EDUSAMBAM ASSESSMENT SERIES

# Physics Comprehensive Practice Test 2

PRINTABLE PRACTICE WORKSHEET



**YOUR PHYSICAL & ONLINE SELF-ASSESSMENT ROADMAP**

**PHYSICAL**

1. Download any practice test →
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3. Submit it to your Teacher/Examiner →
4. Get assessed and improve

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3. Solve online papers →
4. Get auto-assessed and improve

| | | | |
|---|---|---|---|
| **Candidate Name:** | | **Roll No.:** | |
| **Class / Grade:** | | **Date:** | |
| **School / Institution:** | | **Test Centre:** | |

| | | | | | |
|---|---|---|---|---|---|
| **Subject** | Physics | **Topic** | Physics 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 — Matching | 5 pairs | 2 | 10 |
| Section E — Short Answer | 5 | 4 | 20 |
| **Total** | **45** | **—** | **100** |

## Section A — Multiple Choice — 30 marks

1. What is the standard unit used to measure energy? — Basic · 2 pts

**A.** Newton **B.** Watt
**C.** Joule **D.** Kelvin

**Answer:** ☐ A ☐ B ☐ C ☐ D

2. What is Ohm's Law? — Basic · 2 pts

**A.** Force = Mass × Acceleration **B.** Voltage = Current × Resistance
**C.** Work = Force × Distance **D.** Energy = Mass × Speed

**Answer:** ☐ A ☐ B ☐ C ☐ D

3. According to Newton's First Law, what happens to an object in motion if no unbalanced force acts on it? — Basic · 2 pts

**A.** It gradually speeds up on its own **B.** It stops immediately
**C.** It keeps moving at a constant velocity **D.** It changes direction randomly

**Answer:** ☐ A ☐ B ☐ C ☐ D

4. According to Newton's Law of Universal Gravitation, what happens to gravitational pull as distance increases? — Basic · 2 pts

**A.** It stays exactly the same **B.** It increases proportionally
**C.** It weakens rapidly, following an inverse square law **D.** It reverses direction

**Answer:** ☐ A ☐ B ☐ C ☐ D

5. What is heat? — Intermediate · 2 pts

**A.** Another word for temperature **B.** A measurement of mass
**C.** The transfer of thermal energy from a hotter object to a cooler one **D.** A type of force

**Answer:** ☐ A ☐ B ☐ C ☐ D

6. What does the Law of Reflection state? **Intermediate · 2 pts**

**A.** Light always bends when it reflects
**B.** Reflected light always travels slower
**C.** The angle of incidence always equals the angle of reflection
**D.** Light never reflects off rough surfaces

**Answer:** ☐ A ☐ B ☐ C ☐ D

7. In which state are particles tightly packed in fixed positions, only vibrating in place? **Intermediate · 2 pts**

**A.** Gas
**B.** Plasma
**C.** Solid
**D.** Liquid

**Answer:** ☐ A ☐ B ☐ C ☐ D

8. If you run a full lap of a 400m track and end up exactly where you started, what is your displacement? **Intermediate · 2 pts**

**A.** 400m
**B.** 200m
**C.** 0m
**D.** It cannot be calculated

**Answer:** ☐ A ☐ B ☐ C ☐ D

9. Why does a sharp knife cut more easily than a blunt one, with the same push force? **Intermediate · 2 pts**

**A.** Sharp knives weigh less
**B.** Sharp knives are always made of different metal
**C.** A sharp edge concentrates force onto a smaller area, producing greater pressure
**D.** Sharp knives generate their own buoyant force

**Answer:** ☐ A ☐ B ☐ C ☐ D

10. Why can't sound travel through the vacuum of space? **Intermediate · 2 pts**

**A.** Space is too cold for sound
**B.** There are no particles present for the sound wave to travel through
**C.** Sound moves too fast for space
**D.** Gravity blocks sound waves

**Answer:** ☐ A ☐ B ☐ C ☐ D

11. What makes physics different from a science like biology, according to the article? **Intermediate · 2 pts**

**A.** Physics doesn't use experiments
**B.** Physics only studies living things
**C.** Physics explains "why" using precise, testable, mathematical laws
**D.** Physics has no connection to other sciences

**Answer:** ☐ A ☐ B ☐ C ☐ D

12. What is the formula for work? **Advanced · 2 pts**

**A.** Work = Force ÷ Distance
**B.** Work = Force × Distance
**C.** Work = Mass × Acceleration
**D.** Work = Distance ÷ Time

**Answer:** ☐ A ☐ B ☐ C ☐ D

13. What energy transformation happens in a solar panel? **Advanced · 2 pts**

**A.** Electrical → Light
**B.** Sound → Electrical
**C.** Chemical → Kinetic
**D.** Light → Electrical

**Answer:** ☐ A ☐ B ☐ C ☐ D

14. Why do sunsets often look red or orange? **Advanced · 2 pts**

**A.** The Sun itself changes color at sunset
**B.** Sunlight passes through more atmosphere, scattering away most of the blue light first
**C.** There is no scientific explanation for this
**D.** Red light is absorbed completely at sunset

