



BIOLOGY

BOOKS - CHETANA PUBLICATION

ORIGIN AND EVOLUTION OF LIFE

Example

1. What is evolution?



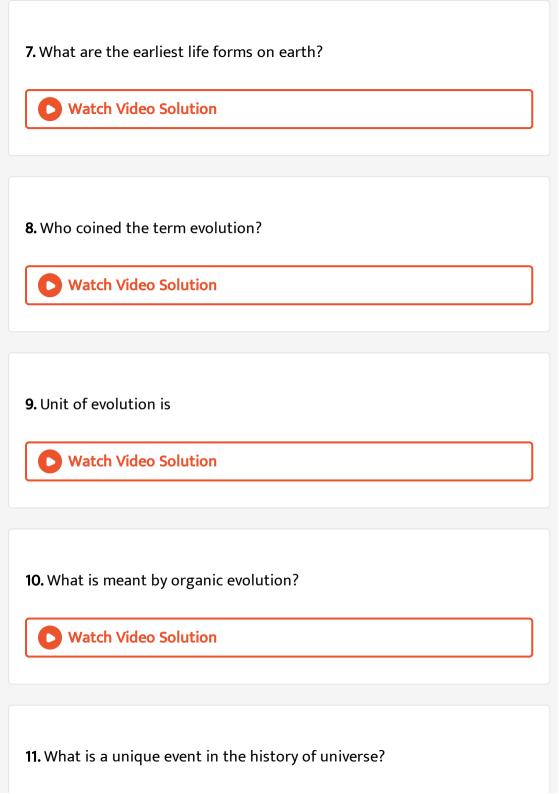
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2. Where was first life formed?



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4. The Lamarck's theory of inheritance of acquired characters.
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5. What is speciation?
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6. Define speciation. Give examples of any two factors causing speciation.
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Watch Video Solution
12. Name the process of origin of life on earth.
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13. Enlist the characters of living organisms.
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14. Explain briefly the theory of special creation.
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15. Explain briefly Cosmozoic theory/theory of Panspermia
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16. The theory of spontaneous generations stated that:
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17. Explain briefly the theory of biogenesis.
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18. State advantages and disadvantages for theory of biogenesis.
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19. Discuss briefly the theories explaining origing of life.
Watch Video Solution
20. Explain briefly the self-assembly theory of origin of life.

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21. Who put forward the theory of biochemical origin of life?
Watch Video Solution
22. Explain briefly the 1st step of Oparin Haldane theory of Chemical
evolution. Or explain briefly the Origin of Earth and primitive atmosphare.
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23. Explain the Big bang theory of Georges Lemaitre.
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24. Write short note on: Origin of Earth and Primitive atmosphere.
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25. Explain briefly the 2nd step of Oparin Haldane theory of Chemical evolution.



26. Explain briefly the formation of ammonia, water and Methane in Oparin Haldane theory of chemical evolution.



27. Write a short note on: Formation of ammonia, water and methane.



28. Explain briefly the 3rd step of Oparin Haldane theory of Chemical evolution.

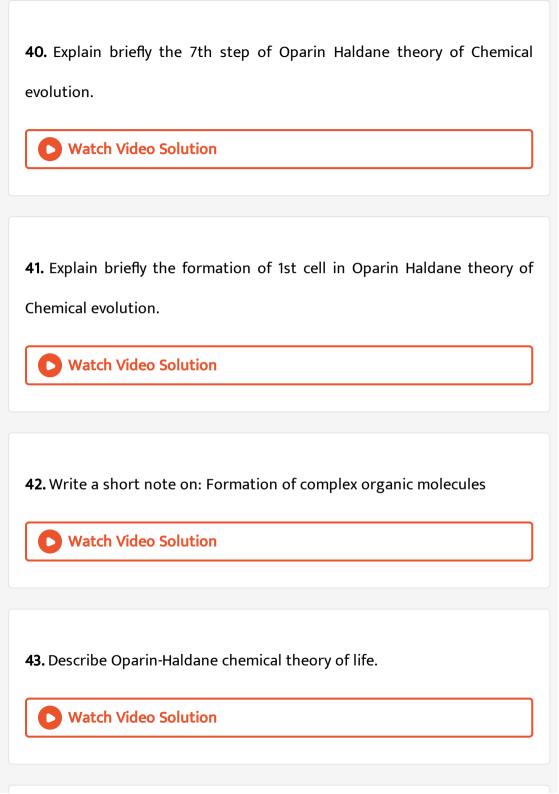
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29. Explain briefly the formation of simple organic molecules Oparin
Haldane theory of chemical evolution.
Watch Video Solution
30. Write a short note on: Formation of simple organic molecules.
Watch Video Solution
31. Explain briefly the 4th step of Oparin Haldane theory of Chemical evolution.
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32. Explain briefly the formation of simple organic molecules Oparin Haldane theory of chemical evolution.

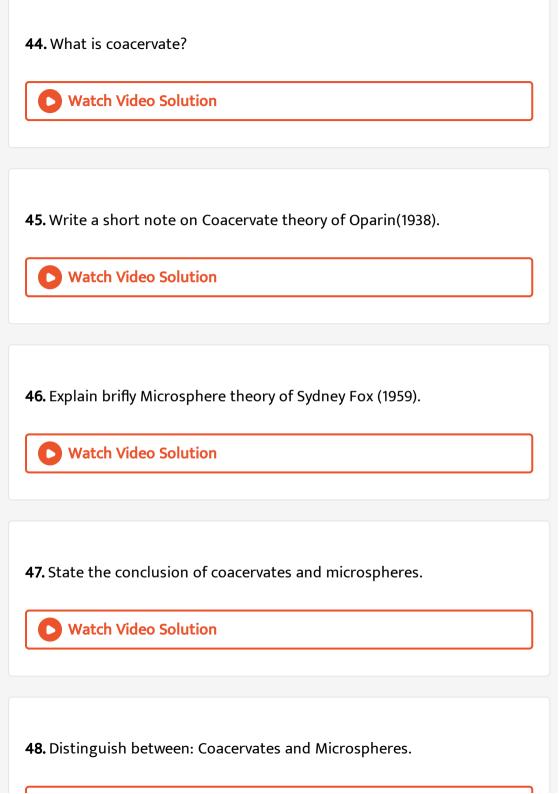
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33. Write a short note on: Formation of complex organic molecules
33. Write a short flote oil. Formation of complex organic filolectries
Watch Video Solution
34 Familia hairfly the File stars of Outside Helders the conset Chamital
34. Explain briefly the 5th step of Oparin Haldane theory of Chemical evolution.
evolution.
Watch Video Solution
35. Explain briefly the formation of Nucleic acids in Oparin Haldane theory
of Chemical evolution.
Watch Video Solution
36. Write a short note on: Formation of Nucleic acids.

