

(OR)

- (b) In a Purifier machine a triple threaded Worm has a tooth of 6mm module and (16)
pitch circle diameter of 50mm.If the worm gear has 30 teeth of 14.5° ,
coefficient of friction is 0.05.

Calculate a) the Lead angle of worm b) Velocity ratio c) Efficiency of
worm gear.

11. (a) (i) Explain various loads acting on Connecting rod of an IC engine. (8)
(ii) Explain the design criteria to be considered for Piston of an IC engine. (8)

(OR)

- (b) (i) Discuss the design criteria followed for the construction of Safety valve (10)
on Boiler.
(ii) State the safety parameters designed for EOT Crane onboard ship. (6)
12. (a) Discuss the safe design criteria to be followed for designing starting air (16)
system onboard ship.

(OR)

- (b) Explain the design guidelines for the fuel oil system onboard ship. (16)