

- c) To transmit power at an angle
d) To store energy
- Q.4 The valve mechanism in an IC engine is responsible for: (CO2)
a) Controlling the flow of fuel into the cylinder
b) Controlling the flow of air into the cylinder
c) Controlling the flow of exhaust gases out of the cylinder
d) All of the above
- Q.5 The components that converts the rotary motion of the camshaft into the reciprocating motion of the valve is: (CO2)
a) Connecting rod b) Piston
c) Cam d) Crankshaft
- Q.6 A piston in an IC engine is primarily a _____ part. (CO2)
a) Rotating b) Revolving
c) reciprocating d) Oscillating

SECTION-B

- Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)
- Q.7 Define fit. (CO3)
- Q.8 Write the material of bush in bush bearing. (CO2)
- Q.9 Write the total number of crankpins in a four stroke engine. (CO2)
- Q.10 In earth return system, which terminal of battery is connected to earthing? (CO2)
- Q.11 There are two pistons in a wheel cylinder. (True/False) (CO2)

- Q.12 Define pitch circle diameter of a gear. (CO2)

SECTION-C

- Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)
- Q.13 Show interference fit with the help of a diagram. (CO3)
- Q.14 Define tolerance and write its types. (CO3)
- Q.15 Draw a labelled sketch of a roller bearing. (CO1)
- Q.16 Name any four parts of a crankshaft. (CO2)
- Q.17 Draw the front view of a petrol engine piston. (CO1)
- Q.18 Name any four parts of a leaf spring assembly. (CO2)
- Q.19 Draw a sketch of overhead valve mechanism. (CO1)
- Q.20 Show any two types of cam followers with the help of diagram. (CO1)
- Q.21 Calculate Pitch circle diameter, clearance, addendum and dedendum for an involute gear having 24 teeth, module pitch 8mm and pressure angle 22° . (CO2)
- Q.22 Define diametral pitch and gear tooth thickness. (CO2)

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)
- Q.23 Draw the profile of involute teeth by Prof. Unwin's method using the data given in Q. no.21. Draw at least three teeth and label all the circles. (CO1)