

MULTIPLE CHOICE QUESTIONS

- Q1.** What was Louis Pasteur's observation about origin of life?
 (a) Life is pre-occupied
 (b) Life comes from only from pre-existing life
 (c) Life comes only from post-existing life
 (d) Nothing can be said about life
- Q2.** Who among the following proposed that life could have come from pre-existing non-living organic molecules and that formation of life was preceded by chemical evolution?
 (a) Louis Pasteur
 (b) Miller
 (c) Oparin and Haldane
 (d) Greek thinkers
- Q3.** Who among the following supported embryological evolution?
 (a) Charles Darwin
 (b) Ernst Heckel
 (c) Hugo de Varies
 (d) Miller
- Q4.** Who among the following rejected the proposal of Ernst Heckel's embryonic evolution?
 (a) Charles Darwin
 (b) Lamarck
 (c) Karl Ernst von Baer
 (d) None of the above
- Q5.** Who among the following wrote the book *Philosophique Zoologique*?
 (a) Lamarck (b) Haldane
 (c) Ernst Heckel (d) Darwin
- Q6.** Which of the following represents homology?
 (a) Cucurbita and Bougainvillea
 (b) Whales and bats
 (c) Eye of octopus and mammals
 (d) Both (a) and (b)
- Q7.** What do analogous structures like wings of butterfly and birds represent?
 (a) Divergent evolution
 (b) Adaptive radiation
 (c) Convergent evolution
 (d) All of the above
- Q8.** Which of the is a good example of Adaptive Radiation?
 (a) Moths
 (b) Darwin's finches
 (c) Tasmanian wolf
 (d) Sugar glider
- Q9.** Which among the following are the two key concepts of Darwinian Theory of Evolution?
 (a) Natural selection
 (b) Branching descent
 (c) Adaptive radiation
 (d) Both (a) and (b)
- Q10.** Which of the following is correct about Hardy Weinberg Principle?
 (a) The principle states that allele frequencies in a population are not stable and is not constant generation after generation
 (b) The principle states that allele frequencies in a population stable and is constant generation after generation
 (c) Both (a) and (b)
 (d) None of the above
- Q11.** What is gene pool?
 (a) Total number of genes in a population
 (b) Total number of genes and their alleles in a population
 (c) Total number alleles in a population
 (d) Frequency of alleles on a gene
- Q12.** Which among the following was the biggest dinosaur?
 (a) Ichthyosaurs
 (b) *Tyrannosaurus rex*
 (c) Lobefins
 (d) Tutara
- Q13.** What was the brain capacity of *Homo habilis*?
 (a) 350-450 cc
 (b) 550-650 cc
 (c) 650-800 cc
 (d) 800-900 cc
- Q14.** What were the features of *Homo erectus*?
 (a) Small brain with 500 cc brain capacity
 (b) Large brain with 500 cc brain capacity
 (c) Small brain with 900 cc brain capacity
 (d) Large brain with 900 cc brain capacity
- Q15.** Which of the following man used hides to protect their body and buried their dead?
 (a) Dryopithecus
 (b) Neanderthal
 (c) *Ramapithecus*
 (d) *Homo habilis*
- Q16.** When dis *Homo sapiens* arose?
 (a) 6500o- 75,000 years ago
 (b) 75,000-80,000 years ago
 (c) 75,000-10,000 years ago
 (d) 10,000-12,000 years ago
- Q17.** Which among the following is correct about Neo-Darwinism?
 (a) Mutation is responsible for evolution
 (b) Genetic drift is responsible for evolution
 (c) Natural drift is responsible for evolution
 (d) Adaptive radiation is responsible for evolution

Q18. What type of organs are shown the following picture?

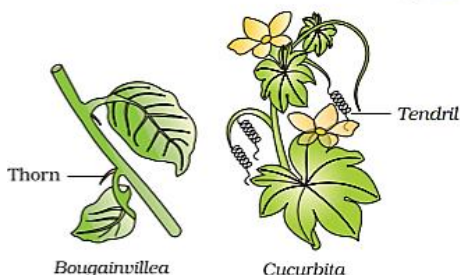


- (a) Analogous organs
 - (b) Homologous organs
 - (c) Modified organs
 - (d) Stripped organs
- Q19.** What is the cause of Founder's effect in a population?
- (a) Mutation
 - (b) Natural selection
 - (c) Genetic drift
 - (d) Gene flow
- Q20.** The process of evolution of different species in a given geographical area starting from a point and radiating to other areas of habitat is called as.
- (a) Saltation
 - (b) Adaptive radiation
 - (c) Founder's effect
 - (d) Divergent evolution
- Q21.** Which hominid fossil was discovered in Java that had a cranial capacity of 900cc?
- (a) Neanderthal man
 - (b) Ramapithecus
 - (c) Homo erectus
 - (d) Homo sapiens
- Q22.** Where can we see pre-historic cave paintings done by humans?
- (a) Uttar Pradesh
 - (b) Madhya Pradesh
 - (c) Orissa
 - (d) West Bengal
- Q23.** Which of the following is correct about Natural Selection?
- (a) It leads to stabilization
 - (b) It leads to directional change
 - (c) It leads to disruption
 - (d) All of the above
- Q24.** Which of the following shows convergent evolution?
- (a) Flippers of Dolphins and penguins
 - (b) Vertebrae heart and brain
 - (c) Bones of the fore-limbs of cheetah and whales
 - (d) Tendrils of *Cucurbita* and *Bougainvillea*
- Q25.** Which of the following is correct about anthropogenic action?

