

- Q.22 What is the function of governor? Explain its types.
- Q.23 Discuss the types of combustion chambers for petrol engine.
- Q.24 Explain the phenomena of combustion in SI engines
- Q.25 What is super charged engine? Explain.
- Q.26 Explain working of alternate fuel operated engine.
- Q.27 Explain gas turbine and jet propulsion engine.
- Q.28 Discuss the effect of pollutants on human and environment.
- Q.29 Explain the function and working of catalytic converter.
- Q.30 Draw a neat diagram of alternate and explain its working.
- Q.31 Draw main wiring diagram of a car.
- Q.32 Explain the working of dynamo with a neat sketch.
- Q.33 Explain the working of lead acid battery with its chemical reactions.
- Q.34 Write short note on air bags.
- Q.35 Explain the term Electronic vehicle stability.

#### SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Explain the working of CRDI with a simple diagram.
- Q.37 What are the sources of engine pollutants of SI and CI engines.
- Q.38 Explain vapour compression cycle with diagram.

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### Mech. Engg. (Automobile) Subject:- Automobiles Engg- I

Time : 3Hrs.

M.M. : 100

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Pre-ignition caused by the spontaneous combustion of the mixture before the end of compression stroke is due to:
- Overheated spark plug points
  - Red hot carbon deposits on cylinder walls
  - Cylinder wall being too hot
  - Any of the above
- Q.2 Which of the following could be an alternate fuels operated engines
- Coal
  - Uranium
  - Liquid silicon
  - CNG
- Q.3 Diesel cycle was given by:
- Nicholoas Otto
  - Rutherford
  - Rudolph Diesel
  - Neil Diesel
- Q.4 Which of the following is not a type of engine?
- Turbo charged engine
  - Gas turbine engine

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- c) Wankel engine  
d) Differential engine
- Q.5 Turbocharger are generally  
a) Centrifugal compressors  
b) Reciprocating compressor  
c) Vane blowers  
d) Roots blower
- Q.6 SI stands for  
a) Sub Inspector                      b) Spark Ignition  
c) Steering insulator                d) Starter Indicator
- Q.7 What is the full form of DBT  
a) Dual battery transfer  
b) Dry bulb Temperature  
c) Disc Brake Torque  
d) Direct Battery Terminal
- Q.8 A dynamo converts \_\_\_\_\_  
a) Mechanical energy into electrical energy  
b) Starts the engine  
c) Magnetic energy into electrical energy  
d) Magnetic energy into mechanical energy
- Q.9 What happens when an alternator is said to be over excited  
a) Negative power factor  
b) Unity power factor  
c) Lagging power factor  
d) Leading power factor

- Q.10 What is true about the Wankel engine?  
a) It is a rotary external combustion engine  
b) It is more expensive  
c) It has a longer operating cycle  
d) It has less time to complete the combustion

### SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Expand CRDI
- Q.12 \_\_\_\_\_ nozzle and \_\_\_\_\_ nozzle are two types of nozzle.
- Q.13 \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ are the four stroke of an IC engine
- Q.14 Wankel engine is a type of \_\_\_\_\_ engine.
- Q.15 \_\_\_\_\_ is an engine pollutant
- Q.16 Write any two application of sensors
- Q.17 LT supply is of \_\_\_\_\_ volts for three phase connection.
- Q.18 Air Bag is used as safety to decrease the \_\_\_\_\_
- Q.19 Wiring harness is used to keep the \_\_\_\_\_ organised
- Q.20 DPT stands for \_\_\_\_\_

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Differentiate between petrol engine and diesel engine