Solution

PHYSICS

MHT - CET - Physics

1.

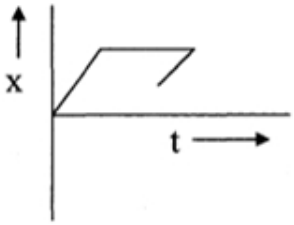
(c) 540 π^2 m/s^2

Explanation:

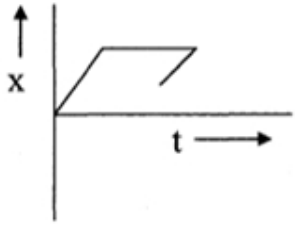
540 π^2 m/s^2

2.

(c)



Explanation:



3. **(a)** -87.5 N

Explanation:

-87.5 N

4. **(a)** 480 N

Explanation:

480 N

5.

(d) 29.4 m/s^2

Explanation:

29.4 m/s^2

6.

(b) 25% of value at earth's surface

Explanation:

25% of value at earth's surface

7.

(b) Option (iv)

Explanation:

Boyle's law states that at constant temperature, the volume of a gas is directly proportional to its pressure.

8.

(b) decreases density.

Explanation:

decreases density.

9.

(d) 280 Hz
Explanation:
280 Hz

10.

(c) Vibration of string
Explanation:
Vibration of string

11.

(b) its wavelength is very small.
Explanation:
its wavelength is very small.

12.

(d) n = ∞
Explanation:
n = ∞

13.

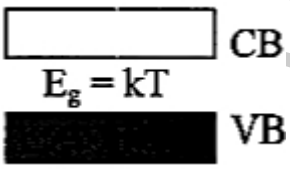
(c) $2\sqrt{3}$ qx
Explanation:
$2\sqrt{3}$ qx

14.

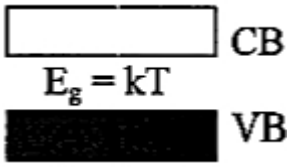
(b) 15 μC, 5 μC
Explanation:
15 μC, 5 μC

15.

(c)



Explanation:



16.

(b) $2\sqrt{gR}$
Explanation:
$2\sqrt{gR}$

17.

(c) $\frac{\pi}{8}$ m/s
Explanation:
$\frac{\pi}{8}$ m/s

18.

(b) Option (d)

Explanation:

Cylinder Q reaches the ground with larger angular speed.

19.

(c) mass of the vehicle.

Explanation:

mass of the vehicle.

20.

(d) $\frac{f}{\sqrt{2}}$

Explanation:

$\frac{f}{\sqrt{2}}$

21.

(d) 2.22 rad/s

Explanation:

2.22 rad/s

22.

(b) π s

Explanation:

π s

23. **(a)** $\frac{1}{2}$

Explanation:

$\frac{1}{2}$

24.

(c) zero

Explanation:

zero

25. **(a)** venturimeter

Explanation:

venturimeter

26. **(a)** $2\sqrt{2}$ s

Explanation:

$2\sqrt{2}$ s

27.

(d) Option (d)

Explanation:

compression is reflected as compression with phase change of 180°.

28. **(a)** $\frac{R}{R_b} = a$

Explanation:

$\frac{R}{R_b} = a$

29.

(b) 1 : 1
Explanation:
1 : 1

30.

(d) Option (A)
Explanation:
Temperature of A will rise faster than B but the final temperature will be the same in both.

31.

(b) zero and minimum.
Explanation:
zero and minimum.

32. **(a)** zero
Explanation:
zero

33.

(c) $Vn^{\frac{2}{3}}$
Explanation:
$Vn^{\frac{2}{3}}$

34. **(a)** phase differences remain constant.
Explanation:
phase differences remain constant.

35.

(b) $\Delta x = \frac{t \sin(i-r)}{\cos r}$
Explanation:
$\Delta x = \frac{t \sin(i-r)}{\cos r}$

36.

(c) all possible planes
Explanation:
all possible planes

37.

(b) 4 Ω
Explanation:
4 Ω

38. **(a)** 3950 Ω in series with galvanometer.
Explanation:
3950 Ω in series with galvanometer.

39.

(b) 0.8 mT
Explanation:
0.8 mT

40.

(c) both 180° and 0°

Explanation:

Both 180° and 0°

41. **(a)** $F_1 = -F_2$

Explanation:

$F_1 = -F_2$

42.

(b) Soft iron

Explanation:

Soft iron

43.

(b) At t = 0.5 direction of I_R reverses and V_R is zero

Explanation:

At t = 0.5 direction of I_R reverses and V_R is zero

44.

(b) alternating

Explanation:

alternating

45. **(a)** electrically neutral

Explanation:

electrically neutral

46.

(d) 8 and 6

Explanation:

8 and 6

47.

(b) $_7N^{13}$,$_6C^{12}$

Explanation:

$_7N^{13}$,$_6C^{12}$

48. **(a)** 10^{-8} cm

Explanation:

10^{-8} cm

49.

(c) 8.0 mA

Explanation:

8.0 mA

50.

(c) 27%

Explanation:

27%