



CET25B6 EVOLUTION

Class 12 - Biology

Time Allowed: 1 hour and 30 minutes

Maximum Marks: 75

1. Which one is a vestigial organ in man? [1]
 - a) Iris
 - b) Pinna muscles
 - c) Malleus
 - d) Nasal epithelium
2. Which gas was probably least abundant in the early atmosphere? [1]
 - a) O₂
 - b) CO₂
 - c) NH₃
 - d) H₂O
3. One of the important consequences of geographical isolation is: [1]
 - a) Speciation through reproductive isolation
 - b) No change in the isolated fauna
 - c) Preventing speciation
 - d) Random creation of new species
4. The concept of evolution was given by: [1]
 - a) Darwin
 - b) Lamarck
 - c) Aristotle
 - d) Empedocles
5. Struggle for existence and survival of the fittest theories were given by: [1]
 - a) Wallace
 - b) Both Lamarck and Darwin
 - c) Lamarck
 - d) Darwin
6. Which was not present in primitive atmosphere? [1]
 - a) Free oxygen
 - b) Water
 - c) Methane
 - d) Ammonia
7. Darwin in his **Natural selection** theory did not believe in any role of which of the following in organic evolution? [1]
 - a) Survival of the fittest
 - b) Discontinuous variations
 - c) Parasites and predators as natural enemies.
 - d) Struggle for existence
8. Coacervates are: [1]
 - a) Protein and lipid aggregates.
 - b) Protobionts having polysaccharides + proteins + water.
 - c) Both Protein aggregates and Protein and lipid aggregates.
 - d) Protein aggregates
9. Who was famous Indian Palaeontologist? [1]

- a) G.J. Mendel
c) Prof-Birbal Sahni

b) Sutton
d) T.H. Morgan

10. There are two opposing views about origin of modern man. According to one view, Homo erectus in Asia were the ancestors of modern man. A study of variations of DNA however suggested African origin of modern man. What kind of observations on DNA variations could suggest this? [1]

a) Greater variation in Africa than in Asia.
c) Similar variations in Africa and Asia.

b) Greater variation in Asia than in Africa.
d) Variations only in Asia and no variation in Africa.

