

EDUSAMBAM ASSESSMENT SERIES

Biology Comprehensive Practice Test 2

PRINTABLE PRACTICE WORKSHEET

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Candidate Name:		Roll No.:	
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Subject	Biology	Topic	Biology Comprehensive Practice Test 2	Total Marks	100
Total Questions	45	Time Allowed	1 Hour (60 minutes)	Version	A

GENERAL INSTRUCTIONS

1. Read each question carefully before answering.
2. For Section A and Section B, mark one answer only.
3. For Sections C and E, write your answer clearly in the space provided.
4. For Section D, write the correct letter from Column B against each item in Column A.
5. Do not use correction fluid. Keep all answers clear and legible.
6. This worksheet is prepared from the EDUSAMBAM practice assessment supplied for this paper.

PAPER PATTERN

Section	Questions	Marks Each	Total
Section A — Multiple Choice	15	2	30
Section B — True / False	10	2	20
Section C — Fill in the Blank	10	2	20
Section D — Column Matching	5 pairs	2	10
Section E — Short Answer	5	4	20
Total	45	—	100

Section A — Multiple Choice
30 marks

1. The first line of defence against many pathogens includes:

- A.** Skin and mucous barriers
C. Memory B cells only

- B.** Antibodies only
D. Red blood cells

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

2. Innate immunity is best described as:

- A.** A rapid, broadly acting defence present before a specific infection is encountered
C. A defence based entirely on antibodies

- B.** A response that occurs only after vaccination
D. A system that has no cells

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

3. Antibodies are produced by:

- A.** Activated B-lineage cells, especially plasma cells
C. Platelets

- B.** Red blood cells
D. Alveolar cells

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

4. A key feature of adaptive immunity is:

- A.** Specific recognition and immunological memory
C. Immediate action without recognition

- B.** Absence of receptors
D. Inability to respond again

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

5. Vaccination works primarily by:

- A.** Training the immune system to recognise specific targets without causing the intended disease
C. Replacing white blood cells

- B.** Destroying every microorganism in the body
D. Making pathogens unable to mutate

Answer: ☐A ☐B ☐C ☐D

Intermediate • 2 pts

6. A booster dose can be useful because:

- A.** Immune memory can be strengthened and antibody responses can rise again
C. It changes all pathogens into harmless organisms

Answer: ☐A ☐B ☐C ☐D

Intermediate · 2 pts

B. The first vaccine permanently disappears from the body after hours

D. It removes all immune cells

7. A person infected with a virus is not necessarily helped by an antibiotic because:

- A.** Antibiotics target bacterial structures/processes rather than viral replication mechanisms
C. Antibiotics only work on plants

Answer: ☐A ☐B ☐C ☐D

Intermediate · 2 pts

B. Viruses are larger than bacteria

D. Viruses have cell walls that antibiotics cannot reach

8. Antimicrobial resistance is strongly promoted when:

- A.** Susceptible microbes are killed while resistant variants survive and reproduce under selection pressure
C. Antibiotics create every mutation deliberately

Answer: ☐A ☐B ☐C ☐D

Intermediate · 2 pts

B. All microbes become resistant simultaneously

D. Resistance cannot be inherited

9. Autoimmune disease involves:

- A.** Immune responses directed against the body's own tissues
C. Only bacterial infection

Answer: ☐A ☐B ☐C ☐D

Intermediate · 2 pts

B. Complete absence of immune cells

D. Only allergic responses

10. An allergy is best understood as:

- A.** An excessive or inappropriate immune response to a usually harmless substance
C. A lack of antibodies in every case

Answer: ☐A ☐B ☐C ☐D

Intermediate · 2 pts

B. A bacterial disease

D. A genetic mutation in every immune cell

11. Which immune cell type can directly kill infected or abnormal target cells?

- A.** Cytotoxic T cells
C. Platelets

Answer: ☐A ☐B ☐C ☐D

Intermediate · 2 pts

B. Red blood cells

D. Osteocytes

12. Inflammation can be useful because it:

- A.** Helps recruit immune cells and increases local defensive responses
C. Prevents all immune responses

Answer: ☐A ☐B ☐C ☐D

Advanced · 2 pts

B. Always indicates an autoimmune disease

D. Occurs only in the brain

13. Why can a second exposure to the same antigen sometimes produce a faster response?

- A.** Memory cells formed during the first response can respond rapidly
C. The skin becomes permanently thicker

Answer: ☐A ☐B ☐C ☐D

Advanced · 2 pts

B. Pathogens always become weaker

D. Red blood cells remember antigens

14. A vaccine with high effectiveness can reduce disease spread because:

- A.** Fewer susceptible people and/or fewer infections can reduce opportunities for transmission
C. It removes every pathogen from the environment

Answer: ☐A ☐B ☐C ☐D

Advanced · 2 pts

B. Vaccinated people cannot carry any microorganism

D. It guarantees lifelong sterilising immunity in every person

15. Which statement best integrates immunity and public health?

- A.** Individual immune protection and population-level transmission patterns can influence one another
C. Only antibodies matter for disease control