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37. Explain briefly the 6th step of Oparin Haldane theory of Chemical evolution.
Watch Video Solution
38. Explain briefly the 7th step of Oparin Haldane theory of Chemical evolution.
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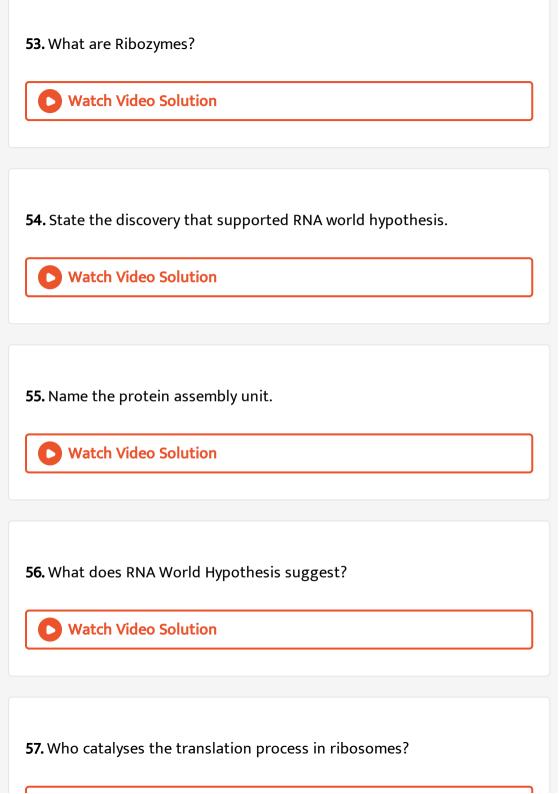
39. Write a short note on evolution.

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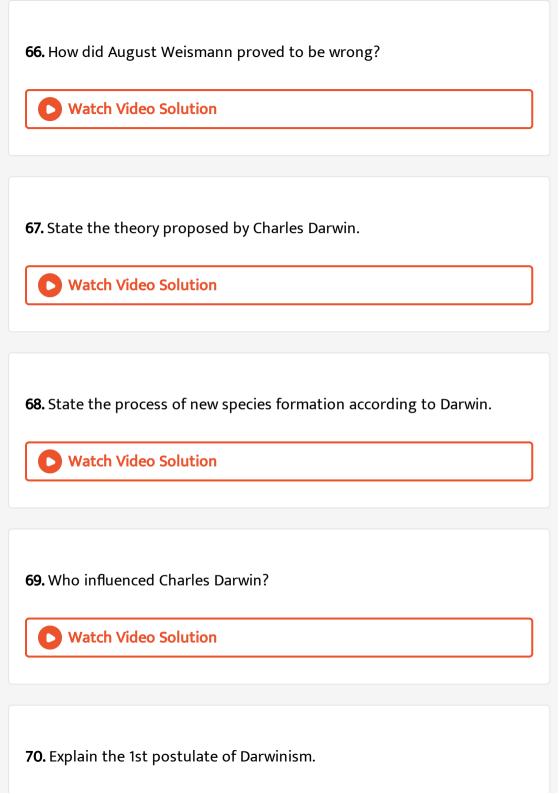


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49. When was earth formed? What was its condition at that time?
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50. Describe the Urey and Miller's experiment.
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51. Name the process of origin of life on earth.
Watch Video Solution
52. Who found that RNA can act as biocatalysts and when?
Watch Video Solution



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58. State the nucleic acid found abundantly in all living cells.
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59. Whom is RNA structurally related to?
Watch Video Solution
60. Enlist the characters of RNA that support RNA World Hypothesis.
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61. State the significance of stable, double stranded DNA.
Watch Video Solution

○ Watc	th Video Solution
63. Define t	he following term
Organic ev	olution
○ Wate	h Video Solution
○ Wato	h Video Solution
	narck's theory of inheritance of acquired characters.
64. The Lan	
64. The Lan	narck's theory of inheritance of acquired characters.
64. The Lan	narck's theory of inheritance of acquired characters.

