



B.E DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2018)

Seventh Semester

AUTOMOBILE ENGINEERING

U18AUI7201: Vehicle Maintenance and Reconditioning

COURSE OUTCOMES

- CO1: Familiarize the need and procedures of service records used for vehicle maintenance.
 CO2: Examine and troubleshoot engine malfunctions.
 CO3: Identify the conditions of battery and auxiliary electrical systems.
 CO4: Describe the repair procedure for vehicle chassis and body component.
 CO5: Assess and rectify the wheel and tire parameters.
 CO6: Inspect and troubleshoot the HVAC system.

Time: Three Hours

Maximum Marks: 100

Answer all the Questions: -

PART A (10 x 2 = 20 Marks)

(Answer not more than 40 words)

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|---|-----|-------------------|
| 1. Interpret about six stage diagnostics process in vehicle maintenance. | CO1 | [K ₂] |
| 2. Recall about Root cause analysis. | CO1 | [K ₂] |
| 3. How to examine the quality of digital multimeter. | CO2 | [K ₂] |
| 4. Predict the reasons for engine misfiring. | CO2 | [K ₂] |
| 5. Indicate the safety procedure which must be followed while handling lead acid battery. | CO3 | [K ₃] |
| 6. List down types of tests used for alternator testing. | CO3 | [K ₂] |
| 7. Discuss about the strategies used for testing starter motor circuit. | CO3 | [K ₂] |
| 8. Comment the role of burglar alarm. | CO4 | [K ₂] |
| 9. Discuss about the control of the wipers. | CO6 | [K ₂] |
| 10. Recommend the maintenance procedure if center locking system fails. | CO5 | [K ₃] |

Answer any FIVE Questions: -

PART B (5 x 16 = 80 Marks)

(Answer not more than 400 words)

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|--|---|-----|-------------------|
| 11. a) Explain about the various details in a maintenance report. | 8 | CO1 | [K ₂] |
| b) Perform a case study for root cause analysis followed in vehicle maintenance. | 8 | CO2 | [K ₃] |
| 12. a) With the help of a neat sketch discuss about Automotive service station. | 8 | CO3 | [K ₂] |
| b) Infer the diagnostics procedure used for engine malfunction. | 8 | CO4 | [K ₂] |

13.	a)	Discuss about the various tools and instruments used in the maintenance shop.	8	CO4	[K ₂]
	b)	List out the types of clutch fault occurs in the vehicle.	8	CO5	[K ₂]
14.	a)	Brief about the batteries testing procedure followed in service station.	8	CO3	[K ₂]
	b)	Explain about the role of alternator in the vehicle and discuss about various alternator testing procedures.	8	CO4	[K ₂]
15.	a)	List out various faults associated with ignition system.	8	CO5	[K ₂]
	b)	Discuss about following sensors used in automobile.	8	CO6	[K ₂]
		I. Oxygen sensor			
		II. TPS			
		III. Air Flow sensor			
		IV. Ideal speed control			
16.	a)	Explain about tire rotation procedure and its benefits.	16	CO5	[K ₂]
