ANSWER THE FOLLWING QUSTIONS USING SCKETCHES TO EXPLAIN YOUR ANSWERES IF REQUIRED.
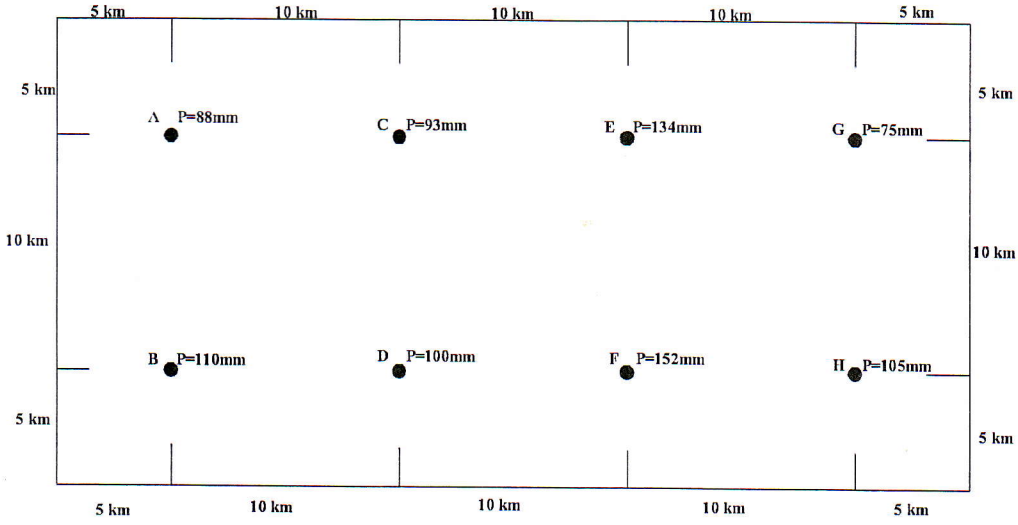
QUSTION NO. (1)

a) Define (Hydrogeology- Climatology)?

b) Describe using sketch the hydrological cycle?

c) A river basin with area of 15 KM^2 , the inflow (I) through a month is 5 M^3/sec and the outflow (O) through the same month is 3 M^3/sec and the precipitation is 4.5 cm. If the change of the storage is 0.15 Million M^3 calculate the evapo-transpiration (ET)?

d) what are the parameters that affect on the evaporation?

QUSTION NO. (2)

a) what is the difference between Evaporation and Transpiration?

b) Explain using sketches the evaporation pan experimental method to measure the evaporation?

c) what are the suitable location for the river measurement stations?

d) Explain how to measure the water level in the rivers?

QUSTION NO. (3)

a) What are the various methods used to measure the river discharge?

b) What is the influence of humanity on the hydrological cycle?

c) Explain using sketches the symon"s rain gauge?

d) The shown area has 8 rainfall stations and the recorded precipitation depth at each station are shown. Use the method of arithmetic mean and the method of Thiessen to calculate the average rainfall over the area?

QUSTION NO. (4)

a) What are the parameters that defining the rain fall?

b) Calculate the discharge and the mean velocities for the river if the velocities and depths recorded as shown in table

Distance (m)	0	2	4	6	8	10	12	14	16	18	20	22
Depth (m)	0	1	4	7	8	7	6	5	3	2	1	0
V(0.2y) m/sec	0	1.4	2	2.5	3	3.1	2.5	2.3	2.1	1.8	1.5	0
V(0.8y) m/sec	0	0.7	1.2	1.8	2	1.9	1.7	1.5	1.3	1.1	1	0

c) Explain using sketches the three methods for Hydrograph separation?

d) What is the advantage of stream flow Hydrograph analysis?

مع اطيب التمنيات بالنجاح د.م \ اشرف فتحي اللين