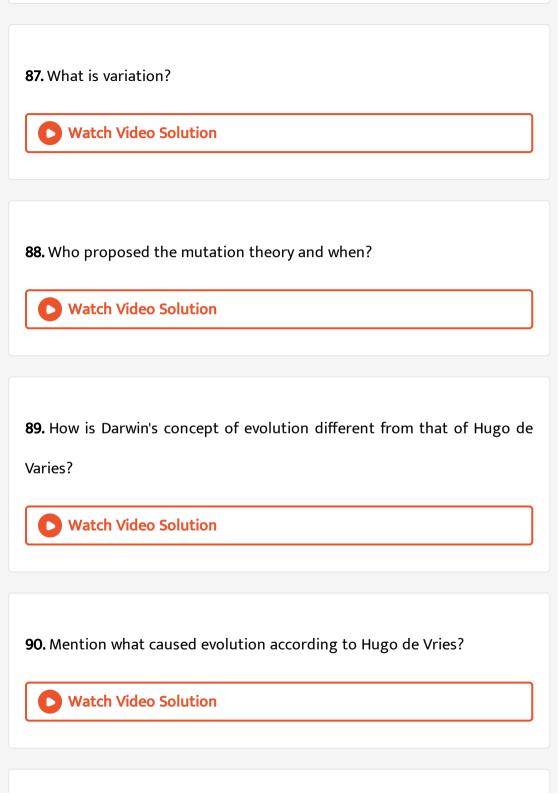


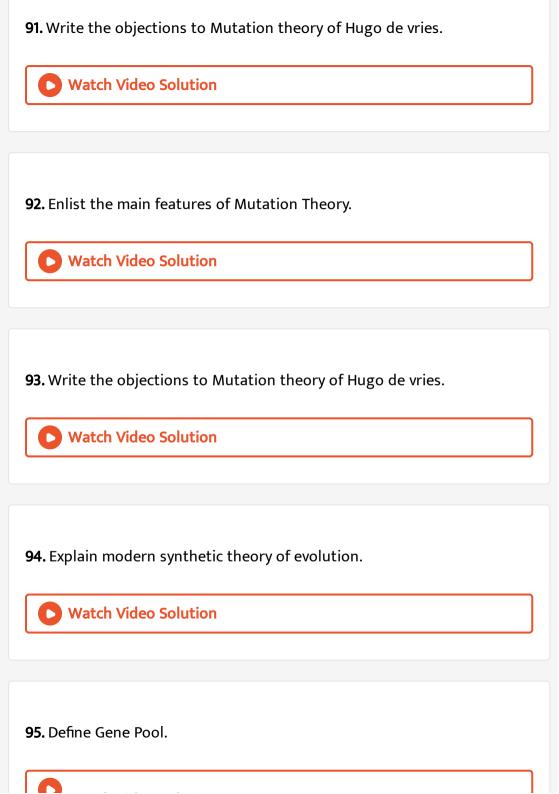
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71. Write a short on Overproduction.
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72. Explain the 2nd postulate of Darwinism
Watch Video Solution
73. Write a short note on AIDS.
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74. Distinguish between: Intraspecific Struggle and Interspecific Struggle.
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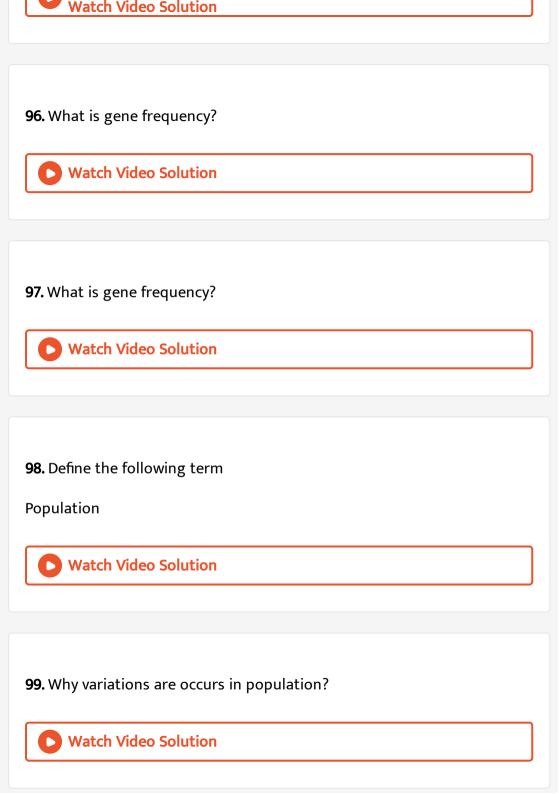
75. Explain the 3rd postulate of Darwinism
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76. Write a short note on Organic variations.
Watch Video Solution
77. Explain the 4th postulate of Darwinism.
Watch Video Solution
78. Write a short note on mammals.
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79. When we say "survival of fittest" does it mean that
(a) Those which are fit only survive or
(b) Those that survive called fit.
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80. When we say "survival of fittest" does it mean that
(a) Those which are fit only survive or
(b) Those that survive called fit.
Watch Video Solution
81. How does fitness of a population help in evolution?
Watch Video Solution
82. Who named natural selection as suvival of the fittest?

Watch Video Solution
83. Explain the 5th postulate of Darwinism.
Watch Video Solution
84. Write a short note on AIDS.
Watch Video Solution
85. Answer the following question:
What were the objections raised against Darwinism?
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86. What is mutation?
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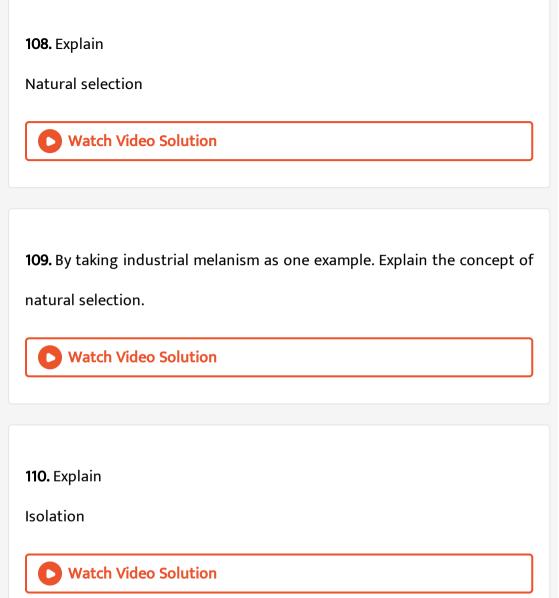






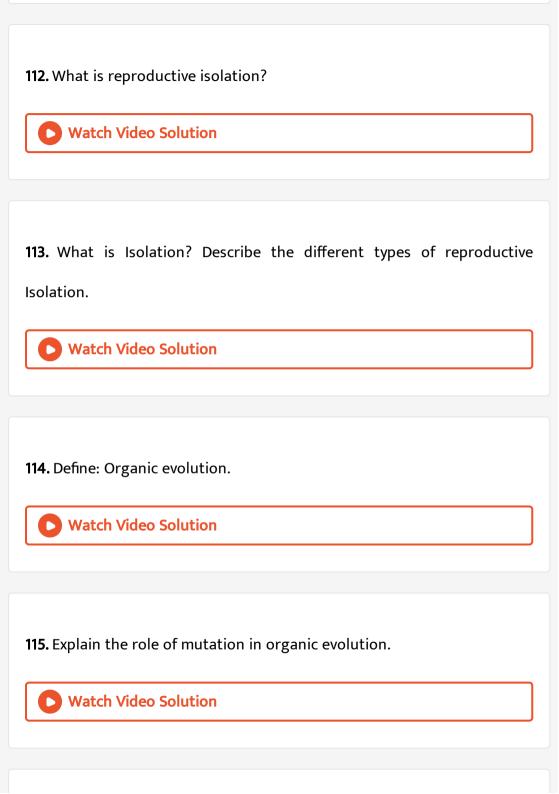
100. Explain modern synthetic theory of evolution.
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101. Enlist the different factors that are responsible for changing gene frequency.
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102. Write a short note on Gene mutation.
Watch Video Solution
103. Write a short note on Genetic recombination.
Watch Video Solution

