

Time: 3 Hours

Marks: 80

N.B: Question no.1 is compulsory.

Solve any 3 from remaining Questions.

Q. 1 Write answer for any four questions

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| a) Where does maximum cylinder bore occur and why? | 5 |
| b) What are the requirements of starting system of an automobile? | 5 |
| c) Explain the principle operation of rear window defroster. | 5 |
| d) Explain the phenomenon of roll over protection. | 5 |
| e) What are the sources of differential noise and how it is diagnosed? | 5 |
| f) What are the functions of wheel and tyre? | 5 |

Q. 2

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|---|----|
| a) Which type of automotive battery you will suggest for your vehicle? Support your answer with proper justification. | 10 |
| b) Explain the significance of combustion chamber in automobile and explain its types. | 10 |

Q. 3

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| a) Explain cooling system diagnosis in detail. | 10 |
| b) What are the various lighting system controlled by head light switches? | 10 |

Q. 4

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| a) Explain various security and anti-theft devices in detail. | 10 |
| b) How the service and repair passive belt system is carried out? | 10 |

Q. 5

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| a) What is OBD-II and explain in detail. | 8 |
| b) What are the various lighting system controlled by head light switches? | 8 |
| c) Where does maximum cylinder bore occur and why? | 4 |

Q. 6 A Write short note on : (Any Two)

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|--------------------------------|---|
| a) Flywheels | 5 |
| b) Exhaust gas re circulation. | 5 |
| c) Horns system | 5 |

Q. 6 B Attempt any two

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| a) What is the need of effective steering system? | 5 |
| b) When headlights are switched from low beam to high beam, all headlights goes out: Technician A says that the problem may be a bad dimmer switch but Technician B says that the ignition switch may be bad. Who is correct? Give proper justification. | 5 |
| c) While performing cooling system service on a hybrid vehicle: Technician A disconnects electric water pump. Technician B disables high voltage system before serving the engine. Who is correct? | 5 |