Answer: ☐A ☐B ☐C ☐D

Advanced · 2 pts

B. Public health has no biological component

D. Vaccination affects only the vaccinated person's genes

Section B — True / False

20 marks

16. The immune system can distinguish many molecular patterns using specialised receptors.

A. True ☐ **B.** False ☐

Basic · 2 pts

17. Innate immunity is completely absent until after vaccination.

A. True ☐ **B.** False ☐

Basic · 2 pts

18. Antibodies are proteins that can bind specific targets.

A. True ☐ **B.** False ☐

Basic · 2 pts

19. All inflammation is harmful.

A. True ☐ **B.** False ☐

Basic · 2 pts

20. Vaccines are designed to induce immune memory against particular targets. Intermediate • 2 pts
A. True ☐ **B.** False ☐
21. Antibiotics are effective treatments for every viral infection. Intermediate • 2 pts
A. True ☐ **B.** False ☐
22. Antimicrobial resistance can spread through microbial populations. Intermediate • 2 pts
A. True ☐ **B.** False ☐
23. Autoimmune reactions can involve immune recognition of self molecules as targets. Intermediate • 2 pts
A. True ☐ **B.** False ☐
24. A person with immune memory can never become infected again. Intermediate • 2 pts
A. True ☐ **B.** False ☐
25. Herd or community protection can depend on how many people are susceptible and how efficiently an infection spreads. Intermediate • 2 pts
A. True ☐ **B.** False ☐

Section C — Fill in the Blank

20 marks

26. The first line of physical defence includes the skin and ____ membranes. Basic • 2 pts
Answer: _____
27. The branch of immunity that includes rapid, broad defences is ____ immunity. Basic • 2 pts
Answer: _____
28. Cells that secrete large amounts of antibodies are called ____ cells. Basic • 2 pts
Answer: _____
29. Long-lived cells that contribute to faster secondary responses are ____ cells. Basic • 2 pts
Answer: _____
30. A substance or molecular structure recognised by specific immune receptors is an _____. Intermediate • 2 pts
Answer: _____
31. A vaccine aims to generate protective immune _____. Intermediate • 2 pts
Answer: _____
32. The inappropriate immune response to harmless substances seen in hay fever is an _____. Intermediate • 2 pts
Answer: _____
33. Immune attack against the body's own tissues is characteristic of ____ disease. Intermediate • 2 pts
Answer: _____
34. Resistance of microbes to antimicrobial drugs is called antimicrobial _____. Intermediate • 2 pts
Answer: _____
35. The movement of an infection through a population depends partly on transmission and the number of ____ people. Intermediate • 2 pts
Answer: _____

Section D — Column Matching

10 marks

36-40. Match each term to its correct definition.

Column A	Answer	Column B
Antibody	____	A. Supports a faster secondary immune response
Memory cell	____	B. Exposure designed to train immune memory
Vaccine	____	C. Immune attack against self
Autoimmunity	____	D. Reduced susceptibility of a microbe to a drug
Antimicrobial resistance	____	E. Specific protein that binds an antigen

Section E — Short Answer

20 marks

41. Compare innate and adaptive immunity in terms of speed, specificity and memory. Advanced • 4 pts
- _____
- _____
- _____
- _____

42. Explain why vaccination can protect an individual without giving them the disease the vaccine is designed to prevent. Advanced · 4 pts

43. Explain how antimicrobial resistance can increase in a bacterial population after antibiotic exposure. Advanced · 4 pts

44. Why does autoimmune disease differ conceptually from infection? Advanced · 4 pts

45. Explain how individual vaccination and population transmission can interact. Advanced · 4 pts

Candidate Signature: _____ **Invigilator Signature:** _____

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Marks Obtained: _____ / 100

Result / Grade: _____

Checked By: _____

Date Checked: _____

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Biology Comprehensive Practice Test 2 — Answer Key

Teacher reference: equivalent grammatically correct wording is acceptable for open-ended items when the meaning is preserved.

Section A — Multiple Choice

1. A

2. A

3. A

4. A

5. A

6. A

7. A

8. A
9. A

10. A

11. A

12. A

13. A

14. A

15. A

Section B — True / False

16. False

17. True

18. False

19. True

20. False
21. True

22. False

23. False

24. True

25. False

Section C — Fill in the Blank

26. mucous

27. innate

28. plasma

29. memory

30. antigen
31. memory

32. allergy

33. autoimmune

34. resistance

35. susceptible

Section D — Column Matching

36. Antibody — E

37. Memory cell — A

38. Vaccine — B
39. Autoimmunity — C

40. Antimicrobial resistance — D

Section E — Short Answer (Model Answers)

41. compare; rapid; broad; innate; defences

42. controlled; antigen; exposure; immune; recognition

43. existing; variation; acquired; resistance; selection

44. autoimmunity; involves; immune; recognition; attack

45. link; reduced; susceptibility; infection; individuals