Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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|  |  |  |  |
| **Code :** | **16PH2001** | **Duration :** | **3hrs** |
| **Sub. Name :** | **SEMICONDUCTOR PHYSICS I** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

|  |  |  |  |  |
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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Explain in detail the drift and diffusion current in semiconductor with its expressions and suitable diagrams. | CO1 | 20 |
| **(OR)** | | | | |
| 2. |  | Explain intrinsic and extrinsic semiconductor with suitable diagrams. | CO1 | 20 |
|  |  |  |  |  |
| 3. |  | Design various logic gates and verify with its truth table. | CO2 | 20 |
| **(OR)** | | | | |
| 4. | a. | Explain in detail the microcomputer with its block diagram. | CO2 | 12 |
| b. | Discuss in detail RAM, ROM and EPROM. | CO2 | 8 |
|  |  |  |  |  |
| 5. |  | Determine the working function of multi-meter with its block diagram. | CO2 | 20 |
| **(OR)** | | | | |
| 6. |  | Elaborate in detail the various passive transducers with suitable diagrams. | CO1 | 20 |
|  |  |  |  |  |
| 7. |  | Discuss in detail the satellite communication with its block diagram. | CO3 | 20 |
| **(OR)** | | | | |
| 8. |  | Determine the function of optical communication using fibre optic cable. | CO3 | 20 |
|  | | **Compulsory**: |  |  |
| 9. |  | Explain in detail the forward and reverse bias of PN diode with its current voltage characteristics. | CO1 | 20 |