104. Write a short note on Gene flow. Watch Video Solution 105. Write a note on Genetic drift. Watch Video Solution 106. If the variation occur in population by chance alone and not by natural selection and bring change in frequencies of an allele. What is it called? **Watch Video Solution** 107. Write a short note on Chromosomal aberrations. **Watch Video Solution**



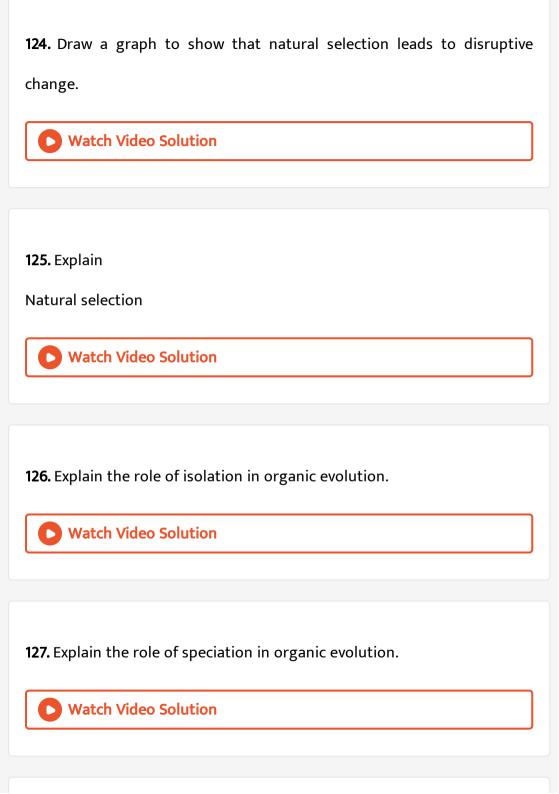
111. Explain briefly about geographical isolation.





116. Explain the role genetic recombination in organic evolution.
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117. Explain the role gene flow in organic evolution.
Watch Video Solution
118. Explain the role of genetic drift in organic evolution. Watch Video Solution
119. What is founder effect?
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120. Answer the following questions: How does the rate of rection depend on the nature of the reactants? Illustrate with suitable example. **Watch Video Solution** 121. Write a short note on: Mitosis. **Watch Video Solution 122.** What is directional natural selection. Illustrate with suitable example. **Watch Video Solution 123.** What is disruptive selection? Give example. **Watch Video Solution**



128. State the Hardy-Weinberg equilibrium.



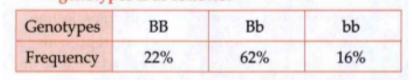
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129. Explain Hardy - Weinberg's Principle.



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130. In a certain population, the frequency of three genotypes is as follows:

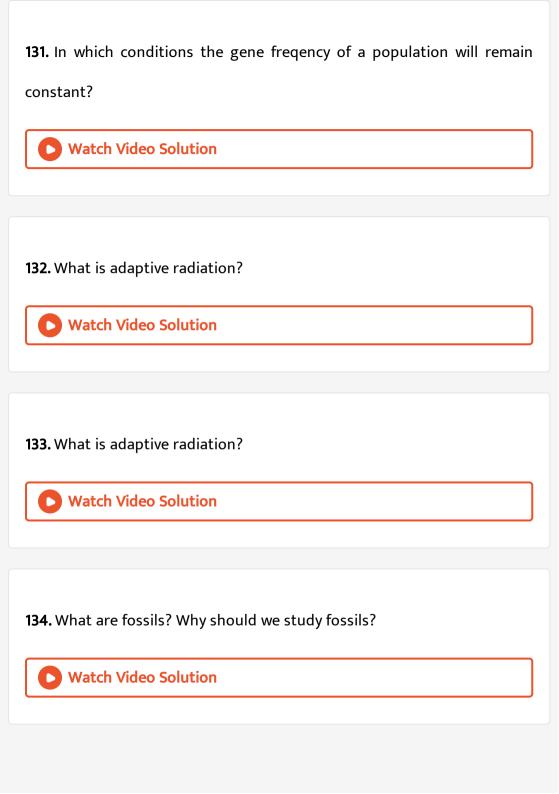


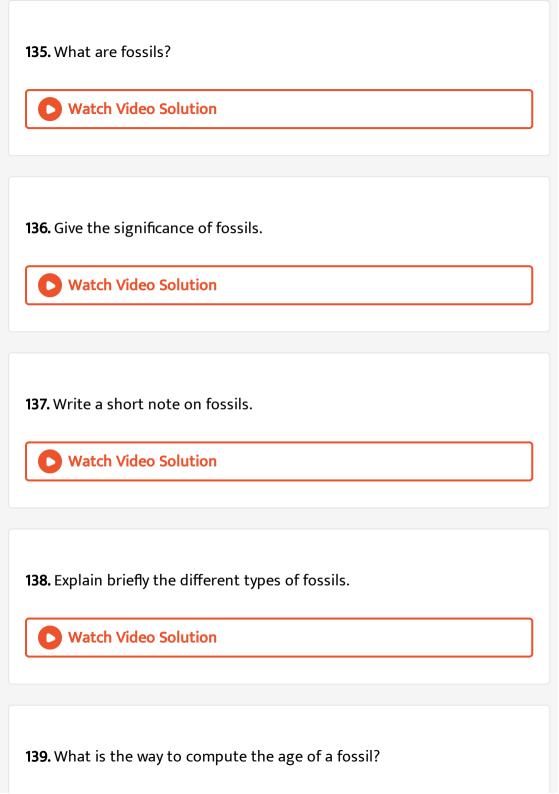
What is the

likely frequency of alleles 'B' and 'b'?

