

## AIPMT 2006

1. Praying mantis is a good example of -
  - (1) Mullerian mimicry
  - (2) Warning coloration
  - (3) Social insects
  - (4) Camouflage
2. Which one of the following amino acid was not found to be synthesized in Miller's experiment-
  - (1) Glycine
  - (2) Aspartic acid
  - (3) Glutamic acid
  - (4) Alanine
3. An important evidence in favour of organic evolution is the occurrence of -
  - (1) Homologous and vestigial organs
  - (2) Analogous and vestigial organs
  - (3) Homologous organs only
  - (4) Homologous and analogous organs
4. Jurassic period of the Mesozoic era is characterised by -
  - (1) Gymnosperms are dominant plants and first birds appeared
  - (2) Radiation of reptiles and origin of mammal like reptiles
  - (3) Dinosaurs become extinct and angiosperms appeared
  - (4) Flowering plants and first dinosaurs appeared
5. Evolutionary history of an organism is known as:
  - (1) Phylogeny
  - (2) Ancestry
  - (3) Paleontology
  - (4) Ontogeny
6. Sickle cell anemia has not been eliminated from the African population because -
  - (1) it is controlled by recessive genes
  - (2) it is not a fatal disease
  - (3) it provides immunity against malaria
  - (4) it is controlled by dominant genes

## AIPMT 2007

7. One of the important consequences of geographical isolation is :-
  - (1) no change in the isolated fauna
  - (2) preventing Speciation
  - (3) speciation through reproductive isolation
  - (4) random creation of new species

8. Among the human ancestors the brain size was more than 1000 CC in: -
  - (1) *Homo neanderthalensis*
  - (2) *Homo erectus*
  - (3) *Ramapithecus*
  - (4) *Homo habilis*
9. Two plants can be conclusively said to belong to the same species if they: -
  - (1) can reproduce freely with each other and form seeds.
  - (2) have more than 90 percent similar genes
  - (3) look similar and possess identical secondary metabolites
  - (4) have same number of chromosomes
10. The Finches of Galapagos islands provide an evidence in favour of: -
  - (1) Special Creation
  - (2) Evolution due to Mutation
  - (3) Retrogressive Evolution
  - (4) Biogeographical Evolution
11. What is common to whale, seal and shark :-
  - (1) Seasonal migration
  - (2) Thick subcutaneous fat
  - (3) Convergent evolution
  - (4) Homiothermy
12. Adaptive radiation refers to: -
  - (1) Adaptations due to Geographical isolation
  - (2) Evolution of different species from a common ancestor
  - (3) Migration of members of a species to different geographical areas
  - (4) Power of adaptation in an individual to a variety of environments
13. When two species of different genealogy come to resemble each other as a result of adaptation, the phenomenon is termed :-
  - (1) Divergent evolution
  - (2) Microevolution
  - (3) Co-evolution
  - (4) Convergent evolution

14. The concept of chemical evolution is based on:
- (1) Crystallization of chemicals
  - (2) Interaction of water, air and clay under intense heat
  - (3) Effect of solar radiation on chemicals
  - (4) Possible origin of life by combination of chemicals under suitable environmental conditions
15. Industrial melanism as observed in peppered moth proves that: -
- (1) The true black melanic forms arise by a recurring random mutation
  - (2) The melanic form of the moth has no selective advantage over lighter form in industrial area
  - (3) The lighter-form moth has no selective advantage either in polluted industrial area or non-polluted area.
  - (4) Melanism is pollution-generated feature
16. Which one of the following statements is correct: -
- (1) Stem cells are specialized cells
  - (2) There is no evidence of the existence of gills during embryogenesis of mammals
  - (3) All plant and animal cells are totipotent
  - (4) Ontogeny repeats phylogeny

#### AIPMT 2008

17. Which one of the following is incorrect about the characteristics of protobionts (coacervates and microspheres) as envisaged in the abiogenic origin of life?
- (1) They were partially isolated from the surroundings
  - (2) They could maintain an internal environment
  - (3) They were able to reproduce
  - (4) They could separate combinations of molecules from the surroundings
18. Which one of the following scientist's name is correctly matched with the theory put forth by him?
- (1) de Vries – Natural selection
  - (2) Mendel – Theory of pangenesis
  - (3) Weismann – Theory of continuity of Germplasm
  - (4) Pasteur – Inheritance of acquired characters

