

Quiz

1. Hydrological data processing does not include:
 - i. Converting the units of data
 - ii. Modelling by using the data
 - iii. Measuring the data
 - iv. Disaggregation or aggregation of data.
2. Methods of collection of hydrologic data include
 - i. Direct Measurement
 - ii. Remote Sensing
 - iii. Chemical Tracers
 - iv. All the above
3. To obtain precipitation data with given reliability, compared to plains, the number of stations in mountains will be
 - i. More
 - ii. Less
 - iii. Same
 - iv. Can't answer with given information.
4. Which of the following statement about random errors is not correct?
 - i. These errors are unpredictable,
 - ii. Impact due to these can be reduced by repeated measurements of the variable,
 - iii. Random errors arise due to malfunctioning of instrument
 - iv. Random errors cannot be completely eliminated.

Tutorial

1. What features are considered in selection of suitable site for a rain gauge?
2. List the main methods of measurement of stage of a river. Explain any one of them briefly.
3. Give a brief description of the velocity area method.
4. What do you understand by primary, secondary and hydrological validation?
5. A catchment has 5 rain gauges and the annual rainfall at these has been measured as 650, 450, 565, 482, and 720 mm. Find out the optimum number of rain gauges for the basin if the error of estimation is required to be kept below 10% ?

Case Study

1. Describe the common sources of errors in hydrologic measurements.
2. Compare the BIS and WMO criteria for selection of sites for measuring river flow ?

To do

Visit a hydrometeorological station and find out the variable(s) being measured, instruments being used, infrastructure, and how the data are being processed. If you find that the procedure as per the applicable standard is not being followed, the same may be brought to the notice of a responsible officer.