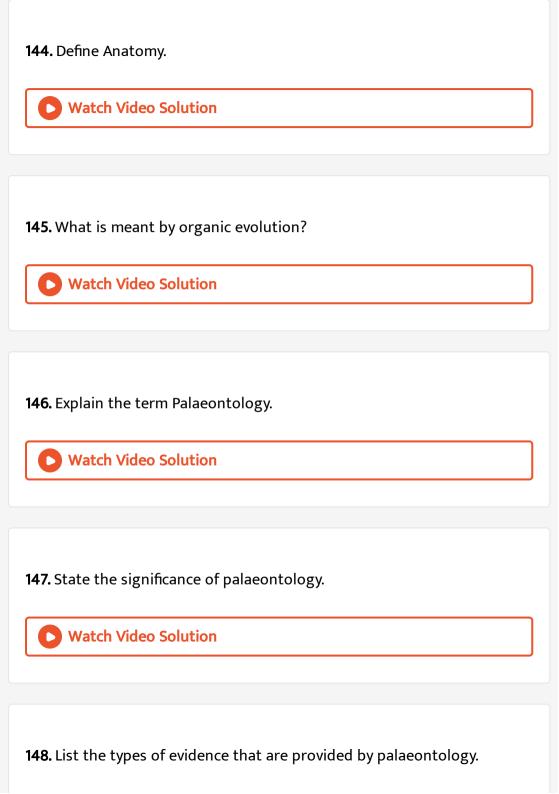


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140. How do we find age of fossils?
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141. Where do we find fossils?
Watch Video Solution
142. What is Homologous organs?
Watch Video Solution
143. What is Embryology?
Watch Video Solution



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149. How does paleontological evidence support evolution of organisms on earth?
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150. Explain briefly the connecting link/missing link.
Watch Video Solution
151. What is carbon dating and how does it work?
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152. Explain Evolutionary aspects.
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153. What is Homologous organs? **Watch Video Solution** 154. Would you consider wings of butterfly and bat as homologous or analogous and why? **Watch Video Solution** 155. Explain briefly Analogous organs examples. **Watch Video Solution** 156. Distinguish between: Homologous organs and Analogous organs. **Watch Video Solution**

157. Define vestigial organs. Write any two names of vestigial organs in human body.



158. Explain the embryological evidence of evolution.



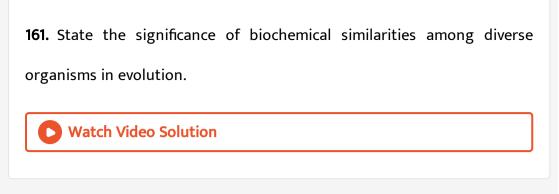
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159. All vertebrate embryos show some similarities at an early stage. Mentions two such similarities. What do they indicate? Explain?



160. Explain Molecular/Biochemical evidence of evolution.





162. Define speciation. Give examples of any two factors causing speciation.

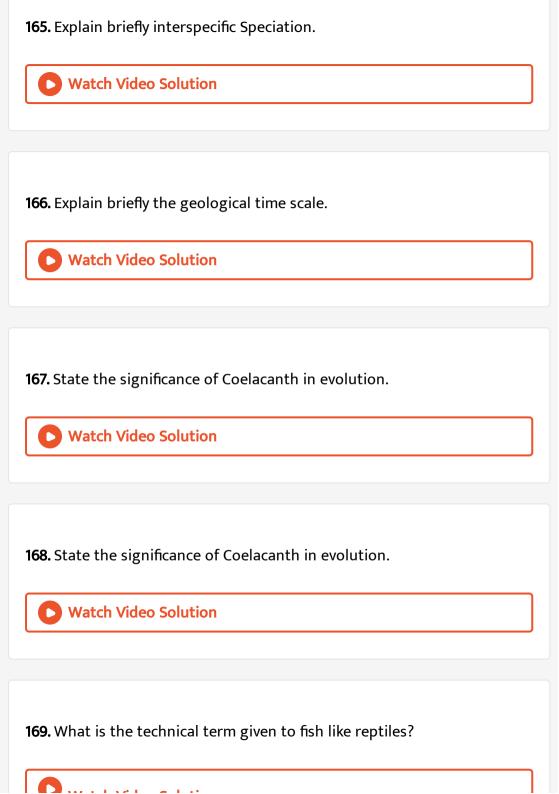


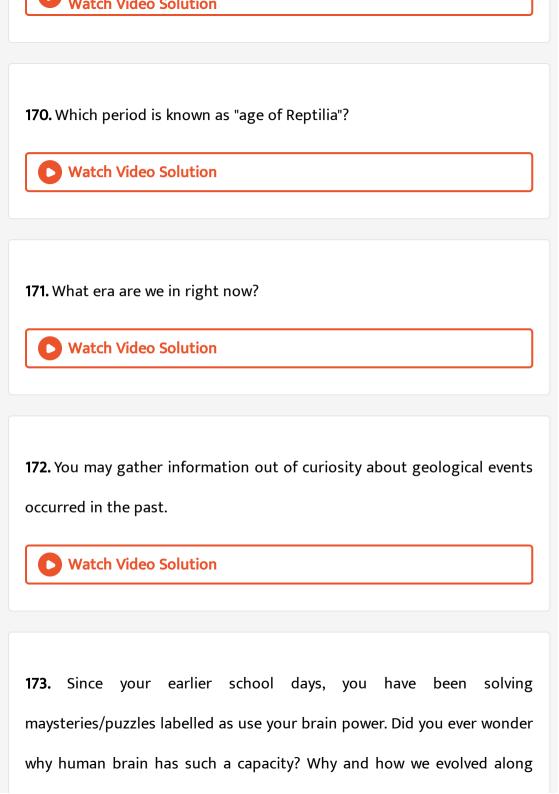
163. State the different modes for formation of new species.

