

Unit - 8**The Story of life ... and Organisms**

PART - A**Qn: 8 : 1**

From the given statements, choose those which are not related to primates.

- a. 3 digits in the limbs
- b. opposable thumb
- c. a pair of nipples
- d. eyes that can focus on one object.

Time - 1 min

Score - 1

Qn: 8 : 2

Find the odd one, and justify

- a) Variations
- b) Survival of the fittest
- c) Struggle for existence
- d) Acquired variations

Time - 1 min

Score - 1

PART - B

Qn: 8 : 3

Identify the human ancestors based on their characteristics and choose those which are suitable from the boxes.

a The oldest fossil among the genus Homo

b Believed to have lived 3 to 3.2 million years ago.

c Known as the common ancestor of man and apes

d Inferred that bipedal walking began from this ancestor

i) Australopithecus

ii) Dryopithecus

iii) Ardipithecus

iv) Homo erectus

v) Homo habilis

vi) Neanderthal man

Time - 3 min

Score - 2

Qn: 8 : 4

Read the description on bacteria and answer the questions given below.

Under favourable circumstances, bacteria divide every 20 minutes. The rapid multiplication results in mutation in the DNA. Mutation causes the formation of new bacteria, producing diverse enzymes.

- What will be the crisis created in the medical field by such changes in pathogenic bacteria?
- Which theory of evolution is justified by the changes in the bacteria?

Time - 2 min

Score - 2

Qn: 8 : 5

Given below are some criticisms raised against Darwin's theory of Natural Selection:

- Lack of experimental support
- Does not explain how variations within the species are transmitted to the next generation

What explanation will you give to this in the background of the growth of genetics?

Time - 4 min

Score - 2

Qn: 8 : 6

Given below are excerpts from Sreeraj's Nature observation diary.

2 2011 June 20

Pond full of tadpoles. How full the pond will be with frogs, if all these grow!

2011 August 10

The poultry bred at home was affected by Ranikhet (Vasantha) disease.

All, except two, died.

Analyse the diary notes on the basis of the Theory of Natural selection.

Time - 2 min

Score - 2

Qn: 8 : 7

Given below are a few lines from the Science article prepared by Ajay.

"Though the theory of chemical evolution has been justified, various theories are being discussed among scientists in connection with the origin of life."

a) Write 2 examples for such arguments which are being discussed in the world of science.

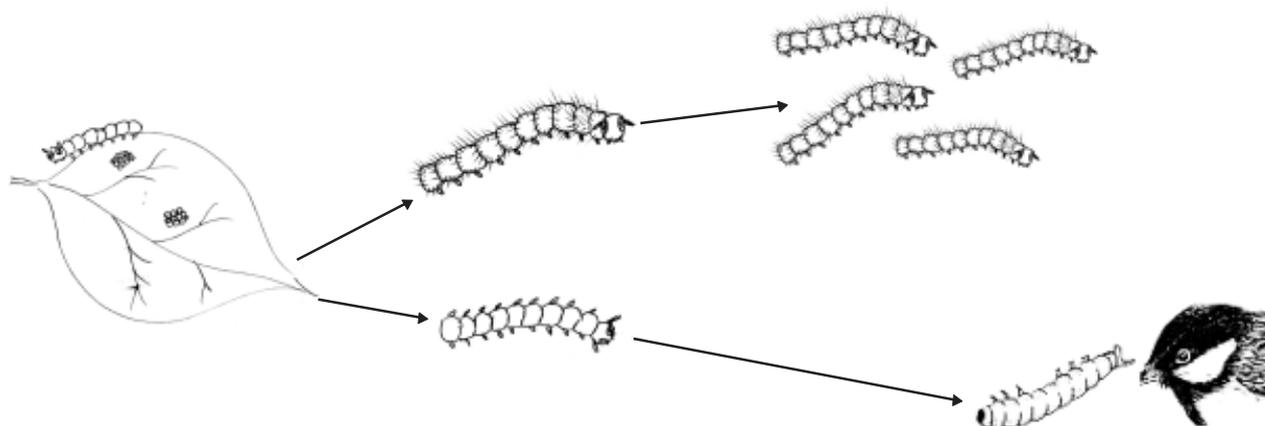
Time - 2 min

Score - 2

PART - C

Qn: 8 : 8

Observe the illustration related to the idea of evolution. Identify the special features of worms. Answer the questions given below.



- a) What explanation will you give for the origin of worms having different characteristics from eggs of the same sexually reproducing organism?
- b) What are the features of worms which survive due to physical peculiarities? What conclusion will you arrive at, through this, about the origin of species?

Time - 4 min
Score - 3

Qn: 8 : 9

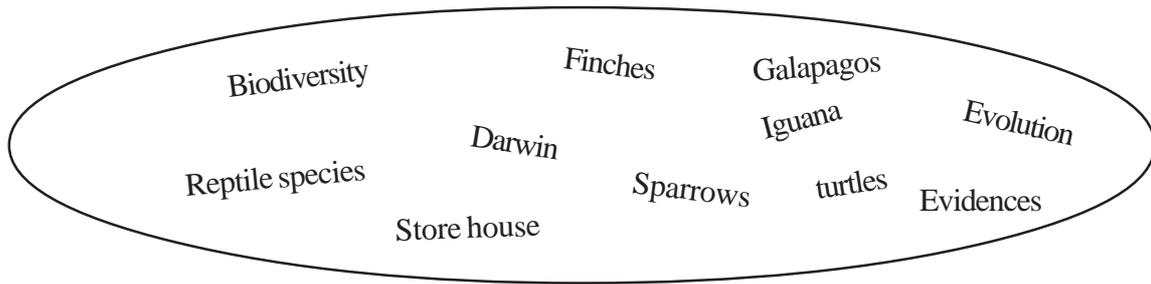
Given below are 4 concepts to be included in the essay on "The Chemical evolution of life" to be presented in connection with the Chemistry Year observation.

