



St. Michael Polytechnic College



St. Santhiyagappar Nagar
Kalayarkoil-630 551.

DEPT: CIVIL ENGG

YEAR/SEMESTER: III / V

SUB.NAME: CIVIL ENGINEERING DRAWING - II

UNIT-1

PART-A (75 marks)

1. The following particulars relate to a rapid sand filter:

Size of one filter unit	: 8000X6600mm
Size of inlet chamber	: 1000X6600mm
Thickness of wall at top	: 400mm
Thickness of wall at bottom	: 600mm
Thickness of foundation	: 500mm
Diameter of manifold	: 450mm
Diameter of laterals	: 100mm
Spacing of laterals	: 600mm c/c
Slope of laterals	: 1 in 50
Raw water inlet	: 300mm dia
Wash water drain pipe	: 300mm dia
Wash water rough	: 300X450mm
Number of trough	: 2
Free board	: 600mm
Bottom of trough above sand bed	: 450mm
Rakers 50mm dia at	: 300mm c/c

Draw the following views to a suitable scale:

- Plan of a filter unit showing the drainage system
- Longitudinal section of a filter unit
- Cross section of a filter unit showing the filter media and wash water trough.