Reg. No. : | | | | | | | | | | |

Question Paper Code: 41754

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Fifth Semester

Mechanical Engineering

14UME504 - AUTOMOBILE ENGINEERING

(Regulation 2014)

Duration: One hour Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. The basic automobile structure consists of the suspension system, axles, wheels and

   (a) Steering (b) frame (c) Brakes (d) Lights

2. Compression rings are generally made of

   (a) low carbon steel (b) high carbon steel
   (c) aluminium (d) chromium

3. The fuel injection timing in a distributor type pump is controlled by

   (a) changing plunger stoke (b) changing speed of rotor
   (c) rotating the cam ring (d) changing the number of cams on the ring

4. The most accurate timer for electronic ignition system is the

   (a) diode (b) transistor
   (c) hall effects switch (d) pulse generator

5. By using synchronizing device, the two involved adjacent gears have their speeds

   (a) increased (b) reduced (c) equalized (d) unequalised

6. A two piece propeller shaft requires

(a) one universal joint (b) a center support bearings
(c) the shaft to be solid (d) none of the above

7. The gas used in modern shock absorber is

(a) Nitrogen (b) Oxygen (c) Hydrogen (d) Carbon dioxide

8. In disc brake, pad to disc adjustment is provided by

(a) caliper (b) piston (c) piston seal (d) bleed screw

9. EGR system is employed for controlling emission of

(a) HC (b) CO (c) NO (d) HC and CO

10. The calorific value of alcohol is

(a) less than that of gasoline
(b) equals to that of gasoline
(c) more than that of gasoline
(d) depends upon type of the engine where used

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. State the construction and working principle three way catalytic converter with neat diagram. (8)

12. What is the purpose of ignition system? Explain any one type with neat diagram. (8)

13. Explain the construction and working principle of multi plate clutch with neat diagram. (8)

14. Explain the construction and working of telescopic shock absorber with neat diagram. (8)

15. Describe the salient features of using LPG as an alternate fuel. Explain why hydrogen is considered as t~~he most favorable fuel~~ for future. (8)