# Multiple Choice Questions (MCQ) topic quiz

**Classification and evolution**

## Instructions and answers for teachers

These instructions cover the learner activity section which can be found on [page](#_Enzymes_1_Multiple) 9.

This Lesson Element supports OCR AS and A Level Biology A (H020, H420). This quiz can also be used to support Biology B (Advancing Biology) (H022, H422).

**When distributing the activity section to the learners either as a printed copy or as a Word file you will need to remove the teacher instructions section.**

### The Activity

This Lesson Element is a teaching and learning resource containing 20 multiple choice questions on the theme of classification and evolution. Some questions might require synoptic thinking, using knowledge and ideas from various topics across the full A Level content.

This resource can be used to test and consolidate understanding at the end of a topic or to revisit and refresh knowledge at a later point in the course.

### Introduction

Multiple choice questions allow rapid coverage of a wide range of sub-topics.

Contrary to a widespread belief among students, multiple choice questions are not necessarily easy – they can be easy, moderate or difficult.

The questions are written so that the incorrect answers are plausible distractors based on common errors or misconceptions.

The questions in this quiz cover topics mainly from specification sections:

Biology A   
4.2.2 Classification and evolution

Biology B (Advancing Biology)

3.1.3 The development of species: evolution and classification.

### Multiple Choice Questions (MCQ) topic quiz - answers

1 Which one of the following is **incorrect** when writing the scientific name of an organism?

| **A** | the name can be underlined |  |
| --- | --- | --- |
| **B** | the name can be in italics |  |
| **C** | the generic name starts with an upper case letter |  |
| **D**  D | the specific name starts with an upper case letter |  |

Your answer

2 Analysis of which of these compounds would **not** be useful in understanding evolutionary relationships between organisms?

| **A** | carbohydrate |  |
| --- | --- | --- |
| **B** | DNA |  |
| **C** | protein |  |
| **D**  A | RNA |  |

Your answer

3 Which one of the following is **not** a domain in the three domain classification system?

| **A** | Archaea |  |
| --- | --- | --- |
| **B** | Eubacteria |  |
| **C** | Eukarya |  |
| **D**  D | Prokaryotae |  |

Your answer

4 Which one of the following is **not** a feature shared by plants and fungi?

| **A** | presence of a cell wall |  |
| --- | --- | --- |
| **B** | presence of starch |  |
| **C** | presence of a nucleus |  |
| **D**  B | presence of 80s ribosomes |  |

Your answer5 Which of the following kingdoms lack membrane-bound organelles?

| **A** | prokaryotae only |  |
| --- | --- | --- |
| **B** | prokaryotae and fungi |  |
| **C** | prokaryotae and protoctista |  |
| **D**  A | prokaryotae, fungi and protoctista | |

Your answer

6 Which of the following kingdoms contains organisms which carry out autotrophic nutrition?

| **A** | plants and fungi only |  |
| --- | --- | --- |
| **B** | plants and protoctista only |  |
| **C** | plants, protoctista and prokaryotae only |  |
| **D**  C | plants, protoctista, prokaryotae and fungi only |  |

Your answer

7 Organisms from which kingdom have hyphae?

| **A** | fungi |  |
| --- | --- | --- |
| **B** | plants |  |
| **C** | prokaryotae |  |
| **D**  A | protoctista |  |

Your answer

8 Which one of the following is the study of the evolutionary relationships between organisms?

| **A** | natural classification |  |
| --- | --- | --- |
| **B** | artificial classification |  |
| **C** | phylogeny |  |
| **D**  C | taxonomy |  |

Your answer

Questions 9-12 refer to the following table which shows the classification of the common earthworm. Taxonomic ranks other than domain, kingdom, genus and species are missing.

