CONTINUOUS INTERNAL EVALUATION– 1

Dept:ME	Sem / Div:IV	Sub:KINEMATICS OF MACHINES	S Code:18ME44
Date:25/05/2021	Time: 9.30-11.00AM	Max Marks: 50	Elective:N
Note: Answer any 2 full questions, choosing one full question from each part.			

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QN		Questions	Marks	RBT	COs
		PART A			
1	a	Explain any two inversions of four bar mechanism	15	L2	CO2
	b	Explain basic terms used in Radial CAMs with necessary diagram	10	L2	CO1
		OR			
2	a	A cam is to give the following motion to a knife-edged follower : **1.** Outstroke during 60° of cam rotation ; **2.** Dwell for the next 30° of cam rotation ; **3.** Return stroke during next 60° of cam rotation, and **4.** Dwell for the remaining 210° of cam rotation. The stroke of the follower is 40 mm and the minimum radius of the cam is 50 mm. The follower moves with uniform velocity during both the outstroke and return strokes. Draw the pro- file of the cam when **(a)** the axis of the follower passes through the axis of the cam shaft	20	L3	CO4
	b	Differentiate machine and mechanism.	5	L2	CO1 & CO2
		PART B			
3	a	A cam is to be designed for a knife edge follower with the following data : **1.** Cam lift = 40 mm during 90° of cam rotation with simple harmonic motion. **2.** Dwell for the next 30°. **3.** During the next 60° of cam rotation, the follower returns to its original position with simple harmonic motion. **4.** Dwell during the remaining 180°. Draw the profile of the cam when the line of stroke of the follower passes through the axis of the cam shaft	20	L3	CO4
	b	Write a short note on Links and Kinematic Pairs	5	L4	CO1 & CO2
		OR			
4	a	With a neat sketch explain 1. Ratchet & Pawl Mechanism 2. Geneva Mechanism	15	L2	CO1 & CO2
	b	Write a short note on Followers	10	L2	CO4

Prepared by: Prof. Sudarshan M L HOD