

Program: BE –Automobile Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: AEC601 and Course Name: Automotive Systems

Time: 1hour

Max. Marks: 50

=====

2609\_R12\_AUTO\_VI\_AEC601\_QP3

=====

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

These are sample MCQs to indicate pattern, may or may not appeared in examination

| Q. No. | Questions                                                                                                                                       | Options                                 |                       |                        |                    |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------|------------------------|--------------------|
|        |                                                                                                                                                 | A                                       | B                     | C                      | D                  |
| 1      | In a centrifugal clutch, when the centrifugal force is slightly more than the spring force, shoe begins to move in a radially inward direction. | Radially outwards                       | Radially upwards      | Radially downwards     | Radially inwards   |
| 2      | Which of these is not a type of clutch?                                                                                                         | Single disc                             | b) Conical            | Centrifugal            | Cylindrical        |
| 3      | In a single dry plate clutch, torsional vibrations are absorbed by_____                                                                         | Coil springs known as torsional springs | Cushion springs       | Central hub            | Clutch pedal       |
| 4      | In which transmission Belt and pulley arrangement is used                                                                                       | CVT                                     | Sliding mesh gear box | constant mesh gear box | Epicyclic Gear box |
| 5      | If two meshing gears have 4:1 gear ratio and the smaller gear has 12 teeth, the large gear will have                                            | 12 teeth                                | 24 teeth              | 36 teeth               | 48 teeth           |

|    |                                                                                       |                                     |                                                             |                                                           |                                                              |
|----|---------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------|
| 6  | Torque multiplication in torque converter becomes unity when                          | Turbine speed equals impeller speed | Turbine speed greater than impeller speed                   | Turbine speed lower than impeller speed                   | Impeller speed greater than Turbine speed                    |
| 7  | In which type of manual transmission the double-declutching is used?                  | Constant-mesh gearbox               | Sliding mesh gearbox                                        | Synchromesh gearbox                                       | Epicyclical gearbox                                          |
| 8  | In semi automatic transmission                                                        | Clutch and gears shifting manually  | Clutch is shifted automatically but gears shifting manually | Clutch and gears shifting Automatically                   | Gears are shifted automatically but Clutch shifting manually |
| 9  | Constant Velocity Universal Joint is used at                                          | Front end of the propeller shaft    | Rear end of the propeller shaft                             | Road wheel end of the shaft on front wheel drive vehicles | Differential end of the shaft on front wheel drive vehicles  |
| 10 | The function of the universal joint is to allow the propeller shaft to                | Change length                       | Bend sideways                                               | Transfer torque at a angle                                | Change inclination                                           |
| 11 | The following diverts the power at right angles towards the driving wheel             | Torque tube                         | Transfer case                                               | Final drive                                               | Differential                                                 |
| 12 | Which types of wheels cannot be used with a tubeless tire?                            | Disc wheel                          | Light alloy wheel                                           | Wire wheel                                                | Composite wheel                                              |
| 13 | The ring gear is mounted on the                                                       | Differential carrier                | Differential housing                                        | Axle housing                                              | Differential case                                            |
| 14 | The axle used in truck is                                                             | Semi-floating                       | fully-floating                                              | three-quarter floating                                    | half-floating                                                |
| 15 | Central portion of propeller shaft is made from                                       | Steel tube                          | Cast iron rod                                               | Gun metal shaft                                           | Steel shaft                                                  |
| 16 | The two basic types of axle are                                                       | Dead and floating                   | Dead and live                                               | Floating and semi floating                                | Floating and Three Quarter floating                          |
| 17 | Transfer case is located next to the gearbox in                                       | Front wheel drive                   | Rear wheel drive                                            | Four wheel drive                                          | Two wheel drive                                              |
| 18 | In case of Macpherson strut suspension, where does the upper end of the strut attach? | Upper wishbone                      | Vehicle body                                                | Vehicle chassis                                           | Axle                                                         |

|    |                                                                                              |                                                         |                                                       |                                                                           |                                                                            |
|----|----------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 19 | In case of drum brake, between which components does friction occur?                         | Brake pad & Rotating Tyre                               | Brake pad & rotating disc                             | Brake shoe & rotating drum                                                | Drum & rotating disc                                                       |
| 20 | What is brake bleeding?                                                                      | Process of removing air from the hydraulic brake system | Process of adding air into the hydraulic brake system | Process of removing oil from air brake system                             | Process of adding oil into air brake system                                |
| 21 | What is brake fading?                                                                        | Entry of air in to hydraulic brake system               | Cooling of brake material due to application of brake | Increase in friction because of increase in temperature of brake material | Reduction in friction because of increase in temperature of brake material |
| 22 | What happens inside the master cylinder when brake pedal is pressed by driver?               | Brake shoes expand                                      | Disc starts rotating                                  | Oil pressure reduces due to action of push rod                            | Oil pressure increases due to action of push rod                           |
| 23 | What is the name of the angle through which the wheel has to turn to sustain the side force? | Slip angle                                              | Castor angle                                          | Camber                                                                    | Kingpin inclination                                                        |
| 24 | Wheel wobbles occur due to                                                                   | inoperative stabilizer                                  | wheel out of balance                                  | bent kin-pin                                                              | bent steering knuckle                                                      |
| 25 | The tilting of the front wheels away from the vertical is called                             | caster                                                  | camber                                                | toe-in                                                                    | toe-out                                                                    |

