

SANT GADGE BABA AMRVATI UNIVERSITY, AMRAVATI
Summer Examination 2020 Credit Point
HVPM's College of Engineering and Technology, Amravati
Department of Electronics & Tele communication Engineering
Bachelor of Engineering Sem. :- VII

Subject :-PLC&D

Code :- 7ET5

Instructions:-

- 1) Solve any two questions**
- 2) All question carry equal marks**

Q1.

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|--|------------------------|
| a) Define Programmable Logic Controller. Explain different type of PLC | 02 Credit Point |
| b) Explain Mechanical Switches and Proximity Switches with example. | 02 Credit Point |
| c) Explain the rules for contraction the ladder diagram | 02 Credit Point |
| d) Draw various type of ladder diagram | 02 Credit Point |
| e) Design & Development of Ladder diagram of temperature control of motor. | 01 Credit Point |
| f) What is SCADA system . Explain Distribution SCADA system in detail | 01 Credit Point |

Q2.

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|--|------------------------|
| a) Describe processor section of a PLC in details | 02 Credit Point |
| b) Explain any two types of Transducers& Sensor | 02 Credit Point |
| c) Draw and Explain timer function with example. | 02 Credit Point |
| d) Explain development of ladder diagram | 02 Credit Point |
| e) Design ladder diagram of Direct on Line motor | 01 Credit Point |
| f) Explain channel scanning i.e polling and interrupt scanning in brief. | 01 Credit Point |

Q3.

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|---|------------------------|
| a) Explain Incremental encoder with its assembly | |
| b) Explain overall PLC system with neat block diagram | 02 Credit Point |
| c) Explain data handling instruction | 02 Credit Point |
| d) Draw up counter ladder diagram | 02 Credit Point |
| e) Design ladder diagram of forward reverse of motor | 01 Credit Point |
| f) Draw and explain the block diagram of Remote Terminal Unit (RTO) | 01 Credit Point |

Q4.

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|---|------------------------|
| a) Explain Discrete I/O modules. | 02 Credit Point |
| b) Explain liquid level detector | 02 Credit Point |
| c) Explain up and down counter in detail with its related bits and timing diagram | 02 Credit Point |
| d) Draw JK F F development of ladder diagram | 02 Credit Point |
| e) Explain the different Industrial application of PLC through Ladder diagram. | 01 Credit Point |
| f) What are the benefits of SCADA system | 01 Credit Point |