

- 1) Who gave the first theory of evolution?
 - (a) Huxley
 - (b) Wallace
 - (c) Lamarck
 - (d) Darwin

- 2) Who proposed the concept of evolution?
 - (a) Lamarck
 - (b) Wallace
 - (c) Darwin
 - (d) None of these

- 3) The theory of inheritance of acquired characteristics is related with:
 - (a) Lamarck
 - (b) Darwin
 - (c) Louis Pasteur
 - (d) Weismann

- 4) The theory of use and disuse of organs was given by:
 - (a) Jean Baptiste de Lamarck
 - (b) Alfred Russel Wallace
 - (c) T R Malthus
 - (d) Charles Darwin

- 5) The main reason for the failure of the Lamarckian theory is:
 - (a) Its failure to explain overspecialisation of certain organs
 - (b) Mainly due to the failure of recognition that the phenotype is the by product of gene reproduction
 - (c) Both (a) and (b)



- (d) None of these
- 6) The key point of Darwin's theory of evolution is:
- (a) Overproduction
 - (b) Variation
 - (c) Survival of the fittest
 - (d) Natural selection
- 7) Organic evolution was explained by two British naturalists, who were:
- (a) Lamarck and Darwin
 - (b) Darwin and Wallace
 - (c) Darwin and Huxley
 - (d) Lyell and Darwin
- 8) In the life history of birds, nitrogenous waste products are ammonia, urea and uric acid. It provides evidence in favour of:
- (a) Divergent evolution
 - (b) Convergent evolution
 - (c) Parallel evolution
 - (d) Organic evolution
- 9) Darwin and Wallace were influenced by the essay of T R Malthus on:
- (a) Principles of population
 - (b) Theory of continuity of germplasm
 - (c) Saltatory variations
 - (d) Principles of geography
- 10) Who among the following was the co-advisor of Darwin?
- (a) Smith



- (b) Dodson
- (c) Wallace
- (d) Hugo de Vries

11) Sudden, discontinuous and heritable change is called:

- (a) Variation
- (b) Mutation
- (c) Inheritance of acquired character
- (d) Natural selection

12) The theory of pangenesis was proposed by:

- (a) August Weismann
- (b) Charles Darwin
- (c) Sewall Wright
- (d) Galton

13) The theory of continuity of germplasm has been given by:

- (a) T R Malthus
- (b) August Weismann
- (c) Charles Lyell
- (d) Herbert Spencer

14) Darwin's theory was unable to explain:

- (a) Natural selection
- (b) Mutation
- (c) Variation
- (d) Reproductive isolation

15) The theory of mutation to explain the mechanism of evolution was proposed by:



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- (a) August Weismann
- (b) HMS Beagle
- (c) Hugo de Vries
- (d) Sewall Wright

16) The principle of Darwin called Darwinism is based on:

- (a) Use and disuse of organs
- (b) Development of vestigial organs
- (c) Effect of nature on organisms
- (d) None of these

17) Darwin's finches is the:

- (a) Name of the ship on which Darwin travelled
- (b) Main points of theory of natural selection
- (c) 20 birds studied by Darwin on the Galapagos Islands
- (d) Extinct animals studied by Darwin

18) The ultimate source of organic evolution is:

- (a) Use and disuse of organ
- (b) Natural selection
- (c) Mutation
- (d) Isolation

19) According to Darwin:

- (a) The organs that are not used become vestigial and gradually disappear
- (b) Organisms have a tendency to produce more offsprings
- (c) Nature selects individuals having better adaptability
- (d) Both (b) and (c)



20) Neo Lamarckism states that only those characters are heritable which:

- (a) Arise due to change in environment
- (b) Affect germplasm
- (c) Are useful
- (d) All of these

21) Which one of the following is an incorrect match?

- (a) Darwin - Theory of natural selection
- (b) Lamarck - Use and disuse of organs
- (c) Genetic drift - Sum total of genes in the population of a particular area
- (d) Hugo de Vries - Mutation theory

22) Which one of the following statements about Lamarckism is incorrect?