#### AIPMT 2009

19. Peripatus is a connecting link between: -
- (1) Coelenterata and Porifera
  - (2) Ctenophora and Platyhelminthes
  - (3) Mollusca and Echinodermata
  - (4) Annelida and Arthropoda
20. 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:-
- (1) Inheritance of darker colour character acquired due to the darker environment
  - (2) Natural selection whereby the darker forms were selected
  - (3) Appearance of the darker coloured individuals due to very poor sunlight
  - (4) Protective mimicry

#### AIPMT (Pre) 2010

21. Darwin's finches are a good example of
- (1) Convergent evolution
  - (2) Industrial melanism
  - (3) Connecting link
  - (4) Adaptive radiation

#### AIPMT (Mains) 2010

22. The most apparent change during the evolutionary history of *Homo sapiens* is traced in: -
- (1) Walking upright
  - (2) Shortening of jaws
  - (3) Remarkable increase in the brain size
  - (4) Loss of body hair
23. Given below are four statements (A-D) each with one or two blanks. Select the option which correctly fills up the blanks in two statements:
- Statements:**
- (A) Wings of butterfly and birds look alike and are the results of \_\_\_(i)\_\_\_ evolution
  - (B) Miller showed that  $\text{CH}_4$ ,  $\text{H}_2$ ,  $\text{NH}_3$  and \_\_\_(i)\_\_\_, when exposed to electric discharge in flask resulted in formation of \_\_\_(ii)\_\_\_

- (C) Vermiform appendix is a \_\_ (i) \_\_ organ and an \_\_ (ii) \_\_ evidence of evolution.  
 (D) According to Darwin evolution took place due to \_\_ (i) \_\_ and \_\_ (ii) \_\_ of the fittest.

**Options:**

- (1) (A) – (i) convergent  
 (B) – (i) oxygen, (ii) nucleosides  
 (2) (B) – (i) water vapour, (ii) amino acids,  
 (C) – (i) rudimentary (ii) anatomical  
 (3) (C) – (i) vestigial, (ii) anatomical,  
 (D) – (i) mutations, (ii) multiplication  
 (4) (D) – (i) small variations, (ii) survival,  
 (A) – (i) convergent

**AIPMT (Pre) 2011**

24. What was the most significant trend in the evolution of modern man (*Homo sapiens*) from his ancestors?  
 (1) Upright posture  
 (2) Shortening of jaws  
 (3) Binocular vision  
 (4) Increasing brain capacity

**AIPMT (Pre) 2012**

25. Evolution of different species in a given area starting from a point and spreading to other geographical areas is known as: -  
 (1) Migration  
 (2) Divergent evolution  
 (3) Adaptive radiation  
 (4) Natural selection
26. What was the most significant trend in the evolution of modern man (*Homo sapiens*) from his ancestors?  
 (1) Increasing cranial capacity  
 (2) Upright posture  
 (3) Shortening of jaws  
 (4) Binocular vision
27. The extinct human who lived 1,00,000 to 40,000 years ago, in Europe, Asia and parts of Africa, with short stature, heavy eye brows, retreating fore heads, large jaws with heavy teeth, stocky bodies, a lumbering gait and stooped Posture was :-

- (1) Cro-Magnons humans  
 (2) Ramapithecus  
 (3) Homo habilis  
 (4) Neanderthal human

28. Which one of the following options gives one correct example each of convergent evolution and divergent evolution?

|     | <b>Convergent evolution</b>                       | <b>Divergent evolution</b>        |
|-----|---|-----------------------------------|
| (1) | Bones of forelimbs of vertebrates                 | Wings of butterfly and birds      |
| (2) | Thorns of Bougainvillea and tendrils of Cucurbita | Eyes of Octopus and Mammals       |
| (3) | Eyes of octopus and mammals                       | Bones of forelimbs of vertebrates |
| (4) | Thorns of Bougainvillea and tendrils of Cucurbita | Wings of butterflies and birds    |

**AIPMT (Mains) 2012**

29. The idea of mutations was brought forth by: -  
 (1) Hardy Weinberg, who worked on allele frequencies in a population  
 (2) Charles Darwin, who observed a wide variety of organisms during sea voyage  
 (3) Hugo do Vries, who worked on evening primrose  
 (4) Gregor Mendel, who worked on *Pisum sativum*

**NEET-UG 2013**

30. The eye of octopus and eye of cat show different patterns of structure, yet they perform similar function. This is an example of:  
 (1) Analogous organs that have evolved due to divergent evolution  
 (2) Homologous organs that have evolved due to convergent evolution  
 (3) Homologous organs that have evolved due to divergent evolution  
 (4) Analogous organs that have evolved due to convergent evolution

