

No. of Printed Pages : 03

Roll No.

634

B. Tech. EXAMINATION, May 2017

(Sixth Semester)

(Old Scheme) (Re-appear Only)

(ME)

ME-308

AUTOMATIC CONTROLS

Time : 3 Hours]

[Maximum Marks : 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) How a typical Block Diagram is represented ? **10**

(3-26/23)M-634

P.T.O.

- (b) Discuss signal flow graphs in detail. **10**
- 2. (a) Explain Mason's Formula with suitable example. **10**
- (b) Explain proportional cum integral controller. **10**
- 3. (a) Explain zeroes and poles of a transfer function. **10**
- (b) Discuss about error constants. **10**
- 4. (a) Describe the closed and open loop transfer function. **10**
- (b) Explain Routh's Hurwitz criterion for the stability of the system. **10**
- 5. Discuss about the representation of sampled signal. Also explain Hold device and Pulse transfer function. **20**
- 6. (a) Give the relation between root locus locations and transient response. **10**
- (b) How do we represent a sampled signal ? **10**

- 7. (a) Explain Nyquist criterion for stability of the system. **12**
- (b) Discuss about discrete systems. **8**
- 8. Describe the solution of state vector differential equations. **20**