

II B. Tech II Semester Supplementary Examinations, February - 2022
AUTOMOTIVE ELECTRICAL AND ELECTRONICS
(Automobile Engineering)

Time: 3 hours

Max. Marks: 75

Answer any **FIVE** Questions each Question from each unit
All Questions carry **Equal** Marks
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- 1 a) Explain the care and maintenance of Automotive batteries.  
b) What is earth return system? Describe the Insulated and Earth Return System.
- Or
- 2 a) Describe the Characteristics of battery rating and capacity.  
b) Discuss the Heavy duty Discharge Tester.
- 3 a) Explain the construction and working principle of manually operated starter drive with over running clutch.  
b) Discuss the conditions and behaviour of Starter during Starting.
- Or
- 4 a) Describe the series motor with neat diagram.  
b) Discuss the Care and Maintenances of Starter Motor.
- 5 a) Describe the construction and working of alternator charging system and its control.  
b) Discuss the working of cut-out relay in charging system.
- Or
- 6 a) Explain the armature reaction and Third brush regulation in generator.  
b) Discuss the compensated voltage regulator.
- 7 a) Discuss the Current Trends in Automotive Electronic Engine Management System.  
b) What is electromagnetic interference suppression in automobile? Explain.
- Or
- 8 a) Explain the Automotive electronic dash board instruments.  
b) Discuss the Security and Warning System of automobiles.
- 9 a) Discuss the crankshaft position sensor.  
b) Discuss the Solenoid Actuator with suitable sketch.
- Or
- 10 a) Discuss the construction and working of Stepper motor.  
b) What is mass air flow used for? Explain the Air Mass Flow for Engine application.

