

# AA-126

April-2019

**B.Sc. (Fire& Safety), Sem.-IV**

**Automobile Engineering**

**Time : 2:30 Hours]**

**[Max. Marks : 70**

1. (A) Write the following :
- (i) Explain main parts of I.C. engine with figure. 7
  - (ii) Explain working of diesel engine. 7
- OR**
- (i) Write down the advantages and disadvantages of two stroke engine over four stroke engine.
  - (ii) Write down the comparison between petrol engine and diesel engine.
- (B) Short questions : (any **four** out of **six**) 4
- (i) List out the components which makes a complete automobile.
  - (ii) What is prime mover ?
  - (iii) Write down the sequence of operation of I.C. engine.
  - (iv) Give any two differences between petrol & diesel engine.
  - (v) Classify I.C. engine according to the types of fuel used.
  - (vi) Petrol engine is also known as \_\_\_\_\_.
    - (1) Spark ignition engine
    - (2) Compression ignition engine
2. (A) Write the following :
- (i) Explain wheel with their types & write down the requirements of good wheel. 7
  - (ii) Explain chassis, axle & differential used in automobile. 7
- OR**
- (i) Explain different types of fuel supply system.
  - (ii) Why ignition system of petrol engine is required ? List out different types of ignition system.
- (B) Short questions : (any **four** out of **six**) 4
- (i) How brakes plays an important role in automobile ?
  - (ii) Write down different types of Tyre.
  - (iii) Define supercharging.
  - (iv) List out the main components of carburetor.
  - (v) What is the full name of MPFI ?
  - (vi) What is the function of Hand Brake ?

3. (A) Write the following :
- (i) Explain Airless or Solid fuel injection system of diesel engine. 7
  - (ii) How Lubrication system plays an important role in automobile ? What are the purposes served by the lubrication ? 7

**OR**

- (i) Explain Suspension system of automobile with its objectives.
  - (ii) Write down the function and types of steering system. What are the requirements of good steering system ?
- (B) Short questions : (any **three** out of **five**) 3
- (i) Write down different types of cooling system in automobile.
  - (ii) What is the function of steering system ?
  - (iii) Give the main parts of suspension system.
  - (iv) Write down the function of suspension system.
  - (v) List out types of fuel injection of diesel engine.

4. (A) Write the following :
- (i) Explain Anti-lock braking system. 7
  - (ii) Explain Ground clearance, Angle of approach and Angle of departure. 7

**OR**

- (i) Explain PTO system with their types.
  - (ii) Explain traction control system.
- (B) Short questions : (any **three** out of **five**) 3
- (i) What is full name of PTO system ?
  - (ii) How seat belts plays an important role in automobile ?
  - (iii) What is the difference between ABS system and Traction control system ?
  - (iv) List out the name of superchargers used in the automobile.
  - (v) Power take-off from the drive shaft to the gear box is also known as
    - (1) TOP take-off
    - (2) SANDWICH take-off
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