

## سؤالان بالميكانيكا ( 10 درجات )

الجزء A: القرص المخفي ( 3.5 درجة )

(0.8 pt) **A.1**

$$b =$$

(0.5 pt) **A.2**

Equation of motion for  $\varphi$  :

$$I_S =$$

(0.4 pt) **A.3**

$$d =$$

(0.7 pt) **A.4**

$$I_S =$$

(1.1 pt) **A.5**

$$h_2 =$$

$$r_2 =$$

الجزء B: محطة الفضاء الدوارة (6.5 درجة)

(0.5 pt) **B.1**

$$\omega_{ss} =$$

(0.2 pt) **B.2**

$$\omega_E =$$

(0.6 pt) **B.3**

$$\omega =$$

(0.8 pt) **B.4**

$$g_E(h) =$$

$$\tilde{\omega}_E =$$

(0.3 pt) **B.5**

$$R =$$

(1.1 pt) **B.6**

$$v_x =$$

$$d_x =$$

(1.3 pt) **B.7**

$$H \geq$$

(1.7 pt) **B.8**

$$x(t) =$$

$$y(t) =$$