| **Taxonomic rank** | **Named taxonomic group** |
| --- | --- |
| Domain | Eukaryotae |
| Kingdom | Animalia |
|  | Annelida |
|  | Clitellata |
|  | Haplotaxida |
|  | Lumbricidae |
| Genus | *Lumbricus* |
| Species | *terrestris* |

9 To which class does the earthworm belong?

| **A** | Annelida |  |
| --- | --- | --- |
| **B** | Clitellata | |
| **C** | Haplotaxida | |
| **D**  B | Lumbricidae |  |

Your answer

10 To which phylum does the earthworm belong?

| **A** | Annelida |  |
| --- | --- | --- |
| **B** | Clitellata | |
| **C** | Haplotaxida | |
| **D**  A | Lumbricidae |  |

Your answer

11 To which family does the earthworm belong?

| **A** | Annelida |  |
| --- | --- | --- |
| **B** | Clitellata |  |
| **C** | Haplotaxida |  |
| **D**  D | Lumbricidae |  |

Your answer

12 To which order does the earthworm belong?

| **A** | Annelida |  |
| --- | --- | --- |
| **B** | Clitellata |  |
| **C** | Haplotaxida |  |
| **D**  C | Lumbricidae |  |

Your answer

13 Which one of the following taxonomic groups will contain the least number of species?

| **A** | kingdom |  |
| --- | --- | --- |
| **B** | family |  |
| **C** | genus |  |
| **D**  C | order |  |

Your answer

14 Which one of the following taxonomic groups will contain the highest number of species?

| **A** | class |  |
| --- | --- | --- |
| **B** | order |  |
| **C** | phylum |  |
| **D**  C | family |  |

Your answer

15 Which of the following statements about the marsupial mole and placental mole is/are correct?

**Statement 1:** The marsupial mole and placental mole belong to the same genus.

**Statement 2:** They have a similar body shape and forelimbs.

**Statement 3:** They provide an example of convergent evolution.

| **A** | 1, 2 and 3 |  |
| --- | --- | --- |
| **B** | Only 1 and 2 |  |
| **C** | Only 2 and 3 |  |
| **D**  C | Only 1 |  |

Your answer

16 Members of the same class must also be members of the same of which of the following taxonomic groups?

| **A** | genus |  |
| --- | --- | --- |
| **B** | order |  |
| **C** | phylum |  |
| **D**  C | family |  |

Your answer

17 Which kingdom contains both autotrophic and heterotrophic organisms, some unicellular and others multicellular, with membrane-bound organelles?

| **A** | fungi |  |
| --- | --- | --- |
| **B** | plants |  |
| **C** | prokaryotae |  |
| **D**  D | protoctista |  |

Your answer

18 Organisms belonging to which one of these kingdoms do **not** all have a cell wall?

| **A** | fungi |  |
| --- | --- | --- |
| **B** | plants |  |
| **C** | prokaryotae |  |
| **D**  D | protoctista |  |

Your answer

19 The following description of the genetic material does **not** apply to which one of the kingdoms?

“A linear DNA molecule associated with proteins called histones.”

| **A** | fungi |  |
| --- | --- | --- |
| **B** | plants |  |
| **C** | prokaryotae |  |
| **D**  C | protoctista |  |

Your answer

20 Which of the following is **not** necessary for evolution to occur by natural selection?

| **A** | inheritance of genes |  |
| --- | --- | --- |
| **B** | habitat variation |  |
| **C** | genes affecting reproductive fitness |  |
| **D**  B | genetic variation |  |

Your answer

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**Classification and evolution**

## Learner Activity

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Your answer

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Your answer

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| **C** | prokaryotae and protoctista |  |
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Your answer

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| **B** | plants and protoctista only |  |
| **C** | plants, protoctista and prokaryotae only |  |
| **D** | plants, protoctista, prokaryotae and fungi only |  |

Your answer

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| --- | --- | --- |
| **B** | plants |  |
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| **D** | taxonomy |  |

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| **B** | family |  |
| **C** | genus |  |
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Your answer

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