

Code No: 126VH**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year II Semester Examinations, December - 2018****AUTOMOBILE ENGINEERING****(Common to ME, MCT)****Time: 3 hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A**(25 Marks)**

- 1.a) What are the functions of Carburettor? [2]
- b) What is a TDI system? [3]
- c) Briefly explain about a radiator. [2]
- d) What is firing order and write the possible firing order in 4-cylinder engine. [3]
- e) What do you mean by fluid flywheel? [2]
- f) What is the function of overdrive torque converter? [3]
- g) Why camber is to be provided? Explain. [2]
- h) What is the function of King pin? [3]
- i) What are the advantages of using LPG and CNG in automobile engines? [2]
- j) What are the advantages of using common rail diesel injection? [3]

PART - B**(50 Marks)**

- 2.a) What are the requirements of an ideal carburettor?
 - b) How the testing of fuel pumps is carried out? [5+5]
- OR**
- 3.a) Briefly explain the fuel supply system of petrol engine.
 - b) What are the requirements of a fuel-injection system of a CI engine? [5+5]
- 4.a) What are the factors affecting the establishment of spark?
 - b) Compare battery-ignition system with magneto-ignition system. [5+5]
- OR**
- 5.a) Write a short note on dwell angle.
 - b) Briefly explain the working of the magneto-ignition system with the help of a circuit diagram. [4+6]
- 6.a) How clutch can be operated electromagnetically?
 - b) Explain working of a constant mesh gear box with a neat sketch. [5+5]
- OR**
- 7.a) What are the advantages of using rubber as a means of suspension?
 - b) Sketch and explain the construction and working of a Wishbone type suspension. [5+5]

- 8.a) Write a short note on master cylinder.
b) Explain mechanical brake system with neat sketch. [4+6]
- OR**
- 9.a) Write a short note on Davis steering mechanism.
b) What are the requirements of brake fluid? [5+5]
- 10.a) Briefly explain about multi-point fuel injection for SI engines.
b) Explain the working of a catalytic converter. [5+5]
- OR**
- 11.a) What are the national standards of pollution?
b) What are the main pollutants from the engine exhaust and mention their effects on living organisms? [5+5]

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