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188844

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 deformation per unit length is called

a) Strain b) Stress

c) Elasticity d) None of the above

Q.2 Bending moments at supports in case of simply supported beam is always.

a) Negative b) Positive

c) Zero d) Depends upon laoding

Q.3 The product of circular pitch and the diameter pitch is equal to

a) 2Π b) Π

c) $1/\Pi$ d) None of the above

Q.4 A flow in which the quantity of liquid flowing per second is not constant is called

a) Streamline flow b) Turbulent flow

c) Steady flow d) Insteady flow

Q.5 In a centrifugal pump, the regulating valve is provided on the

a) Casing b) Delivery pipe

c) Suction pipe d) Impeller

SECTION-B

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

Q.6 Define Poisson's Ratio.

Q.7 Define simply supported beam.

Q.8 Define Module.

Q.9 Write the formula for power transmission by solid shaft.

Q.10 Define atmoshperic pressure.

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 What are the advantages of bolted connections?

Q.13 Explain cross belt drive with neat sketch.

Q.14 Explain Laminar and turbulence flow.

Q.15 Define shear strain.

Q.16 Define the following terms used in tooth gears

Pressure angle, Pitch point, Base circle diameter, Dedendum, Addendum circle diameter

Q.17 What are the factors influencing the frictional loss in pipe flow?

Q.18 What is Pelton Wheel?

SECTION-D

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

Q.19 Draw shear force and bending moment diagram of a 8m long cantilever beam, subjected to point load of 800N at free end.

Q.20 Explain the working principle of reciprocating pump with neat sketch.