

The Living World — NEET Biology PYQ (2007-2021)

Class 11 Biology · 15 real NEET & AIPMT questions, year-tagged · answers checked by RankUp

NEET 2021

1. Which one of the following belongs to the family Muscidae ?

- (A) Fire fly
- (B) Grasshopper
- (C) Cockroach
- (D) House fly

NEET 2019 · Q144

2. Select the correctly written scientific name of Mango which was first described by Carolus Linnaeus :

- (A) Mangifera indica Car. Linn.
- (B) Mangifera indica Linn.
- (C) Mangifera indica
- (D) Mangifera Indica

NEET 2017 (Gujarati paper) · Q73

3. Given below are defined the various taxonomic aids used in taxonomy which facilitate identification and classification of organisms. Which one of the following is wrong?

- (A) Herbarium is created to house live specimens of plant material.
- (B) Museums are established to keep preserved specimens of animals and plants.
- (C) Botanical gardens and Zoological parks are established to conserve and preserve live plants and animals respectively.
- (D) Keys, floras, manuals, monographs and catalogues are useful aids for identification of plants and animals.

NEET 2016 Phase 2 · Q94

4. The label of a herbarium sheet does not carry information on

- (A) date of collection
- (B) name of collector
- (C) local names
- (D) height of the plant

NEET 2016 Phase 2 · Q137

5. Match Column-I with Column-II for housefly classification and select the correct option using the codes given below:

Column-I: a. Family; b. Order; c. Class; d. Phylum

Column-II: (i) Diptera; (ii) Arthropoda; (iii) Muscidae; (iv) Insecta

- (A) a-(iii), b-(i), c-(iv), d-(ii)
- (B) a-(iii), b-(ii), c-(iv), d-(i)
- (C) a-(iv), b-(iii), c-(ii), d-(i)
- (D) a-(iv), b-(ii), c-(i), d-(iii)

NEET 2016 Phase 2 · Q139

6. Study the four statements (A-D) given below and select the two correct ones out of them:

- A. Definition of biological species was given by Ernst Mayr.**
- B. Photoperiod does not affect reproduction in plants.**
- C. Binomial nomenclature system was given by R. H. Whittaker.**
- D. In unicellular organisms, reproduction is synonymous with growth.**

The two correct statements are

- (A) B and C
- (B) C and D
- (C) A and D
- (D) A and B

7. Nomenclature is governed by certain universal rules. Which one of the following is contrary to the rules of nomenclature?

- (A) Biological names can be written in any language
- (B) The first word in a biological name represents the genus name, and the second is a specific epithet
- (C) The names are written in Latin and are italicised
- (D) When written by hand, the names are to be underlined

AIPMT 2012 Mains

8. Which one of the following organisms is scientifically correctly named, correctly printed according to the International Rules of Nomenclature and correctly described?

- (A) *Musca domestica* – The common house lizard, a reptile
- (B) *Plasmodium falciparum* – A protozoan pathogen causing the most serious type of malaria
- (C) *Felis tigris* – The Indian tiger, well protected in Gir forests
- (D) *E. coli* – Full name *Entamoeba coli*, a commonly occurring bacterium in human intestine

AIPMT 2011 Mains

9. Which one of the following aspects is an exclusive characteristic of living things?

- (A) Perception of events happening in the environment and their memory
- (B) Increase in mass by accumulation of material both on surface as well as internally
- (C) Isolated metabolic reactions occur in vitro
- (D) Increase in mass from inside only

AIPMT 2011 Prelims

10. Which one of the following organisms is not an example of eukaryotic cells

- (A) *Amoeba proteus*
- (B) *Paramecium caudatum*
- (C) *Escherichia coli*
- (D) *Euglena viridis*

AIPMT 2011 Prelims

11. Which one of the following animals is correctly matched with its particular named taxonomic category?

- (A) Housefly - *Musca*, an order
- (B) Tiger - *Tigris*, the species
- (C) Cuttlefish - Mollusca, a class
- (D) Humans - Primata, the family

AIPMT 2007 Prelims · Q101

12. ICBN stands for

- (A) International Code of Botanical Nomenclature
- (B) International Congress of Biological Names
- (C) Indian Code of Botanical Nomenclature
- (D) Indian Congress of Biological Names

AIPMT 2007 Prelims · Q103

13. Biological organisation starts with

- (A) cellular level
- (B) organismic level
- (C) atomic level
- (D) submicroscopic molecular level

14. The living organisms can be unexceptionally distinguished from the non-living things on the basis of their ability for

- (A) interaction with the environment and progressive evolution
- (B) reproduction
- (C) growth and movement
- (D) responsiveness to touch

15. Two plants can be conclusively said to belong to the same species if they

- (A) have more than 90 per cent similar genes
- (B) look similar and possess identical secondary metabolites
- (C) have same number of chromosomes
- (D) can reproduce freely with each other and form seeds

Answer key and explanations

1. Answer: (D) House fly

The housefly, *Musca domestica*, belongs to the family Muscidae of order Diptera. Grasshopper and cockroach belong to other insect orders and the firefly is a beetle.

