Government College of Engineering, Amravati

Department of Electronics Engineering

Class Test- I

Course Code: ETU304
Course Name: Digital Electronics
Date: 07/08/2015

Duration: 01 Hr
Max. Marks: 15
Time: 03:00 - 04:00

All questions are compulsory; marks of three best answers out of four will be considered

1] Using K-map write down the following expressions for the given function; $Y(\alpha,\beta,\gamma,\delta)=\Sigma m\{1,3,5,7,8,10,12,14\}+d(0,15)$ and comment implementing which expression is better? Why? a. Standard SoP, b. Reduced SoP c. Standard PoS, d. Reduced PoS 05

2] Design a <8 4 2 1> code to <8 4 2 -1> code convertor; which code is more useful? Why? 05

3] Describe the process of error detection and correction using Hamming codes for 7 message bits and required parity bits using even parity. 05

4] Describe Universal Gates; design Ex-OR Gate using NAND and NOR gates. 05