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# **APPSC Exam**

Previous Paper

# Simplifying **Government Exams**



HA/648

2012

Series C

## HYDROLOGY

### Paper II

Time: 150 Minutes

Max. Marks: 300

#### INSTRUCTIONS

- 1. Please check the Test Booklet and ensure that it contains all the questions. If you find any defect in the Test Booklet or Answer Sheet, please get it replaced immediately.
- 2. The Test Booklet contains 150 questions. Each question carries two marks.
- 3. The Test Booklet is printed in four (4) Series, viz. ABCD. The Series, A or B or C or D is printed on the right-hand corner of the cover page of the Test Booklet. Mark your Test Booklet Series A or B or C or D in Part C on side 1 of the Answer Sheet by darkening the appropriate circle with Blue/Black Ball point pen.

Example to fill up the Booklet Series

If your Test Booklet Series is A, please fill as shown below:









If you have not marked the Test Booklet Series at Part C of side 1 of the Answer Sheet or marked in a way that it leads to discrepancy in determining the exact Test Booklet Series, then, in all such cases, your Answer Sheet will be invalidated without any further notice. No correspondence will be entertained in the matter.

4. Each question is followed by 4 answer choices. Of these, you have to select one correct answer and mark it on the Answer Sheet by darkening the appropriate circle for the question. If more than one circle is darkened, the answer will not be valued at all. Use Blue/Black Ball point pen to make heavy black marks to fill the circle completely. Make no other stray marks.

e.g.: If the answer for Question No. 1 is Answer choice (2), it should be marked as follows:



5. Mark Paper Code and Roll No. as given in the Hall Ticket with Blue/Black Ball point pen by darkening appropriate circles in Part A of side 1 of the Answer Sheet. Incorrect/not encoding will lead to *invalidation* of your Answer Sheet.

Example: If the Paper Code is 027, and Roll No. is 95640376 fill as shown below:

Paper Code

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Roll No.

9	5	6	4	0	3	7	6
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- 6. Please get the signature of the Invigilator affixed in the space provided in the Answer Sheet. An Answer Sheet without the signature of the Invigilator is liable for *invalidation*.
- 7. The candidate should **not** do rough work or write any irrelevant matter in the Answer Sheet. Doing so will lead to *invalidation*.
- 8. Do not mark answer choices on the Test Booklet. Violation of this will be viewed seriously.
- 9. Before leaving the examination hall, the candidate should hand over the original OMR Answer Sheet (top sheet) to the Invigilator and carry the bottom sheet (duplicate) for his/her record, failing which disciplinary action will be taken.
- 10. Use of whitener is prohibited. If used, the answer sheet is liable for invalidation.

- 1. Porosity is high in one of the following 6. materials:
  - (1) Shale
  - (2) Sandstone
  - (3) Limestone
  - (4) Clay
- 2. Rain shadow occurs towards
  - (1) Windward side
  - (2) Leeward side
  - (3) Upward side
  - (4) Lowward side
- 3. The following is one of the grain sizes of gravel:
  - (1) < 0.002
  - (2) 0.6 to 0.02
  - (3) 0.02 to 0.006
  - (4) > 2.0
- 4. Indian climate is strongly influenced by
  - (1) Northeast monsoon
  - (2) Northwest monsoon
  - (3) Southwest monsoon
  - (4) (1) and (3)
- 5. India receives an average rainfall of
  - (1) 1,200 mm
  - (2) 1,000 mm
  - (3) 1,400 mm
  - (4) 1,300 mm

- About 80% of the rainfall contributes from the
  - (1) Northwest monsoon
  - (2) Southwest monsoon
  - (3) Northeast monsoon
  - (4) Southeast monsoon
- 7. Highest rainfall occurs at
  - (1) Cherrapunji
  - (2) Mawsynram
  - (3) Imphal
  - (4) Itanagar
- 8. Factors affecting the type of soil in a region are
  - (1) Climate
  - (2) Vegetation
  - (3) Landscape
  - (4) (1), (2) and (3)
- 9. Post-monsoon occurs during
  - (1) October December
  - (2) June September
  - (3) March May
  - (4) January February
- 10. The climate of the Northeastern region is
  - (1) Arid
  - (2) Semi-arid
  - (3) Tropical wet
  - (4) Humid subtropical

