DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – Sep/Oct 2019

Course: B. Tech. in Chemical Engineering   Sem: III
Subject Name: Elective –I Renewable Energy Sources   Subject Code: BTCHE306B
Max Marks: 20   Date:- 9/10/2019   Duration:- 1 Hr.

Instructions to the Students:

1. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
2. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.

		(Level/CO)	Marks
Q. 1	**Attempt following Questions by choosing option**		**1 X 6**
	1. Biomass is described as		CO2
	(a) Large Living things (b) Inorganic matter that can be converted to fuel		
	(c) Organic matter that can be converted to fuel (d) Petroleum		
	2. A windmill is an example of a turbine		CO4
	(a) True (b) False		
	3. In which way does the Darrieus rotor spin		CO4
	(a) Vertically (b) Horizontally (c) Both vertically & Horizontally (d)None of these		
	4. What is one example of Biomass		CO2
	(a) Electricity (b) Trees (c) Wind (d) Water		
	5. By which process solar energy is converted into chemical energy		CO3
	(a) Evaporation (b) Greenhouse effect (c) Photosynthesis (d) None of these		
	6. What is one disadvantage of renewable energy		CO1
	(a) Electricity & power could become much cheaper		
	(b) 3rd world countries could have affordable energy		
	(c) Many people could become energy independent		
	(d) Most sources are expensive to get started		
Q.2	**Solve Any Two of the following.**		**2 X 3**
(A)	What are renewable and nonrenewable energy sources? Give applications	CO1	
(B)	Describe the main considerations in selecting a site for wind energy generators	CO4	
(C)	What are the instruments used for measuring solar radiations? Describe any two with sketches	CO3	
Q. 3	**Solve Any One of the following.**		**1 X 8**
(A)	Explain various types of solar radiations? Explain working of flat plate collectors	CO3	
(B)	Explain briefly the construction of working of horizontal and vertical axis wind turbine with neat sketches. Discuss advantage and disadvantage of it.	CO4	

*** End ***