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Water Management

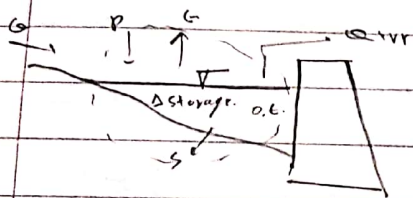
2. Multiple Choice

Canal losses

4.5% / yr

- Maximum water / canals / canals
- As shown
- Illustrations - water / water via / via
- Evaporation

4.5% / yr - canal loss



$$\frac{\Delta \text{Storage}}{\Delta t} = P + Q - E - S - Q_{irr}$$

$$Q_{irr} = P + Q - E - S$$

Area = 35.71 ha

Area = 871.1 ha (Abbas)

Beckham $P = 110 \text{ cm/yr}$ - canal loss - Area = 35.71 ha - 8.11 m / ha

Evaporation $Q = 41 \text{ cm/yr}$ - $E = 0.93 \text{ m/yr} \cdot 35.71 \cdot 10^4 \text{ m}^2 = 33,360 \text{ m}^3/\text{yr}$
 $= 8.9 \cdot 10^4 \text{ m}^3/\text{yr}$

Seepage $E = 93 \text{ cm/yr}$

Seepage $S = 14 \text{ cm/yr} \rightarrow 0.14 \text{ m} \cdot 35.71 \cdot 10^4 = 5.0 \cdot 10^4 \text{ m}^3/\text{yr}$

Live in the canal over the section

$$Q = (0.41 \text{ m/yr} / (871.1 - 35.71) \cdot 10^4 = 392.5 \cdot 10^4 \text{ m}^3/\text{yr}$$

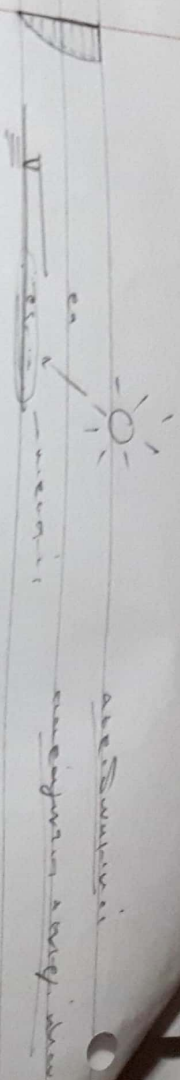
$$Q_{irr} = 392.5 \cdot 10^4 \text{ m}^3/\text{yr} = 9,117 \text{ m}^3/\text{s} \rightarrow \text{average flow rate in section}$$

ET - flux tower parameters recommended

in the field / in the field / in the field

Evaporation

$$E_r = \frac{R_n}{L_{vew}}$$



$E_r = P_r$
 h_{ew}

$E = \frac{A}{4\pi} E_r + \frac{1}{M_A} E_a$

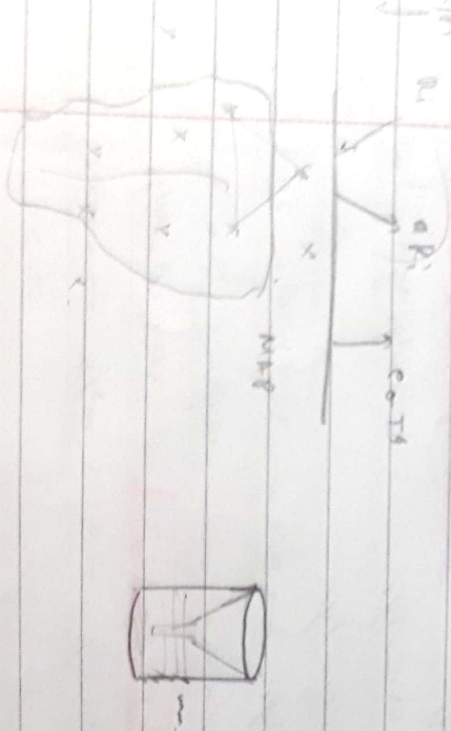
Albedo = 0.04, $T_w = 14^\circ C$
 Given: water at equilibrium absorption $Q_i = 550 W/m^2$

Mass in equilibrium: $P_u = (1 - \alpha) P_i = \epsilon \sigma T^4$
 $\epsilon = 0.55$
 $\epsilon = 5.67 \times 10^{-8}$
 emissivity like blackbody.

