solved Vii Long Answer Questions



Textual Evaluation Solved Viii Higher Order Thinking Skills Hots

**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 in looked similar to a wing of a crow. Is he correcct? Give reason for your answer.



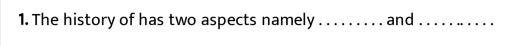
2. Imprints of fossils tell us about evolution- How?



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



## Additional Question I Fill In The Blanks





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



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



4.	Sexual	reproduction,	which	involves	meiosis	help	in
rec	ombinati	on of	during g	ametic fusi	on		
	Watch	n Video Solution					
	Water	T Video Soldtion					

**5.** The major concept in astrobiology is the .....



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



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

## 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. Petrifaction (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



## Additional Question Iii Choose The Correct Answer

A. chemical reaction
B. special creation
C. spontaneous generation
D. Biogenesis
Answer: B
Watch Video Solution
<b>2.</b> Palaeontogy deals with the study of

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

A. analogous organs B. fossils C. gradual change D. homologous organ **Answer: C Watch Video Solution 3.** The other name for continuous variation is ......... A. germinal variation B. somatic variation C. discontinuous variation D. fluctuation variation Answer: D

0	Watch Video Solution

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

A. paleobotany

B. Embryology

C. mutation

D. palaeontology

### **Answer: A**



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

U	Watch Video Solution

# Additional Question Iv Answer The Following Shortly

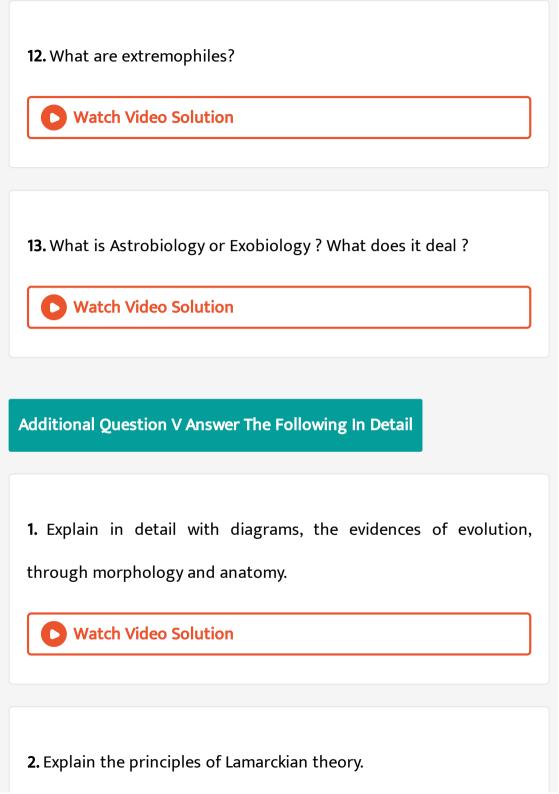
- **1.** What is Abiogenesis?
  - Watch Video Solution

- 2. What is cosmic origin?
  - Watch Video Solution

- 3. What is chemical evolution?
  - Watch Video Solution

4. Name the evidences of evolution, What do they support?
Watch Video Solution
5. Explain the evidences of evolution from Embryology.
Watch Video Solution
<b>6.</b> Represent a flow chart showing the postulates of Lamarckism.
Watch Video Solution
7. Explain the evidences of evolution from palaeontology.
Watch Video Solution

Watch Video Solution
<b>9.</b> Represent a flow chart showing the postulates of Lamarckism.
Watch Video Solution
<b>10.</b> Explain the types of variation ?
Watch Video Solution
<b>11.</b> Explain the importance of fossils.
Watch Video Solution



## Additional Question Vi Higher Order Thinking Skills Hots

1. What is the relationship between mutation and variation?



2. What are living fossils?



3. What is Mars 2020 Astrobiology?