- 11. The maximum rate of flow attained at a given point during a flood event is called the
  - (1) Flood peak
  - (2) Flood current
  - (3) Flood frequency
  - (4) (1) and (3)
- 12. A well from which water flows without pumping is termed
  - (1) Flowing well
  - (2) Recharge well
  - (3) Tube-well
  - (4) Dug well
- 13. The maximum amount of material that the stream is able to transport is called the
  - (1) Stream flood
  - (2) Stream sediment
  - (3) Stream capacity
  - (4) Stream capture
- 14. Electromagnetic spectrum contains
  - (1) Six bands
  - (2) Three bands
  - (3) Four bands
  - (4) Five bands
- 15. Photo infra-red imagery is very effective for
  - (1) Soil-moisture differentiation
  - (2) Colour differentiation
  - (3) Temperature differentiation
  - (4) (1), (2) and (3)

- 16. The hydrograph of storm run-off resulting from an isolated rainfall of some unit duration occurring uniformly over the entire area of the catchment produces a unit volume of run-off called the
  - (1) Base of variation
  - (2) Unit hydrograph
  - (3) Hydrograph separation
  - (4) Streamflow hydrograph
- 17. The maximum flood that any structure can safely pass is called the
  - (1) Design flood
  - (2) Flood peak
  - (3) Flood frequency
  - (4) Flood elevation
- 18. The process of determining the reservoir stage, storage volume of the outflow hydrograph corresponding to a known hydrograph of inflow into the reservoir, is called the
  - (1) Flood discharge
  - (2) Flood volume
  - (3) Flood routing
  - (4) Flood control
- 19. If the rainfall is more than 750 mm, the climate is called the
  - (1) Arid climate
  - (2) Semi-arid climate
  - (3) Semi-humid climate
  - (4) Humid climate
- 20. All India forecasts are prepared every day at
  - (1) Pune
  - (2) Hyderabad
  - (3) Chennai
  - (4) Delhi

- 21. The best flood control method in India is
  - (1) Reservoirs
  - (2) Construction of levees
  - (3) Channel improvement
  - (4) Flood plain zoning
- 22. Tropical cyclone has
  - (1) Small diameter
  - (2) High wind velocity
  - (3) Heavy precipitation
  - (4) (1), (2) and (3)
- 23. Usage of hydrographs is
  - (1) Evaporation loss
  - (2) Groundwater loss
  - (3) Run-off loss
  - (4) Determination of storage capacity
- 24. Flood absorbing capacity is a function of
  - (1) Full reservoir level
  - (2) Highest flood level
  - (3) Half reservoir level
  - (4) (1) and (2)
- 25. Discharge velocity is known as
  - (1) Darcian velocity
  - (2) Specific recharge
  - (3) Specific velocity
  - (4) None of the above

- 26. Thermal remote sensing systems are used to detect
  - (1) Wave energy
  - (2) Visible wave
  - (3) Temperature changes
  - (4) (1) and (2)
- 27. Light interacting with gases and particulate matter during the transmission of energy through the atmosphere is called
  - (1) Atmospheric windows
  - (2) Atmospheric scattering
  - (3) Atmospheric absorption
  - (4) (1) and (3)
- 28. The electromagnetic property of materials is expressed by the
  - (1) Complex relative permittivity
  - (2) Surface roughness
  - (3) Radar scattering mechanism
  - (4) Radar wavebands
- 29. Satellite systems parameters are of two types:
  - (1) Instrumental
  - (2) Viewing
  - (3) (1) and (2)
  - (4) None of the above
- 30. Earth resources satellites are associated with
  - (1) Visible wavelengths
  - (2) Micro-wavelengths
  - (3) Thermal infra-red wavelengths
  - (4) (1), (2) and (3)

31.	An equation for	the flow o	of water	in a fully
	confined aquifer	is called a		the maish

- (1) Theis equation
- (2) Jacob equation
- (3) Chow equation
- (4) Walton equation
- 32. Cloudiness in water due to suspended and colloidal organic and inorganic material is expressed by
  - (1) Colour
  - (2) Taste
  - (3) Odour
  - (4) Turbidity
- 33. A cave that occurs above the water table is called a
  - (1) Karst cave
  - (2) Vadose cave
  - (3) Phreatic cave
  - (4) (1) and (3)
- 34. A cave that forms at the approximate position of the water table is called a
  - (1) Water table cave
  - (2) Vadose cave
  - (3) Phreatic cave
  - (4) (1) and (2)