$P_u = (1 - 0.04) 550 \frac{W}{m^2} = 525.567168 (273.15 K)^4$
 $\Rightarrow P_u = 1.675 W/m^2$

Energy balance of water.
 $C_p \epsilon_r \frac{P_u}{h_{ew}} = 5.67 \frac{W}{m^2 \cdot day}$
 h_{ew}

$h_{ew} = 2.5 \times 10^6 = 2370 \cdot T_w^{1.16}$
 $h_{ew} = 1000 \text{ kg/m}^3$
 5 kg/m^3

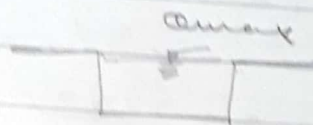


$$\mathbb{Q} \neq \mathbb{Q}_2 \neq \mathbb{Q}_3$$

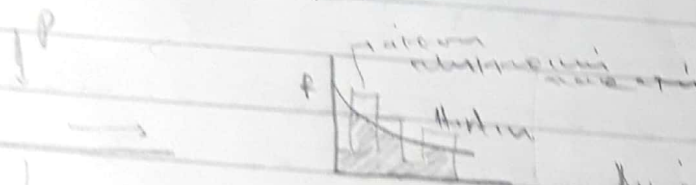
Time	Be. in	H ₂	H ₂	H ₂	H ₂
0					
1	$1 - 4 = 2.63$				
2	$1 - 4 = 2.13$				
3	$2.5 - 4 = 2.15$				
4					
5					
6					
7					
8					

Ditama elapisa, anasus
mijon alapisa nasa, an elapisa
nasa nasa

Diese ist privat... - Zwei Stunden
zu den in der... am 08.09.01 3/10
und... 3.10.01 zu M4
stark... zu anderen...
beim...
ab... nach...
so... - Mannung



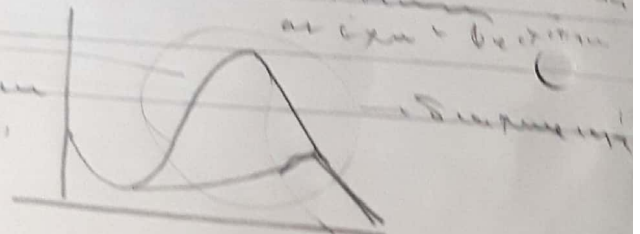
Indicazioni per la
percezione



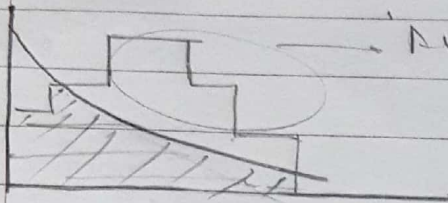
My ipu pive Quinin

1. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$
 2. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$
 3. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$
 4. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

am 1. April 1911
am 1. April 1911
am 1. April 1911



Minim



Area under curve

Hydrograph, Green-Ampt, 50%

For main Green-Ampt
pulses are 50% of peak

2-hr M4R

6hr

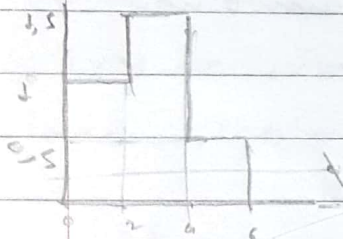
0 → 2 → 4 → 6

1 in/hr 1.5 2.5 in/hr

t	Q
0	0
2	100
4	900
6	150
8	100
10	50
12	0

Direct runoff = 3.78 in

NO return & no baseflow
at the beginning



Direct = 3.78 in (baseflow, etc.)

$$R_d = \sum (P - \phi) \Delta t$$

$$3.78 \text{ in} = (1 - \phi) \cdot 2 + (1.5 - \phi) \cdot 2 + (2.5 - \phi) \cdot 2$$

area under 1.5

Given the area under the curve is 3.78 in

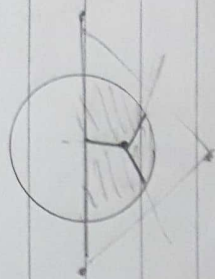
area under the curve is 3.78 in

area under the curve is 3.78 in

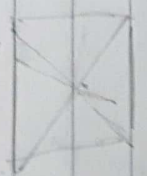
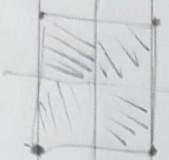
$$\frac{3.78}{2} = 3 - 3\phi \Rightarrow \phi = \frac{3 - 3.78}{6} = 0.13 \text{ in/hr}$$

by area under the curve is 3.78 in and 1.5 in/hr
area under the curve is 3.78 in and 1.5 in/hr

visiting museum
 visit the museum tomorrow



visiting museum



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