

NEET EVOLUTION — EVIDENCES FOR EVOLUTION (PALAEONTOLOGY, HOMOLOGY, ANALOGY, BIOCHEMICAL) — PYQS

Max. Marks: 140

Questions: 35

Section A (MCQ) — 35 questions

Q.1 Which of the following is not an example of convergent evolution? [NEET (UG) 2026]

- (1) Fore limbs of whales and bats
- (2) Flippers of penguins and dolphins
- (3) Eyes of octopuses and mammals
- (4) Wings of butterflies and birds

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Q.2 Which of the following is not evidence for evolution? [RE-NEET (UG) 2026]

- (1) Divergent evolution of anatomical structures such as forelimbs
- (2) Convergent evolution of traits like wings of birds and butterflies
- (3) Paleontological evidence from fossil records
- (4) Embryological support for evolution as proposed by Ernst Haeckel

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Q.3 Given below are two statements: one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): Forelimbs of human and bats are homologous.

Reason (R): Forelimbs of humans and bats have similar anatomical structure.

In the light of the above statements, choose the most appropriate answer from the options given below:

[RE-NEET (UG) 2026]

- (1) A is false but R is true
- (2) Both A and R are correct and R is the correct explanation of A
- (3) Both A and R are true, but R is not the correct explanation of A
- (4) A is true but R is false

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Q.4 Sweet potato and potato represent a certain type of evolution. Select the correct combination of terms to explain the evolution. [NEET (UG) 2025]

- (1) Homology, convergent
- (2) Analogy, divergent
- (3) Analogy, convergent
- (4) Homology, divergent

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Q.5 The flippers of the Penguins and Dolphins are the example of the [NEET (UG) 2024]

- (1) Adaptive radiation
- (2) Natural selection
- (3) Convergent evolution
- (4) Divergent evolution

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Q.6 Match **List I** with **List II**:

List-I		List-II	
A.	Living Fossil	I.	Elongated canine teeth
B.	Connecting Link	II.	Vermiform appendix
C.	Vestigial Organ	III.	Echidna
D.	Atavism	IV.	<i>Latimeria</i>

Choose the correct answer from the options given below: [RE-NEET (UG) 2024]

- (1) A-IV, B-III, C-II, D-I
- (2) A-IV, B-II, C-III, D-I
- (3) A-IV, B-III, C-I, D-II
- (4) A-III, B-IV, C-I, D-II

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Q.7 Which of the following statements is not true? [NEET (UG) 2022]

- (1) Analogous structures are a result of convergent evolution
- (2) Sweet potato and potato are an example of analogy
- (3) Homology indicates common ancestry
- (4) Flippers of penguins and dolphins are a pair of homologous organs

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Q.8 Match **List-I** with **List-II**.

List-I		List-II	
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. [NEET (UG) 2021]

- (1) (a)-(i), (b)-(iv), (c)-(iii), (d)-(ii)
 (2) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)
 (3) (a)-(iii), (b)-(ii), (c)-(i), (d)-(iv)
 (4) (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)

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- Q.9** Embryological support for evolution was disapproved by [NEET (UG) 2020]
 (1) Oparin (2) Alfred Wallace
 (3) Karl Ernst von Baer (4) Charles Darwin

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- Q.10** Flippers of Penguins and Dolphins are examples of [NEET (UG) 2020]
 (1) Adaptive radiation (2) Natural selection
 (3) Industrial melanism (4) Convergent evolution

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- Q.11** 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. [NEET (UG) 2020]
 (1) B, C and D only (2) A only
 (3) A and C only (4) D only

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- Q.12** The similarity of bone structure in the forelimbs of many vertebrates is an example of [NEET 2018]
 (1) homology (2) analogy
 (3) convergent evolution (4) adaptive radiation

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- Q.13** Among the following sets of examples for divergent evolution, select the incorrect option. [NEET 2018]
 (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

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- Q.14** Which of the following structures is homologous to the wing of a bird ? [NEET 2016 (Phase 1)]
 (1) Wing of a Moth (2) Dorsal fin of a Shark
 (3) Flipper of Whale (4) Hindlimb of Rabbit

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- Q.15** Analogous structures are a result of : [NEET 2016 (Phase 1)]
 (1) Divergent evolution (2) Convergent evolution
 (3) Stabilizing selection (4) Shared ancestry

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- Q.16** The eye of octopus and eye of cat show different patterns of structure, yet they perform similar function. This is an example of : [NEET 2013]
 (1) Homologous organs that have evolved due to divergent evolution
 (2) Analogous organs that have evolved due to convergent evolution
 (3) Homologous organs that have evolved due to convergent evolution
 (4) Analogous organs that have evolved due to divergent evolution

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- Q.17** Which one of the following options gives one correct example each of convergent evolution and divergent evolution ? [AIPMT 2012 (Prelims)]

- (1) Convergent evolution → Thorns of *Bougainvillea* and tendrils of *Cucurbita* & Divergent evolution → Eyes of octopus and mammals
- (2) Convergent evolution → Eyes of octopus and mammals & Divergent evolution → Bones of forelimbs of mammals and vertebrates
- (3) Convergent evolution → Thorns of *Bougainvillea* and tendrils of *Cucurbita* & Divergent evolution → Wings of butterflies and birds
- (4) Convergent evolution → Bones of forelimbs of vertebrates & Divergent evolution → Wings of butterfly and birds

