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Total Number of Pages : 01

B.Tech  
PAU6J001

6<sup>th</sup> Semester Regular / Back Examination 2018-19

**AUTOMOTIVE ELECTRICAL & ELECTRONICS**

**BRANCH : AUTO**

**Max Marks : 100**

**Time : 3 Hours**

**Q.CODE : F610**

**Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.**

**The figures in the right hand margin indicate marks.**

**Part- I**

**Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)**

- a) How variable spark timing is achieved?
- b) What is the role of Alternators?
- c) How Horns produce?
- d) What are the functions of Battery in automobile?
- e) What is a detonation sensor?
- f) How fuel indicator work in an automobile?
- g) How Oxygen sensor works?
- h) Why electronic regulators are used?
- i) Write some examples of use of actuators in automobile.
- j) What is the use of voice warning system?

**Part- II**

**Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**

- a) Differentiate between Insulated and earth return system.
- b) Explain with neat sketch automotive charging system.
- c) Explain the construction and working of D.C. Generators.
- d) Explain the testing and maintenance procedures for batteries.
- e) Explain wiring and harness requirements in automobile.
- f) Explain about different sensors used in automobile. .
- g) Explain how seat belt Warning system works in automobile.
- h) Explain how remote locking system works in automobile.
- i) Justify use of ECU in automobiles.
- j) Explain working of starting system in automobile.
- k) Explain working of automotive lighting system
- l) Explain working of reverse parking system.

**Part-III**

**Only Long Answer Type Questions (Answer Any Two out of Four)**

- Q3** Discuss with circuit diagram the working of automobile electrical system. **(16)**
- Q4** Describe constructional details of wet cell Batteries and principle of charging and discharging. **(16)**
- Q5** Discuss about the use of sensors, microprocessor and microcomputer controlled devices in automobiles. **(16)**
- Q6** Discuss with circuit diagram working of electrical and electronics system of a CRDI engine car. **(16)**