The Living World: Chapter Introduction

A mule cannot reproduce, yet it is alive. Metabolism, cellular organisation and consciousness define life; binomial names and the taxonomic hierarchy organise 1.7-1.8 million described species.

Name: Date: Score: ____ / 18

A. Fill in the blanks

1. The sum of all chemical reactions in a body is called ____.

2. Naming each organism with a genus and a species name is called ____ nomenclature.

3. Binomial nomenclature was given by Carolus ____.

4. The lowest (most specific) taxonomic category is the ____.

5. The scientific name of the mango is Mangifera ____.

B. True or False

6. Growth is a defining feature of living organisms. True / False

7. A mule is a living organism even though it cannot reproduce. True / False

8. Cellular organisation is a defining feature of life. True / False

9. In Homo sapiens, "sapiens" is the genus. True / False

C. Assertion and reason

10. Assertion (A): Reproduction is not a defining feature of life.
Reason (R): Mules and worker bees are alive but cannot reproduce.

(a) Both A and R are true, and R explains A
(b) Both A and R are true, but R does not explain A
(c) A is true, R is false
(d) A is false, R is true

Answer: _____

11. Assertion (A): Local names are enough for science.
Reason (R): One plant has different names in different places.

(a) Both A and R are true, and R explains A
(b) Both A and R are true, but R does not explain A
(c) A is true, R is false
(d) A is false, R is true

Answer: _____

D. Choose the correct option

12. Which is a defining property of living organisms?

(a) growth
(b) reproduction
(c) metabolism
(d) movement

Answer: _____

13. The correct order of taxonomic categories is:

(a) kingdom, class, phylum, order
(b) kingdom, phylum, class, order
(c) phylum, kingdom, order, class
(d) order, class, phylum, kingdom

Answer: _____

14. The scientific name of humans is:

(a) Homo erectus
(b) Homo sapiens
(c) Homo indica
(d) Sapiens homo

Answer: _____

15. About how many species have been described?

(a) 17 thousand
(b) 1.7-1.8 million
(c) 170 million
(d) 1.8 billion

Answer: _____

E. Short answer questions

16. Why are growth and reproduction not defining features of living organisms?

17. State two rules of binomial nomenclature.

F. Match the columns

18. Match each item in Column A with the correct item in Column B.

Column A	Column B	Your answer
1. Mangifera	(a) Specific epithet of humans	1 → ____
2. sapiens	(b) Genus of mango	2 → ____
3. Linnaeus	(c) Binomial nomenclature	3 → ____
4. Metabolism	(d) Defining feature of life	4 → ____

Detailed solutions

1. metabolism

2. binomial

3. Linnaeus

4. species

5. indica

6. False. Non-living masses also grow, by accumulation from outside.

7. True. Reproduction is not a defining feature.

8. True. All living organisms are made of cells.

9. False. "Homo" is the genus; "sapiens" is the specific epithet.

10. (a) R is the reason A is true.

11. (d) A is false; R is true and is why binomial names are needed.

12. (c) metabolism. No non-living object shows metabolism.

13. (b) kingdom, phylum, class, order. Kingdom → phylum → class → order → family → genus → species.

14. (b) Homo sapiens. Genus Homo, species sapiens.

15. (b) 1.7-1.8 million. NCERT quotes about 1.7-1.8 million.

16. Non-living things such as mountains and sand mounds also increase in mass (from outside), and many living organisms such as mules and worker bees cannot reproduce. So neither is found in all and only living things.

17. The name has two words: the genus (starts with a capital letter) and the specific epithet (small letter). It is printed in italics, or each word is underlined separately when handwritten.

18. 1 → (b), 2 → (a), 3 → (c), 4 → (d). Each term matches its idea from the chapter introduction.