- (a) Use and disuse of organs cause variations
- (b) All characteristics acquired during the lifetime of an organism are transmitted to the next generation
- (c) Inheritance of acquired characteristics has been experimentally proved by many workers
- (d) Lack of use of a particular organ causes its degeneration and ultimately, disappearance

23) Neo Lamarckism has laid emphasis on:

- (a) Use and disuse of organs
- (b) Internal vital force
- (c) Both (a) and (b)
- (d) None of these

24) According to Lamarck, variations in the organisms arise due to:

- (a) Use and disuse of organs
- (b) Change in germ plasm



- (c) Both (a) and (b)
- (d) Change in the structure of chromosome

25) Which scientist pointed out that Lamarckism is self-contradictory?

- (a) Waddington
- (b) Payne
- (c) Ray Lankester
- (d) Lysenko

26) The first evidence against inheritance of acquired character was proved by:

- (a) Spencer
- (b) Weismann
- (c) Malthus
- (d) Ray Lankester

27) The work of which scientist lends support to Lamarck?

- (a) Weismann
- (b) Kammerer
- (c) Wallace
- (d) Sewall Wright

28) Like Darwin, Wallace also laid emphasis on as the main factor in evolution:

- (a) Struggle for existence
- (b) Survival of the fittest
- (c) Variation
- (d) Natural selection

29) Darwin's theory cannot explain:

- (a) Overproduction



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- (b) Overspecialisation of certain structures
- (c) Neutral flowers and sterility of hybrids
- (d) Both (b) and (c)

30) Who proposed the theory of 'continental drift'?

- (a) Wegener
- (b) Wallace
- (c) Moody
- (d) Huxley

31) Lamarck's theory of evolution stresses upon:

- (a) Internal vital force
- (b) Use and disuse of organs
- (c) Appetency
- (d) All of these

32) Charles Darwin is associated with:

- (a) Theory of mutation
- (b) Population migration
- (c) Natural selection
- (d) Recapitulation theory

33) Which one of the following statements is incorrect?

- (a) Mutations are the initiating force in evolution.
- (b) Mutations result in certain fault in gene duplication.
- (c) Only useful mutations are inheritable.
- (d) Mutation is responsible for speciation.

34) The Galapagos Islands are associated with the name of:



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- (a) Darwin
- (b) Wallace
- (c) Spencer
- (d) Huxley

35) Two scientists - Castle and Phi lips - transplanted ovaries of a black guinea pig in another white guinea pig whose ovaries were replaced and found that all the progenies were black. It lends support to:

- (a) Inheritance of acquired characteristics
- (b) Theory of natural selection
- (c) Theory of germ plasm
- (d) Mutation theory

36) According to modern concept, evolution involves:

- (a) Genetic variations
- (b) Isolation
- (c) Natural selection
- (d) All of these

37) Who has written the - the man who mused - Birds can fly, so why can't I?

- (a) Me Dougall
- (b) Dodson
- (c) Crew
- (d) Karl Marx

38) Industrial melanism in *Biston betularia* was explained by:

- (a) Bernard Kettlewell
- (b) J B S Haldane
- (c) Sewall Wright



(d) Stebbins

39) In mosquitoes, resistance against DDT is an example of:

- (a) Natural selection
- (b) Artificial selection
- (c) Mutation
- (d) Survival of the fittest

40) The concept of Homology and analogy was given by:

- (a) Buffon
- (b) Richard Owen
- (c) Julian Huxley
- (d) A Weismann

41) Adaptive similarities in animals living in the same habitat is known as:

- (a) Parallel evolution
- (b) Convergent evolution
- (c) Divergent evolution
- (d) None of these

42) Homologous organs provide evidence of:

- (a) Parallel evolution
- (b) Divergent evolution
- (c) Convergent evolution
- (d) None of these

43) Hands and legs of humans are:

- (a) Vestigial organs
- (b) Homologous organs



- (c) Analogous organs
- (d) Adaptive convergence

44) The presence of analogous organs indicates:

- (a) Similar structure and function of the organs
- (b) Similar adaptation by unrelated groups
- (c) Different adaptation by related groups
- (d) Presence of nonfunctional organs

45) Analogous organs present:

- (a) Divergent evolution
- (b) Convergent evolution
- (c) Parallel evolution
- (d) Adaptive radiation

46) Stings of honeybees and scorpions shows:

- (a) Parallel evolution
- (b) Divergent evolution
- (c) Convergent evolution
- (d) Phylogenetic homology

47) Which one of the following favours the theory of natural selection?

