RV Educational Institutions
RV College of Engineering

Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavi

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RVCE22BCD014

USN

DEPARTMENT OF MECHANICAL ENGINEERING

Date	19th Jan 2023	Maximum Marks	10+50
Course Code	22ES14E	Duration	20+90 Min
Semester	I	CIE-I	
FUNDAMENTALS OF MECHANICAL ENGINEERING			

Answer all the Questions

PART A (QUIZ)

Sl. No.	Questions	M	BT	CO
1	Define the following terms: Stoke. Compression ratio.	2	L1	3
2	[redacted] & [redacted] gears are used to transmit the motion when two shafts are parallel to each other.	2	L1	3
3	Piston rings are provided to maintain [redacted]	1	L1	3
4	[redacted] part of an engine converts rectilinear motion of piston to rotary motion of crankshaft	1	L1	3
5	Stroke of the piston will be equal to [redacted] the radius of the crank.	1	L1	3
6	Energy required to perform suction and compression strokes only during the first cycle at the time of starting is supplied by [redacted]	1	L1	3
7	In hybrid electric vehicles [redacted] converts AC or DC electrical energy into AC energy suitable for the operation of the electric motor.	1	L1	3
8	In Micro Hybrid Electric vehicles, electric Motor supplies power of [redacted]	1	L1	3

PART B (TEST)

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	10	L3	3
4a	Classify in detail the different type of IC Engine.	5	L1	3
4b	Compare between constant Pressure and constant Volume cycle IC engines.	5	L1	3
5	With a neat sketch derive Velocity ratio and Train value for Simple and Compound Gear train.	10	L3	3

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

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