4. Analogous organs arise due to: **(NCERT Exemplar)**
   (a) genetic drift (b) artificial selection
   (c) divergent evolution (d) convergent evolution
5. $(p+q)^2 = p^2 + 2pq + q^2 = 1$ represents an equation used in: **(NCERT Exemplar)**
   (a) biometrics (b) population genetics
   (c) Mendelian genetics (d) molecular genetics
6. Appearance of antibiotic-resistant bacteria is an example of: **(NCERT Exemplar)**
   (a) transduction
   (b) adaptive radiation
   (c) divergent evolution
   (d) pre-existing variation in the population
7. Evolution of life shows that life forms had a trend of moving from: **(NCERT Exemplar)**
   (a) land to water (b) water to land
   (c) dryland to wet land (d) fresh water to sea water
8. Viviparity is considered to be more evolved because: **(NCERT Exemplar)**
   (a) the young ones are left on their own.
   (b) the embryo takes a long time to develop.
   (c) the young ones are protected by a thick shell.
   (d) the young ones are protected inside the mother's body and are looked after they are born leading to more chances of survival.
9. Fossils are generally found in: **(NCERT Exemplar)**
   (a) Igneous rocks (b) Any type of rock
   (c) Sedimentary rocks (d) Metamorphic rocks
10. Which type of selection is industrial melanism observed in moth, *Biston bitularia*: **(NCERT Exemplar)**
    (a) Artificial (b) Stabilising
    (c) Directional (d) Disruptive
11. The most accepted line of descent in human evolution is: **(NCERT Exemplar)**
    (a) *Homo erectus* → *Homo habilis* → *Homo sapiens*
    (b) *Ramapithecus* → *Homo habilis* → *Homo erectus* → *Homo sapiens*
    (c) *Australopithecus* → *Ramapithecus* → *Homo sapiens* → *Homo habilis*
    (d) *Australopithecus* → *Ramapithecus* → *Homo erectus* → *Homo habilis* → *Homo sapiens*
12. In 1953 S. L. Miller created primitive Earth conditions in the laboratory and gave experimental evidence for origin of first form of life from pre-existing non-living organic molecules. The primitive Earth conditions created include: **(NCERT Exemplar)**
    (a) low temperature, volcanic storms, atmosphere rich in oxygen
    (b) low temperature, volcanic storms, reducing atmosphere
    (c) high temperature, volcanic storms, non-reducing atmosphere
    (d) high temperature, volcanic storms, reducing atmosphere containing $CH_4$, $NH_3$, etc.

13. Variations during mutations of meiotic recombinations are: (NCERT Exemplar)
(a) random and small
(b) random and directional
(c) random and directionless
(d) random, small and directional

14. In the origin of life, microspheres are most primitive protobiont, which have a membrane of: (DPMT 2008)
(a) fats (b) lipid
(c) carbohydrates (d) lipid and proteins

15. Transformation of the early reducing atmosphere of the Earth into an oxidizing atmosphere was mainly due to the activities of: (Karnataka CET 2008)
(a) anaerobic heterotrophs
(b) aerobic photo synthesizers
(c) anaerobic photosynthesizers
(d) anaerobic chemoheterotrophs

16. Connecting link between Echinodermata and Chordata is: (VMMC-Safdarjung 2008)
(a) *Peripatus* (b) *Archaeopteryx*
(c) *Balanoglossus* (d) None of these

17. Industrial melanism was highlighted by: (Kerala PMT 2008)
(a) Polar bear (b) Rock python
(c) *Mimosa pudica* (d) *Biston betularia*
(e) *Triticum aestivum*

18. An evolutionary process, giving rise to new species adapting to new habitats and ways of life is called: (DPMT 2008; VITEEE 2008)
(a) adaptation (b) microevolution
(c) adaptive radiation (d) convergent evolution

19. Sweet potato and potato are examples of: (DPMT 2008)
(a) homologous structures (b) analogous structures
(c) both (a) and (b) (d) none of these

20. Appearance of teeth in the embryos of birds is an example of: (VMMC-Safdarjung 2008)
(a) atavism
(b) speciation
(c) vestigial organs
(d) ontogeny repeats phylogeny

21. The theory of pangenesis was rejected due to the acceptance of: (DPMT 2008)
(a) Richter theory of cosmozoic
(b) Cuvier theory of catastropism
(c) Weismann theory of germplasm
(d) Spallanzani theory of biogenesis

