

# Sample Question Paper

## Scheme – I

**ProgrammeName : Mechanical Engineering**

**Programme Code : ME**

**Semester : Sixth**

**Course Title : Automobile Engineering**

**Marks : 70**

**22656**

**Time: 3 Hrs.**

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### Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Preferably, write the answers in sequential order.

#### **Q.1) Attempt any FIVE of the following.**

**(10 Marks)**

- a) Name any four major components of automobile.
- b) State working principle of clutch.
- c) Define Toe In and Toe out
- d) Enlist any four requirements of suspension system in automobile.
- e) List the main components of battery.
- f) Define HGV and LGV.
- g) State function of universal joint.

#### **Q.2) Attempt any THREE of the following.**

**(12 Marks)**

- a) State the various types of automobile bodies.
- b) Explain the working of coil spring type single plate clutch with neat sketch.
- c) Describe working of Drum Brake with neat sketch.
- d) State advantages of independent suspension system.

#### **Q.3) Attempt any THREE of the following.**

**(12 Marks)**

- a) Draw a neat sketch of front engine front wheel type vehicle layout and label it.
- b) Explain the working of recirculating ball type gearbox with neat sketch.
- c) Explain working of Telescopic shock absorber with neat sketch.
- d) Explain working of alternator with neat sketch.

#### **Q.4) Attempt any Three of the following.**

**(12 Marks)**

- a) State four advantages and disadvantages of LPG as a fuel.
- b) Explain construction and working of Lead acid Battery with neat sketch.
- c) Describe collapsible steering column with neat sketch.

- d) State importance of wire harness and cable colour coding used in automobile lighting system .
- e) Draw a neat sketch of Traffic sign – STOP and NO PARKING.

**Q.5) Attempt any TWO of the following.**

**(12 Marks)**

- a) Explain the construction and working of synchromesh gear box with neat sketch.
- b) Draw a neat layout of ABS and explain its working.
- c) State any six probable causes of tyre wear and give its remedies.

**Q.6) Attempt any TWO of the following.**

**(12 Marks)**

- a) Draw neat sketch of Overdrive and explain its construction and working.
- b) Compare Battery and Magneto Ignition system ( six points) .
- c) Draw labelled layout of a modern service station use in automobile workshop.

**Sample Test Paper I**

**Scheme – I**

**Programme Name : Mechanical Engineering**

**Programme Code : ME**

**Semester : Sixth**

**Course : Automobile Engineering**

**Marks : 20**

**22656**

**Time: 1 hour**

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**Instructions:** All questions are compulsory

1. Illustrate your answers with neat sketches wherever necessary
2. Figures to the right indicate full marks
3. Preferably, write the answers in sequential order

**Q.1 Attempt any FOUR.**

**(8 Marks)**

- a. Define automobile .
- b. State function of clutch .
- c. Define term steering ratio.
- d. List types of propeller shaft.
- e. Name two types of Steering gear boxes used in automobile.
- f. Define Drag and Lift .

**Q.2 Attempt any Three**

**(12 Marks)**

- a. List the advantages and disadvantages of Four wheel drive.
- b. Explain with neat sketch working of single plate diaphragm clutch.
- c. State any four requirement of braking system.
- d. Describe working of fully floating rear axle .

**Sample Test Paper II**

**Scheme – I**

**Programme Name** : Mechanical Engineering  
**Programme Code** : ME  
**Semester** : Sixth  
**Course** : Automobile Engineering  
**Marks** : 20

**22656**

Time: 1 hour

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**Instructions:** All questions are compulsory

1. Illustrate your answers with neat sketches wherever necessary
2. Figures to the right indicate full marks
3. Preferably, write the answers in sequential order

**Q.1 Attempt any FOUR.**

**(8 Marks)**

- a. State function of rigid suspension system.
- b. List four basic electrical – electronics components used in automobiles.
- c. Define Transport term: 1) Driver 2) Passenger
- d. State different types of Rims.
- e. Define rating of battery and battery capacity.
- f. List any four records to be kept in service station.

**Q.2 Attempt any Three.**

**(12Marks)**

- a. Explain with neat sketch the working of wishbone type suspension.
- b. Explain working of Bendix drive used in starting system with neat sketch .
- c. Describe duties and responsibilities of RTO.
- d. Draw neat sketch of Fuel gauge .