- (a) Limitation of resources
- (b) Overproduction
- (c) Abundance of variations
- (d) All of these

48) Which one of the following is responsible for speciation?

- (a) Natural selection



- (b) Mutation
- (c) Reproductive isolation
- (d) Random mating

49) Principles of geology were propounded by:

- (a) Malthus
- (b) Lerner
- (c) Charles Lyell
- (d) Wallace

50) The modern synthetic theory of evolution was proposed by:

- (a) Huxley
- (b) Stebbins
- (c) Sewall Wright
- (d) Darlington

51) The pioneer workers in the field of organic evolution are:

- (a) Muller, Lamarck, Darwin and Stebbins
- (b) Darwin, Malthus, de Vries and Lerner
- (c) Lamarck, Darwin, de Vries and Wallace
- (d) Darwin, Huxley, Darlington and Simpson

52) 'Food increases geometrically while population increases arithmetically' was proposed by:

- (a) Herbert Spencer
- (b) T R Malthus
- (c) Charles Darwin
- (d) August Weismann



53) The source of raw material for evolution is:

- (a) Mutation
- (b) Natural selection
- (c) Environment
- (d) Use and disuse of organs

54) Evolution is irreversible, this is known as:

- (a) Sewall Wright effect
- (b) Alien's rule
- (c) Cope's law
- (d) Dollo's law

55) The improved race of pigeons developed due to:

- (a) Effect of environment
- (b) Parthenogenesis
- (c) Artificial selection
- (d) Mutation

56) Darwin raised many types of by artificial selection:

- (a) Fowls
- (b) Pigeons
- (c) Ornamental plants
- (d) Dogs

57) According to Neo Darwinism, new species originate due to:

- (a) Natural selection
- (b) Use and disuse of organs
- (c) Mutations
- (d) All of these



58) Darwin could not differentiate between:

- (a) Useful and harmful variations
- (b) Continuous and discontinuous variations
- (c) Use and disuse of organs
- (d) Changes in environmental conditions

59) The theory of continuity of germplasm:

- (a) Supports Lamarckism
- (b) Criticised Lamarckism
- (c) Supports the theory of natural selection
- (d) Criticised the mutation theory

60) The main centre for the evolution of dinosaurs was:

- (a) Australia
- (b) South America
- (c) North America
- (d) The Islands of Madagascar

61) Prototherians have evolved from:

- (a) Lung fishes
- (b) Amphibians
- (c) Reptiles
- (d) Aves

62) Prototheria provides evidence in favour of organic evolution, which is:

- (a) Biogeographical
- (b) Biochemical
- (c) Paleontological



(d) Embryological

63) Darwin, during his voyage around the world, studied the flora and fauna of:

- (a) Greenland
- (b) Channel Islands
- (c) Galapagos Islands
- (d) Queen Elizabeth Islands

64) Darwin's theory is not applicable to:

- (a) Vestigial organs
- (b) Arrival of the fittest
- (c) Degeneration of organs
- (d) All of these

65) Which one of the following theories is not associated with Darwin?

- (a) Theory of pangenesis
- (b) Theory of sexual selection
- (c) Natural selection theory
- (d) Theory of continuity of germplasm

66) Darwin pointed out that like artificial selection, an analogous process operates in nature, known as:

- (a) Sexual selection
- (b) Induced breeding
- (c) Natural selection
- (d) Struggle for existence

67) Darwin pointed out that:

- (a) Continuous variations are heritable



- (b) Continuous variations are partially inheritable
- (c) Continuous variations are not heritable
- (d) None of these

68) Continuous variations are also known as:

- (a) Sports
- (b) Mutations
- (c) Saltations
- (d) Fluctuations

69) Darwin's finches provided an evidence of evolution, which is:

- (a) Paleontological
- (b) Embryological
- (c) Biogeographical
- (d) Biochemical

70) Which one of the following is incorrect?

