

- 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:

  - Nicholaoas 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