

**CONTINUOUS INTERNAL EVALUATION - 3**

ME

03/04/2021

Dept: ME	Sem / Div: D, E & F	Sub: Elements of Mechanical Engineering	S Code: 18ME15
Date: 09/04/2021	Time: 3:00-4:30	Max Marks: 50	Elective: N

Note: Answer any 2 full questions, choosing one full question from each part.

QN	Questions	Marks	RBT	CO's
<b>PART A</b>				
1	a Derive the equation to find the length of the belt for open belt drive system.	10	L3	CO3
	b A motor running at 1750rpm drives a line shaft at 800rpm. If the diameter of the pulley on the motor shaft is 160mm, find that of the pulley on the line shaft. Also find the length of the belt if the center distance between the pulleys is 3m.	8	L3	CO4
	c What are the advantages and disadvantages of liquid fuels over the solid fuels.	7	L2	CO1
<b>OR</b>				
2	a Derive an expression for the ratio of tensions in a belt drive system.	10	L3	CO3
	b With a neat sketch explain the working of a wind mill.	8	L2	CO1
	c Explain with a neat sketch the following types of gears; 1. rack and pinion 2. Worm and worm wheel 3. Helical gear	7	L2	CO4
<b>PART B</b>				
3	a With a neat sketch explain the working of Babcock and	15	L2	CO2

	Wilcox boiler.			
	b List the boiler mountings and accessories. Explain briefly the functions of any 4 boiler mountings.	10	L2	CO2
<b>OR</b>				
4 a	With a neat sketch explain the working of Lancashire boiler.	15	L2	CO
b	Explain briefly about the renewable and non renewable energy resources.	10	L2	CO

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3/04/21

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