**Answer:** ☐ A ☐ B ☐ C ☐ D

15. What did James Watt actually contribute, historically? **Advanced · 2 pts**

**A.** Major improvements to the steam engine's efficiency
**B.** He invented the very first engine of any kind
**C.** He discovered electricity
**D.** He invented the wheel

**Answer:** ☐ A ☐ B ☐ C ☐ D

## Section B — True / False **20 marks**

16. Chemical energy is stored in the bonds between atoms and is found in food and fuels. **Basic · 2 pts**

**A.** True ☐ **B.** False ☐

17. Rubber and plastic are commonly used as electrical conductors. **Basic · 2 pts**

**A.** True ☐ **B.** False ☐

18. Like magnetic poles repel and unlike poles attract. **Basic · 2 pts**

**A.** True ☐ **B.** False ☐

19. Newton’s Third Law says action and reaction forces act on the same object. **Basic · 2 pts**

**A.** True ☐ **B.** False ☐

20. Weight can change when local gravitational strength changes, while mass remains constant. **Intermediate · 2 pts**

**A.** True ☐ **B.** False ☐

21. Heat always flows naturally from a colder object to a hotter object. **Intermediate · 2 pts**

**A.** True ☐ **B.** False ☐

22. A good conductor allows electric charge to move relatively easily. **Intermediate · 2 pts**

**A.** True ☐ **B.** False ☐

23. Pitch mainly depends on the frequency of a sound wave. **Intermediate · 2 pts**

**A.** True ☐ **B.** False ☐

24. Ultrasound has a frequency below 20 Hz. **Intermediate · 2 pts**

**A.** True ☐ **B.** False ☐

25. In an ideal energy transformation, total energy is conserved even when its form changes. **Intermediate · 2 pts**

**A.** True ☐ **B.** False ☐

## Section C — Fill in the Blank — 20 marks

26. Ohm’s Law is V = I × ____. **Basic · 2 pts**

Answer: _____

27. The two poles of a magnet are called north and ____. **Basic · 2 pts**

Answer: _____

28. The force needed to accelerate a 2 kg object at 3 m/s² is ____ N. **Basic · 2 pts**

Answer: _____

29. Gravitational force follows an inverse ____ law with distance. **Basic · 2 pts**

Answer: _____

30. The SI unit of temperature used in the article’s temperature-scale discussion is ____. **Intermediate · 2 pts**

Answer: _____

31. Heat transfer through direct particle contact is called ____. **Intermediate · 2 pts**

Answer: _____

32. The visible colors of light together form the visible ____. **Intermediate · 2 pts**

Answer: _____

33. Matter in the state made of charged particles is called ____. **Intermediate · 2 pts**

Answer: _____

34. A sound wave’s tightly packed regions are called ____. **Intermediate · 2 pts**

Answer: _____

35. A changing magnetic field can produce electric current by electromagnetic ____. **Intermediate · 2 pts**

Answer: _____

## Section D — Matching — 10 marks

**36. Match each term to its correct definition.**

| Column A | Answer | Column B |
|---|---|---|
| Voltage | ____ | **A.** Attraction between masses |
| Faraday | ____ | **B.** Sound above human hearing range |
| Gravity | ____ | **C.** Electrical potential difference |
| Conduction | ____ | **D.** Heat transfer by direct contact |
| Ultrasound | ____ | **E.** Electromagnetic induction |

## Section E — Short Answer — 20 marks

41. What is the difference between a conductor and an insulator? Advanced · 4 pts

42. Explain what Oersted’s 1820 observation revealed. Advanced · 4 pts

43. Why do objects fall at the same rate in a vacuum? Advanced · 4 pts

44. Distinguish heat from temperature. Advanced · 4 pts

45. Explain the Doppler effect using an approaching ambulance as an example. Advanced · 4 pts

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

**FOR OFFICE USE ONLY**

Marks Obtained: _____ / 100 Checked By: _____

Result / Grade: _____ Date Checked: _____

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# Physics 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. C
2. B
3. C
4. C
5. C
6. C
7. C
8. C
9. C
10. B
11. C
12. B
13. D
14. B
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. r
27. south
28. 6
29. square
30. kelvin
31. conduction
32. spectrum
33. plasma
34. compressions
35. induction

## Section D — Matching

36. Voltage — C
37. Faraday — E
38. Gravity — A
39. Conduction — D
40. Ultrasound — B

## Section E — Short Answer (Model Answers)

**41.** conductor; current; insulator; resist

**42.** current; magnetic field; wire; compass

**43.** air resistance; gravity; same acceleration

**44.** heat; energy transfer; temperature; average kinetic

**45.** frequency; pitch; compressed; stretched; approach