

QUESTION 1

List the **five** principal laws that govern the loss of pressure due to friction in a water relay and in your own words explain how each of these factors needs to be taken into consideration when operating a water relay.

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QUESTION 3

A rectangular swimming pool has an internal measurement of 7 metres long by 3 metres wide, the shallow end is 1 metre deep, uniform slope to 2.5 metres at the deep end.

- a) Calculate the quantity of water in the pool, assuming it is full.

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- b) Calculate to the nearest minute the time required to expose the bottom at the shallow end using a “B” type ejector pump?

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- c) What are the factors affecting the output of an ejector pump?

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QUESTION 5

Water is discharged through a 19mm nozzle at 1050 kPa.

(a) Calculate the discharge in litres per second.

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(b) Calculate the jet reaction in Newtons.

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(c) Calculate the effective height of this jet to the nearest metre.

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