31. The tendency of population to remain in genetic equilibrium may be disturbed by:
- (1) lack of random mating
  - (2) random mating
  - (3) lack of migration
  - (4) lack of mutations
32. The process by which organisms with different evolutionary history evolve similar phenotypic adaptation in response to a common environmental challenge, is called:
- (1) Adaptive radiation
  - (2) Natural selection
  - (3) Convergent evolution
  - (4) Non-random evolution
33. According to Darwin, the organic evolution is due to:
- (1) Reduced feeding efficiency in one species due to the presence of interfering species
  - (2) Intraspecific competition
  - (3) Interspecific competition
  - (4) Competition within closely related species
34. Variation in gene frequencies within populations can occur by chance rather than by natural selection. This is referred to as:
- (1) Genetic load
  - (2) Genetic flow
  - (3) Genetic drift
  - (4) Random mating

#### AIPMT 2014

35. Forelimbs of cat, lizard used in walking; forelimbs of whale used in swimming and forelimbs of bats used in flying are an example of:
- (1) Analogous organs
  - (2) Adaptive radiation
  - (3) Homologous organs
  - (4) Convergent evolution
36. Which one of the following are analogous structures: -
- (1) Wings of Bat and Wings of Pigeon.
  - (2) Gills of Prawn and Lungs of Man.
  - (3) Thorns of Bougainvillea and Tendrils of Cucurbita
  - (4) Flippers of Dolphin and Legs of Horse

#### AIPMT 2015

37. Which of the following had the smallest brain capacity?
- (1) *Homo sapiens*
  - (2) *Homo neanderthalensis*
  - (3) *Homo habilis*
  - (4) *Homo erectus*
38. Which is the most common mechanism of genetic variation in the population of sexually reproducing organism?
- (1) Chromosomal aberrations
  - (2) Genetic drift
  - (3) Recombination
  - (4) Transduction

#### Re-AIPMT 2015

39. The wings of a bird and the wings of an insect are:
- (1) homologous structures and represent convergent evolution
  - (2) homologous structures and represent divergent evolution
  - (3) analogous structures and represent convergent evolution
  - (4) phylogenetic structures and represent divergent evolution
40. Industrial melanism is an example of:
- (1) Neo Lamarckism
  - (2) Neo Darwinism
  - (3) Natural selection
  - (4) Mutation
41. Which the following are most suitable indicators of SO<sub>2</sub> pollution in the environment?
- (1) Fungi
  - (2) Lichens
  - (3) Conifers
  - (4) Algae

#### NEET-I 2016

42. Which of the following structure is homologous to the wing of a bird?
- (1) Dorsal fin of a Shark
  - (2) Wing of a Moth
  - (3) Hind limb of Rabbit
  - (4) Flipper of Whale
43. Analogous structures are a result of: -
- (1) Divergent evolution
  - (2) Convergent evolution
  - (3) Shared ancestry
  - (4) Stabilizing selection

44. Following are the two statements regarding the origin of life: -
- (a) The earliest organisms that appeared on the earth were non-green and presumably anaerobes.
  - (b) The first autotrophic organisms were the chemoautotrophs that never released oxygen.
- Of the above statements which one of the following options is correct?
- (1) (a) is correct but (b) is false.
  - (2) (b) is correct but (a) is false.
  - (3) Both (a) and (b) are correct.
  - (4) Both (a) and (b) are false.

## NEET-II 2016

45. Genetic drift operates in: -
- (1) Non-reproductive population
  - (2) Slow reproductive population
  - (3) Small isolated population
  - (4) Large isolated population
46. In Hardy-Weinberg equation, the frequency of heterozygous individual is represented by:-
- (1)  $pq$
  - (2)  $q^2$
  - (3)  $p^2$
  - (4)  $2pq$
47. The chronological order of human evolution from early to the recent is: -
- (1) Ramapithecus → Homo habilis → Australopithecus → Homo erectus
  - (2) Australopithecus → Homo habilis → Ramapithecus → Homo erectus
  - (3) Australopithecus → Ramapithecus → Homo habits → Homo erectus
  - (4) Ramapithecus → Australopithecus → Homo habilis → Homo erectus
48. Which of the following is the correct sequence of events in the origin of life?
- I. Formation of protobionts
  - II. Synthesis of organic monomers
  - III. Synthesis of organic polymers
  - IV. Formation of DNA-based genetic systems
- (1) II, III, I, IV
  - (2) II, III, IV, I
  - (3) I, II, III, IV
  - (4) I, III, II, IV