- 35. The soil-moisture content below which plants are unable to withdraw soil moisture is called the
  - (1) Wilting point
  - (2) Field capacity
  - (3) Soil water
  - (4) Soil liquefaction
- 36. The condition under which one or more of the hydraulic properties of an aquifer vary according to the direction of flow is known as the
  - (1) Anisotropy
  - (2) Isotrophy
  - (3) Geography
  - (4) (1), (2) and (3)
- 37. An equation that can be used to compute the quantity of water flowing through an aquifer is expressed by
  - (1) Debye-Huckel equation
  - (2) Darcy's law
  - (3) Boussinesq equation
  - (4) Dupuit equation
- 38. The temperature of a given air mass at which condensation will begin is known as
  - (1) Dew point
  - (2) Wilting point
  - (3) Adiabatic expression
  - (4) None of the above

- 39. A condition in which the amount of recharge to an aquifer equals the amount of natural discharge is expressed by
  - (1) Dupuit equation
  - (2) Dynamic equilibrium
  - (3) Darcy's law
  - (4) Manning equation
- 40. The mechanical energy per unit mass of fluid at any given point in space and time is expressed by
  - (1) Force potential
  - (2) Free energy
  - (3) Fluid potential
  - (4) Free potential
- 41. A measure of the amount of calcium and magnesium dissolved in the water is expressed by
  - (1) Alkalinity
  - (2) Hardness
  - (3) Salinity
  - (4) (1) and (2)
- 42. The sum of the elevation head, the pressure head and the velocity head at a given point in an aquifer is expressed by
  - (1) Total velocity
  - (2) Total flow
  - (3) Total energy
  - (4) Total head

- 43. The study of the occurrence, distribution and chemistry of all waters of the earth is the subject of
  - (1) Hydrogeology
  - (2) Geohydrology
  - (3) Groundwater geology
  - (4) Hydrology
- 44. Water that clings to the surfaces of mineral particles in the zone of aeration is known as
  - Hygroscopic water
  - (2) Gravitational water
  - (3) Field capacity
  - (4) (1), (2) and (3)
- 45. A part of the unsaturated zone below the root zone and above the capillary fringe is known as a
  - (1) Soil water zone
  - (2) Intermediate zone
  - (3) Capillary zone
  - (4) Saturation zone
- 46. The partial differential equation governing steady state flow of groundwater is expressed by
  - (1) Darcy's law
  - (2) Laplace equation
  - (3) Hydrologic equation
  - (4) Dupuit equation

- 47. A scale model of an aquifer built using a porous medium to demonstrate groundwater flow is called a
  - (1) Sand model
  - (2) Numerical model
  - (3) Electrical model
  - (4) Stochastic model
- 48. Conflict between two air masses is a result of
  - (1) Orographic precipitation
  - (2) Cyclonic precipitation
  - (3) Frontal precipitation
  - (4) Convectional precipitation
- Automatic-radio-reporting rain-gauge was installed at the Koyna-Hydro-electric project in June
  - (1) 1965
  - (2) 1967
  - (3) 1964
  - (4) 1966
- 50. Factors affecting evapotranspiration are
  - (1) Climate
  - (2) Crop pattern
  - (3) Soil moisture
  - (4) (1), (2) and (3)

- 51. Run-off estimation is associated with
  - (1) Evaporation
  - (2) Interception
  - (3) Infiltration
  - (4) (1), (2) and (3)
- 52. Horton's equation is related to
  - (1) Infiltration
  - (2) Run-off
  - (3) Base flow
  - (4) Soil moisture
- 53. Thermal convection is also called
  - (1) Frontal precipitation
  - (2) Cyclonic precipitation
  - (3) Convectional precipitation
  - (4) Orographic precipitation
- 54. Extra-tropical cycle is associated with
  - (1) Large diameter
  - (2) Frontal type precipitation
  - (3) Convectional precipitation
  - (4) (1) and (2)

55.	The arid region is associated with one of the				
	following characteristic features :				

- (1) Average annual rainfall > 750 mm
- (2) Average annual rainfall between 400 and 450 mm
- (3) Average annual rainfall < 400 mm
- (4) None of the above
- 56. An aquifer that is overlain by a confined bed is called
  - (1) A confined aquifer
  - (2) An unconfined aquifer
  - (3) A perched aquifer
  - (4) A leaky aquifer
- 57. Water that contains a high amount of dissolved solids and is created by liquid seeping from a landfill is called
  - (1) Total dissolved solids
  - (2) Hard water
  - (3) Leachate
  - (4) (1) and (2)

