



RV Educational Institutions
RV College of Engineering

Autonomous
Institution Affiliated
to Visvesvaraya
Technological
University, Belagavi

Approved by AICTE
New Delhi, Accredited
By NAAC, Bengaluru
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DEPARTMENT OF MECHANICAL ENGINEERING

Date	11 th July 2023	Maximum Marks	50
Course Code	22ES24E	Duration	90 Min
Semester	II	CIE-I	
FUNDAMENTALS OF MECHANICAL ENGINEERING			

Answer all the Questions.

Sl. No.	Questions	M	BT	CO
1.	Explain with schematic diagram working principle of IC engine in which burning of fuel takes place at constant pressure.	10	L2	3
2.	With a neat sketch explain Series-Parallel Hybrid electric vehicle.	10	L2	3
3	Explain with Sketches: a) Helical gears b) Elliptical gears c) Worm gears d) Rack and Pinion gears	10	L3	3
4a	Explain the concept of regenerative braking systems used in HEV	5	L1	3
4b	Compare between constant Pressure and constant Volume cycle IC engines.	5	L1	3
5	With an example, bring out the velocity ratio for simple and compound gear trains.	10	L3	3

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

Marks	Particulars	CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
Distribution	Max Marks	00	00	50	00	20	10	20	00	00	00