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**6th Sem. / Mechanical Engg.**  
**Subject : Automobile Engineering**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 In disc brakes disc is attached to the

- a) Wheel
- b) Axle
- c) Suspension
- d) None of the above

Q.2 Camber is

- a) Positive
- b) Negative
- c) Both A and B
- d) zero

Q.3 The type of wheel which can't be used with a tubeless tyre is

- a) Wire wheel
- b) Steel wheel disc
- c) Alloy
- d) Composite wheel

Q.4 The purpose of torque converter in automobile is

- a) Automatically control the speed of engine
- b) Automatically multiplying Engine torque
- c) Automatically multiplying vehicle torque
- d) Automatically multiplying the speed of the engine

Q.5 Hotchkiss drive is mostly used in

- a) Cars
- b) Trucks
- c) Both A and B
- d) None of the above

Q.6 Which of the following is not a automobile

- a) Motor cycle
- b) Passenger Car
- c) Trucks
- d) Aero plane

**SECTION-B**

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define Automobile (CO-1)

Q.8 CNG stands for..... (CO-1)

Q.9 Write the principle of clutch. (CO-2)

(1)

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(2)

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- Q.10 Hydraulic brakes works on the principle of .....  
(CO-4)
- Q.11 Define battery capacity  
(CO-5)
- Q.12 What is dynamo in automobile  
(CO-5)

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions.  $(8 \times 4 = 32)$

- Q.13 Draw the layout of automobile chassis and label its different components. (CO-1)
- Q.14 Why are CNG and PNG considered more cost effective compared to traditional fuels. (CO-1)
- Q.15 Write the advantages and disadvantages of single plate clutch. (CO-2)
- Q.16 Explain the function of differential with neat diagram. (CO-3)
- Q.17 Explain Ackerman steering mechanism with the help of neat sketch. (CO-3)
- Q.18 Explain principle and working of hydraulic brake with neat sketch (CO-4)
- Q.19 Explain the construction and working of shock absorber. (CO-4)

- Q.20 Explain the working of lead acid battery. (CO-5)
- Q.21 How do Electric and Hybrid vehicles help the environment and economy worldwide ? (CO-7)
- Q.22 Write the function of suspension system. (CO-3)

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions.  $(2 \times 8 = 16)$

- Q.23 What is an alternator give its principle, construction and working in detail. (CO-7)
- Q.24 Explain the construction and working of constant mesh gear box. (CO-2)
- Q.25 What is self driving car ? Explain various components of it. (CO-7)