345 Register No.:

April 2018

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B

(2) Answer division (a) or division (b) of each question in PART – C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. What is piston displacement in an engine?
2. What is valve clearance? Why should it be given?
3. What is CCVTI?
4. Define diesel knock.
5. What is the function of the governor in an automobile? In which vehicle it is used?
6. Name any two anti-freeze mixtures or solutions.
7. What is multi-grade oil? Give an example.
8. List the various types of compression rings.

PART – B

9. What are the three methods of scavenging in two stroke cycle engines?
10. Compare wet liners with dry liners.
11. Compare AC mechanical fuel pump and SU electrical fuel pump.
12. Define Cetane number. What is normal Cetane value of diesel fuels?
13. Explain with a neat sketch the working of single acting diesel feed pump.
14. Compare air cooled and water cooled engines.
15. Explain the working of pressure relief valve used in lubrication system.
16. Draw a valve timing diagram of a four stroke petrol engine and indicate various processes.

[Turn over....

PART – C

17. (a) Discuss the merits and demerits of four stroke cycle engin over two stroke cycle engines.

(Or)

(b) Explain the construction and working principle of Wankel rotary engine with neat sketches.

18. (a) Explain the different expansion control methods in pistons with simple sketches.

(Or)

(b) Explain with neat sketch the construction and operation of side valve mechanism. State the merits and demerits.

19. (a) Explain in detail the combustion stages in petrol engine.

(Or)

(b) In what way the SU carburettor differ from other carburettors? Explain its working with a neat sketch.

20. (a) Explain with simple sketches the different types of combustion chambers used in diesel engines.

(Or)

(b) Explain with a neat sketch the construction and working of a mechanical governor used in diesel engine.

21. (a) How radiator cores are classified? With suitable sketch explain the construction of any one type indicating its merits over the other types.

(Or)

(b) With suitable line diagram explain the construction and working of full pressure lubrication system in an automobile engine.
