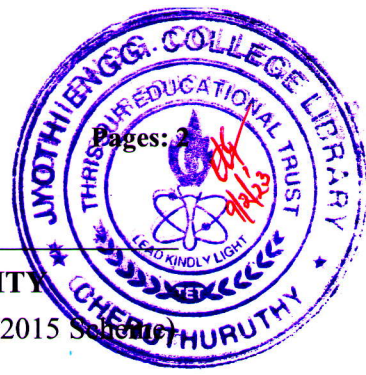


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Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Seventh Semester B.Tech Degree (S, FE) Examination January 2023 (2015 Scheme)

Course Code: MR407

Course Name: Autotronics

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 5 marks.

Marks

- 1 What is the function of steering system in a vehicle? Briefly explain any one steering system. (5)
- 2 Discuss the working of throttle position sensor. (5)
- 3 Explain the working of high pressure diesel fuel injection with a simple figure. (5)
- 4 What do you mean by traction control system of a vehicle? Explain. (5)
- 5 Explain the concept of hybrid vehicle. (5)
- 6 List the components of an electric vehicle and its purpose. (5)
- 7 What is TPMS? Explain with figure. (5)
- 8 Explain briefly about the vehicle intelligence in modern vehicles. (5)

PART B

Answer any three full questions, each carries 10 marks.

- 9 With the help of a neat figure explain various components of an IC engine. (10)
- 10 Explain the following. (10)
(a) Manifold pressure sensor (b) Vehicle speed sensor (c) Crankshaft position sensor (d) Exhaust gas oxygen sensor.
- 11 With the help of a neat figure explain MPFI system. (10)
- 12 What do you mean by fuel system of an automobile? Explain its components with figure. (10)
- 13 With the help of a neat figure explain the working of an ABS. (10)

PART C

Answer any two full questions, each carries 15 marks.

- 14 Compare electric vehicles and hybrid vehicles. Also furnish the differences between series and parallel hybrid vehicles with figure. (15)

- 15 Explain the working of electric vehicles fuel cells. What are its merits and demerits? (15)
- 16 Sketch the architecture for dynamic vision in vehicle and explain its working. (15)
- 17 Discuss the various intelligent systems in modern automobiles. Explain any two types with suitable sketches. (15)
