## B.Sc. Semester-4 Examination (Fire & Safety)

CC - Automobile Engineering April-2023

[Max. Marks: 70

Time: 2-30 Hours)

| Q-1        |             | Define Automobile. Write down classification of Prime mover.  |        |
|------------|-------------|---|--------|
| Q-1        |             | Explain main parts of an I.C. engine with figure.   | 7      |
|            |             | OR  | 7      |
| Q-1        | Д           | Explain working of petrol engine.   | ~      |
| Q-1        |             | What are advantages & disadvantages of two stroke cycle engine over four stroke cycle engine?   | 7<br>7 |
| Q-2<br>Q-2 | A<br>B      | List out the different parts on Automobile & Explain Brake, Brake booster and hand brake. Explain Tyre with their types & write down their function.  | 7<br>7 |
|            | _           | OR  |        |
| Q-2<br>Q-2 | A<br>B      | Explain Various types of Fuel supply system used on petrol and diesel engine. What is Ignition system of petrol engine? Explain Coil-ignition system.   | 7<br>7 |
| Q-3<br>Q-3 | A<br>B      | Explain Supercharging with their objects & Write down different types of superchargers used in this syster Explain Air-less or Solid fuel injection method with their types.  OR                        | 7      |
| Q-3<br>Q-3 | A<br>B      | Explain Steering system & Write down the requirements of good steering system.  What are the main parts of an engine which requires lubrication? & Write down the advantages served by the lubrication. | 7<br>7 |
| Q-4        |             | Define PTO & Explain their types.   | 7      |
| Q-4        | В           | Explain Angle of Approach, Angle of Departure & Ground clearance.   | 7      |
| Q-4        | Δ           | OR List out the safety features found in new car. Explain ABS system.   |        |
| Q-4        |             | Explain Cooling system of an automobile.  | 7      |
| •          |             |   | 7      |
| Q-5        |             | Answer the following question.  | 14     |
|            | 1.          | Classify the I.C. engine according to the method of ignition of fuel.   |        |
|            | 2.          | What is the function of flywheel?   |        |
|            | 3.          | Give the name of main parts of an engine which require lubrication.   |        |
|            | 4.          | Write down the difference between the common rail and individual fuel supply system.  |        |
|            | 5.          | Which coolant is used for Liquid-cooling system in automobile?  |        |
|            |             | How many holes are introduced in MPFI system?   |        |
|            | /.          | The Function of carburetor is mixes the & in correct proportions, for proper combustion.  |        |
|            |             | List the types of wheel.  |        |
|            | 9.<br>40    | How Brake booster plays an important role in automobile braking system?   |        |
|            |             | Write a function of Differential.   |        |
|            |             | Why the coil-ignition system is required in automobile?  Define Ground clearance.   |        |
|            |             |   |        |
| ,          | <b>.</b> Э. | Diesel engine has a compression ratio approximately from to  i. 5 to 10   |        |
|            |             | 11 10 10 13   |        |
|            | 14          |   |        |
| •          | <b>-</b> ₩, | Theoretically, a two stroke cycle engine should develop the power developed by the four stroke cycle engine.  |        |

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