2018

CBCS

1st Semester

AUTOMOBILE MAINTENANCE

PAPER—C2T

(Vocational)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group—A

1. Answer any *five* questions :   5×2

   (a) Write the properties of lubricants.

   (b) Why is cooling system needed for an IC engine ?

(c) Name the materials used for

    (i) cylinder head and

    (ii) crank case.

(d) What is a gasket ?

(e) What is the function of a piston ?

(f) Sketch any fuel injector pump.

(g) What is CRDI system ?

(h) Mention some major components of a cooling system.

Group—B

2. Answer any *four* questions :   4×5

(a) Mention the names for the automobiles where

    (i) two cylinder engine and

    (ii) 4-cylinder engine are used respectively.

                    2½+2½

(b) What do you understand by calibration of fuel injection pump ? How is it done ?   3+2

(c) Write in brief the different tests for injection nozzle ?

                    5

(d) Sketch the diagram of fuel circulation in the injection system. 5

(e) What are the common fuel losses in SI engines ? 5

(f) Compare MPFI with a carburattor. 5

Group—C

3. Answer any *one* question : 1×10

(a) Describe the defects in a simple carburettor and their remedies. In a carburettor the petrol used has density 750 kg/m^3 and the jet is located 6 mm above the level of petrol in the float chamber. The coefficient of discharge/velocity for air is 0.85 and density of air is 1.3 kg/m^3. Calculate the critical air velocity.

5+5

(b) Describe the function of a piston. What are the common troubles that are likely to occur in different types of fuel pumps ? Write the probable causes for the troubles. 3+2+5