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Q.18 Which one of the following pairs of items correctly belongs to the category of organs mentioned against it? [AIPMT 2008]

- (1) Nephridia of earthworm and Malpighian tubules of cockroach - excretory organs
- (2) Wings of honey bee and wings of crow - homologous organs
- (3) Thorn of *Bougainvillea* and tendrils of *Cucurbita* - analogous organs
- (4) Nictitating membrane and blind spot in human eye - vestigial organs

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Q.19 Thorn of *Bougainvillea* and tendril of *Cucurbita* are examples of: [AIPMT 2008]

- (1) analogous organs (2) homologous organs
- (3) vestigial organs (4) retrogressive evolution

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Q.20 When two species of different genealogy come to resemble each other as a result of adaptation, the phenomenon is termed:- [AIPMT 2007]

- (1) Microevolution (2) Convergent evolution
- (3) Co-evolution (4) Divergent evolution

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Q.21 Which one of the following statements is correct? [AIPMT 2007]

- (1) Ontogeny repeats phylogeny.
- (2) There is no evidence of the existence of gills during embryogenesis of mammals.
- (3) Stem cells are specialized cells.
- (4) All plant and animal cells are totipotent.

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Q.22 Which one of the following is not a living fossil?

[AIPMT 2006]

- (1) *Peripatus* (2) King crab
- (3) *Sphenodon* (4) *Archaeopteryx*

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Q.23 An important evidence in favour of organic evolution is the occurrence of- [AIPMT 2006]

- (1) Homologous organs only
- (2) Homologous and vestigial organs
- (3) Homologous and analogous organs
- (4) Analogous and vestigial organs

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Q.24 Which one of the following phenomena supports Darwin's concept of natural selection in organic evolution? [AIPMT 2005]

- (1) Prevalence of pesticide resistant insects
- (2) Development of organs from 'stem' cells for organ transplantation
- (3) Production of 'Dolly', the sheep by cloning
- (4) Development of transgenic animals

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Q.25 Which of the following is the relatively most accurate method for dating of fossils? [AIPMT 2005]

- (1) Radio-carbon method
- (2) Uranium-lead method
- (3) Potassium-argon method
- (4) Electron-spin resonance method

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Q.26 Presence of gills in the tadpole of frog indicates that [AIPMT 2004]

- (1) fish were amphibious in the past
- (2) fish evolved from frog-like ancestors
- (3) frog will have gills in future
- (4) frog evolved from gilled ancestors

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Q.27 Age of fossils in the past was generally determined by radio-carbon method and other methods involving radioactive elements found in the rocks. More precise methods, which were used recently and led to the revision of the evolutionary periods for different groups of organisms include -

[AIPMT 2004]

- (1) Electron spin resonance (ESR) & fossil DNA
- (2) Study of carbohydrates/proteins in fossils
- (3) Study of the conditions of fossilization
- (4) Study of carbohydrates/proteins in rocks

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Q.28 Convergent evolution is illustrated by:

[AIPMT 2003]

- (1) Bacterium and protozoan
- (2) Rat and dog
- (3) Dogfish and whale
- (4) Starfish and cuttle fish

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Q.29 Industrial melanism is an example of :-

[AIPMT 2003]

- (1) Darkening of skin due to smoke from industries
- (2) Defensive adaptation of skin against ultraviolet radiations
- (3) Drug resistance
- (4) Protective resemblance with the surroundings

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Q.30 Which one of the following describes correctly the homologous structures ?

[AIPMT 2003]

- (1) Organs with anatomical dissimilarities but performing same function
- (2) Organs that have no function now, but had an important function in ancestors
- (3) Organs with anatomical similarities, but performing different functions
- (4) Organs appearing only in embryonic stage and disappearing later in the adult

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Q.31 Which of the following are homologous organs ?

[AIPMT 2002]

- (1) Wings of birds & Pectoral fins of fish
- (2) Wings of bat & Butterfly
- (3) Legs of frog & Cockroach
- (4) Wings of birds & Locust

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Q.32 Sequence of which of the following is used to know the phylogeny ?

[AIPMT 2002]

- (1) DNA
- (2) r-RNA
- (3) m-RNA
- (4) t-RNA

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Q.33 Half life period of C^{14} is : -

[AIPMT 2001]

- (1) 5000 years
- (2) 50 years
- (3) 500 years
- (4) 5×10^4 years

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Q.34 Similarities in organism with different genotype indicates : -

[AIPMT 2001]

- (1) Divergent evolution
- (2) Macroevolution
- (3) Convergent evolution
- (4) Microevolution

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Q.35 Which is not a vestigial organ in man?

[AIPMT 2000]

- (1) Segmental muscles of abdomen
- (2) Third molar
- (3) Coccyx
- (4) Nails

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	1	4	2	3	3	1	4	2	3	4	1
Ques.	12	13	14	15	16	17	18	19	20	21	22
Ans.	1	4	3	2	2	2	1	2	2	1	4
Ques.	23	24	25	26	27	28	29	30	31	32	33
Ans.	2	1	4	4	1	3	4	3	1	2	1
Ques.	34	35									
Ans.	3	4									