

Gazi University
Faculty of Engineering Civil Engineering Department
CE 372 HYDROLOGY
2020 Spring Term
Homework 1

11.02.20209

1) Determine the outflow from the reservoir (in m^3/sec) in June with the following data:

Mean monthly inflow to lake:	= $25 \text{ m}^3/\text{sec}$
Mean seepage rate:	= $4160 \text{ m}^3/\text{day}$
Monthly precipitation on the reservoir:	= 30 mm .
Change in reservoir level:	= $1\text{Y} \text{ cm/month}$ (decrease)
Monthly evaporation:	= 250 mm .
Surface area of the reservoir:	= 40 km^2

2) For the month of April, a lake having an average surface area of 2.5 km^2 has the following properties:

Mean monthly inflow to lake:	= $0.5\text{R} \text{ m}^3/\text{sec}$
Mean monthly outflow from lake:	= $0.45 \text{ m}^3/\text{sec}$
Mean seepage rate:	= $1500 \text{ m}^3/\text{day}$
Monthly precipitation on lake:	= 46 mm/month
Change in reservoir level:	= 170 mm/month (increase)

Estimate the loss of water from the lake surface as evaporation in April (in mm/month).

3) The surface area of the lake is 265 km^2 and the annual precipitation $p=6\text{Q} \text{ cm}$. The annual inflow to the lake is $1.4 \text{ m}^3/\text{s}$. If there is a rise of 8.5 cm in the lake level (water level) compute the outflow of the lake assuming that the annual evaporation is $159 \times 10^6 \text{ m}^3$ and seepage is neglected.

FIND YOUR MISSING NUMBER IN HOMEWORK FROM YOUR STUDENT NUMBER

KEY: Student No: XYZTVMQR

Example: Student No: 94113060 Y=4 , Q=6 , R=0

Bring your Homework to Lecture. Tuesday for English & Montana Sections
Friday for %30 English Sections.
Deadline: 21.03.2020