

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VI(NEW) – EXAMINATION – SUMMER 2019
Subject Code:2163904
Date:18/05/2019
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.

		MARKS
Q.1	(a) Define Bio-Gas.	03
	(b) Define OTEC. Mention Any Three types of OTEC.	04
	(c) Discuss various non-conventional Energy sources (any five).	07
Q.2	(a) Mention any Six Types of Fuels cell with Electrolyte used in each one.	03
	(b) Write a Short Note on Solar Thermal Power Plant.	04
	(c) Write a Short Note on Wave and Tidal Energy.	07
	OR	
	(c) Explain Geothermal Energy, Its types and Limitations.	07
Q.3	(a) Define Wood Stoves and Bio diesel.	03
	(b) Draw Molten Carbonate fuel cell with overall reaction.	04
	(c) Explain the Theory of Solar Cell.	07
	OR	
Q.3	(a) Describe Nuclear Power Plant.	03
	(b) Explain Phosphoric Acid fuel cell with Diagram.	04
	(c) Discuss Wind Energy, Principle, Performance and Limitations.	07
Q.4	(a) Write a short note on Flat Plate Collector.	03
	(b) Explain Open Cycle OTEC with Diagram.	04
	(c) Write a Short Note on Availability of Bio-mass and its Conversion Theory.	07
	OR	
Q.4	(a) Briefly Discuss Farad Generator, Hall Generator, Disk Generator.	03
	(b) Write a Short Note on Alkaline fuel cell with overall Reaction.	04
	(c) Write Down Limitation of Nuclear Energy and Performance.	07
Q.5	(a) Explain Thermal Energy Storage for Heating and Cooling.	03
	(b) Explain Closed Cycle and Hybrid Cycle of OTEC.	04
	(c) Briefly Discuss Any Five Type of Fuel Cell and Compare how it is Different from Battery.	07
	OR	
Q.5	(a) Explain Basic Principle of MHD. (With Diagram)	03
	(b) Describe Solid Oxide fuel cell and its Limitations.	04
	(c) Write a Short Note on Open Cycle MHD.	07
