

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**M. E. - SEMESTER – III • EXAMINATION – WINTER • 2014**

**Subject code: 733901****Date: 25-11-2014****Subject Name: Green Energy Engineering****Time: 02:30 pm - 05:00 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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|------------|------------|--|-----------|
| <b>Q.1</b> | <b>(a)</b> | Describe the potential for solar and wind energy use in India.                                       | <b>07</b> |
|            | <b>(b)</b> | Describe the composition of energy systems.  | <b>07</b> |
| <b>Q.2</b> | <b>(a)</b> | Describe essential elements of green energy systems.   | <b>07</b> |
|            | <b>(b)</b> | Describe the term target and solution for green energy and sustainability.                           | <b>07</b> |
| <b>OR</b>  |            |  |           |
|            | <b>(b)</b> | Describe the energy sources and their possible negative impact on environment.                       | <b>07</b> |
| <b>Q.3</b> | <b>(a)</b> | Describe the energy analysis of solar ponds.   | <b>07</b> |
|            | <b>(b)</b> | Describe the factors affecting green energy applications for sustainability.                         | <b>07</b> |
| <b>OR</b>  |            |  |           |
| <b>Q.3</b> | <b>(a)</b> | Describe the energy analysis of wind energy systems.   | <b>07</b> |
|            | <b>(b)</b> | Describe the importance of energy analysis of green energy systems.                                  | <b>07</b> |
| <b>Q.4</b> | <b>(a)</b> | Describe the McKelvey classification of energy sources.  | <b>07</b> |
|            | <b>(b)</b> | Describe the principals of energy economics.   | <b>07</b> |
| <b>OR</b>  |            |  |           |
| <b>Q.4</b> | <b>(a)</b> | Describe the economic issues and environmental perspectives of renewable energy sources.             | <b>07</b> |
|            | <b>(b)</b> | Describe the merits and demerits of one renewable and one non-renewable energy source.               | <b>07</b> |
| <b>Q.5</b> | <b>(a)</b> | Describe the energy policies towards electricity in India.   | <b>07</b> |
|            | <b>(b)</b> | Describe the energy productivity and management of energy demand.                                    | <b>07</b> |
| <b>OR</b>  |            |  |           |
| <b>Q.5</b> | <b>(a)</b> | Describe the global and Indian trends in energy demand.  | <b>07</b> |
|            | <b>(b)</b> | Describe the case for and against privatization in electricity generation and distribution in India. | <b>07</b> |

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