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| **Subject /Subject Code** | **Semester /Branch** | **Issue Date** | **Due Date** |
| **DIGITAL FUNDAMENTALS / 3130704** | **3RD Sem. /IT** |  |  |

**Assignment# 1**

**Number System**

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Question** | **CO Mapping** |
|  | Convert 11011.101, 1001011 to decimal | 3 |
|  | Convert 163.875 to decimal | 3 |
|  | Add 27.125 to -79.625 using 12-bit 2’s complement arithmetic | 3 |
|  | Add (27.5)8 and (74.4)8 | 3 |
|  | Convert (756.603)8 to HEX | 3 |

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**Assignment# 2**

**Binary Codes**

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Question** | **CO Mapping** |
|  | Explain classification of Binary codes in detail. | 1,3 |
|  | Perform 37+28 in XS-3 | 1,3 |
|  | Convert (3A7)16 ,(527)8 into Grey | 1,3 |
|  | Explain Error detecting codes using example | 1,3 |
|  | Explain 7-bit hamming code using example | 1,3 |

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**Assignment#3**

**Logic Gates and Boolean Algebra**

|  |  |  |
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| **Sr. No.** | **Question** | **CO Mapping** |
|  | Explain Basic Gates with truth table and diagram | 1,2 |
|  | Explain Universal Gates and X-OR,X-NOR with truth table and diagram | 1,2 |
|  | Convert Universal Gates into Basic Gates, draw Diagram and Truth table | 1,2 |
|  | Expand A’ + B’ to min terms and max terms | 1,2 |