- 58. The volume between mineral grains in a porous medium is called the
  - (1) Permeability
  - (2) Pore space
  - (3) Porosity
  - (4) (1) and (3)
- 59. The following is the most difficult aspect of aquifer protection
  - (1) Control of abandoned wells
  - (2) Control of sea water
  - (3) Control of mining wells
  - (4) None of the above
- 60. Porosity is high in
  - (1) Rhombohedral packing
  - (2) Poorly sorted material
  - (3) Cubic packing
  - (4) (1) and (3)

- 61. IRS-P4 is meant for
  - (1) Oceanographic resources
  - (2) Management of natural resources
  - (3) Management of agricultural resources
  - (4) Estimation of water resources
- 62. Active microwave remote sensing provide their own
  - (1) Energy of thermal origin
  - (2) Reflected energy
  - (3) Backscattered energy
  - (4) Illumination
- 63. Sensor parameters are used for making
  - (1) Observations
  - (2) Spatial resolution
  - (3) Spectral resolution
  - (4) Radiometric resolution
- 64. The basic output of Geographical Information System is the
  - (1) Spatial data analysis system
  - (2) Land use analysis system
  - (3) Geography related system
  - (4) (1), (2) and (3)
- 65. Electromagnetic Wave Theory is formulated by
  - (1) De Broglie
  - (2) Planck
  - (3) Maxwell
  - (4) Schrodinger

- 66. Base flow recession is a function of
  - (1) Topography
  - (2) Drainage
  - (3) Soil and geology
  - (4) (1), (2) and (3)
- 67. Models can be constructed, using electrical circuits to simulate ideal aquifers, which are called
  - (1) Scale models
    - (2) Numerical models
    - (3) Analog models
    - (4) Stochastic models
- 68. Darcy's law is an example of
  - (1) A mathematical model
  - (2) An analytical model
  - (3) A viscous fluid model
  - (4) A scale model
- 69. The finite difference equation is solved by what are known as
  - (1) Iterative methods
  - (2) Direction implicit methods
  - (3) Grid methods
  - (4) (1) and (2)
- 70. Konikow and Bredehoeft model is a
  - (1) Finite-difference groundwater flow model
  - (2) Finite element simulation model
  - (3) Solute-transport model
  - (4) (1), (2) and (3)

- 71. Solute-transport models are used in studies of 76.
  - (1) Regional changes in hydraulic head
  - (2) Contamination plumes
  - (3) Sea water intrusion
  - (4) (2) and (3)
- 72. Groundwater flow models are associated with 77.
  - (1) Regional steady-state flow in aquifer systems
  - (2) Storage of thermal energy in aquifers
  - (3) Groundwater heat-pump impacts
  - (4) Land subsidence
- 73. Heat-transport models are used in the analysis of
  - (1) Radio nuclide movement
  - (2) Dewatering well system
  - (3) Waste disposal sites
  - (4) None of the above
- 74. If the soil moisture is present before a particular event, it is called the
  - (1) Antecedent moisture
  - (2) Soil moisture
  - (3) Excess precipitation
  - (4) (2) and (3)
- 75. The process by which water can be injected or added to the aquifer, is called the
  - (1) Aquitard
  - (2) Aquiclude
  - (3) Aquifuge
  - (4) Artificial recharge

- 76. The water from precipitation that collects in puddles at the land surface, is called the
  - (1) Artificial storage
  - (2) Depression storage
  - (3) Specific storage
  - (4) None of the above
- 77. The water that falls directly into a lake or steam without passing through any land-phase of the run-off cycle, is called the
  - (1) Direct precipitation
  - (2) Excess precipitation
  - (3) Total precipitation
  - (4) Front precipitation
- 78. The evapotranspiration that actually occurs under given climatic and soil-moisture conditions is known as
  - (1) Potential evapotranspiration
  - (2) Actual evapotranspiration
  - (3) Evapotranspiration
  - (4) Evaporation
- 79. A digital groundwater flow model where the aquifer is divided into a mesh formed of a number of polygonal cells is known as a
  - (1) Finite element model
  - (2) Finite difference model
  - (3) (1) and (2)
  - (4) None of the above
- 80. The maximum amount of moisture that can be contained by an air mass at a given temperature is called the
  - (1) Saturation humidity
  - (2) Relative humidity
  - (3) Absolute humidity
  - (4) None of the above

