

Mr. Pujush

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- September 2016

B.Tech 5th Semester

COURSE CODE:10B11WEC515

MAX. MARKS: 15

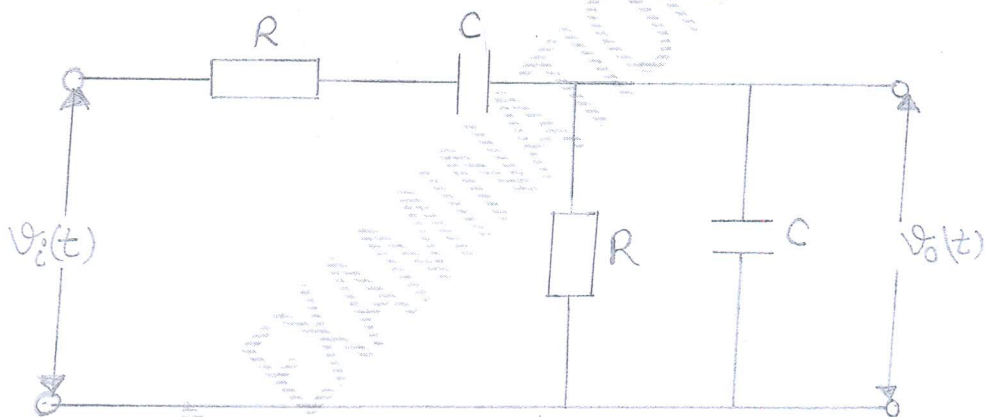
COURSE NAME: THEORY AND APPLICATION OF CONTROL SYSTEM

COURSE CREDITS: 4

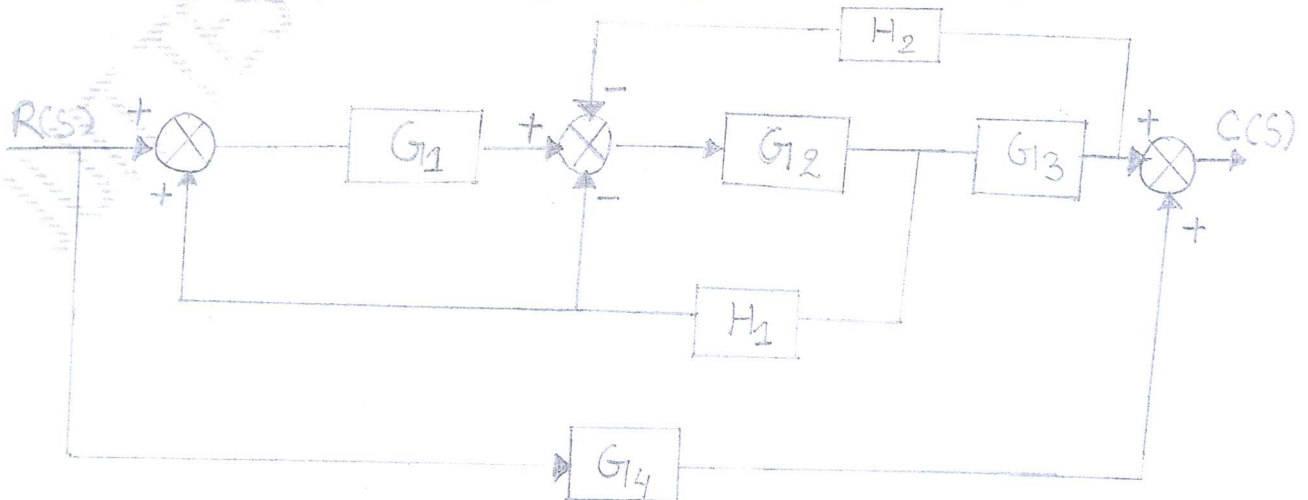
MAX. TIME: 1Hr

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. Define Transfer Function. Write the advantages and disadvantages of the transfer function approach. 3
2. Find the Transfer Function of the given network and plot the location of Poles and Zeros for $R = C = 1$. 4



3. Find the Overall Transfer Function using **Block Diagram Reduction** Technique. 4



4 Answer the following.

(a) Define Mason's Gain formula and write its advantages over block diagram reduction technique.

1

(b) Calculate the $C(S)/R(S)$ using **Mason's Gain Formula**.

3

