SE (Bio-Med) SEM-IV (CBGS) DEC, 2015 22/12/15
YTIET/LZ13/ENGG/SE-B.M./SEM-IV/ETCS/22-12
ETCS

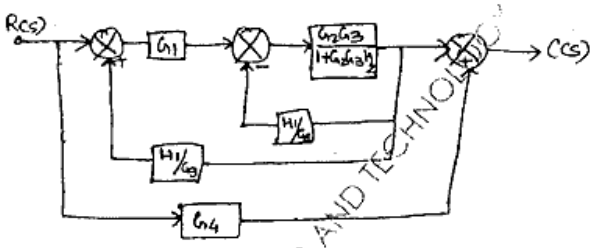
QP Code : 5529

(3 Hours) [Total Marks : 100

N.B. : (1) Question No. 1 is **compulsory**.
(2) Attempt any **three** from remaining **five**.
(3) Draw suitable **diagrams** wherever **necessary**.

1. (a) Differentiate between Open loop & Closed loop system. 20
(b) State and explain Maison's gain formula.
(c) State the factors considered in selecting electronic voltmeter.
(d) Explain focus and intensity control of CRO.

2. (a) Draw and explain working of FET voltmeter. 10
(b) Obtain transfer function of the system from the given block diagram. 10



3. (a) Draw the block diagram of a function generator and explain its working and specifications. 10
(b) Explain with diagram working of Successive Approximation type DVM. State advantage and limitations. 10

4. (a) Consider the open loop T.F. $G(s)\frac{7500(s+k)}{s^2(s+34.5)}$ under unity f/b 10
Find the range of K for which system is stable.
(b) Draw and explain block diagram and working of digital phase meter. 10

5. (a) Draw and explain block diagram working of CRO. 10
(b) Show various response specifications of a second order system. 10
(c) Define Gain Margin & Phase Margin. 10

6. (a) Sketch the root locus for 10

$$G(s)H(s)=\frac{k}{s(s+4)(s^2+4s+20)}$$

(b) Explain Dual trace and Dual Beam CRO. 10
(c) Explain True RMS Responding Voltmeter. 10

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