

Roll No.

Total Pages : 02

BT-7/M-20

37059

RENEWABLE ENERGY RESOURCES

ME-435-E

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit.

Unit I

1. Discuss the concept, types and significance of renewable energy resources. **20**
2. Write briefly on the following :
 - (a) Multimode heat transfer **10**
 - (b) Properties of transparent materials. **10**

Unit II

3. Discuss the effect of earth's atmosphere on solar radiation. How is heat balance maintained for a solar collector ? **20**
4. Write briefly on the following :
 - (a) Solar pond **10**
 - (b) Working of a photovoltaic cell. **10**

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Unit III

5. Discuss the working of an impulse turbine. Also discuss the working of a hydraulic rain pump. **20**
6. Write briefly on the following : **7+7+6**
- (a) Bio-fuels
 - (b) Pyrolysis
 - (c) Alcoholic fermentation.

Unit IV

7. Discuss the concept of wave motion as a source of energy. What are different types of wave patterns ? Also discuss different causes for tide formation. **20**
8. Write briefly on the following :
- (a) Geophysics **10**
 - (b) Geothermal Energy. **10**