22. The principle that gives the geneticists a tool to determine when evolution is occurring is: (VITEEE 2008)
(a) Hardy-Weinberg principle
(b) Chemiosmotic theory
(c) Malthusian principle
(d) Cloning theory

23. Which of the following defines Hardy-Weinberg's law? (DPMT 2008)
(a) $p^2 + 3pq + q^2 = 1$ (b) $p^2 + 2pq + q^2 = 1$
(c) $p^2 + 2pq + q^2 = 0$ (d) $q^2 + p^2 + 2pq = 0$

24. Hardy -Weinberg equilibrium is known to be affected by gene flow, genetic drift, mutation, genetic recombination and: **(Kerala PMT 2008)**
(a) saltation (b) evolution
(c) limiting factors (d) natural selection
(e) over production

25. Transfer of genes from one gene pool to another is called: **(BV Pune 2008)**
(a) mutation (b) gene flow
(c) speciation (d) genetic drift

26. Higher frequency of melanie British moths and DDT resistance in mosquitoes are cited as examples for: **(Karnataka CET 2008)**
(a) Genetic drift (b) Point mutation
(c) Natural selection (d) Arrival of the fittest

27. Closely related species varying different in trait expresses: **(Odisha JEE 2008)**
(a) convergent evolution (b) divergent evolution
(c) parallel evolution (d) none of these

28. Which is not a pre-zygotic isolation mechanism? **(VITEEE 2008)**
(a) hybrid sterility (b) seasonal isolation
(c) ecological isolation (d) geographical isolation

29. Which one does not confirm to the theory of "Biogenesis"? **(JKCMEE 2009)**
(a) Spallanzani's experiment
(b) Louis Pasteur's experiment
(c) Von Helmont's experiment
(d) Francisco Redi's experiment

30. Miller-Urey's experiment mixture had the following except: **(JKCMEE 2009)**
(a) methane (b) $CO_2$
(c) hydrogen (d) water vapour

31. *Peripatus* is a connecting link between: **(AIPMT 2009)**
(a) Coelenterata and Porifera
(b) Annelida and Arthropoda
(c) Mollusca and Echinodermata
(d) Ctenophora and Platyhelminthes

32. In the case of peppered moth (*Biston betularia*) the black-coloured form became dominant over the light-coloured form in England during industrial revolution. This is an example of: **(AIPMT 2009)**
(a) inheritance of darker colour character acquired due to the darker environment
(b) appearance of the darker coloured individuals due to very poor sunlight
(c) natural selection whereby the darker forms were selected
(d) protective mimicry

33. Which of the following is a connecting link between mammals and reptiles? **(AFMC 2009)**
(a) *Peripatus* (b) *Balanoglossus*
(c) *Ornithorhyncus* (d) *Archaeopteryx*

34. Darwin's finches provide an excellent evidence in favour of evolution. The evidences come from the field of: **(AFMC 2009)**

(a) anatomy (b) embryology
(c) palaeontology (d) biogeography

35. Haeckel's biogenetic law is: **(CPMT 2009)**

(a) every organism is produced by its parents
(b) ontogeny repeats phylogeny
(c) phylogeny repeats ontogeny
(d) reproductive isolation

36. Origin of first toothed birds and gymnosperms took place during: **(CPMT 2009)**

(a) Triassic (b) Jurassic
(c) Permian (d) Cretaceous

37. A living connecting link which provides evidence for organic evolution is: **(CPMT 2009)**

(a) *Sphenodon* between reptiles and birds
(b) Lung fishes between pisces and reptile
(c) *Archaeopteryx* between reptiles and birds
(d) duck billed platypus between reptiles and mammals

38. Darwin judged the fitness of an individual by: **(DUMET 2009)**

(a) Number of offspring
(b) Ability to defend itself
(c) Strategy to obtain food
(d) Dominance over other individuals

39. Which one of the following periods is largely associated with extinction of dinosaurs and the increase in flowering plants and reptiles? **(DUMET 2009)**

(a) Jurassic (b) Triassic
(c) Cretaceous (d) Permian

40. Industrial melanism is an example of: **(DUMET 2009)**

(a) Drug resistance
(b) Darkening of skin due to industries
(c) Protective resemblance with the surrounding
(d) Defensive adaptation of skin against UV radiations

