**18EII02**

**Hall Ticket Number:**

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| **IV/IV B.Tech (Supplementary) DEGREE EXAMINATION** | | | |
| **April,2023** | **Institutional Elective (Common to all Branches)** | | |
| **Seventh Semester** | **Power plant Instrumentation** | | |
| **Time:** Three Hours | | **Maximum: 5**0 Marks | |
| *Answer Question No. 1 Compulsorily.* | | | (10X1 = 10 Marks) |
| *Answer* ***ANY ONE*** *question from each Unit.* | | | (4X10=40 Marks) |

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| 1. | a) | Identify the significance of instrumentation for power generation. | CO1(BL2) | | **1M** |
|  | b) | List various conventional power plants | CO1(BL1) | | **1M** |
|  | c) | State about interlock | CO2(BL2) | | **1M** |
|  | d) | Recall the function of Pulverizer | CO2(BL2) | | **1M** |
|  | e) | Present the applications of boiler | CO2(BL1) | | **1M** |
|  | f) | Mention the methods of thermal power generation | CO1(BL1) | | **1M** |
|  | g) | Cite the advantages of lubricating oil in turbine | CO3(BL2) | | **1M** |
|  | h) | Name the instrument to measure vacuum in the condenser | CO3(BL2) | | **1M** |
|  | i) | Interpret the purpose of the analyzer | CO4(BL2) | | **1M** |
|  | j) | Define pH. | CO4(BL1) | | **1M** |
| **Unit - I** | | | | | |
| 2. |  | Describe the methods of Hydro power generation. | CO1(BL3) | **10M** | |
|  |  | **(OR)** |  |  | |
| 3. |  | Explain the measurement of smoke density. | CO1(BL3) | **10M** | |
| **Unit - II** | | | | | |
| 4. | a) | Elucidate about the function of super heater | CO2(BL3) | **5M** | |
|  | b) | Illustrate the importance of air fuel ratio control in boiler | CO2(BL4) | **5M** | |
|  |  | **(OR)** |  |  | |
| 5. | a) | Demonstrate the role of spray and gas recirculation controls | CO2(BL4) | **5M** | |
|  | b) | Explain the role of computers in power plants. | CO2(BL4) | **5M** | |

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| **Unit - III** | | | | | |
| 6. |  | Explain about temperature monitoring and control | | CO3(BL4) | **10M** |
|  |  | **(OR)** | |  |  |
| 7. |  | Describe about hydrogen generator cooling system | | CO3(BL4) | **10M** |
| **Unit - IV** | | | | | |
| 8. |  | | Elaborate about pollution monitoring and control equipment. | CO4(BL2) | **10M** |
|  |  | | **(OR)** |  |  |
| 9. |  | | Demonstrate about Paramagnetic type Oxygen Analyzer | CO4(BL3) | **10M** |

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