

## **SECTION-B**

**Note:** Objective type questions. All questions are compulsory  
(5x1=5)

- Q.6 Define Modulus of Rigidity.
  - Q.7 Define Cantilever.
  - Q.8 Define Pitch circle.
  - Q.9 What is Unwin's rule in case of rivets?
  - Q.10 What is Turbine?

### **SECTION-C**

**Note:** Short answer type questions. Attempt any six questions out of eight questions. (6x5=30)

- Q.11 Define torsional rigidity of shaft.

Q.12 Derive the relationship between shear force and bending moment.

Q.13 Define the following terms used in tooth gears  
Pitch point, Pitch circle, Module, circular pitch and diametral pitch.

Q.14 Derive the formula for power transmission by hollow shaft.

Q.15 What are the assumptions made for designing riveted joint?

Q.16 Write the advantages of V-belts over flat belts.

Q.17 Write the Bernoulli's theorem.

Q.18 What is FrancisTurbine?

## **SECTION-D**

**Note:** Long answer type questions. Attempt any one questions out of two questions. (1x10=10)

- Q.19 Draw the S.F. and B.M. diameter for a simply supported beam of length 6m and point load of 5KN is applied at the mid of the beam.

Q.20 Explain difference between centrifugal pumps and reciprocating pumps.

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**Level 4 / 2nd. Sem. / DVOC**

## Production Tech.

## **Subject : General Mechanical Engineering-I**

Time : 2 Hrs.

M.M. : 50

## **SECTION-A**

**Note:** Multiple-choice questions. All questions are compulsory  
(5x1=5)

- Q.1 The S.I. unit of stress is \_\_\_\_\_  
a) Kg/cm<sup>2</sup>      b) N/m<sup>2</sup>  
c) Kg/mm<sup>2</sup>      d) Kg/m<sup>2</sup>

Q.2 For a simply supported beam loaded with point load, the B.M.D. will be  
a) A triangle      b) A parabolic curve  
c) A cubic curve      d) None of the above

Q.3 Slip in belt drive is  
a) Loss of power  
b) Difference between velocities of two pulleys  
c) Difference between linear speed of the rim of pulley and the belt  
d) None of the above

Q.4 The barometer is used to measure  
a) Velocity of liquid  
b) Atmospheric pressure  
c) Pressure in pipes and channels  
d) Difference of pressure between two points in a pipe

Q.5 In a centrifugal pump, the liquid enters the pump  
a) At the top      b) At the bottom  
c) At the center      d) From sides

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