

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2017**

HYDRAULICS

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer all questions in one or two sentences. Each question carries 2 marks.

1. Define intensity of pressure and pressure head.
2. Define the term velocity approach.
3. Derive the relation among C_d , C_c and C_v .
4. Write down the equation for loss of head at entrance and exit in a pipe flow.
5. Write any two function of Draft tube in a waterway system of hydroelectric power plant. (5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Distinguish among atmospheric pressure, gauge pressure and absolute pressure. Calculate the height of mercury column equivalent to a gauge pressure 150 kpa.
2. Explain with a neat sketch, how the positive and negative pressure measuring by a simple manometer.
3. Write any 6 differences between centrifugal pump and reciprocating pump.
4. Write down the equation for discharge through a triangular notch. List any 4 advantages of triangular notch over rectangular notch.
5. Write down the Kutter's and Manning's formula for Chezy's constant C .
6. Define the term most economical cross section of channels. Derive an expression for most economical section of a rectangular channel.
7. What is the use of pitot tube ? Derive an expression for its use. (5×6 = 30)