

NEET BIOLOGY

Topic: Evolution

- Which of the following is a fish – like reptile probably existed about 200 mya?
 - Ichthyophis*
 - Ichthyosaur*
 - Archaeopteryx*
 - Seymouria*
- The biggest dinosaur was –
 - Tyrannosaurus rex*
 - Ichthyosaur*
 - Ophiosaurus*
 - Dryopithecus*
- About how many years ago, the dinosaurs suddenly disappeared from the earth?
 - 100 mya
 - 45 mya
 - 65 mya
 - 165 mya
- Which of the following is not true?
 - Small sized reptiles of Mesozoic era still exist today.
 - Climatic changes killed dinosaurs.
 - The first reptiles were like shrews
 - Fossils of first mammals are small sized.
- Pouched mammals of Australia show restricted distribution because
 - They are more adapted than placental mammals
 - Lack of competition from other mammals due to continental drift.
 - They were intelligent in sensing & avoiding danger.
 - They have marsupium for parental care.

6. About 15 mya, which of the following primates were existing?
- (a) *Homo sapiens neanderthalensis*
 - (b) *Dryopithecus* and *Homo habilis*
 - (c) *Dryopithecus* was more ape – like
 - (d) *Homo habilis* and *Homo erectus*
7. Which of the following statement is *incorrect*?
- (a) *Dryopithecus* was hairy and walked like gorillas and chimpanzees.
 - (b) *Ramapithecus* was more man – like
 - (c) *Dryopithecus* was more ape – like
 - (d) *Homo erectus* discovered in *Australia*
8. Australopithecines probably lived in East African grasslands about
- (a) 5 mya
 - (b) 25000 ya
 - (c) 2 mya
 - (d) 70000 ya
9. The first human – like being the hominid was called
- (a) *Ramapithecus*
 - (b) *Homo habilis*
 - (c) *Homo erectus*
 - (d) *Homo sapiens*
10. The brain capacity of *Homo habilis* was between:-
- (a) 500 – 600 CC
 - (b) 800 – 1000 CC
 - (c) 1100 – 1300 CC
 - (d) 650 – 800 CC

15. Natural selection acts to decrease the frequency of which phenotypes in a population:-
- (a) The most common phenotype
 - (b) the average phenotypes
 - (c) Most conspicuous (identifiable) phenotype
 - (d) the most camouflaged phenotypes
16. Anatomical structure that show similar function but dissimilar embryonic and evolutionary background are said to be:-
- (a) Vestigial
 - (b) Homologous
 - (c) Primitive
 - (d) Analogous
17. Which of the following individuals has the greatest fitness?
- (a) An individual who is homozygous for sickle cell anemia living in malaria – free area
 - (b) An individual who has normal haemoglobin living in malaria infested area
 - (c) An individual who is heterozygous for a sickle – cell trait living in malaria infested area
 - (d) An individual who is heterozygous for sickle – cell anemia living in malaria – free area
18. Early Greek thinkers thought that the unit of life called spores was transferred to different planets including earth. This is the explanation of theory of :
- (a) Spontaneous generation
 - (b) Panspermia
 - (c) Creationism
 - (d) Catastrophism
19. Which of the following theory talks of a singular huge explosion unimaginable in physical terms and leads to formation of universe ?
- (a) Theory of special creation
 - (b) Nebular hypothesis
 - (c) Big Bang theory
 - (d) Theory of spontaneous generation.

20. Which of the following statement is **incorrect**:-
- (a) Oparin – Haldane theory proposed that formation of life was preceded by chemical evolution.
 - (b) The conditions on earth were :- high temperature, volcanic storms, reducing atmosphere, etc.
 - (c) Temperature on earth was about 800°C .
 - (d) Analysis of meteorite content also revealed similar compounds like Miller's experiment indicating that similar processes are occurring elsewhere in space.
21. Identify the correct statement regarding first living system of earth ?
- (a) They were originated in ocean.
 - (b) They were anaerobic, chemoautotroph and prokaryotic
 - (c) The first form of life arose slowly through evolutionary forces from non-living molecules, i.e. abiogenesis
 - (d) These were most probably chemoheterotrophs and aerobic organisms.
22. Which of the following is not the connotation of theory of special creation?
- (1) All living organisms (species or types) that we see today were created as such
 - (2) That the diversity was always the same, since creation & will be the same in future also
 - (3) That earth is about 4000 years old.
- Choose :-
- (a) 1 only
 - (b) 1 & 2 only
 - (c) 1, 2 & 3
 - (d) None of these
23. Which of the following is true of homologous structures?
- (a) They are characteristics present in two species that were not present in their common ancestor.
 - (b) They are characteristics present in their common ancestors.
 - (c) They are generally result from convergent evolution.
 - (d) Both (a) and (c) are true.

24. In a population, the melanic (black winged) variety of *Biston betularia*, is due to a dominant allele. Mm and MM individuals are black, and mm individuals are white. In the population, 81% individuals are white coloured, and 19% black coloured. Assuming the Hardy Weinberg equilibrium, What is the approximate frequency of the melanic (M) allele in the population?
- (a) 0.81
 - (b) 0.19
 - (c) 0.90
 - (d) 0.10
25. Which of the following is **not** related with Darwinism?
- (a) living forms share similarities to varying degrees not only among themselves but also with life forms that existed millions of years ago
 - (b) There has been gradual evolution of life.
 - (c) Any population has built in variation in characteristics.
 - (d) The fitness refers ultimately and only to physical fitness.
26. Fill the blanks :-
- Alfred Wallace, a naturalist who worked inA..... had also come toB.....conclusions likeC.....
- (a) A – Galapagos, B – Dissimilar, C – Lamarck
 - (b) A - Galapagos, B – Similar, C – Darwin.
 - (c) A – Malay Archipelago, B – Similar, C –Darwin
 - (d) A – Malay Archipelago, B – different, C – Malthus
27. The only fundamental requirement for evolution to occur is
- (a) Natural selection
 - (b) Genetic drift
 - (c) Variation
 - (d) Balancing selection

28. Consider following statements:-

- (1) Natural selection is one of several mechanisms of evolution
- (2) Variation is a prerequisite for evolution
- (3) There can be evolution without natural selection, but cannot be without variation.
- (4) The ultimate source of all genetic variation is natural selection.

Choose **correct** combination:-

- (a) 1 & 2 only
- (b) 1, 2 & 4 only
- (c) 1, 2 & 3 only
- (d) 1, 2,3 & 4

29. Which of the following is not true with respect to mutations :-

- (a) Mutations can be harmful, useful as well as neutral.
- (b) The effect of the mutations will often depend on the current environment of the organism.
- (c) “Harmful” mutation does necessarily mean “deadly”.
- (d) Mutations are rare events.

30. Fill in the blanks:-

.....A.....andB..... work by re-organizing and re-arranging existing alleles andC.....is the only source of completely new alleles.

- (a) A – Mutation, B – Natural selection, C –Gene flow.
- (b) A – Gene flow, B – Mutation, C – Sexual selection
- (c) A – Gene flow, B – Mutation, C – Genetic drift
- (d) A – Recombination, B – Gene flow, C – Mutation

ANSWER KEY

| | | | | | | | | | | |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Que. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Ans. | B | A | C | C | B | B | D | C | B | D |
| Que. | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Ans. | C | B | B | B | C | D | C | B | C | c |
| Que. | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| Ans. | A | D | B | D | D | C | C | C | C | D |

