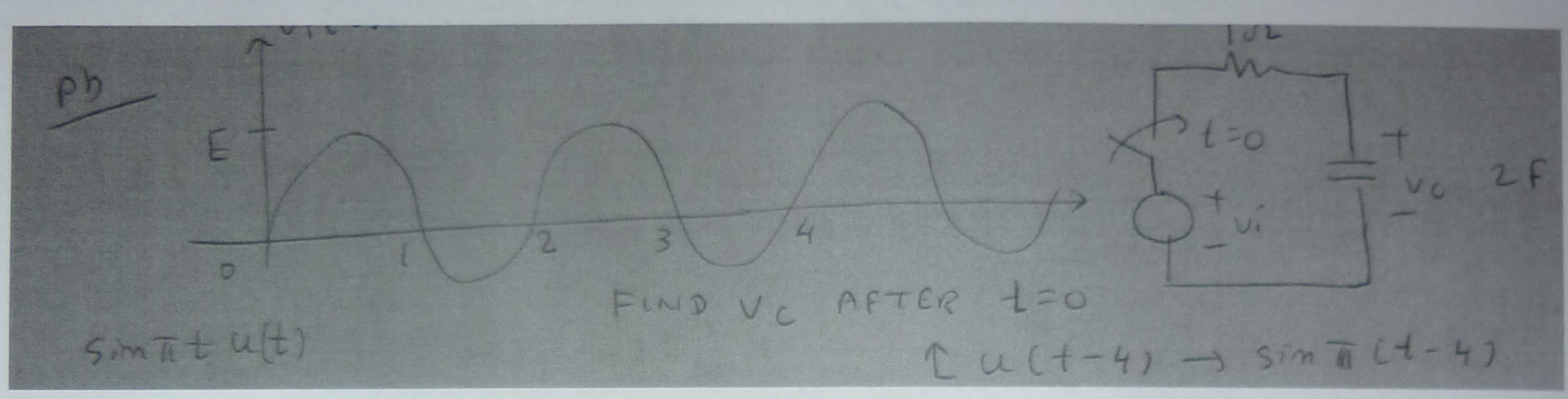
St Clements University Higher Education School

