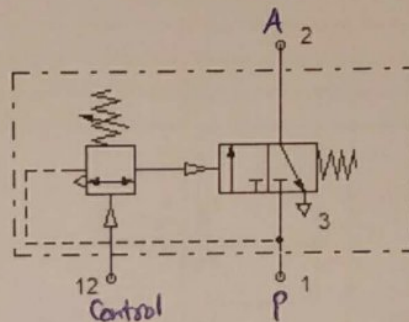
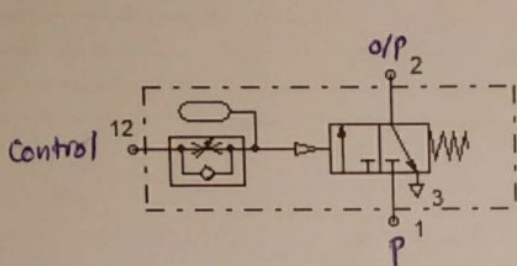
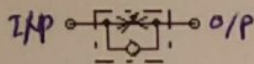
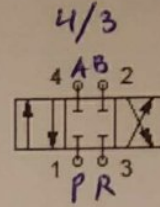
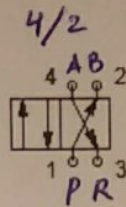
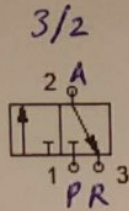
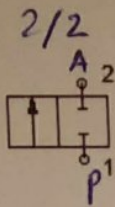


