

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2018****Subject Code: 2163904****Date: 05/05/2018****Subject Name: Non-conventional energy sources****Time: 10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Define Nuclear Fission and Fusion? **03**
(b) Write advantages and limitations of fuel cells? **04**
(c) What is MHD? Explain the principle of MHD power generation? **07**
- Q.2** (a) Draw a well-defined diagram of Autonomous Solar Cell Power Plant? **03**
(b) What is the difference between biomass and biogas? **04**
(c) Write down the advantages and disadvantages of tidal power plant? **07**
- OR**
- (c) Name and explain basic types of silicon solar cells? **07**
- Q.3** (a) Draw a well-defined diagram of open cycle MHD generator? **03**
(b) Write down the principle of tidal energy? **04**
(c) Explain close cycle and Hybrid cycle OTEC? **07**
- OR**
- Q.3** (a) How you can improve the efficiency of solar cells? **03**
(b) List disadvantages of geothermal energy? **04**
(c) How you can use biomass as a fuel? **07**
- Q.4** (a) Explain HDR? **03**
(b) What do you mean by geothermal energy? **04**
(c) Write down the working of fuel cells? **07**
- OR**
- Q.4** (a) Define flat plate collector? **03**
(b) Draw a well-defined diagram of binary fluid system geothermal power plant? **04**
(c) Write advantages and disadvantages of Nuclear Power? **07**
- Q.5** (a) List advantages of wind energy? **03**
(b) Explain two basin system of tidal power system? **04**
(c) How geothermal power plant can operate? **07**
- OR**
- Q.5** (a) Define the term Renewable and Non-Renewable energy with proper examples? **03**
(b) List the advantages of MHD power generator? **04**
(c) Write a short notes on characteristics of Wind Power? **07**