- (a) All mutations are inheritable.
- (b) Majority of mutations are retrogressive or negative.
- (c) Mutations are the source of variations
- (d) The mutation theory clearly explains the role of nature.

71) Mutations have given rise to new varieties such as:

- (a) Ancon sheep
- (b) Hornless cattle
- (c) Hairless cats
- (d) All of these

72) Mutation cannot explain:



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- (a) Connecting link
- (b) Living fossil
- (c) Mimicry
- (d) Industrial melanism

73) The formation and disappearance of Ancon sheep presents a very good example of:

- (a) Continuous variation
- (b) Discontinuous variation
- (c) Natural selection
- (d) Artificial selection

74) Hugo de Vries performed his experiment on:

- (a) *Oenothera lamarckiana*
- (b) *Drosophila melanogaster*
- (c) *Salmonella typhi*
- (d) *Pisum sativum*

75) Genetic drift is also known as:

- (a) Founder effect
- (b) Sewall Wright effect
- (c) Bottleneck effect
- (d) Gene migration

76) Saltation theory was given by:

- (a) Hugo de Vries
- (b) J B D Kettlewell
- (c) Julian Huxley
- (d) T H Morgan



77) Who termed the recapitulation theory, the law of biogenetics?

- (a) Hugo de Vries
- (b) Wallace
- (c) Haeckel
- (d) Huxley

78) Which one of the following statements is incorrect?

- (a) Useful mutations are selected by nature.
- (b) Microevolution leads to change in the genetic equilibrium in a Mendelian population.
- (c) Microevolution results in the splitting of a population of a species into several subgroups.
- (d) Macroevolution operates about species level.

79) Substantive variation brings changes in:

- (a) Size
- (b) Weight
- (c) Colour
- (d) All of these

80) Meristic variation brings about changes in:

- (a) Skin colour
- (b) Height
- (c) In a certain number living beings
- (d) All of these

81) Which one of the following is a correct match?

- (a) Darwin - Inheritance of acquired characters
- (b) Wallace - Origin of species



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- (c) Hugo de Vries - Theory of pangenesis
- (d) Recapitulation theory - Biogenetic law

82) The Ordovician period is known as the:

- (a) Age of Giant Molluscs
- (b) Age of Reptiles
- (c) Age of Birds
- (d) Age of Mammals

83) Sudden appearance of an ancestral characteristics is known as:

- (a) Reversion
- (b) Variation
- (c) Mutation
- (d) Vestigial character

84) Which one of the following is a vestigial organ in humans?

- (a) Vermiform appendix
- (b) Coccyx
- (c) Ear muscles
- (d) All of these

85) Which one of the following is a set of vestigial organs?

- (a) Hindlimbs of boas, ear pinna of whales and eye muscles of humans
- (b) Muscles of ear pinna of humans, hindlimbs of pythons and feathers of birds
- (c) Splint bones in horses, eyes of Proteus and ear pinna of whales
- (d) Tail fin of tadpole larvae, splint bones of horses and pinna of dogs

86) Who is popularly known as the 'Father of Palaeontology'?

- (a) Charles R Richet



- (b) Leonard da Vinci
- (c) Charles Lyell
- (d) Boltwood

87) The founder of modern palaeontology is:

- (a) George Cuvier
- (b) Birbal Sahni
- (c) K V Frisch
- (d) Leonardo da Vinci

88) The largest animal to have ever walked on the earth is the:

- (a) *Brontosaurus*
- (b) *Tyrannosaurus*
- (c) *Archosaurus*
- (d) *Lepidosaurus*

89) The earliest known mammal-like reptile was:

- (a) *Lepidosaurus*
- (b) *Cynognathus*
- (c) *Archosaurus*
- (d) *Sauropods*

90) Which one of the following is a living fossil?