11. H.M.S. Beagle is associated with which scientist? [1]

a) Columbus
c) Lamarck

b) Wallace
d) Darwin

12. The tendency of population to remain in genetic equilibrium may be disturbed by: [1]

a) Lack of mutations
c) Random mating

b) Lack of random mating
d) Lack of migration

13. Coacervates are [1]

a) Protobiont
c) Colloidal droplets

b) Contain nucleoproteins
d) Both Colloidal droplets and Contain nucleoproteins

14. Which one of the following is linked to evolution? [1]

a) Competition
c) Variations

b) Reproduction
d) Extinction

15. Tendril of Cucurbita and thorns of Bougainvillea are: [1]

a) Homologous organs
c) Vestigial organs

b) Both Homologous organs and Analogous organs
d) Analogous organs

16. Phylogenetic system of classification was proposed by: [1]

a) Oswald Tippo
c) Lamarck

b) Linnaeus
d) Hutchinson

17. Homo sapiens arose in Africa and moved across continents and developed into distinct races during: [1]

a) Ice age between 5000-6000 years ago
c) Ice age between 75000-10,000 years ago

b) Stone age between 2000-4000 years ago
d) Stone age between 10,000 years ago

18. Which of the following is not a factor that affects Hardy-Weinberg equilibrium? [1]

a) Migration
c) Vegetative propagation

b) Mutation
d) Genetic drift

19. Natural selection really means: [1]

- c) Vestigial organs
d) Analogous organs
31. Mammals evolved from: [1]
a) Both Birds and Reptiles
b) Birds
c) Reptiles
d) Amphibians
32. Theory of random genetic drift was proposed by: [1]
a) Meyer
b) Hardy-Weinberg
c) Swell Wright
d) R.A. Fischer
33. Hardy-Weinberg principle states that allele frequencies in a population are stable and is: [1]
a) Varies from generation to generation
b) Constant up to second generation
c) Constant from generation to generation
d) Constant for the second generation
34. Presence of different types of beaks in finches of Galapagos islands adapted to different feeding habits provides evidence of: [1]
a) Intraspecific competition
b) Natural selection
c) Interspecific competition
d) Interspecific variations
35. Ontogeny repeats phylogeny is narrated in which of the evidences of organic evolution? [1]
a) Palaeontological evidences
b) Anatomical evidences
c) Physiological evidences
d) Embryological evidences
36. Homo erectus had a large brain around: [1]
a) 1500 cc
b) 1400 cc
c) 500 cc
d) 900 cc
37. Palaeontology is study of: [1]
a) Both Insects or Fossils
b) Birds
c) Fossils
d) Insects
38. Cranial-cavity of modern man is: [1]
a) 1200-1600 cc³
b) 900-1000 cc³
c) 600-900 cc³
d) 450-650 cc³
39. The common origin of man and chimpanzee is best shown by: [1]
a) Chromosomes
b) Dental formula
c) Binocular vision
d) Cranial capacity
40. Biogenetic law was proposed by: [1]
a) Hugo de Vries
b) Haeckel
c) Darwin
d) Lamarck
41. Which of the following variations are temporary and have nothing to do with the last or next generation? [1]
a) Both Hereditary variations and Discontinuous variations
b) Discontinuous variations

- c) Hereditary variations
d) Environmental variations

42. The brain capacity of *Homo erectus* was about: [1]
a) 1200 c.c.
b) 650 c.c.
c) 900 c.c.
d) 1400 c.c.

43. The extinct human who lived 1,00,000 to 40,000 years ago, in Europe, Asia, and parts of Africa, with short stature, heavy eyebrows, retreating foreheads, large jaws with heavy teeth, stocky bodies, a lumbering gait and stooped posture was. [1]
a) Neanderthal human
b) *Homo habilis*
c) Cro-Magnon human
d) *Ramapithecus*

44. Wings of birds and fore limbs of horse are: [1]
a) Homologous organs
b) Vestigial organs
c) Both Analogous organs and Vestigial organs
d) Analogous organs

45. At which stage during evolution did human use hides to protect their bodies and buried their dead? [1]
a) Neanderthal man
b) *Homo habilis*
c) *Homo erectus*
d) Java man

46. Stanley Miller had put the Oparin-Haldane theory to test in 1953 by creating in the laboratory, the probable conditions of the primitive earth. In the experiment, simple amino acids were synthesized from which of the following mixtures as observed after 18 days? [1]
a) NH_3 , CH_4 and O_2
b) H_2 , O_2 , N and H_2O
c) CH_4 , CN, H_2 and O_2
d) H_2 , NH_3 , CH_4 and water vapours

47. Evolution of life shows that life forms had a trend of moving from: [1]
a) dryland to wet land
b) land to water
c) fresh water to sea water
d) water to land

48. The idea that life originates from pre-existing life is referred as: [1]
a) Extraterrestrial theory
b) Abiogenesis theory
c) Biogenesis theory
d) Special creation theory

49. The theory of evolution supported by the experiment conducted by Louis Pasteur is: [1]
a) Spontaneous generation theory
b) Life comes only from pre-existing life
c) Abiogenesis of life
d) Big bang theory

50. Which of the following were found in Stanley Miller's experiment? [1]
a) Nucleic acids
b) UV-radiations
c) Amino acids
d) Microspheres

51. Lamarckism cannot explain: [1]
a) Webbed toes in aquatic birds.
b) Weak muscles in son of a wrestler.
c) Heterophylly
d) Long, narrow and limbless body of snakes.

