



**ELECTIVE - I**  
**Automobile Engineering (New)**  
**(1255)**

**P. Pages : 2**

**Time : Three Hours**

**Max. Marks : 100**

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Figures to the right indicates full marks.
5. All questions are compulsory, & solve **any two** bit out of A,B,C in each question.

**UNIT – I**

1. a) Explain briefly the factors which control the stop of an automobile. **10**
- b) Describe briefly the following types of frames : **10**
  - i) Conventional frame
  - ii) Semi – integral frame
  - iii) Integral or unit frame
- c) Explain briefly : **10**
  - i) Static brake tester.
  - ii) Hand brake.

**UNIT – II**

2. a) Describe briefly the troubleshooting of a gear box. **10**
- b) What is a fluid flywheel? How does it work? **10**
- c) Describe briefly troubleshooting of propeller shaft. **10**

**UNIT – III**

3. a) What do you mean by the term "Independent suspension"; explain briefly. **10**
- b) Define & explain the following : **10**
- i) Camber angle
  - ii) Caster angle
  - iii) King Pin Inclination
  - iv) Toe – in
- c) Describe briefly "Electronic Power Steering". **10**

**UNIT – IV**

4. a) Enumerate various types of "automobile wheels". **10**
- b) Describe briefly troubleshooting of wheel and tyres. **10**
- c) Explain briefly the following types of tyres : **10**
- i) Conventional tube tyre.
  - ii) Tubeless tyre.

**UNIT – V**

5. a) Describe how the centrifugal advance system operates. **10**
- b) Explain briefly a cut – out relay as used in battery generator circuit. **10**
- c) Describe with the help of neat sketch a "Battery Ignition System". **10**

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