Amrita Vishwa Vidyapeetham
B.Tech. Degree CSE (AI) First Semester
Computational Engineering and Networking

19AIE101-Elements of Computing Systems-1 : Written Assignment 3 (Group-wise)

Max marks: 100 (Including viva)

This evaluation is related to the following course outcome
CO2 Implement different combinational and sequential digital logic systems
CO3 Design the hardware hierarchy of general-purpose computing systems

Qn No	Question
1	Design an 8-bit ALU, which can perform arithmetic and logic operations. Implement the chip logic designed in HDL and test the chip using a hardware simulator (Use interactive simulation). Show the output of x+y, x&y, !x (Take 'x' as your group number and 'y' as 63 in the three operations given, wherever applicable).
2	Design 4 to 16 Decoder using 2 to 4 Decoders. Implement the chip logic in HDL and test the chip using the hardware simulator. (Use interactive simulation)

Instructions: The answer can be uploaded as word file or PDF or PPT (Don't upload HDL file). Show the HDL code and output combination (for all 3 operations in first question and any one in second question) as screenshot inside the word or PDF or PPT .You can upload the file one time only. So kindly ensure that you are uploading the correct file or not. The first page of the file should contain your identity information. Plagiarism will not be entertained and if found, the answer will not be evaluated. Kindly note that question is specific to 8-bit ALU. So if you submit the 16-bit HACK ALU design, the answer will not be evaluated.

Link to upload word/PDF/PPT (One member in the team can upload. Do not upload zip folder)

https://amritavishwavidyapeetham-my.sharepoint.com/personal/g_jyothishlal_cb_amrita_edu/_layouts/15/onedrive.aspx?p=26&s=aHR0cHM6Ly9hbXJpdGF2aXNod2F2aWR5YXBlZXRoYW0tbXkuc2hhcmVwb2ludC5jb20vOmY6L2cvcGVyc29uYWwvZ19qeW90aGlzaGxhbF9jYl9hbXJpdGFfZWR1L0Vvb0gxcjB0UzFaSXJ5dWNRa0JpMWJvQnJLelFYV1NCUnJGV2tqUEFPd0hFM1E