First Hope

GET SOLUTIONS

Click here to visit our website

CLASS 11 PHYSICS - PRACTICE QUESTIONS

For solutions, download the FirstHope app now.

Scan or click here

Click here to get solutions >

Available on Google Play

JOIN THE FIRSTHOPE COMMUNITY

Join our Telegram channel

Click here to join Telegram >

Scan or click here

@FirstHope_CBSE_Notes

Instagram

@firsthope.school

Click here to follow >

YouTube channel

@firsthope.school

Click here to watch >

FirstHope website

firsthope.co.in

Click here to visit our website >

CBSE / Class 11 / Physics

For solutions, download the FirstHope app now.

CLASS 11

Physics

Sample Paper 1 - Questions

33 questions | 70 marks | 2026-27

Time: 3 hours. Answer all questions and subparts unless a choice is stated. Marks are shown on the right. Write answers on separate sheets. Independently prepared practice paper.

Section A - Objective questions

1. A body starts from rest with acceleration 11 m/s^2 for 4 s. Calculate its displacement. **1**
(A) 90 (B) 87 (C) 89 (D) 88

2. Which concept best explains the following situation? Two waves combine to produce a resultant displacement. **1**
(A) Static friction (B) Gravitational potential (C) Dimensional analysis (D) Superposition

3. Which concept best explains the following situation? A suitably modelled spring-mass system oscillates about equilibrium. **1**
(A) Gravitational potential (B) Static friction (C) Simple harmonic motion (D) Dimensional analysis

4. A resultant force of 60 N acts on a 20 kg object. Calculate acceleration. **1**
(A) 4 (B) 5 (C) 2 (D) 3

5. Which concept best explains the following situation? Heat supplied partly raises internal energy and partly becomes work by the gas. **1**
(A) Static friction (B) Gravitational potential (C) First law of thermodynamics (D) Dimensional analysis

6. Which concept best explains the following situation? Water speeds up in a narrower section of a pipe. 1
(A) Gravitational potential (B) Static friction (C) Dimensional analysis (D) Continuity equation

7. A 20 kg object moves at 5 m/s. Calculate its kinetic energy. 1
(A) 252 (B) 250 (C) 249 (D) 251

8. Which concept best explains the following situation? A spring returns toward its original length after a small extension. 1
(A) Static friction (B) Dimensional analysis (C) Gravitational potential (D) Elasticity

9. Which concept best explains the following situation? A mass changes potential as its position in a gravitational field changes. 1
(A) Dimensional analysis (B) Static friction (C) Gravitational potential (D) Elasticity

10. A gas receives 300 J of heat and does 200 J of work. Calculate its internal-energy increase. 1
(A) 99 (B) 102 (C) 100 (D) 101

11. Which concept best explains the following situation? A skater changes rotation speed while approximately conserving angular momentum. 1
(A) Static friction (B) Elasticity (C) Dimensional analysis (D) Angular momentum

12. Which concept best explains the following situation? A force applied farther from a hinge can produce greater turning effect. 1
(A) Torque (B) Elasticity (C) Dimensional analysis (D) Static friction

13. A wave has frequency 200 Hz and wavelength 2 m. Calculate speed. 1
(A) 400 (B) 399 (C) 401 (D) 402

14. Which concept best explains the following situation? Two colliding trolleys exchange momentum within an isolated system. 1
(A) Dimensional analysis (B) Conservation of momentum (C) Elasticity (D) Static friction

15. Which concept best explains the following situation? A resultant force increases a cart's speed over a distance. 1
(A) Static friction (B) Dimensional analysis (C) Work-energy theorem (D) Elasticity

16. A body starts from rest with acceleration 12 m/s^2 for 4 s. Calculate its displacement. 1
(A) 96 (B) 98 (C) 95 (D) 97

Section B - Short responses

17. A resultant force of 66 N acts on a 22 kg object. Calculate acceleration. 2

18. A 22 kg object moves at 5 m/s. Calculate its kinetic energy. 2

19. A gas receives 320 J of heat and does 220 J of work. Calculate its internal-energy increase. 2

20. A wave has frequency 220 Hz and wavelength 2 m. Calculate speed. 2

21. A body starts from rest with acceleration 13 m/s^2 for 4 s. Calculate its displacement. 2

Section C - Short responses

22. A resultant force of 72 N acts on a 24 kg object. Calculate acceleration. 3

23. A 24 kg object moves at 5 m/s. Calculate its kinetic energy. 3

24. A gas receives 340 J of heat and does 240 J of work. Calculate its internal-energy increase. 3

25. A wave has frequency 240 Hz and wavelength 2 m. Calculate speed. 3

26. A body starts from rest with acceleration 14 m/s^2 for 4 s. Calculate its displacement. 3

27. A resultant force of 78 N acts on a 26 kg object. Calculate acceleration. **3**

28. A 26 kg object moves at 5 m/s. Calculate its kinetic energy. **3**

Section D - Case and application questions

29. Consider the application below: Two waves combine to produce a resultant displacement.

(a) Name the relevant concept. **1**

(b) Explain why it applies. **1**

(c) Explain Dimensional analysis with a suitable example. **2**

30. Consider the application below: A suitably modelled spring-mass system oscillates about equilibrium.

(a) Name the relevant concept. **1**

(b) Explain why it applies. **1**

(c) Explain Superposition with a suitable example. **2**

Section E - Extended responses

31. (a) Analyse Superposition with reference to this application: Two waves combine to produce a resultant displacement. **5**
(b) Explain Vector addition with a different relevant example. Develop the reasoning behind both parts.

32. (a) Analyse Torque with reference to this application: A force applied farther from a hinge can produce greater turning effect. **5**
(b) Explain Gravitational potential with a different relevant example. Develop the reasoning behind both parts.

33. (a) Analyse Static friction with reference to this application: A block stays at rest under a small horizontal pull. **5**

(b) Explain Conservation of momentum with a different relevant example.

Develop the reasoning behind both parts.

First Hope

First Hope

GET SOLUTIONS

Click here to visit our website

CLASS 11 PHYSICS - PRACTICE QUESTIONS

For solutions, download the FirstHope app now.

Scan or click here

Click here to get solutions >

Available on Google Play

JOIN THE FIRSTHOPE COMMUNITY

Join our Telegram channel

Click here to join Telegram >

Scan or click here

@FirstHope_CBSE_Notes

Instagram

@firsthope.school

Click here to follow >

YouTube channel

@firsthope.school

Click here to watch >

FirstHope website

firsthope.co.in

Click here to visit our website >

CBSE / Class 11 / Physics

For solutions, download the FirstHope app now.