How do Organisms Reproduce?

Standard difficulty · 20 questions · 40 marks · Time: 37 minutes

Name: _____ Date: _____ Score: ____ / 40

Show your working for Sections B and C. Answers are on the last page — try every question first!

Section A — Choose the correct answer — 8 × 1 = 8 marks

1. Leishmania usually reproduces asexually by:

(a) binary fission **(b)** multiple fission
(c) spore formation **(d)** fragmentation

2. After fertilisation, the ovule wall develops into:

(a) the flower **(b)** the fruit
(c) the pollen grain **(d)** the seed coat

3. DNA copying during reproduction leads to:

(a) loss of all genes
(b) more chromosomes in each generation
(c) no change at all
(d) variation, because copying is never perfectly accurate

4. In the human body, which of these is where the embryo implants and develops?

(a) The uterus **(b)** The placenta **(c)** The ovaries **(d)** The testes

5. Each body cell of a horse has 64 chromosomes. How many chromosomes are there in an egg?

(a) 33 **(b)** 64 **(c)** 128 **(d)** 32

6. As a method of contraception, vasectomy is:

(a) a surgical method **(b)** a device placed in the uterus
(c) a barrier method **(d)** a hormonal method

7. A culture starts with 3 bacteria that divide by binary fission every 40 minutes. How many bacteria are there after 80 minutes?

(a) 12 **(b)** 13 **(c)** 6 **(d)** 24

8. Assertion (A): The gametes of a mango tree, whose body cells have 40 chromosomes, have 20 chromosomes.
Reason (R): Gametes are formed by a special cell division that halves the number of chromosomes.

(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

Section B — Short answer — 8 × 2 = 16 marks

9. How does Planaria reproduce? Name the method and describe it in one line.

10. What does the ovule wall develop into after fertilisation?

11. A bacterium divides into two every 20 minutes. Starting with 50, how long will it take to reach 25,600 bacteria?

12. Why is variation useful for the survival of a species?

13. Each body cell of a pigeon has 80 chromosomes. How many chromosomes are there in (a) a sperm, (b) an egg, (c) the zygote?

14. What is the role of the oviduct (fallopian tube) in human reproduction?

15. What causes HIV-AIDS? Give one way to prevent its spread.

16. Give two differences between the stamen and the pistil.

Section C — Word problems — 4 × 4 = 16 marks

17. Explain the process of sexual reproduction in flowering plants, from pollination to the formation of seeds.

18. Bacterium P divides every 20 minutes and bacterium Q every 40 minutes. Each culture starts with 10 cells. (a) How many divisions happen in each in 2 hours? (b) How many cells are there in each after 2 hours? (c) How many times as many P cells as Q cells is that?

19. Body cells of an onion have 16 chromosomes. (a) How many do its gametes have, and why? (b) Suppose gametes were made without halving the number. How many chromosomes would the offspring have after 2 generations? (c) Why would this be a problem?

20. A pollen grain from a mustard flower is carried by the wind to the stigma of another mustard flower. Describe what happens next, up to the formation of the seed and the fruit. What kind of pollination is this?

Want another sheet on this chapter? In the Ambiful Worksheets app every sheet is new, with its answer key, and your child never gets the same question twice.
Scan the code to get the free app, or open **worksheets.ambiful.com/get**

Answer key

How do Organisms Reproduce? · AW-10S-REP-2026-V1 · For parents — fold back or tear off before handing the sheet to your child.

Q	Answer	Working
1	**(a) binary fission**	—
2	**(d) the seed coat**	—
3	**(d) variation, because copying is never perfectly accurate**	—
4	**(a) The uterus**	—
5	**(d) 32**	gametes have half the number
6	**(a) a surgical method**	—
7	**(a) 12**	80 ÷ 40 = 2 divisions; 3×2^2
8	**(a) Both A and R are true, and R is the correct explanation of A.**	A is true: gametes have half: 40 ÷ 2 = 20. R is true and explains A.
9	**Regeneration: each cut piece grows into a complete organism.**	—
10	**The seed coat**	—
11	**9 divisions; 180 minutes (3 hours)**	25,600 ÷ 50 = 512 = 2 multiplied 9 times
12	**If the environment changes (e.g. the water gets hotter), some variants may survive the change; without variation the whole population could be wiped out.**	—
13	**(a) 40; (b) 40; (c) 80**	gametes have half; fertilisation restores the full number
14	**The oviduct (fallopian tube) carries the egg from the ovary; fertilisation takes place here.**	—
15	**A virus; using a condom (barrier method) during sex prevents its spread.**	—
16	**The stamen is the male part, with an anther that makes pollen; the pistil is the female part, with stigma, style and ovary containing ovules.**	—
17	**Pollen from the anther reaches the stigma (pollination). A pollen tube grows through the style to the ovule, and the male germ cell fuses with the female germ cell to form a zygote (fertilisation). The zygote divides to form an embryo; the ovule becomes a seed with a tough coat, and the ovary grows into a fruit. Petals, sepals,**	—

Q	Answer	Working
	stamens, style and stigma may shrivel and fall off.	
18	**(a) P: 6, Q: 3; (b) P: 640, Q: 80; (c) 8 times**	120 ÷ 20 and 120 ÷ 40
19	**(a) 8: a special division halves the number, so fertilisation restores 16. (b) 64 (doubling every generation: 16 × 2^2). (c) The DNA would keep changing; the body design would not stay stable and the cells could not work properly.**	—
20	**The pollen grain grows a pollen tube through the style to the ovule in the ovary. The male germ cell fuses with the female germ cell (fertilisation) to form a zygote, which grows into an embryo. The ovule becomes the seed and the ovary becomes the fruit; the petals and sepals fall off. This is cross-pollination.**	—