Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

Course: Energy Management **Semester: V**

Program: B. Tech – E&CE/FSE/Che-Spz-R&P/APE-Spz-GS/Mechatronics/ME/Civil-Spz-Infra/ADE/PSE/GIE

Course Code: EPEC 3202 **Time 03 hrs.**

Instructions: **Max. Marks: 100**

Section A: Attempt all questions

Section B: Attempt all questions and Attempt any one from question Q9(a) or Q9(b).

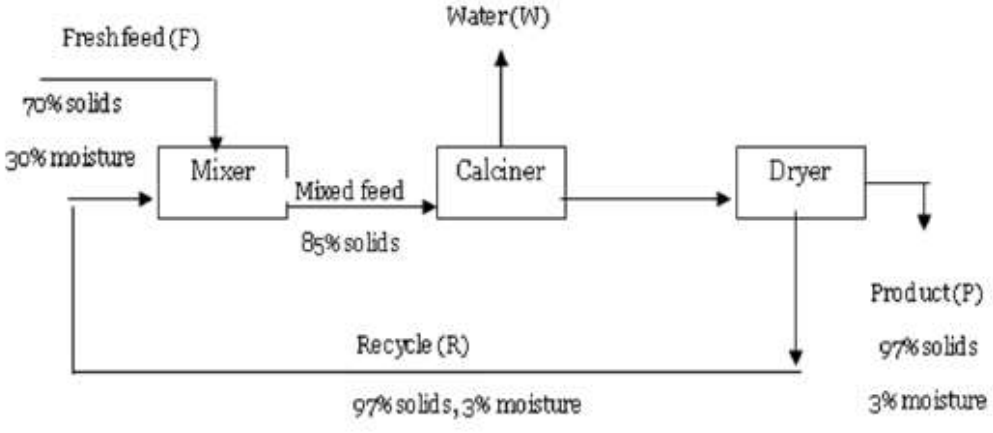
Section C: Attempt all questions and Attempt any one from question Q11(a) or Q11(b).

SECTION A

S. No.		Marks	CO
Q 1	List down the key outcomes of reserve to production ratio with reference to develop and developing countries.	**4**	**CO1**
Q2	Describe Energy Conservation by giving two examples.	**4**	**CO2**
Q3	List any four roles of BEE as defined in Energy Conservation Act 2001.	**4**	**CO3**
Q4	Describe Energy Security and list any four measures which can improve the Energy Security in reference to Indian Economy.	**4**	**CO1**
Q5	Illustrate Sankey diagram with any one relevant example.	**4**	**CO4**
	SECTION B		
Q 6	Describe in detail how the electrical energy pricing is done and discuss the factors which can impact the cost of electricity at domestic and commercial level.	**10**	**CO1**
Q7	Explain any five forms of energy with relevant example.	**10**	**CO2**
Q8	Discuss some key roles and responsibilities of BEE defined as per the Energy Conservation Act 2001.	**10**	**CO3**
Q9(a)	(i) Discuss any one initiative in detail taken globally to combat against the climate change. (ii) List various energy audit instruments and list their utility.	**10**	**CO1, CO4**
	OR		
Q9 (b)	Describe the procedure of conducting detail energy audit and discuss various outcomes of the detail energy audit which can help in reducing the impact of organization activity on climate.	**10**	**CO1, CO4**
	SECTION-C		
Q 10	With the help of neat diagram explain various Earth Cycles in detail and list down the impacts of each cycle disturbance caused due to various human activities.	**20**	**CO1, CO2**

Q11(a)	The energy consumption pattern in a steel rolling mill over 8 month period is provided in the table below; Estimate i) Fixed energy consumption in the Mill. ii) Expected coal consumption for a production of 600 Tons/month.	**20**	**CO4**

Month	Production (Tons)	Coal Consumption (Tons)
1	488	422
2	553	412
3	455	411
4	325	363
5	488	438
6	585	426
7	455	414
8	419	396

	OR		
Q11(b)	In a drying operation, it is necessary to hold the moisture content of feed to a calciner to 15% (w/w) to prevent lumping and sticking. This is accomplishing by mixing the feed having 30% moisture (w/w) with recycle stream of dried material having 3% moisture (w/w). The dryer operation is shown in fig below. What fraction of the dried product must be recycled?  	**20**	**CO4**