52. S. L. Miller's closed flask contained: [1]
- a) H_2 b) NH_3 and water vapour
c) All of these d) CH_4
53. Which of the following is an example of environmental variation? [1]
- a) Madan dyes his hair blue b) Apu is a tongue roller, but his brother Sanjay is not
c) Homer inherited baldness from his father's side of the family d) Patti and Selma have hanging ear lobes
54. Animal husbandry and plant breeding programmes are the examples of: [1]
- a) Mutation b) Artificial selection
c) Reverse evolution d) Natural selection
55. Which one of the following periods is largely associated with extinction of dinosaurs and the increase in flowering plants and reptiles? [1]
- a) Triassic b) Jurassic
c) Cretaceous d) Permian
56. The phenomenon of "Industrial melanism" demonstrates: [1]
- a) Induced mutation b) Reproductive isolation
c) Geographical isolation d) Natural selection
57. In the solar system, earth was supposed to have been formed about: [1]
- a) 4.5 bya b) 400 mya
c) 4.5 mya d) 200 bya
58. Humans belong to the order: [1]
- a) Mammalia b) Hominidae
c) Primata d) Pongidae
59. Mesozoic era is the golden period of: [1]
- a) Reptiles b) Amphibians
c) Molluscs d) Fishes
60. Human being belongs to the species of: [1]
- a) Hominidae b) Homo habilis
c) Homo sapiens d) Homo erectus
61. Variations during mutations of meiotic recombinations are: [1]
- a) small and directional b) random and directionless
c) random, small and directional d) random and directional
62. Every cell of the body contributes gemmules to the germ cells and so shares in the transmission of characters to next generation. This theory is known as: [1]

- a) Mutation theory
c) Germplasm theory
- b) Inheritance of acquired characters
d) Pangenesis theory
63. Presence of tail in a child is an example of: [1]
a) Mutation
b) Divergent evolution
c) Convergent evolution
d) Atavism
64. Pre-historic man who gave a proper burial to the dead for the first time was: [1]
a) Cro-magnon man
b) Pecking man
c) Neanderthal man
d) Java man
65. Louis Pasteur demonstrated that [1]
a) early life came from outer space
b) non-living chemicals produced living molecules
c) life originated spontaneously
d) life comes from pre-existing life
66. Which of the following are not analogous organs? [1]
a) Stings of honey bee and scorpion.
b) Wings of insects and pterodactyl.
c) Fins of fishes and flippers of whale.
d) Thorn of Bougainvillea and tendril of Cucurbita.
67. Which of the following is used as an atmospheric pollution indicator? [1]
a) Lycopodium
b) Lichens
c) Lepidoptera
d) Lycopersicon
68. Homologous organs indicate: [1]
a) Parallel evolution
b) Natural selection
c) Common descendant
d) Convergent evolution
69. What's the difference between natural selection and sexual selection? [1]
a) Sexual selection is a type of natural selection
b) Sexual selection occurs during sex
c) Sexual selection occurs within demes, natural selection does not
d) Natural selection is a type of sexual selection
70. Darwin's finches provide an excellent evidence in favour of organic evolution. These are related to which of the following evidences? [1]
a) Anatomy
b) Biogeography (or Geographic distribution)
c) Palaeontology (or fossils)
d) Embryology
71. De Vries gave his mutation theory on organic evolution while working on: [1]
a) *Pisum sativum*
b) *Drosophila melanogaster*
c) *Althea rosea*
d) *Oenothera lamarckiana*
72. Major radiation of mammals, birds and pollinating insects took place in which epoch? [1]

- a) Pliocene
- b) Palaeocene
- c) Oligocene
- d) Miocene

73. The first cellular form of life evolved [1]
- a) on land
 - b) in air
 - c) in water environment
 - d) in deep soil
74. Links between organisms that show branching pattern of evolutionary relationships are shown by: [1]
- a) Living fossils
 - b) Two fossil layers
 - c) Comparative embryology
 - d) Phylogenetic trees
75. Animal population within which interbreeding occurs is called: [1]
- a) Genus
 - b) Species
 - c) Family
 - d) Class

ABHINAV ACADEMY