

Code No: 158DE

**R18**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B.Tech IV Year II Semester Examinations, July/August - 2022**

**ENERGY SOURCES AND APPLICATIONS**

**(Common to CE, ME, ECE)**

**Time: 3 Hours**

**Max.Marks:75**

**Answer any five questions  
All questions carry equal marks**

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1. Write a detailed note on Environmental and climate issues arising due to energy sources.[15]
2. Classify the different energy sources and write about the advantages and disadvantages of each energy source. [15]
3. Justify why worldwide only fossil fuels are used as energy sources primarily? Why is there a hesitation against renewable energy sources? [15]
- 4.a) Explain in detail about any one mechanism for harnessing energy from tides.  
b) What is biomass? How can it be used as Energy Source? [8+7]
5. How Pumped Storage Hydro Power Project works? Explain with a neat diagram. [15]
6. What is a superconductor? How can the principle of superconductors be used to store energy for regeneration? [15]
7. Define clean energy. Give examples for clean energy technology. How the clean energy technologies can be used for sustainable development of a nation. [15]
8. Write in detail about the concept of green building, green architecture and green building concepts. [15]

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