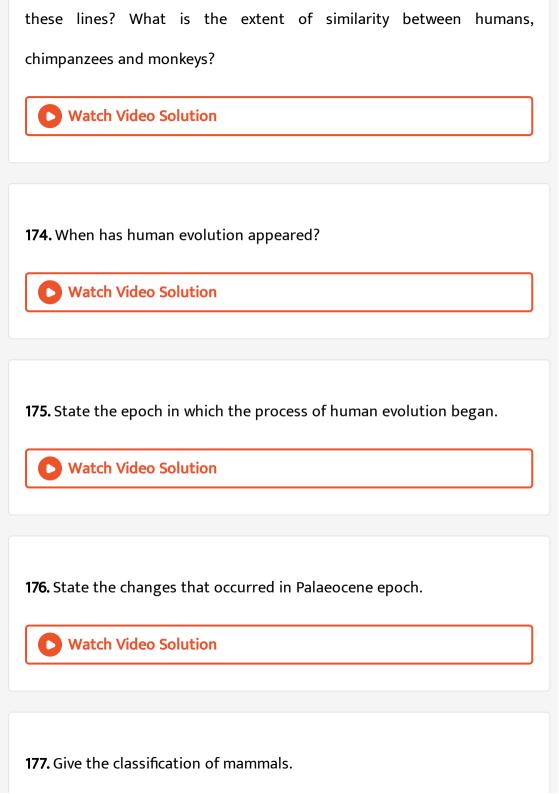


164. Explain briefly intraspecific Speciation.









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178. Why has the cranial capacity increased of human beings?
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179. State the significance of opposable thumb.
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180. What helped man to move around safely on land?
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181. How was evolutionary history of man traced?
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182. Trace the various components of evolution.
Watch Video Solution
183. State the process of human evolution.
Watch Video Solution
184. State the epoch in which the process of human evolution began.
Watch Video Solution
185. What is the scientific name of modern man?
Watch Video Solution

186. Name the ancestor of human which is described as man with ape brain.



187. Recently a fossil park has been established in Gadchiroli district of Maharashtra state. Find more information about Wadadham fossil park.



188. Find out information about caves in India. One such place is in Madhya Pradesh. It is at Bhimbetka rock shelter in Raisen district. Here we can see cave paintings by prehistoric huamns.



189. Distinguish between skull of Ape and skull of Man.

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190. Distinguish between Ape and Human:
Watch Video Solution
191. Distinguish between Ape and Human:
Watch Video Solution
192. Distinguish between Ape and Human:
Watch Video Solution
193. Distinguish between Ape and Human:
Watch Video Solution

194. Nearderthal Man:



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195. Distinguish between Ape and Human:



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196. Match entries in Colum I with those of Column II and choose the correct answers:

	Column I		Column II
(1)	August Weismann	(a)	Mutation theory
(2)	Hugo de Vries	(b)	Germplasm theory
(3)	Charles Darwin	(c)	Theory of acquired characters
(4)	Lamarck	(d)	Theory of natural selection



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1. Who proposed that the first form of life could have come from pre-
existing non living organic molecules?

A. Alfred Wallace

B. Drosophila

C. Charles Darwin

D. Louis Pasteur

Answer:



2. The sequence of origin of life may be.

A.

 $Organic materials
ightarrow \ \in \ \ {
m or} \ \ {
m \it ganic materials}
ightarrow {
m \it Eobiont}
ightarrow {
m \it colloi}$

B. $\textit{In or } \textit{ganicmaterials} \rightarrow \textit{ or } \textit{ganicmaterials} \rightarrow \textit{colloidalaggregate}$

C. $Organic materials
ightarrow ext{ or } ganic materials
ightarrow colloidal
ightarrow aggregate$

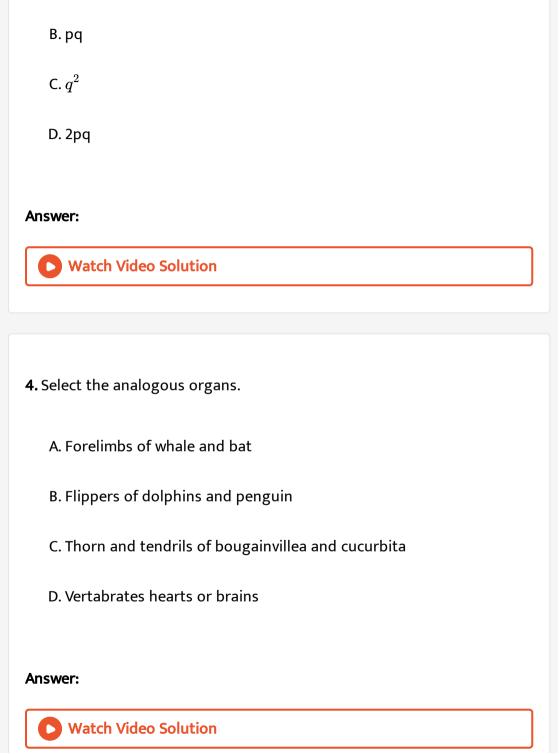
D.

 $In \,\, {
m or} \,\, ganicmaterials
ightarrow \,\, {
m or} \,\, ganicmaterials
ightarrow \,\, Eobiont
ightarrow \,\, colloid$

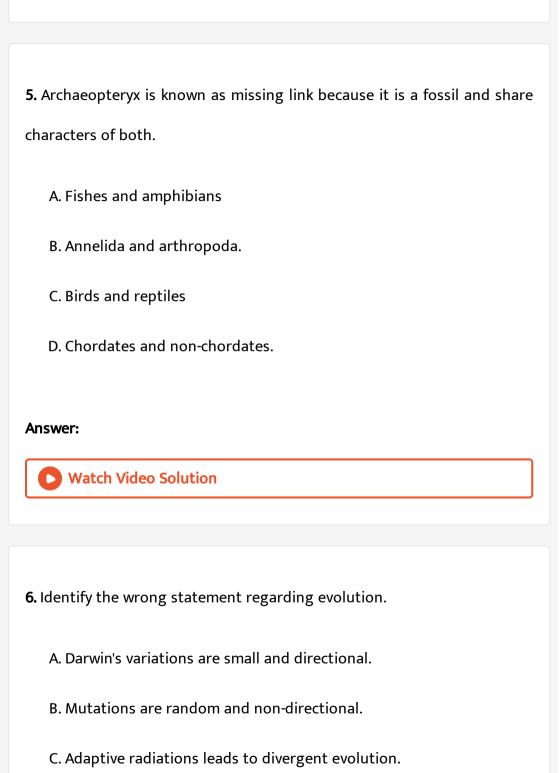
Answer:



3. In Hardy-Weinberg equation, the frequency of homozygous recessive individual is represented by:



A. P^2



D. Mutations are non-random and directional.
Answer:
Watch Video Solution
7. Gene frequency in a population remain constant due to-
A. Mutation
B. Migration
C. Random mating
D. Non- random mating
Answer:
Watch Video Solution
8. Which of the following characteristic is not shown by the ape?

