Assignment 3

The Centrifugal equation is based on the principle of

- Conservation of energy
- Conservation of mass
- Conservation of momentum
- Conservation of time

The flow condition where the Froude number is greater than 1 is

- Critical Flow
- Subcritical Flow
- Supercritical Flow
- Devine Flow

3. In a shallow channel, the velocity is recommended to be measured at

- 1/3 of the depth of water
- 1/2 of the depth of water
- 2/3 of the depth of water
- 0 of the depth of water

The value of the coefficient of discharge (C) in rectangular is

- 0.774
- 0.857
- 0.927
- 1.00

In case of availability of space due to topography, the most suitable spillway is

- Ribbed spillway
- Chain spillway
- Straight spillway
- Pipe spillway

A rectangular channel having a bed slope of 0.05 and Manning’s roughness coefficient of 0.01 can be described as if 12 cm, if the channel is designed in the same assumption section, the width of the channel (m) will be

- 6.54
- 6.11
- 6.52
- 7.29

A cross-section of the bed drain a rectangular channel in discharge a flow of 0.1 m/s, if the average depth of water is 0.5 m for the upstream wall of the channel is 0.2 m, then what should be the length of the channel?

- 0.83 m
- 0.80 m
- 0.90 m
- 1.20 m

A rectangular channel 2.5 m wide is conveying water at a depth of 1.5 m, and the discharge is 2.5 m³/s. Determine the specific energy of the flow (J/m³).

- 1.5 m
- 1.25 m
- 1.5 m
- 1.75 m

A rectangular channel 2.5 m wide is conveying water at a depth of 1.2 m and the rate of flow is 0.5 m³/s, take Chezy’s coefficient = 10.

- 0.54 m
- 0.0044
- 0.0044 m
- 0.0044 m³

A rectangular channel 1.2 m wide is conveying water at a depth of 1.5 m, and the rate of flow is 0.25 m³/s. Take Manning’s coefficient = 0.01.

- 1.41 m
- 1.28 m
- 1.41 m
- 1.41 m

A rectangular channel 1.2 m wide is conveying water at a depth of 1.5 m, and the rate of flow is 0.25 m³/s. Take Manning’s coefficient = 0.01.

- Not Available
- Not Available
- Not Available
- Not Available

Make the slope of the bed of a rectangular channel 1.5 m, where depth of water is 1 m and rate of flow is 0.25 m³/s, take Chezy’s coefficient = 10.

- Not Available
- Not Available
- Not Available
- Not Available

Determine the full box (b) due to friction in an irrigation pipe having 200 m in length and 20 cm diameter. The velocity of flowing water in the pipe is 0.5 m/s. Assume F = 0.017 (coefficient of loss due to roughness)