- 81. Bodies of water with separate but distinct chemical compositions contained in an aquifer are known as
  - (1) Hydrochemical facies
  - (2) Water chemistry
  - (3) Chemical signatures
  - (4) (2) and (3)
- 82. Percent ratio of the absolute humidity to the saturation humidity for an air mass is called
  - (1) Absolute humidity
  - (2) Saturation humidity
  - (3) Relative humidity
  - (4) None of the above
- 83. An expression of the law of mass conservation for purposes of water budgets is expressed by
  - (1) Darcy equation
  - (2) Dupuit equation
  - (3) Hydrologic equation
  - (4) Hantush-Jacob equation
- 84. Rainfall that evaporates from standing vegetation is known as
  - (1) Evaporation loss
  - (2) Transpiration loss
  - (3) Interception loss
  - (4) Water loss
- 85. The process by which the precipitation is captured on the surfaces of vegetation before it reaches the land surface is called the
  - (1) Interception
  - (2) Precipitation
  - (3) Transpiration
  - (4) Evaporation

- The condition in which hydraulic properties of the aquifer are equal in all directions is known as the
  - (1) Isotropy
  - (2) Anisotropy
  - (3) Hydrograph
  - (4) (1), (2) and (3)
- 87. Water entering the hydrologic cycle for the first time is called
  - (1) Connate water
  - (2) Juvenile water
  - (3) Groundwater
  - (4) Surface water
- 88. A cave that forms below the water table is called a
  - (1) Phreatic cave
  - (2) Karst cave
  - (3) Capillary cave
  - (4) Barrier cave
- 89. Run-off includes
  - (1) Overland flow and return flow
  - (2) Interflow
  - (3) Base flow
  - (4) (1), (2) and (3)
- 90. The actual rate of movement of fluid particles through porous media is known as the
  - (1) Seepage velocity
  - (2) Safe yield
  - (3) Specific velocity
  - (4) (1) and (2)

- 91. Water, which is in the atmosphere in gaseous, liquid or solid state, is termed
  - (1) Surface water
  - (2) Atmospheric water
  - (3) Ice water
  - (4) Solid water
- 92. The difference between the field capacity and the wilting point is called the
  - (1) Available soil moisture
  - (2) Gravity water
  - (3) Drainage water
  - (4) (2) and (3)
- 93. Best example of primary porosity is
  - (1) Joints
  - (2) Faults
  - (3) Amygdaloidal structure
  - (4) Folds
- 94. If the water is retained against the force of pumping in the aquifer, it is called the
  - (1) Specific yield
  - (2) Specific retention
  - (3) Permeability
  - (4) (1) and (2)
- 95. Constant head type is used to determine the permeability in the rocks associated with
  - (1) High permeability
  - (2) Low permeability
  - (3) High infiltration
  - (4) Low infiltration

- 96. Phreatic aquifer is also known as
  - (1) Confined aquifer
  - (2) Unconfined aquifer
  - (3) Semi-confined aquifer
  - (4) Semi-unconfined aquifer
- 97. The range of coefficient of storage in the confined aquifer is
  - (1) 0.00001 to 0.001
  - (2) 0.0001 to 0.001
  - (3) 0.001 to 0.01
  - (4) 0.01 to 0.30
- 98. What are the aquifer characteristics?
  - (1) Transmissivity
  - (2) Storage coefficient
  - (3) Discharge
  - (4) (1) and (2)
- 99. The highest desirable limit of arsenic in the drinking water is
  - (1) 0.05 mg/l
  - (2) 0.5 mg/l
  - (3) 0.005 mg/l
  - (4) 0.01 mg/l
- 100. If fluoride content is below 0.6 mg/l in the drinking water, what will happen?
  - (1) Fluorosis
  - (2) Dental decay
  - (3) Unpleasant taste
  - (4) Blue baby disease

