

UNIT – I : Hydrologic Cycle and Precipitation

1. The continuous circulation of water between the atmosphere, land, and oceans is called
 - a) Water balance
 - b) Hydrologic cycle
 - c) Infiltration
 - d) Evaporation

Ans: b

2. Which of the following is a form of precipitation?
 - a) Runoff
 - b) Infiltration
 - c) Snowfall
 - d) Evapotranspiration

Ans: c

3. Rainfall occurring due to surface heating is called
 - a) Cyclonic rainfall
 - b) Orographic rainfall
 - c) Convectional rainfall
 - d) Frontal rainfall

Ans: c

4. Orographic precipitation occurs when
 - a) Air rises over mountains
 - b) Air cools over oceans
 - c) Warm and cold air masses mix
 - d) Groundwater evaporates

Ans: a

5. Which instrument records rainfall continuously?
 - a) Symons rain gauge
 - b) Standard rain gauge
 - c) Recording rain gauge
 - d) Evaporimeter

Ans: c

6. Symons rain gauge is a
 - a) Recording rain gauge
 - b) Non-recording rain gauge
 - c) Snow gauge
 - d) Stream gauge

Ans: b

7. The arithmetic mean method is used to determine
 - a) Runoff
 - b) Average precipitation
 - c) Evaporation
 - d) Infiltration

Ans: b

8. The Thiessen polygon method accounts for
 - a) Elevation
 - b) Rain gauge influence area
 - c) Runoff coefficient
 - d) Streamflow

Ans: b

9. Missing rainfall data can be estimated by
a) Normal ratio method
b) Darcy's law
c) Horton equation
d) Manning's formula

Ans: a

10. Consistency of rainfall records is checked using
a) Double mass curve
b) Hydrograph
c) Flow duration curve
d) Mass curve

Ans: a

11. IDF stands for
a) Infiltration-Duration-Frequency
b) Intensity-Duration-Frequency
c) Irrigation-Duration-Frequency
d) Intensity-Depth-Frequency

Ans: b

12. PMP refers to
a) Probable Mean Precipitation
b) Probable Maximum Precipitation
c) Possible Maximum Precipitation
d) Peak Mean Precipitation

Ans: b

13. Which rainfall is most common during Indian monsoons?
a) Orographic
b) Cyclonic
c) Convectional
d) Artificial

Ans: b

14. Isohyetal method is based on
a) Equal runoff lines
b) Equal rainfall lines
c) Equal elevation lines
d) Equal discharge lines

Ans: b

15. Rainfall intensity is expressed as
a) mm/day
b) mm/hour
c) m³/s
d) liters/day

Ans: b

16. Snow, sleet, and hail are forms of
a) Evaporation
b) Runoff
c) Precipitation
d) Infiltration

Ans: c

17. Depth-Area-Duration relationship is useful in
a) Flood studies
b) Soil classification
c) Canal design
d) Well design

Ans: a

18. The Indian Meteorological Department is abbreviated as
a) IWD
b) IMD
c) IHD

d) IRD

Ans: b

19. Rain gauge density depends upon

- a) Catchment characteristics
- b) Soil type only
- c) Temperature only
- d) Wind velocity only

Ans: a

20. Hydrology mainly deals with

- a) Soil particles
- b) Water occurrence and movement
- c) Rock properties
- d) Structural design

Ans: b

Fill in the Blanks

1. The continuous circulation of water on the earth is called the _____ cycle.

Answer: Hydrologic

2. Water falling from the atmosphere to the earth is known as _____.

Answer: Precipitation

3. Rain, snow, sleet, and hail are forms of _____.

Answer: precipitation

4. The instrument used to measure rainfall is called a _____ gauge.

Answer: rain

5. A rain gauge that continuously records rainfall is called a _____ rain gauge.

Answer: recording

6. The most common non-recording rain gauge in India is the _____ gauge.

Answer: Symons

7. The average rainfall over an area is called _____ precipitation.

Answer: mean

8. Missing rainfall data can be estimated using the _____ ratio method.

Answer: normal

9. Consistency of rainfall records is checked using the _____ mass curve.

Answer: double

10. The relationship among rainfall intensity, duration, and frequency is called _____ relationship.

Answer: IDF

11. PMP stands for Probable Maximum _____.

Answer: Precipitation

12. Rainfall intensity is generally expressed in _____/hour.

Answer: mm

13. The maximum possible rainfall over an area is called _____.

Answer: PMP

14. Depth-area-duration studies are useful in _____ estimation.

Answer: flood

15. India receives most rainfall from the _____ monsoon.

Answer: southwest

16. The standard unit of rainfall measurement is _____.

Answer: millimeter

17. A network of rain gauges is called a rain gauge _____.

Answer: network

18. Snowfall is a form of _____ precipitation.

Answer: solid

19. Hail consists of balls of _____.

Answer: ice

20. Hydrology deals with the occurrence and movement of _____.

Answer: water



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