COLLEGE OF ENGINEERING & TECHNOLOGY

Department : Electrical & Computer Control Engineering

Lecturer : Staff Group

Course : Automatic Control Systems

Course No. : EE 418T Marks : 40

Date : 25 /5 /2015 11^{30} 13^{30} Time : 2 Houres

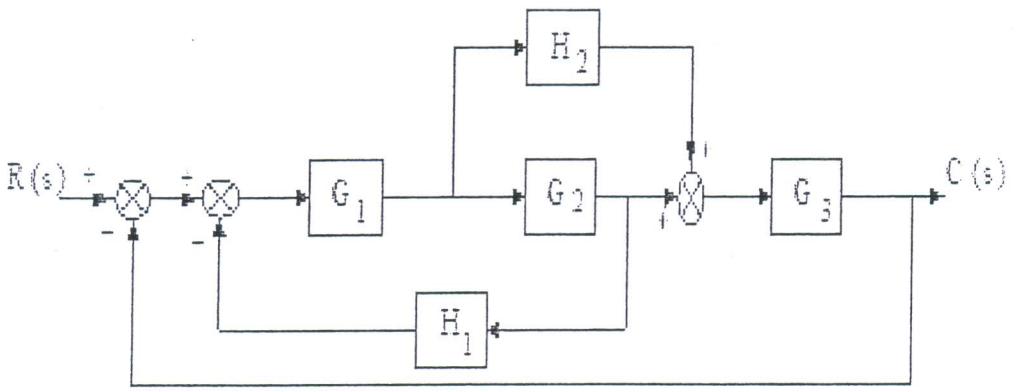
FINAL Examination

Answer the following questions:

Question 1: **[10 Marks]**

Find the closed loop transfer function $\frac{C(s)}{R(s)}$ of the system represented by the following block diagram using:

a) Block diagram reduction Technique
b) Signal flow graph



Question 2: **[10 Marks]**

For a unity feedback system has the following open loop transfer function:

$$KG(s) = \frac{K}{s(s+3)(s+5)}$$

1. Sketch the root locus for the system, showing all details on the graph. Determine the intersection point of the loci with the imaginary axis and the corresponding values of the gain **K** and the value of ω.

P.T.O

Members of Course Examination Committee:	Signature:	Date:
Lecturer : Staff	m. mosleff	10/5/2015
Course Coordinator: Dr. Ahmed el Shenawy		10/5/2015
Head of Department: Prof. Hamdy Ashour	Hamdy	10/5/2015

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