

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)**

**CLASS: M.Tech(Energy Tech.)  
BRANCH: Mechanical**

**SEMESTER : II  
SESSION : SP/22**

**SUBJECT: ME 553 ECONOMICS & PLANNING OF ENERGY SYSTEMS**

**TIME:2:00 Hours**

**FULL MARKS:50**

**INSTRUCTIONS:**

1. The question paper contains 15 questions each of 5 marks.
  2. Attempt any 10 questions.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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|-------|--|-----|
| Q.1-  | Explain the world energy scenario.             | [5] |
| Q.2-  | Discuss the main economic problems             | [5] |
| Q.3-  | What do you mean by positive economics?        | [5] |
| Q.4-  | What do you mean by normative economics?       | [5] |
| Q.5-  | Explain the simple payback period.             | [5] |
| Q.6-  | Define net present value (NPV).                | [5] |
| Q.7-  | Define internal rate of return (IRR).          | [5] |
| Q.8-  | What is replacement analysis?                  | [5] |
| Q.9-  | What is risk analysis?                         | [5] |
| Q.10- | Define financial feasibility.                  | [5] |
| Q.11- | Explain the term OPEC.                         | [5] |
| Q.12- | What is main role of world bank?               | [5] |
| Q.13- | Define energy intensity and energy elasticity. | [5] |
| Q.14- | Explain the economics of solar energy.         | [5] |
| Q.15- | Explain the economics of small hydro energy.   | [5] |

::: 02/05/2022 :::