16. PIPES AND CISTERNS

IMPORTANT FACTS AND FORMULAE

1. **Inlet:** A pipe connected with a tank or a cistern or a reservoir, that fills it, is known as an inlet.
Outlet: A pipe connected with a tank or a cistern or a reservoir, emptying it, is known as an outlet.

2. (i) If a pipe can fill a tank in x hours, then : part filled in 1 hour = 1/x

(ii) If a pipe can empty a full tank in *y* hours, then : part emptied in 1 hour = 1/y

(iii) If a pipe can fill a tank in x hours and another pipe can empty the full tank in y hours (where *y> x),* then on opening both the pipes, the net part filled in 1 hour = (1/x)-(1/y)

(iv) If a pipe can fill a tank in x hours and another pipe can empty the full tank in y hours (where x > *y),* then on opening both the pipes, the net part emptied in 1 hour = (1/y)-(1/x)