41. *Tachyglossus* is a connecting link between: **(DUMET 2009)**

(a) Reptiles and Birds
(b) Birds and Mammals
(c) Amphibians and Reptiles
(d) Reptiles and Mammals

42. Which one of the following was not explained by Darwinism? **(JKCMEE 2009)**

(a) natural selection (b) origin of species
(c) arrival of the fittest (d) struggle for existence

43. Drawinism explains all the following except: **(Karnataka CET 2009)**

(a) offspring with better traits that overcome competition are best suited for the environment.
(b) variations are inherited from parents to offspring through genes.
(c) within each species, there are variations.
(d) organisms tend to produce more number of offspring than can survive.

44. Who was the first to discard the idea of fixity of species? **(Kerala PMT 2009)**

(a) Robert Hooke (b) Stanley Cohen
(c) Charles Darwin (d) William Harvey
(e) Jean Baptiste Lamarck

45. Which one of these is not a case of artificial selection? **(Kerala PMT 2009)**

(a) Broccoli (b) Shetland pony
(c) Great dane dog (d) Peppered moth
(e) Arabian race horse

46. Amphibians were dominant during: **(Kerala PMT 2009)**

(a) silurian (b) jurassic
(c) cambrian (d) ordovician
(e) carboniferous

47. Whose bicentenary is the year 2009? **(Odisha JEE 2009)**

(a) Darwin (b) Edward Jenner
(c) Stanley Miller (d) T.H. Morgan

48. Darwin could not properly explain the theory of evolution due to lack of: **(Odisha JEE 2009)**

(a) evidences (b) variations
(c) speciation (d) genetics

49. One of the oldest, best preserved and most complete hominid fossil commonly known as 'Lucy' belongs to the genus: **(AMU 2009)**

(a) *Oreopithecus* (b) *Dryopithecus*
(c) *Pithecanthropus* (d) *Australopithecus*

50. On the basis of hereditary material most closest relative of man is: **(CPMT 2009)**

(a) gorilla (b) gibbon
(c) orang-utan (d) chimpanzee

51. The prehistoric man which lived on Earth during Pleistocene period: **(CPMT 2009)**

(a) Atlantic man (b) Neanderthal man
(c) *Australopithecus* (d) Cro-Magnon man

52. The chronological order of human evolution from early to the recent is: **(JKCMEE 2009)**

(a) *Ramapithecus* → *Australopithecus* → *Homo habilis* → *Homo erectus*
(b) *Australopithecus* → *Ramapithecus* → *Homo habilis* → *Homo erectus*
(c) *Pithecanthropus pekinensis* → *Homo habilis* → *Homo erectus*
(d) *Australopithecus* → *Ramapithecus* → *Pithecanthropus pekinensis* → *Homo erectus*

53. Which one of the following ancestors of man first time showed bipedal movement? **(WB-JEE 2009)**

(a) Java apeman (b) Peking man
(c) Australopithecus (d) Cro-magnon man

54. In the early Earth, water and $CO_2$ were produced by the combination of $O_2$ with: **(Kerala PMT 2010)**

(a) hydrogen (b) organic matter
(c) hydrogen sulphide (d) sulphates and nitrates
(e) ammonium and methane

## ANSWERS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. (d) | 2. (a) | 3. (a) | 4. (d) | 5. (b) | 6. (d) | 7. (b) | 8. (d) | 9. (c) | 10. (c) |
| 11. (b) | 12. (d) | 13. (c) | 14. (d) | 15. (b) | 16. (c) | 17. (d) | 18. (c) | 19. (b) | 20. (d) |
| 21. (c) | 22. (a) | 23. (b) | 24. (d) | 25. (b) | 26. (c) | 27. (c) | 28. (a) | 29. (c) | 30. (b) |
| 31. (b) | 32. (c) | 33. (c) | 34. (d) | 35. (b) | 36. (b) | 37. (d) | 38. (a) | 39. (c) | 40. (c) |
| 41. (d) | 42. (c) | 43. (b) | 44. (e) | 45. (d) | 46. (e) | 47. (a) | 48. (d) | 49. (d) | 50. (d) |
| 51. (b) | 52. (a) | 53. (c) | 54. (e) | 55. (b) | 56. (a) | 57. (c) | 58. (d) | 59. (b) | 60. (b) |