2. Answer: (B) *Mangifera indica* Linn.

The binomial is written with a capital genus and small-letter specific epithet, followed by the abbreviated author name 'Linn.' when Linnaeus described it. Capitalising 'Indica' breaks the rule, and leaving out the author does not show who first described it.

3. Answer: (A) Herbarium is created to house live specimens of plant material.

A herbarium stores dried, pressed and preserved plant specimens mounted on sheets, not live plants; living plants are kept in botanical gardens. The statements on museums, botanical gardens and zoos, and keys and floras are correct.

4. Answer: (D) height of the plant

A herbarium label records the date and place of collection, the collector's name, and the botanical, family and local names of the specimen. The height of the plant is not a standard entry on the label, since the pressed specimen itself is kept on the sheet.

5. Answer: (A) a-(iii), b-(i), c-(iv), d-(ii)

The housefly *Musca domestica* belongs to family Muscidae, order Diptera, class Insecta and phylum Arthropoda. Only one code pairs family with Muscidae, order with Diptera, class with Insecta and phylum with Arthropoda.

6. Answer: (C) A and D

Ernst Mayr gave the biological species concept, and in unicellular organisms division of the cell is both growth and reproduction, so A and D are correct. Photoperiod does affect flowering and reproduction, and binomial nomenclature was given by Linnaeus, while Whittaker proposed the five-kingdom system.

7. Answer: (A) Biological names can be written in any language

Scientific names must be in Latin or Latinised form, so writing them in any language is against the rules. Binomials consist of genus followed by specific epithet, printed in italics or underlined separately when handwritten.

8. Answer: (B) *Plasmodium falciparum* - A protozoan pathogen causing the most serious type of malaria

Plasmodium falciparum is correctly named and causes malignant malaria, the most serious kind. *Musca domestica* is the housefly, the tiger is *Panthera tigris* and Gir protects lions, and *E. coli* stands for *Escherichia coli*, not *Entamoeba*.

9. Answer: (A) Perception of events happening in the environment and their memory

Consciousness, the ability to sense the environment and remember it, is the defining property found only in living things. Increase in mass by surface accumulation also occurs in non-living things such as crystals and mountains, and isolated metabolic reactions in vitro are not living.

10. Answer: (C) *Escherichia coli*

Escherichia coli is a bacterium and so has a prokaryotic cell without a nuclear membrane. *Amoeba*, *Paramecium* and *Euglena* are protists with true nuclei, so they are eukaryotes.

11. Answer: (B) Tiger - Tigris, the species

In *Panthera tigris*, the tiger, 'tigris' is the specific epithet that denotes the species. *Musca* is the genus of the housefly, *Mollusca* is a phylum, and *Primata* is an order, not a family.

12. Answer: (A) International Code of Botanical Nomenclature

ICBN is the International Code of Botanical Nomenclature, the internationally agreed set of rules for giving scientific names to plants. It is an international code, not an Indian one, and it deals with botanical names, not a congress on biological names.

13. Answer: (D) submicroscopic molecular level

The levels of biological organisation begin with biomolecules at the submicroscopic molecular level, which then build organelles, cells, tissues and organisms. Atoms are the units of chemistry rather than of biological organisation, and the cell is a higher level built from those molecules.

14. Answer: (A) interaction with the environment and progressive evolution

NCERT points out that reproduction cannot be a defining property, since sterile organisms such as mules and worker bees do not reproduce, and growth is also seen in non-living things like crystals and mountains. Sensing and interacting with the environment (consciousness) together with the capacity to evolve is shown by every living organism, so it is the exceptionless distinction.

15. Answer: (D) can reproduce freely with each other and form seeds

By the biological species concept, members of a species interbreed freely in nature and produce fertile offspring (here, viable seeds). Similar appearance, chromosome number or gene similarity can be shared by different species, so they are not conclusive.

Questions as set in the AIPMT/NEET papers conducted by CBSE and NTA. Answers checked and explanations written by the RankUp team. RankUp is not affiliated with CBSE or NTA.