

SSIT POLYTECHNIC, KALAKAD, MAYURBHANJ

5th SEMESTER 1ST INTERNAL EXAMINATION 2023-2024 (WINTER)

SUB: - HM&IFP

BRANCH:-MECHANICAL/MECHANICAL (I.I)

FULLMARK-20

TIME - 1 HOUR

1. Answer all Question Given Below :(Any 5) (2x5= 10)

- (a) Define Hydraulic Machine?
- (b) Classify Hydraulic Turbine.
- (c) Define Reaction & Impulse turbine.
- (d) Define Draft Tube.
- (e) Define Centrifugal Pump?
- (f) What is Slip and Percentage Slip?
- (g) What is priming in centrifugal pump.

2. Answer all question given below :(Any2) (5x2=10)

- (a) What is an Impulse turbine explain with diagram.
- (b) Explain working of centrifugal pump with diagram.
- (c) A Pelton wheel is having a mean bucket diameter of **1m** and is running at **1000 r.p.m.** The net head on the Pelton wheel is **700 m**. If the side clearance angle is **15°** and discharge through nozzle is **0.1 m³/s**. Find:
 - (i) Power available at the nozzle, and
 - (ii) Hydraulic efficiency of the turbine