A. Prognathous face
B. tail is present
C. Chin is absent
D. forelimbs are lonfger than limbs
Answer:
Watch Video Solution
9can be considered as connecting link between ape and man.
A. Australopithecus
B. Homo habilis
C. Homo erectus
D. Neanderthal man.
Answer:
Watch Video Solution

10. The Cranial capacity of Nanderthal man was
A. 600 cc
В. 940 сс
C. 1400 cc
D. 1600 cc
Answer:
Watch Video Solution
11. About 15 billion years ago, single titanic explosion occurred which is
known as
A. Terror blast
B. Bombing
C. Big Bang

D. Holocaust
Answer: Watch Video Solution
12 years ago, earth was formed.
A. 4.6 million years
B. 4.6 billion years
C. 2.6 billion years
D. 1.6 billion years
Answer:
Watch Video Solution
13. Protobiogenesis refers as

A. The origin of protozoans on the earth B. The origin of life on the earth C. The origin of protons on the earth D. The origin of protists on the earth **Answer: Watch Video Solution** 14. According to the, all the living beings on the earth were created by God. A. Theory of chemical evolution B. Theory of abiogenesis C. Theory of special creation D. Theory of panspermia Answer:

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- A. DNA, RNA and uncleotides
- B. Water, Ammonia, Methane
- C. Salt, Sugar, Proteins
- D. Oxygen, CFC, Ozone

Answer:



- 16. The primitive sea containing molecules of organic substance free of
-is known as Hot dilute soup of primitive broth.
 - A. Sulphur
 - B. Carbon

D. Oxygen
Answer:
Watch Video Solution
7. What is considered as a landmark in the origin of life?
A. Formation of proteins
B. Formation of carbohydrates
C. Formation of oxygen
D. formation of water
Answer:
Watch Video Solution

C. Nitrogen

18. The first form of life on earth consisting of nucleic acid along with
inorganic and organic molecules are known as
A. Cocervates
B. Protoproteins
C. Pre-cells or Protobionts

D. Chromophores

Answer:



19. Name the island where Darwin visited while formulating the theory of Natural selection.

A. Seychells

B. Galapagos

C. Phuket

Answer:
Watch Video Solution
20. The prebiotic atmosphere of the earth was
A. aerobic
B. anaerobic
C. partially aerobic
D. without any gas
Answer:
Watch Video Solution

D. Mauritius

21. The sum total of genes present in all individuals of interbreeding or Mendelian population is called
A. gene frequency
B. gene pool
C. gene flow
D. gene mutation
Answer: Watch Video Solution
22. Which of the following theory states that, the life originated on the earth from non-living matter?

A. Theory of chemical evolution

B. Physical Theory

C. mutation Theory

Answer:
Watch Video Solution
23. The struggle between organisms of different species is called
A. Intraspecific struggle
B. Interspecific struggle
C. Environment struggle
D. Struggle against Natural Calamities
Answer:
Watch Video Solution

D. Biogenesis

24. Recently an almost complete lower jaw of a Dryopithecus has been obtained from......

A. Fayum deposits of Egypt

B. Cave near Peking in China

C. Neanderthal valley in Germany

D. Haritalyanga in Bilaspur district of Himachal Pradesh

Answer:



25. The cranial capacity of Cro-Magnon man was about...........

A. 800 cc

В. 900 сс

C. 1450 cc

D. 1600 cc

Answer:
Watch Video Solution
26. The phenomenon of industrial melanism demonstrates-
A. natural selection
B. induced mutations
C. reproductive isolation
D. geographical isolation
Answer:
Watch Video Solution
27. The theory of natural selection was proposed by
A. J.B.S. Haldane

B. Sydney fox
C. Charles R. Darwin
D. Oparin
Answer:
Watch Video Solution
28. Mutation theory was proposed by which scientist?
A. Hugo de Vries
B. Oparin
C. Wallace
D. J. Huxley
Answer:
Watch Video Solution

29. Name of ship by which Darwin travelled during his famous voyages.
A. H.M.S. Beagle
B. Superstar Libra
C. Challenger
D. Titanic
Answer:
Watch Video Solution
30. On which plant did Hugo de Vries work during his experimentations?
A. Vinca rosea
B. Oenothera lamarckiana
C. Mirabilis jalapa
D. Solanam nigrum

Watch Video Solution
Watch video solution
31. The struggle between the organisms of same species is called :
A. Intraspecific struggle
B. Interspecific struggle
C. Environment struggle
D. Struggle against Natural Calamities
Answer:
Watch Video Solution
32. is defined as a connecting link between amphibians and reptiles.

Answer:

A. Seymouria
B. Archaeopteryx
C. Ichthyostega
D. Lemurs
Answer:
Watch Video Solution
33is a missing link between fish and amphibian.
A. Lung fish protopterus
B. Seymouria and spenodon
C. Latimeria
D. All the above
Answer:
Watch Video Solution

34. Find the odd one out:
A. deletion
B. duplication
C. translocation
D. crossing over
Answer: Watch Video Solution
35. Find the odd one out
A. caecum
B. nictitating membrane
С. соссух

D. sternum
nswer:
Watch Video Solution
6. Those organs which are structurally similar but functionally dissimilar
re known as
A. vestigial organs
B. both a and b

a

Answer:

C. analogous organs

D. homologous organs

Watch Video Solution

37. Those organs which are functionless are known as:
A. vestigial organs
B. analogous organs
C. homologous organs
D. asymmetrical organs
Answer:
Watch Video Solution
38 is a vestigeal organ in man.
A. Intestine
B. Lungs
C. Vermiform appendix
C. Vermiform appendix D. Spleen