101.	Hard water prevent		
	(1)	Taste	
	(2)	Cancer	

- (3) Lathering
- (4) Salinity in water
- 102. Sodium hazard in irrigated water is expressed by
  - (1) RSC
  - (2) Percent sodium
  - (3) SAR
  - (4) EC
- 103. If the water contains more than 1,000 mg/l TDS, it causes
  - (1) Incrustation
  - (2) Corrosion
  - (3) Organic pollution
  - (4) Domestic pollution
- 104. Fresh water and salt water distribution in a coastal aquifer is described by
  - (1) Zone of diffusion
  - (2) Ghyben-Herzberg relation
  - (3) Salinity variation
  - (4) Groundwater extraction
- 105. An indirect index of the presence of organic matter in water is
  - (1) COD
  - (2) BOD
  - (3) TDS
  - (4) DO

- 106. Colour is produced in the water by
  - (1) Organic matter
  - (2) Iron content
  - (3) H<sub>2</sub>S
  - (4) (1) and (2)
- 107. If the residual sodium carbonate exceeds 2.50 mg/l in the water, it is
  - (1) Unsuitable for irrigation
    - (2) Suitable for irrigation
    - (3) Marginally suitable for irrigation
    - (4) Fairly suitable for irrigation
- 108. Disease-causing bacteria are known as
  - (1) Micro-organisms
  - (2) Pathogenic bacteria
  - (3) Faecal matter
  - (4) None of the above
- 109. The process of diversion of surface flow to the aquifer is termed as
  - (1) Induced recharge
  - (2) Waste water recharge
  - (3) Groundwater recharge
  - (4) (1) and (3)
- 110. Moisture surplus is also called
  - (1) Soil moisture utilization
  - (2) Soil moisture recharge
  - (3) Water surplus
  - (4) (1) and (2)

- 111. If a rock does not transmit or store any 116. Positive boundary is associated with water, it is called an
  - (1) Aquifer
  - (2)Aquiclude
  - (3) Aquifuge
  - (4) Aquitard
- The following iron content is the maximum 112. permissible limit for drinking water :
  - 1.5 mg/l
  - 0.05 mg/l
  - 1.0 mg/l (3)
  - (4) 0.5 mg/l
- 113. Sea water intrusion into inland aquifer can be controlled by
  - Reducing pumping
  - Increasing water supply
  - (3) Forming some type of barrier
  - (1), (2) and (3)
- 114. A recharge well is also called as
  - (1) Inverted well
  - Dug well (2)
  - Borewell (3)
  - Tube-well (4)
- 115. Desirable limit of nitrate in the drinking 120. water is
  - (1) 50 mg/l
  - (2)40 mg/l
  - (3) 45 mg/l
  - (4) 55 mg/l

- - Recharging stream
  - Non-recharging stream
  - Discharging well (3)
  - None of the above (4)
- 117. If the well is penetrated into the entire thickness of the aquifer material, the well is called the
  - (1) Partially penetrated well
  - Fully penetrated well (2)
  - (3) Non-penetrated well
  - (1) and (2) (4)
- 118. A circular or nearly circular area of low atmospheric pressure around which the winds blow counter clock-wise in the northern hemisphere and clock-wise in the southern is known as a
  - (1) Cyclone
  - Orographic rainfall
  - Frontal rainfall (3)
  - (4) Conventional rainfall
- The process by which water changes from the 119. gaseous state into the liquid or solid state is called
  - (1) Evaporation
  - Precipitation (2)
  - Condensation (3)
  - Transpiration (4)
- Rate of evaporation is high in the areas associated with
  - Low humidity (1)
  - (2)High temperature
  - (3) High wind speed
  - (1), (2) and (3) (4)

- 121. Which of the following is the rain gauge 126. Water cycle is also called density in plain areas?
  - (1) 1 for 500 sq. km
  - (2) 1 for 530 sq. km
  - (3) 1 for 540 sq. km
    - (4) 1 for 520 sq. km
- of water 122. The quantity precipitation can be calculated by
  - (1) Thiessen polygon method
  - (2) Isohyetal method
    - (3) (1) and (2)
    - Water density
- 123. Base flow is also called
  - Stream flow (1)
  - Surface run-off (2)
  - Groundwater run-off (3)
  - (4) Interflow
- 124. If stream contributes water to groundwater, it is termed
  - Influent stream (1)
  - Effluent stream
  - Run-off stream
  - Intermediate stream
- 125. Infiltration rate in soils can be determined 130. using
  - Permeameter
  - Darcy flow (2)
  - Reynolds' number (3)
  - Lysimeter (4)

