Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **19CE2002** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ENERGY SCIENCE AND ENGINEERING** | **Max. Marks :** | **100** |

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| **Q. No.** | **Questions** | **Course Outcome** | **Marks** |
| **PART – A (10 X 1 = 10 MARKS)** | | | |
| 1. | Write the role of energy sustainability. | CO5 | 1 |
| 2. | The per capita consumption of energy in our country is \_\_\_\_\_\_\_\_\_. | CO4 | 1 |
| 3. | \_\_\_\_\_\_\_\_\_\_\_ is also one of the future energy. | CO3 | 1 |
| 4. | Nuclear energy is a \_\_\_\_\_\_\_\_\_\_ type of energy. | CO4 | 1 |
| 5. | Regeneration means \_\_\_\_\_\_\_\_\_\_\_\_. | CO5 | 1 |
| 6. | Energy conservation deals with \_\_\_\_\_\_\_\_\_. | CO6 | 1 |
| 7. | The main advantages of non-conventional energy sources are \_\_\_\_\_\_\_\_\_\_\_. | CO1 | 1 |
| 8. | The efficiency of a steam plant is \_\_\_\_\_\_\_\_\_\_\_. | CO2 | 1 |
| 9. | \_\_\_\_\_\_\_\_\_\_\_ is one of the conventional Energy source. | CO1 | 1 |
| 10. | The main drawback of wave energy is \_\_\_\_\_\_\_\_\_\_\_. | CO5 | 1 |

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| **PART – B (6 X 3 = 18 MARKS)** | | | |
| 11. | Define carbon footprint. | CO4 | 3 |
| 12. | Write down the challenges of oil exploration in offshore platforms. | CO5 | 3 |
| 13. | Give the objectives of Energy Audit. | CO6 | 3 |
| 14. | List the various non-conventional energy sources. | CO2 | 3 |
| 15. | Mention the main drawbacks of coal based power generation. | CO1 | 3 |
| 16. | Discuss about the present and future energy and its constrains. | CO6 | 3 |

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| **PART – C (6 X 12 = 72 MARKS)**  **(Answer any five Questions from Q.no 17 to 23. Q.No 24 is a Compulsory Question)** | | | | |
| 17. | a. | Enumerate the step by step procedure to generate electricity from wave energy. | CO4 | 6 |
| b. | Write down the recent prospects in Hydroelectric power projects in India. | CO5 | 6 |
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| 18. |  | Discuss the functions of energy related enterprises and its policies. | CO6 | 12 |
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| 19. | a. | Write down the step by step procedure to generate electricity from geothermal energy. | CO5 | 6 |
| b. | Write a detailed note on nuclear energy. | CO4 | 6 |
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| 20. | a. | Briefly discuss the Biomass power generation. | CO3 | 6 |
| b. | Solar power generation is one of the alternative energy source. Justify it. | CO2 | 6 |
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| 21. |  | Discuss the economics to select the power generation in non-conventional sources. | CO6 | 12 |
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| 22. | a. | Describe the environmental issues while running the fossil fuel plants. | CO4 | 6 |
| b. | Categorize the various energy resources. | CO4 | 6 |
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| 23. | a. | Summarize the necessity of clean energy concepts. | CO1 | 6 |
| b. | Give the relation between economic and environmental outcomes in power generation. | CO6 | 6 |
|  |  | **Compulsory:** | | |
| 24. | a. | Explain the importance of green building concepts and its prospects. | CO2 | 8 |
| b. | Briefly explain the energy conservation and its prominence. | CO2 | 4 |