Answer: Watch Video Solution 39. Find the odd one out..... A. Baboons B. Gibbons C. Macaques D. Langurs **Answer:** Watch Video Solution **40.** __can be considered as connecting link between ape and man. A. Lemurs and tarsiers

B. Tarsiers and new world monkey
C. Monkeys and apes
D. Apes and primitive man
Answer:
Watch Video Solution
41. Which of the following primitive man was nicknamed as handy man?
A. Homo habilis
B. Homo erectus
C. Homo soloensis
D. Homo heidelbergensis
Answer:
Watch Video Solution

42. The first fossil of Australopithecus was obtained from:
A. Taung in South Africa
B. Fayum deposits in Egypt
C. Cave near Peking in China
D. Himachal Pradesh
Answer:
Watch Video Solution
43. Dryopitheaus lives about 20 million years ago in :
A. Miocene epoch
B. Pliocene epoch
C. Oligocene epoch
D. Pleistocene epoch

Answer: Watch Video Solution 44. Cranial capacity of Australopithecus is about...... A. 400 to 600 cc B. 800 cc C. 900 cc D. 1600 cc **Answer:** Watch Video Solution 45. The cranial capacity of java ape man is about :..... A. 400 cc

B. 1450 cc
C. 900 cc
D. 1600 cc
Answer:
Watch Video Solution
46. The cranial capacity of Homo habilis is about:
A. 200 cc
B. 650 to 800 cc
C. 800 cc
D. 1600cc
Answer:
Watch Video Solution

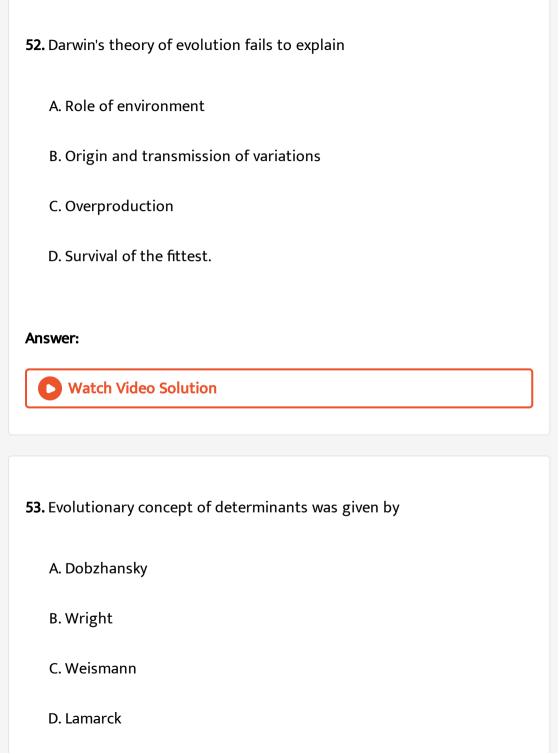
47. The Cranial capacity of Nanderthal man was
A. 400 cc
В. 900 сс
C. 1450 cc
D. 1600 cc
Answer:
Watch Video Solution
48. Java man lived about 5,00,000 years ago in:
48. Java man lived about 5,00,000 years ago in:
A. Miocene epoch
A. Miocene epoch B. Paleocene epoch

Answer: **Watch Video Solution** 49. Neanderthal man lived about 1,50,000 years ago in: A. late Pleistocene epoch B. Miocene epoch C. Middle Pleistocene epoch D. Oligocene epoch Answer: **Watch Video Solution**

50. Which human ancestor is chronologically nearest to us?

A. Australopithecus robustus

B. Australopithecus africanus C. Neanderthal man D. Homo erectus **Answer: Watch Video Solution** 51. Whose theory of evolution believes that every organism has an internal vital force? A. Lamarckism B. Hugo de Varies C. Darwinism D. All of these **Answer: Watch Video Solution**

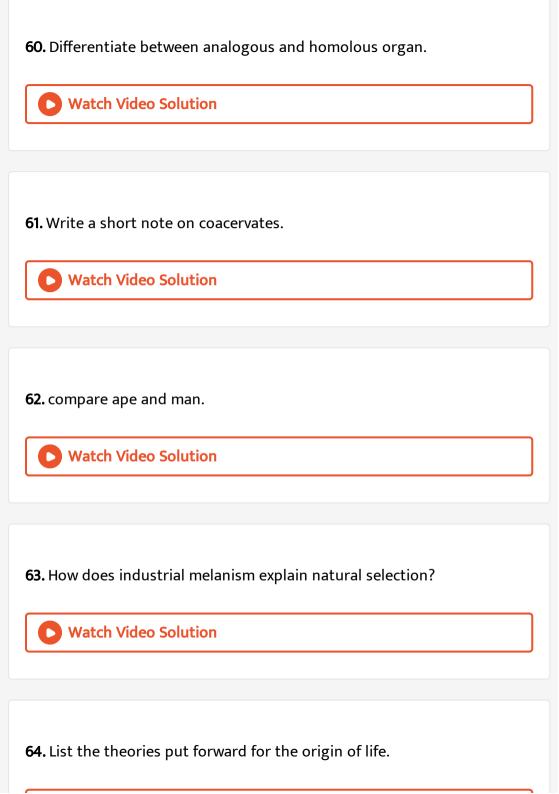


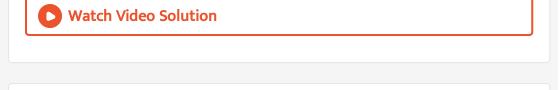
Answer: Watch Video Solution 54. State the evidences that favour Darwinism from the following given below: A. Struggle for existence B. Overproduction C. Survival of the fittest D. All the above Answer: Watch Video Solution

55. What kind of atmosphere was existing on primitive earth?



56. Name the naturalist who put forward the theory of natural selection along with Darwin. **Watch Video Solution** 57. Which gas was absent in the atmosphere at the time of origin of life? **Watch Video Solution** 58. What are the sources of genetic variability? **Watch Video Solution 59.** Archaeopteryx is a connecting link. Give reason **Watch Video Solution**





65. Enlist the main features of Mutation Theory.



66. Describe the Urey and Miller's experiment.