- a) Aerobic organisms
 - b) Anaerobic organisms
 - c) Origin of life
 - d) Process of chemical evolution
- i) Arrange these concepts in chronological order
 - ii) Write short notes on each of these concepts

Time - 3 min
Score - 4

Qn: 8 : 10

Examine the indicators given below.

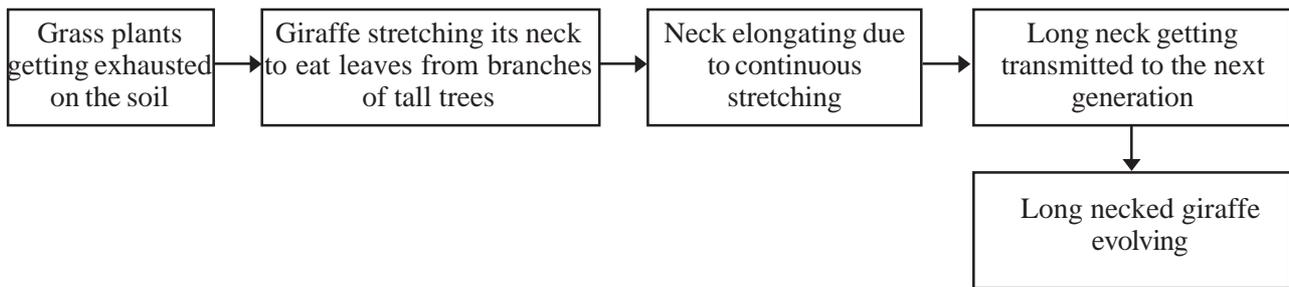


- a) Prepare a short note relating the concepts in the indicators
- b) Give suitable title for the note using the words in the indicators

Time - 3 min
Score - 3

Qn: 8 : 11

Observe the flow chart drawn by Dhanya. It shows how the long necked giraffes evolved according to Lamarck's theory.



Reconstruct this flowchart on the basis of Darwin's Theory of Natural selection.

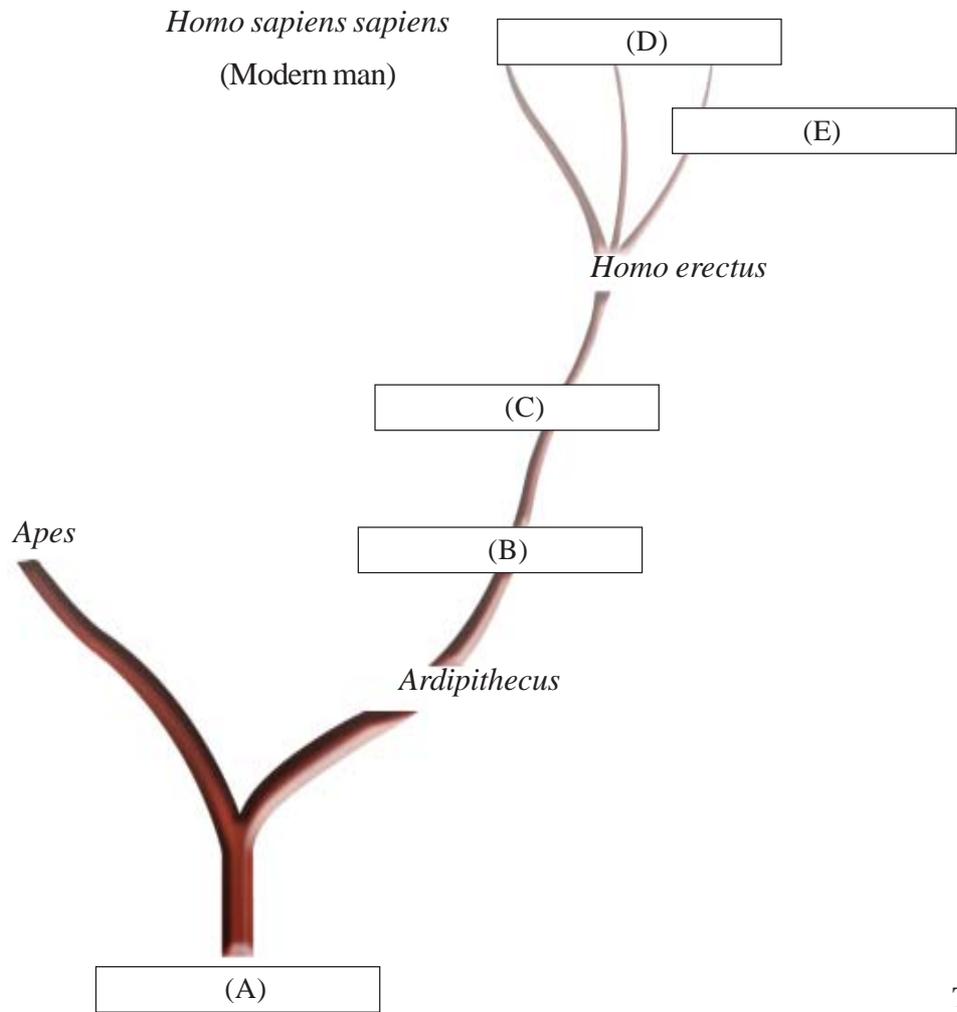
Time - 3 min
Score - 3

Qn: 8 : 12

Given below in the box are the names of certain links in the evolution of man.

Complete the human evolutionary tree choosing suitable ones.

Cromagnon man, Australopithecus, Dryopithecus, Neanderthal man, Homo habilis



Time - 3 min
Score - 3