## NEET-UG 2017

49. Artificial selection to obtain cows yielding higher milk output represents:
- (1) Directional as it pushes the mean of the character in one direction
  - (2) Disruptive as it splits the population into two, one yielding higher output and the other lower output
  - (3) Stabilizing followed by disruptive as it stabilizes the population to produce higher yielding cows
  - (4) Stabilizing selection as it stabilizes this character in the population

## NEET-UG 2018

50. The similarity of bone structure in the forelimbs of many vertebrates is an example of:
- (1) Homology
  - (2) Analogy
  - (3) Convergent evolution
  - (4) Adaptive radiation
51. Among the following sets of examples for divergent evolution, select the incorrect option:-
- (1) Forelimbs of man, bat and cheetah
  - (2) Heart of bat, man and cheetah
  - (3) Brain of bat, man and cheetah
  - (4) Eye of octopus, bat and man
52. According to Hugo de Vries, the mechanism of evolution is: -
- (1) Multiple step mutations
  - (2) Saltation
  - (3) Phenotypic variations
  - (4) Minor mutations

## NEET-UG 2019

53. Variations caused by mutation, as proposed by Hugo de Vries, are :
- (1) random and directional
  - (2) random and directionless
  - (3) small and directional
  - (4) small and directionless

54. In a species, the weight of new-born ranges from 2 to 5 kg. 97% of the new-born with an average weight between 3 to 3.3 kg survive whereas 99% of the infants born with weights from 2 to 2.5 kg or 4.5 to 5 kg die. Which type of selection process is taking place?
- (1) Directional Selection
  - (2) Stabilizing Selection
  - (3) Disruptive Selection
  - (4) Cyclical Selection
55. Match the hominids with their correct brain size:
- |                                  |                  |
|----------------------------------|------------------|
| (a) <i>Homo habilis</i>          | (i) 900 cc       |
| (b) <i>Homo neanderthalensis</i> | (ii) 1350 cc     |
| (c) <i>Homo erectus</i>          | (iii) 650-800 cc |
| (d) <i>Homo sapiens</i>          | (iv) 1400 cc     |
- Select the correct option.
- (1) (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)
  - (2) (a)-(iii), (b)-(ii), (c)-(i), (d)-(iv)
  - (3) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)
  - (4) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)

#### NEET-UG 2019 (Odisha)

56. In Australia, marsupials and placental mammals have evolved to share many similar characteristics. This type of evolution may be referred to as:
- (1) Adaptive Radiation
  - (2) Divergent Evolution
  - (3) Cyclical Evolution
  - (4) Convergent Evolution
57. Which of the following statements is correct about the origin and evolution of men?
- (1) Agriculture came around 50,000 years back.
  - (2) The *Dryopithecus* and *Ramapithecus* primates existing 15 million years ago, walked like men.
  - (3) *Homo habilis* probably ate meat.
  - (4) Neanderthal men lived in Asia between 1,00,000 and 40,000 years back.

#### NEET-UG 2020

58. Embryological support for evolution was disapproved by :
- (1) Oparin
  - (2) Karl Ernst von Baer
  - (3) Alfred Wallace
  - (4) Charles Darwin
59. Flippers of Penguins and Dolphins are examples of:
- (1) Natural selection
  - (2) Adaptive radiation
  - (3) Convergent evolution
  - (4) Industrial melanism
60. From his experiments, S.L. Miller produced amino acids by mixing the following in a closed flask :
- (1)  $\text{CH}_3$ ,  $\text{H}_2$ ,  $\text{NH}_3$  and water vapour at  $600^\circ\text{C}$
  - (2)  $\text{CH}_4$ ,  $\text{H}_2$ ,  $\text{NH}_3$  and water vapour at  $800^\circ\text{C}$
  - (3)  $\text{CH}_3$ ,  $\text{H}_2$ ,  $\text{NH}_4$  and water vapour at  $800^\circ\text{C}$
  - (4)  $\text{CH}_4$ ,  $\text{H}_2$ ,  $\text{NH}_3$  and water vapour at  $600^\circ\text{C}$
61. Which of the following refer to correct example(s) of organisms which have evolved due to changes in environment brought about by anthropogenic action?
- (a) Darwin's Finches of Galapagos islands.
  - (b) Herbicide resistant weeds.
  - (c) Drug resistant eukaryotes.
  - (d) Man-created breeds of domesticated animals like dogs.
- (1) Only (d)
  - (2) Only (a)
  - (3) (a) and (c)
  - (4) (b), (c) and (d)

