

()

السؤال الأول:

- (a) 20 m/s (b) 32 m/s (c) 40 m/s (d) 80 m/s
- (a) 30 cm/s (b) 1000 cm/s (c) 1500 cm/s (d) 3000 cm/s
- (a) (b) (c)
- (a) 624 s (b) 3 s (c) 2 s (d) 170 s
- (a) 1 m (b) 3 m (c) 6 m (d) 18 m

السؤال الثاني:

- 9 m/s 1.5 m/s² 400 m
- 2 m/s²

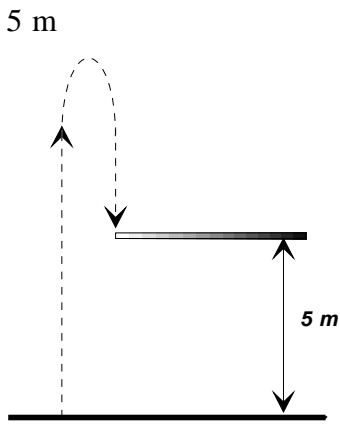
ANS: Total time = 50 s

السؤال الثالث:

- 15 m/s 25 m () 20 m/s
- (). (). ():

ANS: (a) -3.5 m/s² (b) 1.4 s (c) 4.3 s

السؤال الرابع:



20 m/s

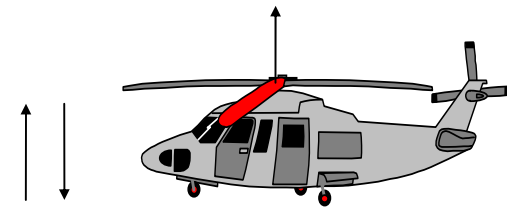
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ANS: (a) -17.4 m/s (b) 3.8 s (c) 20.4 m

السؤال الخامس:



8 m/s

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ANS: (1) 46.4 m (2) 78.4 m

السؤال السادس:

() :

()

ANS: (a) 3.41 s (b) 57 m



KING SAUD UNIVERSITY
PHYSICS DEPARTMENT
103-Phys (Dr.ABDALLAH M. AZZEER)
CIRCLE THE RIGHT ANSWER ONLY

WRITE YOUR ANSWER ON THE ATTACHED SHEET

Useful information: $g = 10 \text{ m/s}^2$

- A car initially moving at 5 m/s accelerates uniformly to 25 m/s in 10 s. How far does it go as it accelerates?
a. 50 m b. 150 m c. 200 m d. 250 m e. 500 m
- A tennis player serves a ball with an acceleration of 160 m/s^2 . The racket is in contact with the ball for 0.1 s. How far does the ball move while in contact with the racket?
a. 0.1 m b. 0.2 m c. 0.4 m d. 0.8 m e. 1.6 m
- A stone dropped into a deep lake falls 20 m in 5 s. What is its average velocity?
a. 4 m/s b. 5 m/s c. 10 m/s d. 20 m/s e. 100 m/s
- A ball is thrown straight upward from ground level with an initial velocity of 20 m/s. At the highest point it reaches,
a. the acceleration is zero
b. the velocity is zero
c. the velocity is 20 m/s
d. the acceleration is a minimum
e. the velocity is negative
- A ball is thrown straight upward from ground level with an initial velocity of 20 m/s. How many meters above the ground is the ball after 1 second?
a. 10 b. 15 c. 20 d. 25 e. 40
- A ball is thrown straight up at 30 m/s. How fast will it be moving after 1 s?
a. 0 m/s b. 10 m/s c. 20 m/s d. 30 m/s e. 40 m/s
- An arrow is shot straight up at 50 m/s. How long will it take to reach its greatest height?
a. 1 s b. 5 s c. 10 s d. 25 s e. 50 s
- An arrow shot straight up is moving at 25 m/s as it passes on the way up. How fast will it be moving on the way down?
a. 12.5 m/s b. 25 m/s c. 37.5 m/s d. 50 m/s e. 75 m/s
- A ball is thrown straight upward from ground level with an initial velocity of 20 m/s. How many seconds is the ball in the air?
a. 0 b. 1 c. 2 d. 3 e. 4
- The velocity of a car that is slowing down is given by $v = b - ct$. The instantaneous acceleration is

- a. 0 b. b c. c d. -b e. -c

11. Ball 1 is thrown up at twice the initial velocity of ball 2. If ball 2 reaches a height h , ball 1 will reach a height of

- a. h b. $2h$ c. $3h$ d. $4h$ e. $8h$

12. A tennis player serves a ball with an acceleration of 150 m/s^2 . The racket is in contact with the ball for 0.1 s . What is the velocity of the ball when it leaves the racket?

- a. 0.15 m/s b. 7.5 m/s c. 15 m/s d. 150 m/s e. 1500 m/s

13. A ball is thrown straight upward from ground level with an initial velocity of 20 m/s . After how many seconds is its velocity 10 m/s downward?

- a. 0 b. 1 c. 2 d. 3 e. 4

14. A ball is thrown straight upward from ground level with an initial velocity of 20 m/s . What is the maximum height in metres reached by the ball?

- a. 10 b. 15 c. 20 d. 25 e. 40

15. An object moves along a straight line. At $t = 0 \text{ s}$ it is at the point marked $x = 200 \text{ m}$, and at $t = 10 \text{ s}$ it is at $x = -100 \text{ m}$. What is its average velocity over this period of time?

- a. 30 m/s b. -30 m/s c. 10 m/s d. -10 m/s e. none of the above

16. On Planet X, the acceleration due to gravity is 2 m/s^2 . If an astronaut wearing his spacesuit can jump 0.5 m vertically on the Earth, how high can he jump on Planet X?

- a. 0.1 m b. 0.5 m c. 1.0 m d. 2.0 m e. 2.5 m

17. In the SI system of units, the basic units are the

- a. gram, centimetre, second
b. kilogram, kilometre, hour
c. newton, kilometre, second
d. kilogram, metre, second
e. pound, foot, second

18. When a coin and a scrap of paper are dropped in air, the brick falls faster. This is because

- a. heavier objects always fall faster
b. air resistance slows the paper more than the rock
c. paper is less attracted by gravity than are metals
d. Galileo proved it
e. all of the above

19. When the velocity is constant,

- a. the acceleration is greater than zero
b. the displacement is constant in time
c. the acceleration is negative
d. the position is constant
e. the x - t graph is a straight line

20. The instantaneous velocity of an object is zero.

- a. This means that the acceleration is zero.
- b. This means that the acceleration is positive.
- c. This means that the acceleration is negative.
- d. This means that the acceleration is constant.
- e. This tells us nothing about the acceleration.



PHYSICS DEPARTMENT

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MCQ #1

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ANSWER SHEET

1.	13.
2.	14.
3.	15.
4.	16.
5.	17.
6.	18.
7.	19.
8.	20.
9.	<i>The more problems you do, the more chance to get A⁺</i>
10.	<i>The more problems you do, the more chance to get A⁺</i>
11.	<i>The more problems you do, the more chance to get A⁺</i>
12.	<i>The more problems you do, the more chance to get A⁺</i>