

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (NEW) - EXAMINATION – SUMMER 2018

Subject Code: 2180912

Date: 30/04/2018

Subject Name: Condition Monitoring(Departmental Elective - III)

Time: 10:30 AM to 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|------------|--|-----------|
| Q.1 | (a) Write importance and necessity of maintenance. | 03 |
| | (b) Explain Breakdown Maintenance. | 04 |
| | (c) Explain techniques of Condition Monitoring. | 07 |
| OR | | |
| Q.2 | (a) Explain Key Gas method | 03 |
| | (b) Explain advantages and disadvantages of Dielectric Frequency Response. | 04 |
| | (c) Explain Partial Discharge. | 07 |
| OR | | |
| Q.3 | (a) Explain comparison techniques for transformer winding deformation diagnosis. | 03 |
| | (b) Explain gas evolution in a transformer. | 04 |
| | (c) Explain Frequency Response Analysis method for power transformer. | 07 |
| OR | | |
| Q.3 | (a) Explain overall level monitoring. | 03 |
| | (b) Explain frequency spectrum monitoring. | 04 |
| | (c) Explain rotor response in detailed | 07 |
| OR | | |
| Q.4 | (a) Write insulation failure modes. | 03 |
| | (b) Explain need for monitoring. | 04 |
| | (c) Explain construction of electrical machines. | 07 |
| OR | | |
| Q.4 | (a) Write rotor winding faults. | 03 |
| | (b) Explain machine specification and failure modes. | 04 |
| | (c) Explain structure of electrical machines and their types. | 07 |
| OR | | |
| Q.5 | (a) Explain Hot – Spot measurement. | 03 |
| | (b) Explain Bulk measurement. | 04 |
| | (c) Explain temperature measurement in detailed. | 07 |
| OR | | |
| Q.5 | (a) Explain lubrication oil and bearing degradation. | 03 |
| | (b) Explain insulation degradation detection in gas analysis on – line. | 04 |
| | (c) Explain particulate detection: core monitors in detailed. | 07 |
