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Enrollment No.....



Faculty of Engineering

End Sem Examination May-2023

AU3EL11 Two & Three wheeler Technology

Programme: B.Tech.

Branch/Specialisation: AU

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. These are considered as two wheelers- **1**
(a) Mopeds (b) Autopeds
(c) Scooters (d) All of these
- ii. Most of the cars on road has- **1**
(a) Single plate clutch (b) Multiplate clutch
(c) Both (a) and (b) (d) None of these
- iii. Automatic scooters have- **1**
(a) Gearbox (b) CVT
(c) Both (a) and (b) (d) None of these
- iv. Bikes has a- **1**
(a) Multiplate clutch (b) Centrifugal clutch
(c) Single plate clutch (d) None of these
- v. Steering is used for- **1**
(a) Cornering (b) Directional stability
(c) Both (a) and (b) (d) None of these
- vi. Neutral indicator shows- **1**
(a) No gear is engaged (b) Engine idling
(c) Both (a) and (b) (d) None of these
- vii. Water temperature warning lights, lighting a green signal when temperature is- **1**
(a) Below 45°C (b) Above 45°C but below 120°C
(c) Above 120°C (d) None of these
- viii. A 100CC bike has a- **1**
(a) Battery ignition system (b) Magneto ignition system
(c) Electronic ignition system (d) None of these

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- ix. Which of the following is true of a 12-volt automobile battery? **1**
(a) It has six cells connected in series
(b) It has three cells connected in series
(c) It has six cells connected in parallel
(d) It has three cells connected in parallel
- x. To limit the flow of current in fluorescent lighting, uses- **1**
(a) A ballast (b) A resistance (c) A load (d) None of these
- Q.2 i. What is the basic purpose of two wheelers? **2**
ii. Write the classification of two wheelers. **3**
iii. With neat sketch explain the layout of a moped. **5**
OR iv. Give classification of three wheelers. Draw the layout of auto-rickshaw. **5**
- Q.3 i. Which gearbox is mostly used in motorcycles? **2**
ii. With neat sketch explain working of CVT. Also, state advantages of CVT. **8**
OR iii. How assist slipper clutch helps to partial disengage the clutch? Explain with neat diagrams. **8**
- Q.4 i. Define caster, rack angle and wheel base. **3**
ii. Explain construction and working of single link and double link type front suspension with neat sketch. **7**
OR iii. Explain construction of steering column with sketch. **7**
- Q.5 i. Which are the requirements of a good ignition system? (Any four) **4**
ii. Explain handlebar controls with necessary diagrams. **6**
OR iii. Why side stand/ignition interlock is important? How it works? Explain it. **6**
- Q.6 Attempt any two:
i. Draw neat diagram showing various components of a battery. Also explain function of each component. **5**
ii. How regulator works? Explain two types of regulator used for two-wheeler charging system. **5**
iii. How does electric horn work? Explain with neat sketch. **5**

P.T.O.

Marking Scheme

AU3EL11 (T) Two & Three wheeler Technology

Q.1	i.	These are considered as two wheelers	1
	d)	All of these	
	ii.	Most of the cars on road has	1
	a)	Single plate clutch	
	iii.	Automatic scooters have	1
	b)	CVT	
	iv.	Bikes has a	1
	a)	Multiplate clutch	
	v.	Steering is used for	1
	c)	Both	
Q.2	vi.	Neutral indicator shows	1
	a)	No gear is engaged	
	vii.	Water temperature warning lights, lighting a green signal when temperature is:	1
	a)	Below 45°C	
	viii.	A 100CC bike has a	1
Q.3	a)	Battery ignition system	
	ix.	Which of the following is true of a 12-volt automobile battery?	1
	a)	It has six cells connected in series	
	x.	To limit the flow of current in fluorescent lighting, uses:	1
Q.4	a)	A ballast	
	i.	What is the basic purpose of two wheelers?	2
	ii.	Write the classification of two wheelers.	3
	iii.	With neat sketch explain the layout of a moped.	
OR		Layout	3
		Explain	2
	iv.	Classification of three wheelers.	3
		Draw the layout of auto-rickshaw.	2
Q.5	i.	Which gearbox is mostly used in motorcycles?	2
	ii.	Neat sketch	2

		Explain working of CVT.	4
		Also state advantages of CVT.	2
OR	iii.	How assist slipper clutch helps to partial disengage the clutch?	5
		Explain with neat diagrams.	3
Q.4	i.	Define caster	1
		rack angle	1
		wheel base.	1
	ii.	single link suspension	
		construction	1
		working	1.5
		neat sketch	1
		double link type front suspension	
		construction	1
		working	1.5
		neat sketch	1
OR	iii.	Explain construction of steering column	5
		sketch.	2
Q.5	i.	Which are the requirements of a good ignition system? (Any four)	4
	ii.	Explain handlebar controls	4
		diagrams.	2
OR	iii.	Why side stand/ignition interlock is important?	3
		How its work?	3
Q.6		Attempt any two:	
	i.	Draw neat diagram showing various components of a battery. Also	2
		explain function of each component.	3
	ii.	How regulator works?	1
		Explain two types of regulator used for two-wheeler charging	4
		system.	
	iii.	How does electric horn work?	3
		Explain with neat sketch.	2
