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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Sixth Semester, B.E. - Automobile Engineering

Semester End Examination; July / Aug. - 2022

Two and Three Wheeled Vehicles

Time: 3 hrs *Max. Marks: 100*

Course Outcomes

The Students will be able to:

CO1: Know different types of a two wheeler and its engine fuel system, lubricating system, cooling system.

CO2: Know ignition and electric system, exhaust system and cranking mechanism of a two wheeler.

CO3: Know Motor cycle transmission and steering system.

CO4: Know Front forks, fork type and spring type suspension systems and braking system used in two wheelers.

CO5: To Understand the frame and body of two wheeler, basics on three wheelers.

***Note**: I) **PART - A** is compulsory. **Two** marks for each question.*

*II) **PART - B**: Answer any **Two** sub questions (from a, b, c) for Maximum of **18 marks** from each unit.*

Q. No.	Questions	Marks	BLs	COs	POs
	I : PART - A	**10**			
I a.	Differentiate between a Moped and Motor cycle.	2	L1	CO1	PO1
b.	What is the function of muffler?	2	L1	CO2	PO1
c.	What do you mean by crush drive?	2	L1	CO3	PO1
d.	How do you designate a Motor cycle tyre?	2	L1	CO4	PO1
e.	What are the advantages of three wheeled vehicles?	2	L1	CO5	PO1
	II : PART - B	**90**			
	UNIT - I	**18**			
1 a.	Discuss in detail development of two wheeler industry in India.	9	L2	CO1	PO1
b.	Draw a layout of fuel supply system in two wheeler and explain function of each component.	9	L2	CO1	PO2
c.	Explain the working of a rotary valve for a two wheeler.	9	L2	CO1	PO2
	UNIT - II	**18**			
2 a.	Explain construction and working of magnetic ignition system with sketch.	9	L2	CO2	PO2
b.	Draw a layout of exhaust system and explain function of each part.	9	L2	CO2	PO2
c.	Briefly explain types of cranking mechanism for a motor cycle.	9	L1	CO2	PO2
	UNIT - III	**18**			
3 a.	How the power transmission takes place in three wheeled vehicle? Explain with sketch.	9	L1	CO3	PO2
b.	What is the necessity of clutch for a Motar cycle? Sketch and describe a multiplate clutch of motor cycle.	9	L2	CO3	PO2
c.	Describe hand operated and foot operated gear shifting in two wheelers.	9	L2	CO3	PO2

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	UNIT - IV	**18**			
4 a.	Sketch a suspension system of a two wheeler and explain parts.	9	L2	CO4	PO2
b.	What are the types of braking systems used for Motor cycles? Explain with sketch a drum brake.	9	L2	CO4	PO2
c.	Discuss in detail the construction of composite wheel and spoked wheel. List merits and demerits of each.	9	L2	CO4	PO2
	UNIT - V	**18**			
5 a.	Sketch and explain following frames: i) Tri angulated ii) Backbone iii) Duplex cradle	9	L2	CO5	PO2
b.	Draw a layout of passenger's rickshaw and explain main features of Bajaj Rickshaw.	9	L2	CO5	PO2
c.	Name any three Indian three wheeled vehicles and write technical specification for each.	9	L1	CO5	PO1

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