

<b>7E7044</b>	Roll No.	Total No of Pages: <b>2</b>
	<b>7E7044</b> <b>B. Tech. VII Sem. (Main / Back) Exam., Nov. – Dec. - 2018</b> <b>Electrical &amp; Electronics Engineering</b> <b>7EX4A Non-Conventional Energy Sources</b> <b>Common with EE, EX</b>	
<b>Time: 3 Hours</b>		<b>Maximum Marks: 80</b> <b>Min. Passing Marks: 26</b>

**Instructions to Candidates:**

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.

Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination.  
(Mentioned in form No. 205)

1. NIL

2. NIL

**UNIT- I**

Q.1 Differentiate Conventional and Non - conventional energy sources. [16]

**OR**

Q.1 (a) What is Double basin arrangement? [8]

(b) Write advantages and limitations of Tidal Power Generation. [8]

**UNIT- II**

Q.2 (a) Explain types of Solar collectors and differentiate Paraboloidal and Heliostat. [8]

(b) Explain Solar radiation on tilted surface. [8]

**OR**

Q.2 Explain briefly Solar cell and Solar cell array.

[16]

**UNIT- III**

Q.3 Differentiate horizontal axis and vertical axis wind turbine with neat and clear diagram.

[16]

**OR**

Q.3 (a) Explain geothermal energy and geothermal preheat hybrid power plant.  
(b) Write application of geothermal energy.

[8]

[8]

**UNIT- IV**

Q.4 (a) Differentiate Nuclear fission and Nuclear fusion.  
(b) Explain Plasma confinement and Magnetic confinement.

[8]

[8]

**OR**

Q.4 Write advantages of Laser fusion reactor and Hybrid and Cold fusion.

[16]

**UNIT- V**

Q.5 Explain Biomass conversion technologies.

[16]

**OR**

Q.5 Explain Pyrolysis scheme and Ethanol production.

[16]