

# C 类 A 卷 (参考答案)

## 一、选择题

题号	1	2	3	4	5	6	7	8	9	10
答案	D	C	D	D	B	D	D	C	C	D

## 二、填空题

11. 17

12.  $10\sqrt{3}$  (或 17.3)

13. 4

14.  $-2m\omega b\vec{j}$

15. 12

16.  $\frac{7}{12}m_1l^2 + \frac{1}{12}m_2l^2 + \frac{1}{4}ml^2$

17.  $\frac{1}{3}\omega_0$

18.  $\frac{M}{\alpha_1 + \alpha_2}$

19. 25

20. 0.5

三:

(1)  $a_r=36\text{m/s}^2$ ;  $a_t=1296\text{m/s}^2$

(2) 2.67rad

四:

(1)  $\omega = \frac{12mv_0}{(4M+3m)l}$

(2)  $\Delta E = \frac{1}{2}mv_0^2 - \frac{1}{2}m\frac{v_0^2}{4} - \frac{1}{2}\frac{1}{3}Ml^2\omega^2 = \frac{3}{8}mv_0^2(1 - \frac{9m}{4M})$

五:

(1)  $y_1 = 0.02 \cos[2\pi(5t - \frac{x}{8}) - \frac{\pi}{4}]$

(2)

$y_2 = 0.02 \cos[2\pi(5t + \frac{x}{8}) + \frac{\pi}{4}]$

(3)

$\therefore x = \pm 4k - 1$  ,  $k = 0, 1, 2, 3, \dots$

六:

$$\frac{F}{g} = \frac{3xM}{l}$$

七:

221m