** D.Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY**

**Set-:**

**Q. Paper Code:**

**23FY112212**

**KASABA BAWADA KOLHAPUR-416006**

**(An Autonomous Institute)**

F. Y. B. Tech, Sem-II

**END SEMESTER EXAMINATION(ESE), July – 2023**

Course Name: …Elements of Electrical Engg., Course Code 221FYL112

Seat No:

**Day and Date:**

**Time: Max. Marks- 50**

***Instructions:***

1. *Question No. 1&2 is compulsory.*
2. *Figure to the right indicate full marks.*
3. *Give suitable general Instructions*
4. *Any other Course Specific Instructions.*
5. *Non questions should repeat from MSE/ISE*

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| --- | --- | --- | --- | --- | --- |
| **BT** | **CO’s** | **Q.No.** |  | | **Marks** |
|  |  | **Q.1** | **All Questions are compulsory** | | **20** |
| **1,2** | **CO1** | **a** | Find the current flowing through each resistor of following diagram  10Ωohm  20 Ω ΩohΩohm    40 Ω ΩohΩohm  20 V ΩohΩohm  10 V |  | **6M** |
| **1,2** | **CO2** | **b** | Explain with neat diagram generation of single-phase AC signal. | **7 M** |
| **3** | **CO3** | c | Derive the E.M.F equation of single-phase transformer | **7 M** |
|  | | | | | |
|  |  | **Q.2** | **All Questions are compulsory** | | **10** |
| **2** | **CO4** | **a** | State the features of IC 78XX and LM317. |  | **4** |
| **1,2** | **CO4** | **b**  **b** | Explain VI characteristics of PN junction diode.  Or  Explain Bridge rectifier with neat waveforms. | **6** |
|  | | | | | |
|  |  | **Q.3** | **All Questions are compulsory** | | **10** |
| **1,2** | **CO5** | **a** | Reduce the following Boolean equation:  **(A+B). (A+B’)** |  | **3** |
| **1,2** | **CO5** | **b** | Prove Demorgans theorem.  OR  Design Half adder. | **7** |
|  | | | | | |
|  |  | **Q.4** | **Attempt any two out of three questions** | | **10** |
| **1,2** | **CO6** | **a** | Explain types of Transducers. |  | **5** |
| **1,2** | **CO6** | **b** | Explain LVDT. | **5** |
| **1,2** | **CO6** | **C** | Explain any one temperature transducer. | **5** |

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