IQY Technical College of Highlight Computer Group

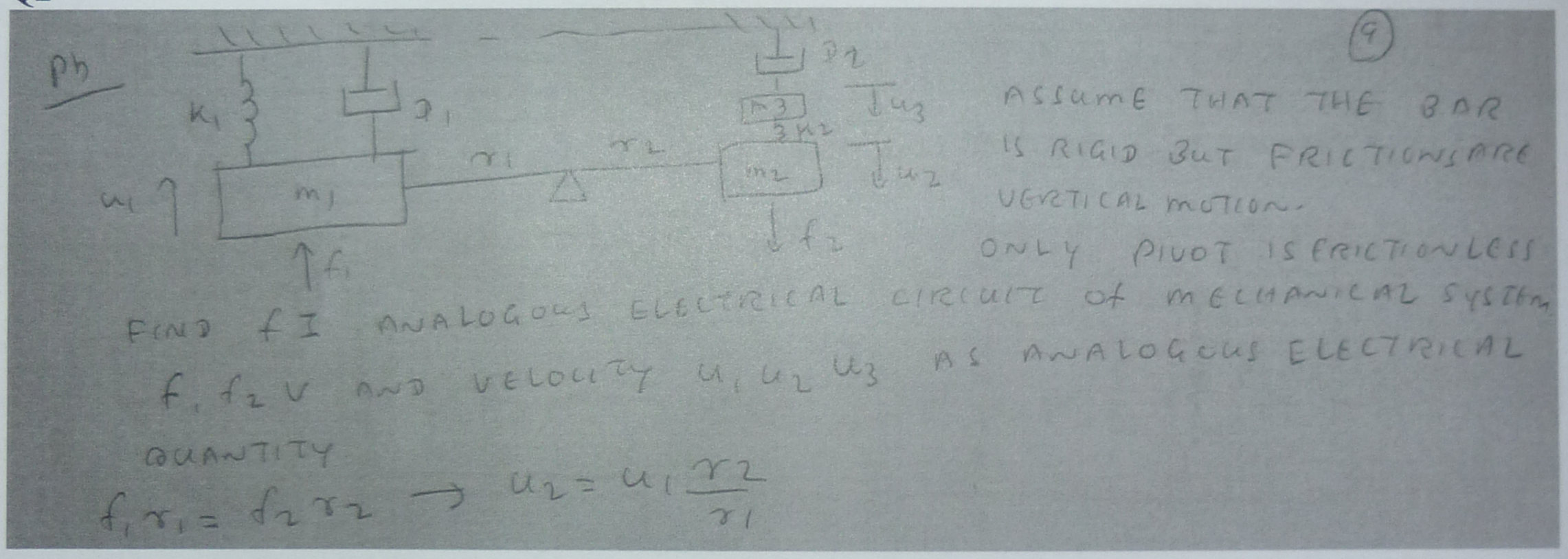
BAE 502 Linear System

Each 10 marks

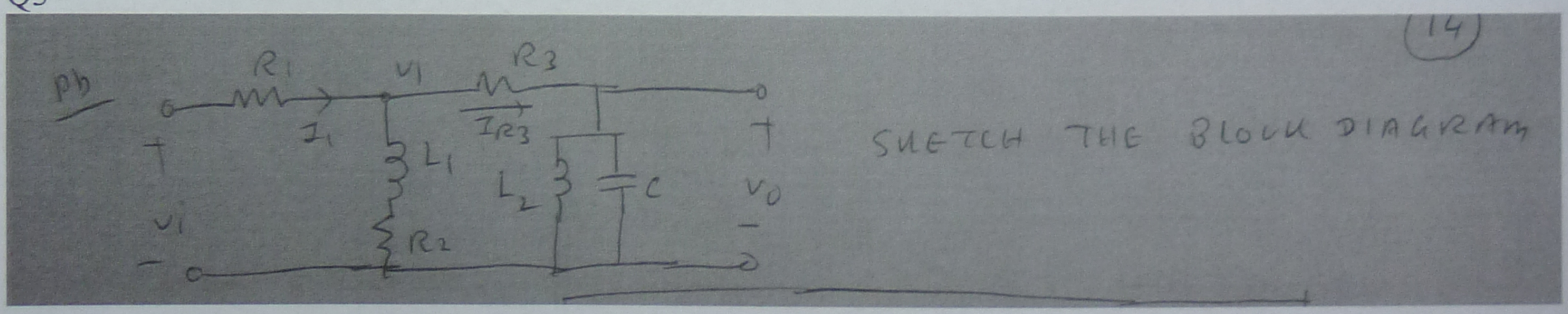
Q.1



Q2



Q3

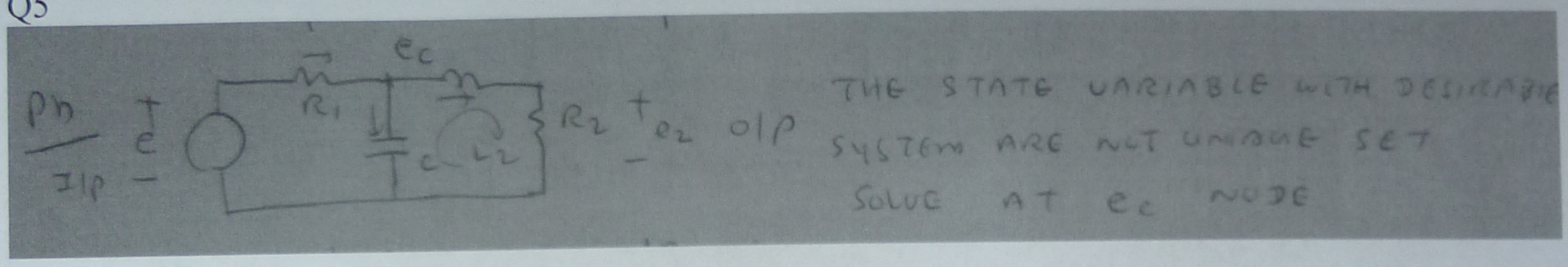


Q4

2^{nd} ORDER SYSTEM $2\frac{d^2y}{dt^2} + 4\frac{dy}{dt} + 8y = 8x$

SIMPLIFY

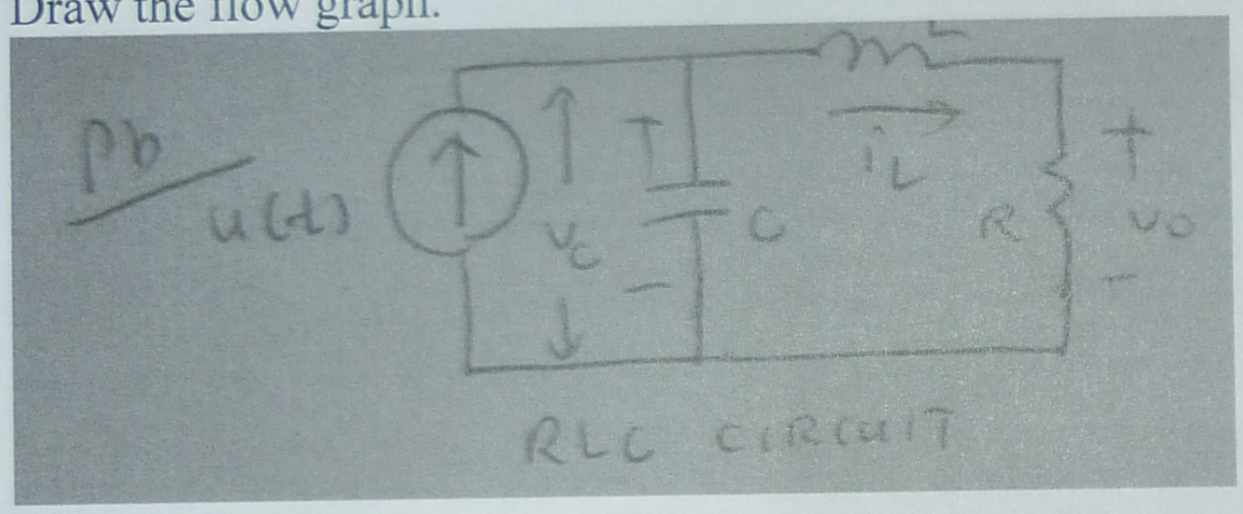
Q5



THE STATE VARIABLE WITH DESIRABLE SYSTEM ARE NOT UNIQUE SET SOLVE AT e_c NODE

Q6

Draw the flow graph.



RLC CIRCUIT

Q7

PB GIVEN A UNITY FEED BACK SYSTEM WITH $G = \frac{K}{(S+1)(S+3)}$

DESIGN THE SYSTEM TO SATISFY THE FOLLOWING SPECIFICATIONS

(i) $P_{OS} \leq 20\%$ (ii) $T_P \leq 1.5$ SEC (iii) $\mu P \geq 4$ $e_{SS} \leq 0.2$

Q8

$GH = \frac{K}{(S+1)^2 \times S}$ FIND ROOT LOCUS AND ALL RELEVANT VALUES (14)

Q9

Write the example of steady state model for linear system

Q10

Why Routh Harwitz Criterion is applied?