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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
07 THRISSUR CLUSTER

FIRST SEMESTER M.TECH. DEGREE EXAMINATION DEC 2017
Chemical Engineering
(Process Control)

07CH61119 Energy Engineering and Management

Time : 3 hours

Max.Marks: 60

Answer all six questions. Part 'a' of each question is compulsory.

Answer either part 'b' or part 'c' of each question

Q.no.	Module 1	Marks
1a	Write about classification of energy resources	4
	Answer b or c	
b	Combined Cycle power plants are more energy efficient, why?	5
c	What are the energy strategies you suggest for sustainable world	5
Q.no.	Module 2	Marks
2a	What is solar distillation? Discuss its applications	4
	Answer b or c	
b	What are the methods available for power generation from solar energy?	5
c	Explain the working of solar pond? Discuss its applications	5
Q.no.	Module 3	Marks
3a	Discuss the site selection criteria for a wind energy farm	4
	Answer b or c	
b	Discuss the biochemical routes for biomass conversion	5
c	Small hydro power plants should get more attention in the present scenario, why?	5

Q.no.	Module 4	Marks
4a	What are the methods available for wave energy conversion?	4
	Answer b or c	
b	Discuss the principle and working of power plants based on OTEC	5
c	What are the routes for hydrogen energy production	5
Q.no.	Module 5	Marks
5a	Why energy audit is required in all fields?	5
	Answer b or c	
b	What is meant by fuel and energy substitution	7
c	Energy audits are classified into many according to the purpose. What are they? Discuss the differences in modus operandi	7
Q.no.	Module 6	Marks
6a	Write about the energy conservation opportunities in dryers	5
	Answer b or c	
b	Discuss the energy conservation measures employed in i) boiler ii) heat exchangers	7
c	Explain the principle of i) cogeneration ii) trigeneration	7