

**DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING**

Date: 22nd August 2019

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| **ACTIVITY REPORT** | |
| Activity Title | Flip Class-QUIZ |
| Course | Analog and Digital Electronics (18CS33) |
| Brief Description | The activity has been conducted to assess the self learning capabilities to understand, analyse the concepts static -1 hazards and static -0 hazards |
| Intended Students | III Semester CSE |
| Prepared by | Dr.Pushpa Mohan |
| Date | 21st August 2019 22nd August 2019 |

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| **Pre Assessment Summary** |
| Methodology (TLP) followed: The video (NPTEL) required w.r.t hazards has been shared to the students.  Students were asked to answer 20 MCQs as pre-assessment quiz on the topic shared .There were total 35 students participated in this Activity. The flip class was conducted to check the knowledge ,analysis and self-learning capability of the students to solve the problem given  1.Which one is not the type of hazard(Blooms Level –L1(Remember))  1. Static-0 Hazard  2. Static-1 Hazard  3.  Dynamic Hazard  4.  None of the above  2.Which statement is suitable to explain glitch? .(Blooms Level-L2(Understand))  1.  A glitch is produce in a logic circuit when a circuit output may produce a short pulse.  2.  A glitch is produce in a logic circuit when circuits output never produce short pulses.  3.  A glitch is produce in a logic circuit when a circuit output may produce a high pulse.  4.  A glitch is produce in a logic circuit when circuits output never produce High pulses.  Key Findings: Students are able to   * Understand the hazards and its types and its impact. |

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| **Impact Analysis- Pre Assessment** |
| Description/Methodology: Evaluation of 20 questions of total 20 Marks   * 35 students attended the activity.   Students have scored an average of 13 marks out of 20 for all questions. |
| Graphs/ Plots:  **Pre-Assessment:-**    **Post-Assessment:-** |

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| **Classroom Assessment** |
| Methodology (TLP) followed: During the class students were asked to answer 3 Questions on the topic shared .There were total 64 students participated in this Activity .The flip class was conducted to check the knowledge ,analysis and self-learning capability of the students to solve the problem given   1. Consider the following logic function.   *F*(*A*, *B*, *C*, *D*)\_ *m*(0, 4, 5, 10, 11, 13, 14, 15)  (a) Find two different minimum circuits which implement *F* using AND and OR gates. Identify two hazards in each circuit.  (b) Find an AND-OR circuit for *F* which has no hazards.  (c) Find an OR-AND circuit for *F* which has no hazards.L3 &L4 **(**Analyze **&Apply)) (L3(apply)-Co4 using simulation software-logisim)**   1. Consider the following logic function   *F*(*A, B, C, D*)\_ *m*(0, 2, 3, 5, 6, 7, 8, 9, 13, 15)  (a) Find three different minimum AND-OR circuits that implement F. Identify two  hazards in each circuit. Then find an AND-OR circuit for *F* that has no hazards.  (b) There are two minimum OR-AND circuits for *F*; each has one hazard. Identify the hazard in each circuit, and then find an OR-AND circuit for *F* that has no hazards.:L3 & L4(Analyze)) **(L3(apply)-Co4 using simulation software-logisim)**  Key Findings: Students are able to   * Apply the concepts of hazards and hazard cover. * Differentiate between different hazards and its cover. |
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| **Impact Analysis- Classroom Assessment** |
| Description/Methodology: Evaluation of 5 questions of total 25 Marks   * 38 students attended the activity.   Students have scored an average of 13 for Question 1 and 12 in Question 2 , 13for Question 3, 11 for Question 4 and 14 for Question 5. |
| Graphs/ Plots: enclosed word document (pre as well as post) |

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| **Scope of Impact Analysis** |
| **Map the activity to the PO’s intended to be achieved with** |
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| **Conclusion** |
| This activity has good impact on students in attaining PO1, 2 ,3,4,5,and 12. |

Course Instructor Signature/s HOD