- (a) It tells us that evolution is not a directed process
- (b) It tells that evolution is a stochastic process
- (c) It tells that evolution is based on chance events in nature and chance mutation in an organism.
- (d) All of the above

- Q26.** Who among the following used the term saltation?
- (a) Lamarck
 - (b) Ernst Heckel
 - (c) Haldane
 - (d) deVries
- Q27.** Who among the following was of the view that evolution of life forms had occurred by the use and disuse of organs?
- (a) Darwin
 - (b) Ernst Heckel
 - (c) Lamarck
 - (d) Thomas Malthus
- Q28.** Which among the following can indicate industrial pollution?
- (a) Sponges
 - (b) Lichen
 - (c) Hydra
 - (d) Moth
- Q29.** When did conifers, cycads and ferns evolved?
- (a) Jurassic period
 - (b) Permian period
 - (c) Cretaceous period
 - (d) Devonian period
- Q30.** Which one of the following is the correct order of geological period from left to right?
- (a) Mesozoic, Cenozoic, Palaeozoic
 - (b) Cenozoic, Palaeozoic, Mesozoic
 - (c) Palaeozoic, Mesozoic, Cenozoic
 - (d) Mesozoic, Palaeozoic, Cenozoic
- Q31.** Which among the following is false statement?
- (a) Cycads evolved in Jurassic period
 - (b) Bryophytes evolved in Palaeozoic
 - (c) Dicotyledons evolved in Cretaceous period
 - (d) Lycopods evolved in Permian period
- Q32.** Which of the following is correct about first mammals?
- (a) They were dinosaurs
 - (b) They were like shrews
 - (c) They were like fishes
 - (d) They were reptiles
- Q33.** What did S.L Miller used in his electric discharge experiment?
- (a) Methane, Hydrogen, ammonia and water vapour
 - (b) Water vapour, Ammonium hydroxide, Hydrogen, methane
 - (c) Ammonium hydroxide, water vapour, Hydrogen, Methane
 - (d) Hydrogen, water vapour, oxygen, carbon monoxide
- Q34.** Who among the following influenced Darwin the most?
- (a) Ernst Heckel
 - (b) Thomas Malthus
 - (c) S.L Miller
 - (d) Lamarck

- Q35.** What is "Fitness" according to Darwin?
 (a) Mental Fitness
 (b) Physical fitness
 (c) Reproductive fitness
 (d) Overall fitness
- Q36.** What are fossils?
 (a) They are soft parts of life forms found in rocks
 (b) They are hard parts of life forms found in rocks
 (c) They are liquid parts of life forms found in rocks
 (d) They are soft parts of life forms found in soil
- Q37.** Where are the fossils generally found?
 (a) Igneous rocks
 (b) Metamorphic rocks
 (c) Volcanic eruptions
 (d) Sedimentary rocks
- Q38.** What are evidences obtained from fossils called?
 (a) Embryological evidence
 (b) Palaeontological evidence
 (c) Convergent evidence
 (d) Divergent evidence
- Q39.** When did flowering plants evolved?
 (a) Triassic period
 (b) Tertiary period
 (c) Silurian period
 (d) Cretaceous period
- Q40.** Which among the following was a missing link between reptiles and birds?
 (a) Dodo
 (b) Archaeopteryx
 (c) Jawless fish
 (d) Synapsids
- Q41.** Which of the following is responsible for initiation of evolution?
 (a) Mutation
 (b) Natural selection
 (c) Variation
 (d) Genetic drift
- Q42.** Which among the following lived in the East African grasslands?
 (a) Ramapithecus
 (b) Australopithecines
 (c) Dryopithecus
 (d) Neanderthal man
- Q43.** Look at the picture and answer which type of evolution is represented by the thorns and tendrils of the plants?



- (a) Divergent evolution
 (b) Convergent evolution
 (c) Both (a) and (b)
 (d) None of the above

- Q44.** Which of the following indicated adaptive radiation
 (a) Moth and lichen
 (b) Eye of octopus and mammals
 (c) Placental wolf and Tasmanian wolf marsupial
 (d) Dinosaurs
- Q45.** Which among the following is the earliest geological period in the period of evolution?
 (a) Mesozoic
 (b) Cenozoic
 (c) Palaeozoic
 (d) None of the above
- Q46.** Who among the following wrote "The Origin of Species"?
 (a) Lamarck
 (b) Darwin
 (c) Thomas Malthus
 (d) Heckel
- Q47.** Who among the following gave the theory of Pangenesis?
 (a) Darwin
 (b) Lamarck
 (c) Miller
 (d) Malthus
- Q48.** Which of the following is the Age of Reptiles?
 (a) Cenozoic
 (b) Mesozoic
 (c) Palaeozoic
 (d) None of the above
- Q49.** Which among the following molecule was absent from the earth's atmosphere, according to scientist Oparin?
 (a) Oxygen
 (b) Water
 (c) Carbon di oxide
 (d) Methane
- Q50.** What is the age of earth according to the theory of special creation?
 (a) 2000 year's old
 (b) 3000 year's old
 (c) 4000 year's old
 (d) 5000 year's old

ASSERTION AND REASON

Direction: in the following questions, a statement of assertion (A) is followed by a statement of reason (R). Choose the correct option among a, b, c and d.

- Q1.** Assertion (A): Natural selection is a process in which heritable variations enabling better survival are enabled to reproduce and leave greater number of progeny.
 Reason (R): Natural selection can lead to stabilisation, directional change or disruption.
 (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A)
 (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A)
 (c) Assertion (A) is true but reason(R) is false
 (d) Assertion (A) is false but reason(R) is true