- - Run-off (1)
  - Internal water (2)
  - Hydrologic cycle (3)
  - Base flow (4)
- 127. Water is available for evaporation from the following kinds of surfaces:
  - (1) Ground surface
  - (2) Open water surface
  - (3) Vegetation
  - (4) (1), (2) and (3)
- 128. If maximum amount of water can hold against the force of gravity in soil, it is called
  - (1) Wilting point
  - Gravity water (2)
  - Field capacity
  - Connate water
- The relation between discharge and river 129. stage is shown as
  - (1) Rating curve
  - Run-off curve
  - Recession curve (3)
  - (4) Infiltration curve
  - Downward movement of water from the ground surface is known as
    - Percolation
    - Depression storage (2)
    - Infiltration (3)
    - Channel precipitation (4)

- 131. A graph showing stage, flow, velocity or other 136. Self-recording rain gauge gives the following property of water with respect to time is known as a
  - Hydraulic profile (1)
  - Hydrography (2)
  - Hydrometer (3)
  - (4) Hydrograph
- 132. Quantitative changes of water are expressed in the following equation:
  - Barometric efficiency
  - (2) Tidal efficiency
  - Laminar flow (3)
  - Water balance (4)
- 133. Soil classification triangle shows the relation | 138. between
  - (1) Particle size and specific yield
  - Particle size and specific retention
  - (3) Particle size and porosity
  - (4) Particle size and permeability
- 134. Soil evaporation will continue at a high rate after
  - (1) Heavy rainfall
  - Low soil temperature (2)
  - Cessation of rainfall (3)
  - Low rainfall (4)
- 135. Evapotranspiration is also known as
  - (1) Soil evaporation
  - (2)Potential evapotranspiration
  - (3) Actual evaporation
  - Consumptive use (4)

- records:
  - Rainfall (1)
  - (2) Rainfall intensity
  - Duration of rainfall
  - (1), (2) and (3)
- 137. At what time, is the rain water in the gauge measured in India?
  - (1) 06.30
  - (2)08.30
  - (3) 12.30
  - (4) 15.30
- Symon's rain gange is a
  - Non-recording rain gauge
  - Self-recording rain gauge
  - Automatic rain gauge
  - Digital rain gauge
- Soil moisture is measured by 139.
  - (1) Tensiometer
  - (2)Permeameter
  - (3)Lysimeter
  - (4) Pan Evaporimeter
- 140. If the total water loss is maximum through evaporation and transpiration, it is called the
  - Evapotranspiration (1)
  - Actual evapotranspiration (2)
  - Potential evapotranspiration (3)
  - Consumptive use

- 141. The maximum infiltration rate is termed as
  - (1) Final infiltration
  - (2) Actual infiltration
  - (3) Infiltration rate
  - (4) Infiltration capacity
- 142. Watershed is also termed
  - (1) Drainage area
  - (2) Drainage basin
  - (3) Catchment area
  - (4) (1), (2) and (3)
- 143. Overland flow is a part of
  - (1) Base flow
  - (2) Stream flow
  - (3) Interflow
  - (4) Inflow
- 144. The volume of water temporarily stored and released into the stream, is called the
  - (1) Bank storage
  - (2) Effluent stream
  - (3) Depression storage
  - (4) None of the above
- 145. Water within the zone of rock flowage is called
  - (1) Run-off
  - (2) Overland flow
  - (3) Internal water
  - (4) Interflow

- 146. The average number of times a flood of a given magnitude is likely to occur over a period of years, is called the
  - (1) Flood peak
  - (2) Flood frequency
  - (3) Flood current
  - (4) Flood model
  - 147. A ratio of total length of all channels within a drainage basin to the area of that basin is called a
    - (1) Drainage length
    - (2) Drainage area
    - (3) Drainage density
    - (4) Drainage divide
  - 148. Arrangement of natural drainage lines within an area is known as
    - (1) Drainage area
    - (2) Drainage pattern
    - (3) Drainage divide
    - (4) Drainage system
  - 149. More ground water run-off occurs, where the area is associated with
    - (1) High surface permeability
    - (2) Low slope
    - (3) Low intensity of precipitation
    - (4) (1), (2) and (3)
  - 150. The actual quantity of water vapour present in a given volume of air is called
    - (1) Relative humidity
    - (2) Absolute humidity
    - (3) Specific humidity
    - (4) None of the above

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