

2010 IIA 3D5 WATER ENGINEERING

List of Numerical Answers

Q1. (b) $7.6 \text{ m}^3 \text{ s}^{-1}$

(c) (i) 68.4 km^2

(ii)

Time Interval (hour)	0-2	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18
Flow rate at outlet ($\text{m}^3 \text{ s}^{-1}$)	60	160	130	135	110	45	20	5	0

Q2. (a) $\text{m}^{1/2} \text{ s}^{-1}$

(b) (ii) 1021 m

(c) (i) 6.3×10^{-5}

Q3. (b) (i) $0.17 \text{ kg s}^{-1} \text{ m}^{-1}$

(ii) $7.15 \times 10^{-2} \text{ kg m}^{-3}$

Q4. (a) 38.5 kW

(b) (i) 81 litre s^{-1}

(ii) 79.9 kW