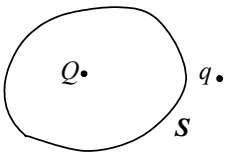
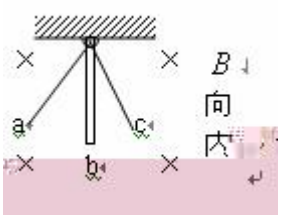
东华理工大学 2017 年硕士生入学考试初试试题

1.(3) S Q q



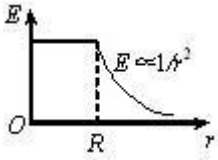
A S
B S
C S
D S

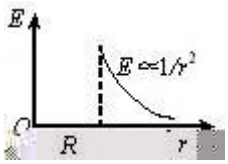
2.(3) $\vec{B}$

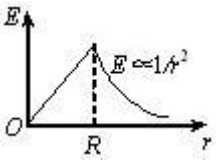


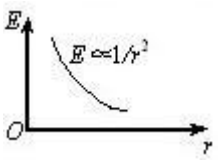
A a B b
C b D c

3.(3) R E
r

A 

B 

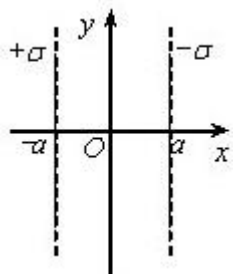
C 

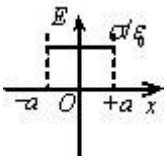
D 

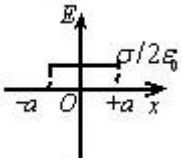
4.(3) $\pm\sigma$

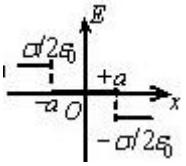
$\vec{E}$ x (

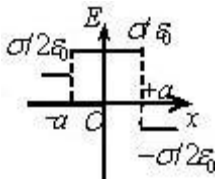
)



A 

B 

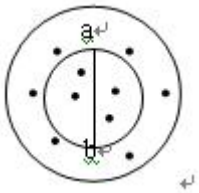
C 

D 

5.(3) $\vec{B}$

ab $\vec{B}$

B I

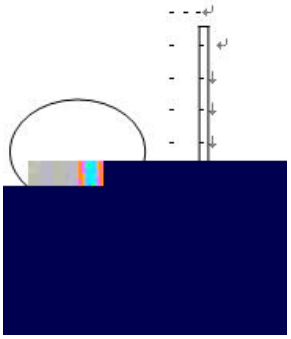


A a b B b a

C $I = 0$ D I

6.(3)

ε I



A $\varepsilon = 0$ $I = 0$ B $\varepsilon \neq 0$ $I = 0$

C $\varepsilon \neq 0$ $I \neq 0$ I D $\varepsilon \neq 0$ $I \neq 0$ I

7.(3)

A B

C D

8.(3)

2

A $2^{2/5}$ B $2^{2/7}$ C $2^{1/5}$ D $2^{1/7}$

1.(3) m_1 m_2

_____

2.(3) 1.0

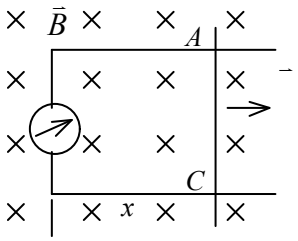
W ΔT _____ Q_p _____

3.(3) AC υ $|AC| = l$

$\frac{dB}{dt} = -k\ (k > 0)$ B AC

x _____

_____



4.(3) A B

x t $x_A = 4t + t^2$

$x_B = 2t^2 + 2t^3$ (SI)

(1) _____

(2) _____

(3) B A _____

5.(3) M v_0 m

υ V

_____

6.(3) $R = 1$

t $\beta = 12t^2 - 6t$ (SI)

$\omega =$ _____

$a =$ _____

7.(3) η ,

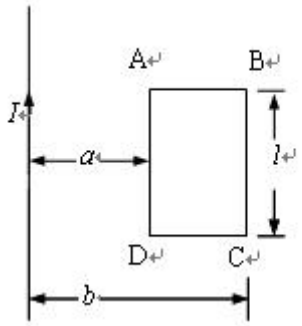
$$w=\frac{T_2}{T_1-T_2} \qquad \eta \quad w \qquad \_\_\_\_\_$$

1.(15) $I=I_0$ i ωt $ABCD$

l $b-a$

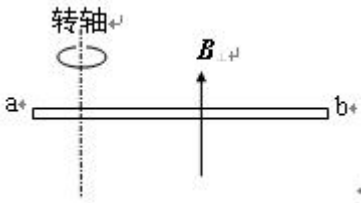
1 $ABCD$ Φ

2 $ABCD$ ε_i

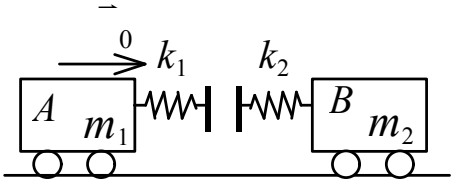


2.(15) 50 c

$\vec{B}_\perp$ 0.50×10^{-4} T a b

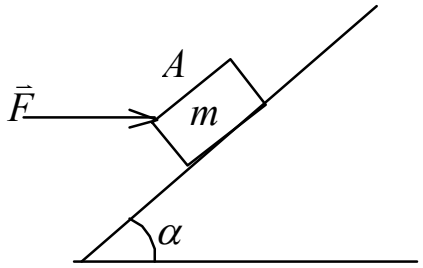


3.(15) A B m_1 m_2 B
A $\bar{}_0$ B k_1 k_2



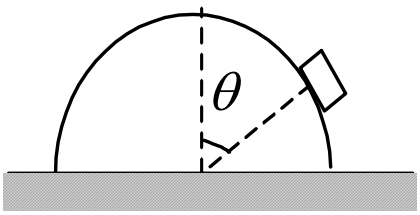
4.(15) $m = 2$ g A $\alpha = 30$

A $\mu = 0.2$ $F = 19.6$N A A



5.(15)

θ



6.(15) 1.0 27°C 20 L( )

($R = 8.31$J· $^{-1}\cdot$K^{-1})

(1) $p - V$

(2)
(3)
(4)

7.(15) ( ) 400K 300K

8000 J
10000 J

(1)
(2)