

CODE: 3033

REVISION: 2015

VERSION:

COURSE: FUNDAMENTALS OF AC SYSTEMS

BLUE PRINT

| Sl. No. | Module | Type of Questions | | | | | | | |
|--------------|--------|-------------------|-----------|------------------|-----------|------------------|------------|------------------|------------|
| | | Part A | | Part B | | Part C | | Total | |
| | | No. of Questions | Score | No. of Questions | Score | No. of Questions | Score | No. of Questions | Score |
| 1. | I | 2 | 4 | 2 | 12 | 4 | 30 | 8 | 46 |
| 2. | II | 1 | 2 | 2 | 12 | 4 | 30 | 6 | 38 |
| 3. | III | 1 | 2 | 1 | 6 | 4 | 30 | 7 | 44 |
| 4. | IV | 1 | 2 | 2 | 12 | 4 | 30 | 7 | 44 |
| Total | | 5 | 10 | 7 | 42 | 16 | 120 | 28 | 172 |

Signature:

Name:

Designation:

Institution:

QUESTION WISE ANALYSIS

COURSE: 6032 MICROCONTROLLERS AND PROGRAMMABLE LOGIC CONTROLLERS

(REV 2015)

VERSION:

| Question No. | Specific Outcome <i>As per syllabus</i> | Module | Content details | Score | Time in minutes |
|------------------------|--|--------|--|-------|-----------------|
| <i>I</i> 1 | 1.1.3 | I | Equation of alternating voltage | 2 | 4 |
| 2 | 1.1.1 | I | Generation of alternating voltage | 2 | 4 |
| 3 | 2.1.3 | II | AC through inductor and resistor | 2 | 4 |
| 4 | 3.1.5 | III | 3 phase delta connection | 2 | 4 |
| 5 | 4.1.4 | IV | 2 wattmeter method for power measurement. | 2 | 4 |
| <i>II</i> 1 | 1.1.2 | I | Explain the advantage of AC supply system. | 6 | 8 |
| 2 | 1.1.8 | I | Addition and subtraction of vectors | 6 | 8 |
| 3 | 2.1.4 | II | AC through resistance and capacitor | 6 | 8 |
| 4 | 3.1.5 | III | Distinguish delta connections | 6 | 8 |
| 5 | 4.1.4 | IV | Two wattmeter method for power measurement. | 6 | 8 |
| 6 | 2.1.9 | II | Describe resonance | 6 | 8 |
| 7 | 4.1.11 | IV | Identify various power factor correction equipment | 6 | 8 |
| <i>III</i> <i>a</i> | 1.1.6,1.1.7 | I | Vector representation of alternating quantities, addition of alternating quantities. | 8 | 15 |
| <i>b</i> | 1.1.4 | I | Identify term related to alternating current | 7 | 15 |
| <i>IV</i> <i>a</i> | 1.1.4,1.1.5 | I | identify terms related to alternating current , explain the term form factor | 8 | 15 |
| <i>b</i> | 1.1.3 | I | Derive the equations of alternating voltage and currents. | 7 | 15 |
| <i>V</i> <i>a</i> | 2.1.4,2.1.9 | II | AC through resistance, inductor and capacitor, resonance in AC series circuit | 8 | 15 |
| <i>b</i> | 2.1.3 | II | AC through resistance and inductor | 7 | 15 |
| <i>VI</i> <i>a</i> | 2.1.10 | II | Compute problems regarding AC circuit | 8 | 15 |
| <i>b</i> | 2.1.4 | II | AC through resistance, inductor and capacitor | 7 | 15 |

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|---------------|-------|-----|--|---|----|
| <i>VII a</i> | 3.1.4 | III | Distinguish star connection | 8 | 15 |
| <i>b</i> | 3.1.3 | III | Explain the advantages of polyphase system | 7 | 15 |
| <i>VIII a</i> | 3.1.5 | III | Distinguish delta connections | 8 | 15 |
| <i>b</i> | 3.1.6 | III | Compare star and delta system | 7 | 15 |
| <i>IX a</i> | 4.1.4 | IV | Describe two wattmeter method for power measurement | 8 | 15 |
| <i>b</i> | 4.1.6 | IV | Distinguish between balanced load and unbalanced load. | 7 | 15 |
| <i>X a</i> | 4.1.4 | IV | Describe two wattmeter method for power measurement | 8 | 15 |
| <i>b</i> | 4.1.7 | IV | Power factor in leading and lagging | 7 | 15 |