

EDUSAMBAM ASSESSMENT SERIES

Physics Comprehensive Practice Test 6

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Candidate Name:		Roll No.:	
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Subject	Physics	Topic	Physics Comprehensive Practice Test 6	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. Which form of energy is stored in the bonds between atoms, such as in food or fuel?

Basic • 2 pts

- A.** Thermal energy
C. Chemical energy

- B.** Electrical energy
D. Sound energy

Answer: ☐A ☐B ☐C ☐D

2. In a series circuit, what happens if one component fails?

Basic • 2 pts

- A.** Nothing happens at all
C. The entire circuit stops working

- B.** Only that component is affected
D. The voltage doubles

Answer: ☐A ☐B ☐C ☐D

3. What does Newton's Third Law state?

Basic • 2 pts

- A.** Objects at rest always stay at rest
C. For every action, there is an equal and opposite reaction

- B.** Force equals mass times acceleration
D. Mass and weight are always identical

Answer: ☐A ☐B ☐C ☐D

4. Why does a feather fall slower than a hammer here on Earth?

Basic • 2 pts

- A.** Gravity pulls harder on the hammer
C. Air resistance affects the feather's large surface area much more

- B.** The feather has less mass, so gravity ignores it
D. Feathers are not affected by gravity at all

Answer: ☐A ☐B ☐C ☐D

5. What is absolute zero, on the Celsius scale?

Intermediate • 2 pts

- A.** 0°C
C. -273.15°C

- B.** -100°C
D. -32°C

Answer: ☐A ☐B ☐C ☐D

6. What is the scattering of sunlight by gas molecules in the atmosphere called?

A. Refraction

B. Reflection

C. Rayleigh scattering

D. Diffusion scattering

Answer: ☐A ☐B ☐C ☐D

7. Dry ice "smoking" is an everyday example of which process?

A. Freezing

B. Melting

C. Sublimation

D. Deposition

Answer: ☐A ☐B ☐C ☐D

8. Which type of motion describes a car stuck in city traffic, speeding up and slowing down?

A. Uniform motion

B. Displacement motion

C. Non-uniform motion

D. Zero motion

Answer: ☐A ☐B ☐C ☐D

9. What is buoyancy?

A. The weight of an object in air

B. A downward force exerted by all fluids

C. The upward force a fluid exerts on a submerged object

D. A force that only exists in outer space

Answer: ☐A ☐B ☐C ☐D

10. In which of these does sound travel fastest?

A. Air

B. Water

C. Steel

D. A vacuum

Answer: ☐A ☐B ☐C ☐D

11. Which area of physics best explains the behaviour of particles at the atomic and subatomic scale?

A. Quantum mechanics

B. Classical mechanics

C. General relativity

D. Thermodynamics

Answer: ☐A ☐B ☐C ☐D

12. Who is the unit of power, the watt, named after?

A. Isaac Newton

B. Albert Einstein

C. James Watt

D. James Clerk Maxwell

Answer: ☐A ☐B ☐C ☐D

13. What kind of energy does a rolling football have?

A. Kinetic energy

B. Gravitational potential energy

C. Elastic potential energy

D. Nuclear energy

Answer: ☐A ☐B ☐C ☐D

14. What is the difference between regular and diffuse reflection?

A. Regular reflection happens on smooth surfaces; diffuse reflection scatters off rough surfaces

B. They are exactly the same thing

C. Diffuse reflection only happens in water

D. Regular reflection doesn't involve light at all

Answer: ☐A ☐B ☐C ☐D

15. What is the formula for work?

A. Work = Force ÷ Distance

B. Work = Force × Distance

C. Work = Mass × Acceleration

D. Work = Distance ÷ Time

Answer: ☐A ☐B ☐C ☐D

Section B — True / False

20 marks

16. Energy is measured in joules, while power is measured in watts.

A. True ☐

B. False ☐

17. Faraday showed that a changing magnetic field can induce electric current.

A. True ☐

B. False ☐

18. Balanced forces always cause acceleration.

A. True ☐

B. False ☐

19. The Moon’s weaker gravity means an object’s weight there is less than on Earth, but its mass is unchanged.

A. True ☐

B. False ☐

20. Thermal equilibrium means two objects have reached the same temperature.

A. True ☐

B. False ☐

21. The law of reflection states that the angle of incidence equals the angle of reflection.

A. True ☐

B. False ☐

22. Particles in a gas are generally more widely separated and move more freely than particles in a solid.
A. True ☐ B. False ☐

23. Velocity can be zero even when an object has travelled a non-zero distance.
A. True ☐ B. False ☐

24. Atmospheric pressure is caused by the weight of the air above us.
A. True ☐ B. False ☐

25. Sound travels fastest through a vacuum because there is no resistance.
A. True ☐ B. False ☐

Section C — Fill in the Blank

20 marks

26. A rolling football mainly has ____ energy.
Answer: _____

27. The magnetic field around a current-carrying wire was highlighted by ____’s experiment.
Answer: _____

28. A force that does not require physical contact is a ____-contact force.
Answer: _____

29. The weight of an object is approximately mass multiplied by ____.
Answer: _____

30. When two objects reach the same temperature, they are in thermal ____.
Answer: _____

31. The splitting of white light into component colors is called ____.
Answer: _____

32. The fourth commonly discussed state of matter is ____.
Answer: _____

33. The SI unit of speed is metres per ____.
Answer: _____

34. An object floats when its average density is ____ than the fluid’s density.
Answer: _____

35. The traditional six simple machines include lever, wheel and axle, pulley, inclined plane, wedge, and ____.
Answer: _____

Section D — Matching

10 marks

36. Match each term to its correct definition.

Column A	Answer	Column B
Conservation of energy	_____	A. Net force is zero
Electromagnetism	_____	B. Inclined plane wrapped around a cylinder
Balanced forces	_____	C. Energy changes form but total energy is conserved
Thermal equilibrium	_____	D. Same temperature
Screw	_____	E. Relationship between electricity and magnetism

Section E — Short Answer

20 marks

41. What is physics, and why is it considered a foundational science?

42. Explain how electricity and magnetism are connected.

43. Why does pressure increase with depth in a fluid?

Advanced · 4 pts

44. Explain why sound cannot travel through empty space and why it travels faster in solids than in air.

Advanced · 4 pts

45. How do simple machines make tasks easier while obeying conservation of energy?

Advanced · 4 pts

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

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Marks Obtained: _____ / 100

Checked By: _____

Result / Grade: _____

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Physics Comprehensive Practice Test 6 — 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. C

3. C

4. C

5. C

6. C

7. C

8. C
9. C

10. C

11. A

12. C

13. A

14. A

15. B

Section B — True / False

16. False

17. False

18. True

19. False

20. False
21. False

22. False

23. False

24. False

25. True

Section C — Fill in the Blank

26. kinetic

27. oersted

28. non

29. g

30. equilibrium
31. dispersion

32. plasma

33. second

34. less

35. screw

Section D — Matching

36. Conservation of energy — C

37. Electromagnetism — E

38. Balanced forces — A
39. Thermal equilibrium — D

40. Screw — B

Section E — Short Answer (Model Answers)

41. matter; energy; motion; forces; fundamental

42. current; magnetic field; Oersted; Faraday; induction

43. weight; fluid; above; depth; pressure

44. medium; particles; vacuum; solid; air

45. force; distance; work; trade; efficiency