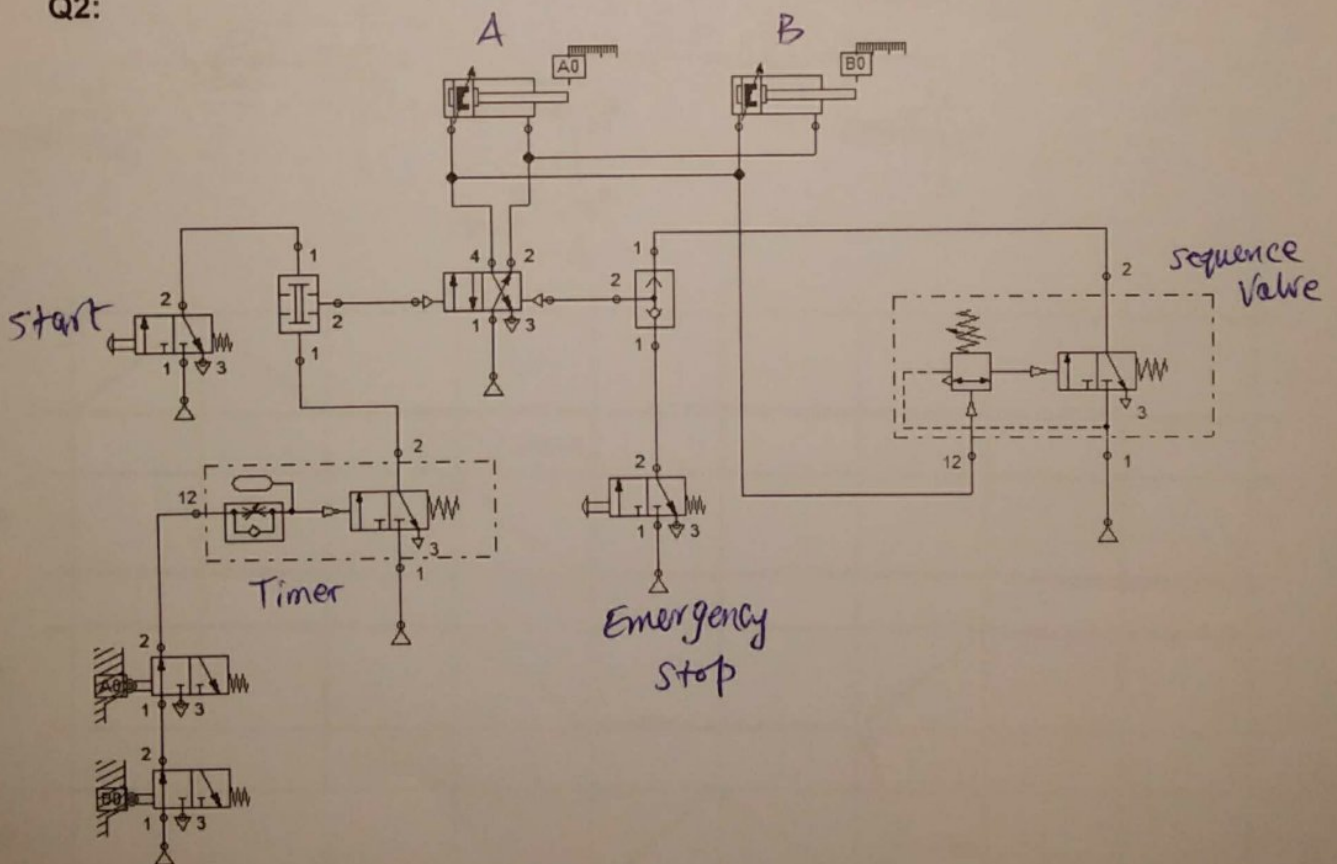
الفصل السادس
المادة: أنظمة سيروليستية

FINAL EXAM ANSWERS (Pneumatic and hydraulic systems) spring 2019

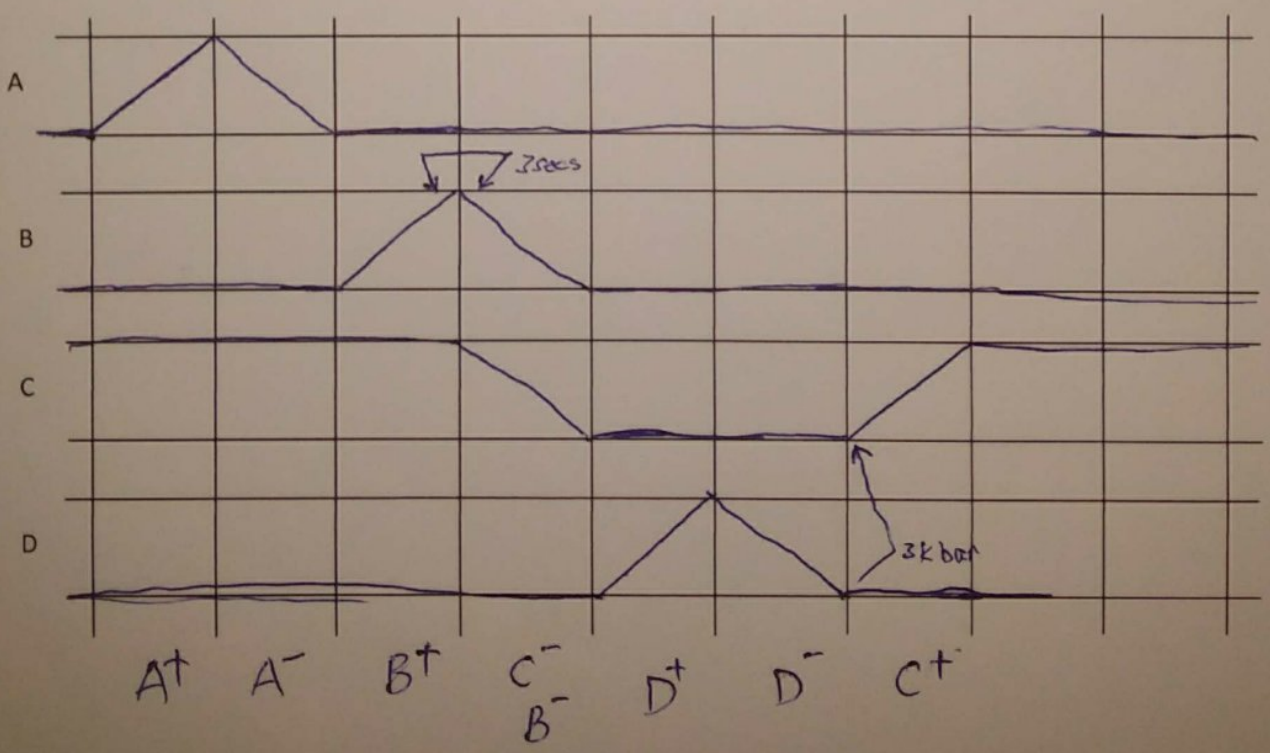
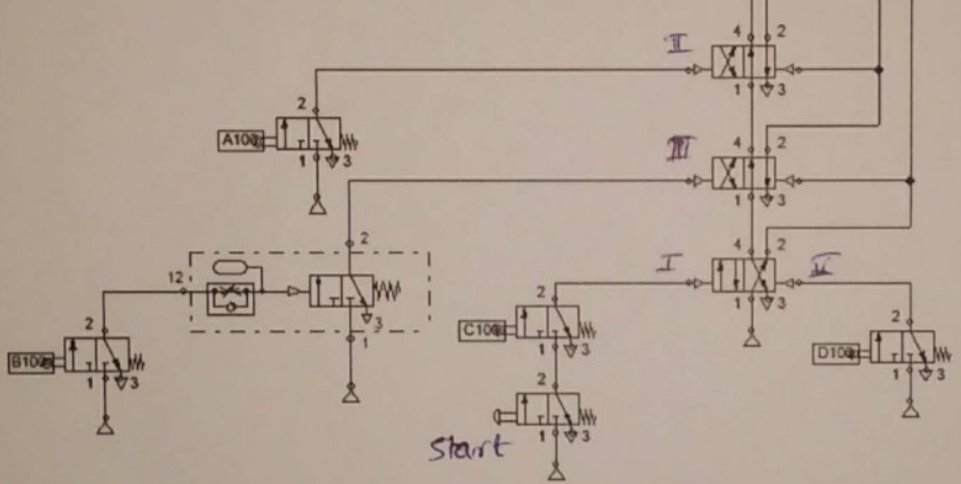
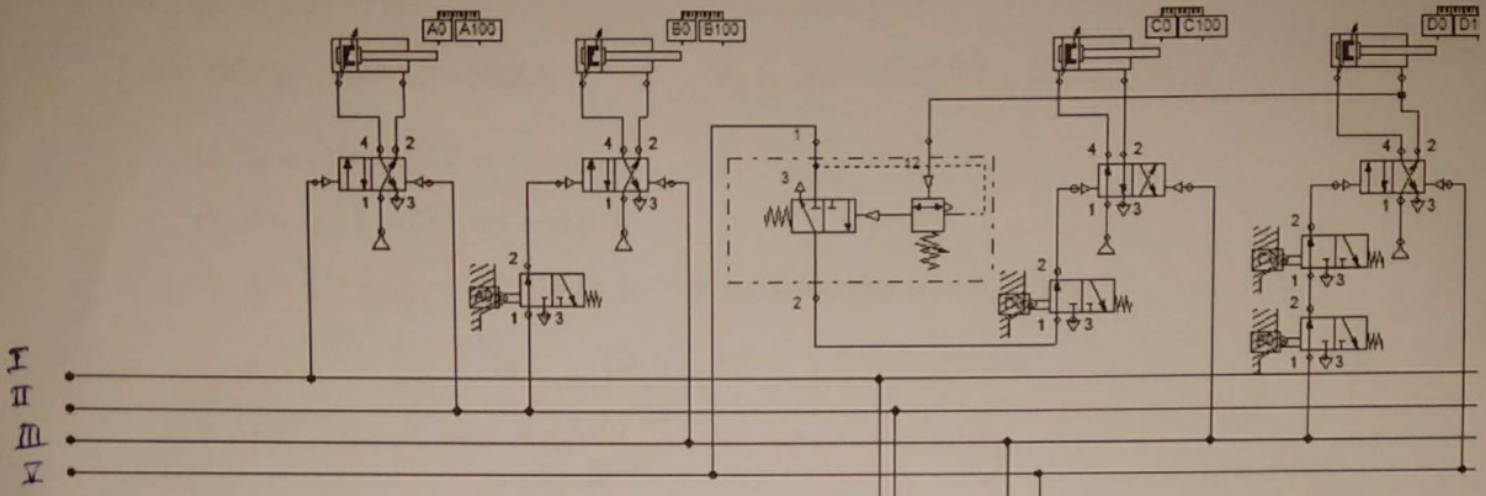
Q1:



Q2:



Q3:



Q4:

a) $F_1 \cdot A_1 = F_2 \cdot A_2$

$F_1 = 1600 \cdot g = 1600 \cdot 10 = 16000 \text{ N}$

$F_2 = \frac{F_1 A_1}{A_2} = \frac{16000 \cdot 0.5}{4} = \frac{8000}{4} = 2000 \text{ N}$

b) $S_2 = \frac{S_1 A_1}{A_2} = \frac{20 \cdot 60}{10} = 120 \text{ cm}$

c) $V = Q \cdot t = \frac{4 \cdot 10}{60} = \frac{2}{3} = 0.67 \text{ l}$

d) $A = \frac{Q}{v} = \frac{4.6 \cdot 10^{-3}}{60 \cdot 5} = 0.0153 \cdot 10^{-3} \text{ m}^2 = 0.0000153 \text{ m}^2 = 0.153 \text{ cm}^2$

دقيقة الى ثانية
لثواني
dm
sec
لثواني
لثواني
3