- (a) *Sphenodon*
- (b) *Prototheria*
- (c) *Latimeria*
- (d) All

91) Which one of the following is a living fossil and connecting link between Annelida and



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Arthropoda?

- (a) *Limulus*
- (b) *Peripatus*
- (c) *Polygordius*
- (d) *Sacculina*

92) Which one of the following is an extinct reptile and is a connecting link between Amphibia and Reptilia?

- (a) *Dodo*
- (b) *Seymouria*
- (c) *Lycaenops*
- (d) *Hesperonis*

93) The connecting link between reptiles and birds is:

- (a) *Sphenodon*
- (b) *Phrynosom*
- (c) *Lingula*
- (d) *Archaeopteryx*

94) *Neoplina* is a connecting link between:

- (a) Protozoa and Porifera
- (b) Annelida and Mollusca
- (c) Nonchordata and Chordata
- (d) Pisces and Amphibia

95) *Balanoglossus* is a connecting link between:

- (a) The living and the non-living
- (b) Plants and animals
- (c) Annelida and Arthropoda



(d) Nonchordata and Chordata

96) Lungs fishes are considered a connecting link between:

- (a) Cyclostomes and fishes
- (b) Cartilagenous and bony fishes
- (c) Fishes and amphibians
- (d) None of these

97) *Chimaera* is a connecting link between:

- (a) Nonchordata and Chordata
- (b) Annelida and Arthropoda
- (c) Catilaginous fishes and bony fishes
- (d) Fishes and amphibians

98) Which one of the following is an extinct animal?

- (a) Mammoth
- (b) Polar bear
- (c) Silverfish
- (d) Anaconda

99) Presence of facial hair in some people presents an example of:

- (a) Gene interaction
- (b) Atavism
- (c) Reverse evolution
- (d) Ontogeny repeats phylogeny

100) Which one of the following represents Atavism?

- (a) Cervical fistula of humans
- (b) Starfish with six arms



- (c) Coccyx of humans
- (d) Tuft of hair on the pinna of humans

101) Lion Boy of Russia is an example of:

- (a) Convergent evolution
- (b) Divergent evolution
- (c) Parallel evolution
- (d) Atavism

102) The presence of gill clefts in vertebrate embryos provides an evidence of:

- (a) Vestigial organ
- (b) Homologous organs
- (c) Organic evolution
- (d) Use and disuse of organs

103) The era which includes the maximum periods is:

- (a) Cenozoic
- (b) Mesozoic
- (c) Palaeozoic
- (d) Proterozoic

104) The earliest Prokaryotes and Eukaryotes were seen during the:

- (a) Archaeozoic era
- (b) Proterozoic era
- (c) Palaeozoic era
- (d) Mesozoic era

105) Which one of the following about the Cenozoic era is correct?

- (a) The Cenozoic era includes only epochs.



- (b) The Cenozoic era is known as the age of birds and mammals.
- (c) It is divided into four epochs.
- (d) All of these
- 106) Which one of the following has the complete fossil record to reveal the evolutionary history?
- (a) Dinosaurs
- (b) Dodos
- (c) Horses
- (d) Whales
- 107) The correct sequence of evolution of the horse is:
- (a) *Eohippus* ~ *Mesohippus* ~ *Pliohippus* ~ *Equus* ~ *Merychippus*
- (b) *Eohippus* ~ *Merichippus* ~ *Mesohippus* ~ *Pliohippus* ~ *Equus*
- (c) *Eohippus* ~ *Mesohippus* ~ *Merichippus* ~ *Pliohippus* ~ *Equus*
- (d) *Eohippus* ~ *Pliohippus* ~ *Mesohippus* ~ *Merichippus* ~ *Equus*
- 108) Development of running habit in deer, which is two-toed and one-toed horse, represents:
- (a) Parallel evolution
- (b) Divergent evolution
- (c) Convergent evolution
- (d) Biogenetic evolution
- 109) Blood is an example of multiple alleles. In humans, four types of blood groups, viz., A, B, AB and O are found while apes have blood group (A) and (B). In monkeys, there are no such blood groups. This clearly indicates that:
- (a) Humans, apes and monkeys have originated from a common ancestor
- (b) Humans and apes have originated from a common ancestor
- (c) Humans are more closely related to apes than to monkeys