#### NEET (UG) 2020 (COVID-19)

62. Embryological support for evolution was proposed by :
- (1) Ernst Heckel
  - (2) Karl Ernst von Baer
  - (3) Charles Darwin
  - (4) Alfred Wallace
63. After about how many years of formation of earth, life appeared on this planet ?
- (1) 500 billion years
  - (2) 50 million years
  - (3) 500 million years
  - (4) 50 billion years

64. The phenomenon of evolution of different species in a given geographical area starting from a point and spreading to other habitats is called :-
- (1) Saltation
  - (2) Co-evolution
  - (3) Natural selection
  - (4) Adaptive radiation
65. A Hominid fossil discovered in Java in 1891, now extinct, having cranial capacity of about 900 cc was:
- (1) *Homo erectus*
  - (2) Neanderthal man
  - (3) *Homo sapiens*
  - (4) *Australopithecus*

### NEET (UG) 2021

66. The factor that leads to Founder effect in a population is:
- (1) Natural selection
  - (2) Genetic recombination
  - (3) Mutation
  - (4) Genetic drift
67. Match **List-I** with **List-II**.

|     | <b>List-I</b>                     |       | <b>List-II</b>   |
|-----|-----------------------------------|-------|--|
| (a) | Adaptive radiation                | (i)   | Selection of resistant varieties due to excessive use of herbicides and pesticides |
| (b) | Convergent evolution              | (ii)  | Bones of forelimbs in Man and Whale  |
| (c) | Divergent evolution               | (iii) | Wings of Butterfly and Bird  |
| (d) | Evolution by anthropogenic action | (iv)  | Darwin Finches   |

Choose the correct answer from the options given below.

- |     | <b>(a)</b> | <b>(b)</b> | <b>(c)</b> | <b>(d)</b> |
|-----|------------|------------|------------|------------|
| (1) | (iv)       | (iii)      | (ii)       | (i)        |
| (2) | (iii)      | (ii)       | (i)        | (iv)       |
| (3) | (ii)       | (i)        | (iv)       | (iii)      |
| (4) | (i)        | (iv)       | (iii)      | (ii)       |

### NEET (UG) 2022

68. Natural selection where more individuals acquire specific character value other than the mean character value, leads to :-
- (1) Directional change
  - (2) Disruptive change
  - (3) Random change
  - (4) Stabilising change
69. Which of the following statements is not true?
- (1) Sweet potato and potato is an example of analogy
  - (2) Homology indicates common ancestry
  - (3) Flippers of penguins and dolphins are a pair of homologous organs
  - (4) Analogous structures are a result of convergent evolution

### Re-NEET (UG) 2022

70. Panspermia, an idea that is still a favourite for some astronomers, means :
- (1) Creation of life from dead and decaying matter
  - (2) Creation of life from chemicals
  - (3) Origin of sperm in human testes
  - (4) Transfer of spores as unit of life from other planets of Earth
71. Select the correct statement regarding mutation theory of evolution.
- (1) This theory was proposed by Alfred Wallace
  - (2) Variations are small directional changes
  - (3) Single step large mutation is a cause of speciation
  - (4) Large differences due to mutations arise gradually in a population

## Exercise - II (Previous Year Questions)

## ANSWER KEY

|          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Question | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 |
| Answer   | 4  | 3  | 1  | 1  | 1  | 3  | 3  | 1  | 1  | 4  | 3  | 2  | 4  | 4  | 1  |
| Question | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| Answer   | 4  | 3  | 3  | 4  | 2  | 4  | 3  | 4  | 4  | 3  | 1  | 4  | 3  | 3  | 4  |
| Question | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| Answer   | 1  | 3  | 3  | 3  | 3  | 2  | 3  | 3  | 3  | 3  | 2  | 4  | 2  | 3  | 3  |
| Question | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| Answer   | 4  | 4  | 1  | 1  | 1  | 4  | 2  | 2  | 2  | 3  | 4  | 4  | 2  | 3  | 2  |
| Question | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 |    |    |    |    |
| Answer   | 4  | 1  | 3  | 4  | 1  | 4  | 1  | 1  | 3  | 4  | 3  |    |    |    |    |

HENRY CLASSES