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Time : 2 Hours**AUTOMOBILE ENGINEERING-II****Subject Code**

V	4	3	2	2
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Total No. of Questions : 23**(Printed Pages : 4)****Maximum Marks : 50**

INSTRUCTIONS : (i) There are *four* sections in the question paper (A, B, C, D) consisting of **23** questions.

(ii) In Section 'A' there are eight questions of which question Nos. **1** to **4** are multiple choice questions, Q. Nos. **5** and **6** are to be answered in one word, phrase, number and Q. Nos. **7** and **8** are to be answered in one sentence each.

(iii) Attempt all questions, however, internal choice is given for question number **20** and **23**.

(iv) Figures to the right indicate marks allotted to each question.

(v) Write the number of each question clearly on the answer-book.

Section A

1. One of the circuit of carburettor that helps in maintaining level of fuel is 1

- Choke Circuit
- Float Circuit
- Idling Circuit
- High Speed Circuit

2. To operate mechanical fuel pump the camshaft is provided with 1
 - Belt
 - Gear
 - Eccentric
 - Push Rod

3. In air cooled engines, fins are provided for block and head to 1
 - Cool the engine faster
 - Block the air flow
 - Allow air to swing
 - Increase the surface area of metal in contact with air

4. In pump circulation water cooling system the boiling point of coolant is raised by 1
 - Vacuum valve
 - Radiator
 - Water jackets
 - Pressure cap

5. Name the sensor that monitors mass or volume of air flowing into the intake manifold for adjusting the quantity of fuel. 1

6. What is the thickness of LPG fuel tank made from alloy steel ? 1

7. Why is pressure relief valve provided in pressurized lubrication system ? 1

8. Why sight glass is provided in some air conditioning system ? 1

Section B

9. Write a short note on the working of fuel feed/transfer pump used in diesel fuel supply system. 2
10. Explain in detail the Common Rail System in diesel engine. 2
11. State any *four* functions of fuel injection pump used in diesel engine. 2
12. Explain the port injection method used in petrol injection system. 2
13. Explain the working of air conditioning system of automobile vehicle. 2
14. Draw a neat labelled diagram of individual pump fuel injection system used in diesel engine. 2

Section C

15. Write a short note on the constructional details of Compressed Natural Gas fuel supply system. 3
16. State any *six* objects of lubrication. 3
17. Explain in detail the heating system of air conditioning of an automobile. 3
18. Describe the positive crankcase ventilation used in automobile to control emission. 3
19. Explain the construction and working of charcoal canister used in controlling vapour emission. 3
20. Draw a neat labelled sketch of D-MPFI system and state any two advantages of Petrol injection system. 3

Or

Draw a neat labelled diagram of throttle body injection system and state any *two* disadvantages of MPFI system.

Section D

21. Draw a neat labelled sketch of simple carburettor and state its *four* functions. 4
22. Draw a neat labelled diagram of pump circulation water cooling system and explain its working. 4
23. Draw a neat labelled sketch of Dry Sump Lubrication System and explain its constitutional details. 4

Or

Explain the constructional details of rotor type oil pump with a neat labelled sketch.