(d) All of these

110) In a mammalian embryo, the kidney is initially pronephric, then mesonephric and finally metanephric. It provides support to:

- (a) The theory of natural selection
- (b) Use and disuse of organ
- (c) Biogenetic law
- (d) Cope's law

111) It has been found that individuals of many species inhabiting cold waters are larger than those inhabiting warmer waters. This conforms to:

- (a) Alien's rule
- (b) Jordan's rule
- (c) Gloger's rule
- (d) Bergman's rule

112) The presence of vestigial organs in animals suggests that:

- (a) Animals having vestigial organs are descendants of such ancestors in which these organs were fully developed and functional
- (b) Animals having vestigial organs have a common ancestor
- (c) Presence of vestigial organs provide evidence of organic evolution
- (d) Both (a) and (c)

113) The concept of adaptive divergence was given by:

- (a) Simpson
- (b) Romer
- (c) Osborn
- (d) Huxley

114) Proteins found in humans and apes are similar. It shows:



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- (a) Homology
- (b) Analogy
- (c) Parallel evolution
- (d) Bio-evolution

115) Fins of fishes and flippers of whales are:

- (a) Homologous organs
- (b) Analogous organs
- (c) Vestigial organs
- (d) Specialised organs

116) Which one of the following is not known, either living or dead, in the main line of chordate evolution?

- (a) Echinoderms and hemichordates
- (b) Urochordates
- (c) Cephalochordates
- (d) All of these

117) The possession of pharyngeal gill slits and pouches in all the embryo of vertebrates indicates that:

- (a) Lungs develop from gills
- (b) Embryos are not able to utilise oxygen of air
- (c) There is less demand of oxygen during
- (d) All vertebrates have evolved from a common early development ancestor

118) There is a tendency among animals to increase in size during the long course of evolution. This is known as:

- (a) Cope's law
- (b) Biogenetic law
- (c) Alien's rule



(d) Gause's law

119) The first eutherian mammals were shrew-like and arboreal:

- (a) Herbivorous
- (b) Insectivorous
- (c) Omnivorous
- (d) Sanguivorous

120) Which one of the following has the complete fossil record to reveal evolutionary history?

- (a) Camel
- (b) Elephant
- (c) Horse
- (d) All of these

121) Industrial melanism in peppered moth (*Biston betularia*) provides an example of:

- (a) Directional selection
- (b) Disruptive selection
- (c) Stabilising selection
- (d) None of these

122) The formation of a different genotype in a new settlement by a small population is known as:

- (a) Bottleneck effect
- (b) Founder effect
- (c) Haldane effect
- (d) Tangier effect

123) Which one of the following is an incorrect match?



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- (a) Sickle anaemia - Common in Asia
- (b) Coacervates - Cell-like structures but not organised structures
- (c) Haldane - Worked on origin of life
- (d) *Latimera* - Living fossil

124) Which one of the following about *Biston betularia* is correct?

- (a) A connecting link
- (b) A fossil
- (c) An example of natural selection
- (d) An example of temporal variation

125) Which one of the following about Hardy-Weinberg law is correct?

- (a) A simple mathematical model showing how genetic equilibrium can be maintained in a gene pool
- (b) Helps in calculation of gene frequencies
- (c) Helps in the calculation of genotypic frequencies
- (d) All of these

126) The natural selection of Darwin does not explain:

- (a) The absence of a connecting link
- (b) Inheritance of vestigial organs
- (c) Origin and inheritance of variations
- (d) All of these

127) The relative frequency of alleles in sexually reproducing organism remains constant from generation to generation. This is known as:

- (a) Haldane effect
- (b) Hardy-Weinberg law
- (c) Law of inheritance



(d) Cope's law



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