

## 2025-2026 (一) 天津二中高一年级第一次月考物理试卷答案

### 选择题

1	2	3	4	5	6	7	8	9	10	11	12	13	14
D	B	A	B	B	D	D	A	CD	AC D	ABC D	AD	BD	AD

### 解答题

15.

(1)  $v_1 = v_0 + (-a)t_1 \Rightarrow t_1 = 2(s)$

(2) 设刹车过程汽车运动的总时间为  $t_m$

$$0 = v_0 + (-a)t_m \Rightarrow t_m = 3(s), \quad t_2 > t_m \quad \text{汽车已停止运动}$$

所以有:  $x_2 = v_0 t_m + \frac{1}{2}(-a)t_m^2 = 18(m)$

(3) 将汽车匀减速直线运动看成反向匀加速直线运动

$$x_3 = \frac{1}{2}at^2 = 8(m)$$

16.

(1)  $\begin{cases} v_1 = v_0 + (-a)t_1 \\ v_1 = \pm 4 \end{cases} \Rightarrow t_1 = 2(s) \text{ 或 } t_1 = 4(s)$

(2)  $x_2 = v_0 t_2 + \frac{1}{2}(-a)t_2^2 = 0(m)$

(3)  $\begin{cases} x = v_0 t + \frac{1}{2}(-a)t^2 \\ x = \pm 10 \end{cases} \Rightarrow t = 5(s) \text{ 或 } t = 1(s) \text{ 或 } t = 3 + \sqrt{14}(s)$

17.

$$\begin{cases} x_{ab} + x_{bc} = va(t_1 + t_2) + \frac{1}{2}a(t_1 + t_2)^2 \\ v_c = v_a + a(t_1 + t_2) \\ x_{ab} = v_a t_1 + \frac{1}{2}at_1^2 \end{cases} \Rightarrow \begin{cases} va = 1m/s \\ a = 2(m/s^2) \\ x_{bc} = 36(m) \end{cases}$$

18

$$(1) \quad 0 = v_1 + (-a)t_3 \Rightarrow a = 0.6(m/s^2)$$

$$(2) \quad h = \frac{t_2 + (t_1 + t_2 + t_3)}{2} v_1 = 105(m)$$

$$(3) \quad \begin{cases} a_1 t = at' \\ v_1 = a_1 t_1 \\ h = \frac{1}{2} a_1 t^2 + \frac{1}{2} at'^2 \\ t_m = t + t' \end{cases}$$

$$\Rightarrow t_m = 5\sqrt{14}(s)$$