

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SIXTH SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018

Course Code: AU 302

Course Name: AUTOMOTIVE ELECTRICAL AND ELECTRONICS (AU)

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any three full questions, each carries 10 marks.

Marks

- | | | |
|---|--|------|
| 1 | a) What is Rectification in a Charging system? | (3) |
| | b) Explain about half-wave and full wave rectification with neat sketch. | (7) |
| 2 | a) What are the effects of temperature on electrolyte of an automobile battery? | (4) |
| | b) Explain about Voltage and Current Regulation. | (6) |
| 3 | Explain the constructional details of Lead Acid battery with necessary sketches. | (10) |
| 4 | Explain with a neat sketch the construction and operation of any two starting drives used in automobile starting system. | (10) |

PART B

Answer any three full questions, each carries 10 marks.

- | | | |
|---|---|------|
| 5 | a) Explain about the spark plug and its constructional details | (5) |
| | b) With a neat sketch Explain the working of an electric horn. | (5) |
| 6 | Describe a high tension magneto ignition system with figure and state its advantages and disadvantages. | (10) |
| 7 | Draw a simplified wiring circuit for a typical passenger car lighting system and discuss the same | (10) |
| 8 | Explain the working of Electronically assisted ignition system with a neat diagram. | (10) |

PART C

Answer any four full questions, each carries 10 marks.

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|---|--|-----|
| 9 | a) Explain about the application of position and lambda sensors used in automobile with neat sketches. | (6) |
| | b) Explain about the function of wheel speed sensors with neat sketch. | (4) |

- 10 With the help of a diagram explain the working of MPFI and TBI system. (10)
- 11 Explain the working of K- Jetronic fuel injection system with a neat layout. (10)
- 12 Explain the over view of CRDI system with necessary figures. (10)
- 13 Explain the principle of engine coolant temperature sensor with neat figure. (10)
- 14 Explain the working principle of Variable reluctance sensor with an example. (10)

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