

April 2019*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. List the four different types of chisels.
2. What do you mean by preventive maintenance?
3. What is the difference between minor overhauling and major overhauling?
4. What is dimensional inspection?
5. What is clutch slippage? State the reasons for clutch slip.
6. Mention any four troubleshoots for gear box.
7. What will happen if the air cleaner of an automobile engine is clogged? Why are the air cleaner elements corrugated?
8. Give the Euro-II norms for new petrol cars followed in India.

PART - B

9. What is detonation? What are the effects of detonation?
10. What is valve clearance? Why should it be given?
11. What is clutch free pedal play? What happens if clutch free pedal play is excessive?
12. Explain any one sequence of tyre rotation of a car with a neat sketch.
13. What is reverse flushing of radiator? How is it done?
14. Write a brief note on poly nuclear aromatic hydro carbon emissions.
15. Explain briefly the working of exhaust gas analysers.
16. Briefly explain log sheets.

[Turn over.....]

PART - C

17. (a) (i) Explain briefly scheduled maintenance.
(ii) Bring out the difference between preventive maintenance and break down maintenance.
(Or)
- (b) Explain the preparation of check lists for daily, weekly and monthly maintenance.
18. (a) (i) How are the ovality and the taper of a cylinder bore checked?
(ii) Discuss the procedure and repair in case the cylinder wear is found to be more than the permissible limits.
(Or)
- (b) (i) Explain in detail the various types of piston failures.
(ii) Give suggestions to avoid the same.
19. (a) (i) How the brake shoe adjustment is carried out? Explain.
(ii) Explain the procedure for filling and bleeding a brake system.
(Or)
- (b) Explain the common troubles experienced in the suspension system of an automobile and suggest appropriate remedies in each case.
20. (a) (i) What are the common troubles which are likely to occur in an electrical fuel pump.
(ii) Explain also the possible reasons for the same.
(Or)
- (b) Discuss the common faults occurring in the engine cooling system and also suggest suitable remedies.
21. (a) Explain the design of various parts to reduce noise pollution arising from automobiles.
(Or)
- (b) (i) What do you understand by the term EGR.
(ii) Explain how EGR reduces NO_x emission.
