Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

**Course Code:MEDLO7032& Course Name: Automobile Engineering (Department Level Optional Course III)**

Time: 1hour Max. Marks: 50

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Note to the students: - All the Questions are compulsory and carry equal marks.

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| Q1. | The purpose of gearbox in an automobile is to |
| Option A: | vary speed |
| Option B: | Vary power |
| Option C: | The purpose of gearbox in an automobile is to |
| Option D: | vary speed |
|  |  |
| Q2. | Double declutching operation helps in |
| Option A: | Smooth power transmission |
| Option B: | Easy shifting of gears |
| Option C: | Better control of vehicle |
| Option D: | More power transmission |
|  |  |
| Q3. | What are the elements of hydrodynamic torque converter? |
| Option A: | Impeller, stator and flywheel |
| Option B: | Turbine, stator and generator |
| Option C: | Impeller, stator and Turbine |
| Option D: | Impeller and stator |
|  |  |
| Q4. | What is the need of the universal joint? |
| Option A: | To bend sideways |
| Option B: | To change inclination |
| Option C: | To transfer torque at an angle |
| Option D: | To maintain the speed of differential |
|  |  |
| Q5. | The front axle has ‘I’ section in the middle to take |
| Option A: | Bending stress |
| Option B: | Side thrust |
| Option C: | Torque reaction |
| Option D: | Shear stresses |
|  |  |
| Q6. | Which gear is free to rotate in overdrive? |
| Option A: | Sun gear |
| Option B: | Ring gear |
| Option C: | Spur gear |
| Option D: | bevel gear |
|  |  |
| Q7. | The force required to stop a vehicle is dependent on |
| Option A: | the deceleration rate |
| Option B: | the weight of vehicle |
| Option C: | both the deceleration rate & the weight of vehicle |
| Option D: | No of occupants inside |
|  |  |
| Q8. | The process of removing air from the brake system is known as |
| Option A: | Energization |
| Option B: | Bleeding |
| Option C: | Self-energizing |
| Option D: | Servo action |
|  |  |
| Q9. | In which type of steering gearbox, variable steering ratio is achieved? |
| Option A: | worm and roller steering gear |
| Option B: | worm and nut steering gear |
| Option C: | worm and sector steering gear |
| Option D: | rack and pinion steering gear |
|  |  |
| Q10. | The larger gear wheel used in the final drive is called: |
| Option A: | Crown wheel |
| Option B: | Sun gear |
| Option C: | Pinion wheel |
| Option D: | The larger gear wheel used in the final drive is called: |
|  |  |
| Q11. | The angle between king pin centre line and vertical in the plane of wheel is called |
| Option A: | Steering axis inclination |
| Option B: | King pin inclination |
| Option C: | Castor |
| Option D: | Camber |
|  |  |
| Q12. | On the road turning, the front wheels are… |
| Option A: | Toe - out |
| Option B: | toe - in |
| Option C: | Parallel |
| Option D: | Toe-in-out |
|  |  |
| Q13. | The term caster is associated with |
| Option A: | Suspension system |
| Option B: | Transmission system |
| Option C: | Braking system |
| Option D: | Steering system |
|  |  |
| Q14. | The leaf springs are connected to axle beam by means of |
| Option A: | U-bolt |
| Option B: | Shackle |
| Option C: | Centre bolt |
| Option D: | Shackle pin |
|  |  |
| Q15. | What is the angle between the vertical when the top of wheels slants outwards? |
| Option A: | Negative Castor |
| Option B: | Positive camber |
| Option C: | Positive castor |
| Option D: | Negative Camber |
|  |  |
| Q16. | Wear on tyre is more on one side is due to: |
| Option A: | incorrect camber angle |
| Option B: | low tyre pressure |
| Option C: | high tyre pressure |
| Option D: | sudden acceleration |
|  |  |
| Q17. | Why is a thermistor used in an alternator regulator? |
| Option A: | To control maximum current |
| Option B: | To control maximum voltage |
| Option C: | To compensate for temperature change |
| Option D: | To control minimum current |
|  |  |
| Q18. | The capacity of a lead acid cell does not depend on its |
| Option A: | The capacity of a lead acid cell does not depend on its |
| Option B: | Temperature |
| Option C: | Rate of charge |
| Option D: | Rate of discharge |
|  |  |
| Q19. | During charging the specific gravity of the electrolyte of a lead acid battery |
| Option A: | Increases |
| Option B: | Decreases |
| Option C: | Remains the same |
| Option D: | Becomes zero |
|  |  |
| Q20. | Which component in the DC generator produces a magnetic field? |
| Option A: | Stator |
| Option B: | Commutator |
| Option C: | Armature |
| Option D: | Carbon brushes |
|  |  |
| Q21. | An automobile chassis does not include which one of the following parts |
| Option A: | Shock absorbers |
| Option B: | Steering system |
| Option C: | Differential |
| Option D: | Brakes |
|  |  |
| Q22. | The automobile chassis consist of engine, frame, power train, wheel, steering and ? |
| Option A: | Doors |
| Option B: | Luggage boot |
| Option C: | Wind shield |
| Option D: | Braking system |
|  |  |
| Q23. | Why ‘Bumpers’ are used in cars |
| Option A: | To reduce the impact in case of low speed collisions |
| Option B: | To improve the aerodynamics of a car |
| Option C: | To increase the engine performance |
| Option D: | To improve the aesthetic of vehicle |
|  |  |
| Q24. | Which of the following sensor is used to determine the temperature of an engine? |
| Option A: | Manifold Absolute Pressure Sensor |
| Option B: | Engine coolant temperature sensor |
| Option C: | Oxygen sensor |
| Option D: | Electronic stability control sensor |
|  |  |
| Q25. | Engine detonation can be identified by… |
| Option A: | Crankshaft position sensor |
| Option B: | Detonation sensor |
| Option C: | Camshaft position sensor |
| Option D: | EGR Position sensor |