







10 Menti Quiz SUBJECT WISE Detailed Solutions

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Q:) A clay in flocculated structure has.... Civil ESIC JE.2019

A : Low permeability, low strength and high compressibility

- B : High permeability, high strength and low compressibility
- C : Low permeability, high strength and low compressibility
- D : High permeability, high strength and high compressibility

Q:) For Saturated soils, the coefficient of proportionality between the flow of water and the hydraulic head gradient, is usually known as: BSPHCL JE Civil 29.01.2019 (Batch - 2)

- A : Coefficient of discharge
- B : Head constant
- C : Coefficient of permeability
- D : Coefficient of Transmissivity.

Q:) Consider the following statements:
The coefficient of permeability 'K' depends upon
(i) Void ratio of the soil
(ii) Duration of flow
(iii) Diameter of the soil grain
(iv) Shape of the particle
Which of the above statement is correct?
(Rajasthan PSC 2018)

- A : i,ii,iii,iv
- B: ii & iii only
- C: i.iii & iv only
- D : iii & iv

Q:) According to Hazen's approximation of permeability of sands, if the effective diameter is 0.2 cm, then the permeability (cm/s) will be approximately equal to: DDA Je 23.04.2018 (First shift)

- A : 20
- B:4
- C:200
- D:40

Q:) What will happed to the permeability of soil mass if air is entrapped in its voids? JMRC J.E. 13.05.2018 (Shift-I) A : Increases

- B : Decreases
- C : Entrapped air doesn't affect permeability
- D: Depends on the viscosity of the fluid

- Q:) Capillary water in soils UK combined AE paper-I, 2012
- A : Causes negative pore water pressure
- B : reduces effective pressure
- C : reduces effective capacity
- D : All the above are true

Q:) The spacing of tile drains to relieve water logged land is directly proportional to the (Haryana SSC JE 2015)

- A : Depth of drain below ground surface
- B : Depth of impervious strata from the drain
- C : Depth of drain below water level.
- D : Coefficient of permeability of the soil to be drained

Q:) Which of the following is NOT an indirect method of estimating of soil in field? [Coal India 2016]

- A : Calculations from grain size and specific surface
- B : Pumping out test
- C : Horizontal capillary tests
- D : Consolidation of test data

- Q:) What is the use of ondoscope? (UPRVUNL AE 2015)
- A : Checking the accuracy of water meters
- B : Regulating the fire hydrants
- C : As a replacement of venturimeter for discharge measurement
- D : Detection of leakage underground water

Q:) Keeping the compaction curve in mind. The soil that in wet part. NWDA JE 2019 (12:30 to 2:30 PM)

- A : Optimum area has higher permeability than the dry part
- B : More than the dry part of the optimum area shear is capable
- C : Is a dispersed structure
- D : Is a puffed structure

Q:) The height of hammed drop in standard proctor test and modified proctor test, respectively, is: DMRC J.E. 12:15 pm

- A : 30 cm & 15 cm
- B:15 cm & 30 cm
- C : 30 cm & 45 cm
- D:45 cm & 30 cm

Q:) The water in the soil which is in excess of the hygroscopic and capillary water and which the soil is porous and drainage available is called-RRB JE CBT - II 28-08-2019 (evening)

- A : Free water
- B : Hygroscopic water
- C : Firing water
- D : Capillary water

Q:) The coefficient of volume compressibility m_v has an unit of: M.P. sub engg. 4 sep 2018 2.00 pm A : m/kN B: kN/m $C: kN/m^2$ $D: m^2/kN$

Q:) In a standard california bearing ratio test (Sample height is 125 mm), the difference between the intial and final dial gauge reading is found to be 0.125 mm. What is the expansion ratio of this soil? DDA JE 23.04.2018 (First shift)

- A:10
- B:1
- C:100
- D:0.1

Q:) On a pressure-voids ratio for a soil, the slope of the linear portion is referred as _____. (NPCC JE 21 jan 2017) A : Swelling index

- B : Compression index
- C : Coefficient of volume change
- D : Coefficient of compressibility

Q:) When load is applied over the soil stratum then the minimum settlement occurs at? (UPRVUNL JE 09-11-2016)

- A : Clayey silt stratum
- B : Sandy clay stratum
- C : Normally consolidated clay stratum
- D: Over consolidated clay stratum

Q:) Which of the following is not a cause of differential settlement in soil foundations? (UPRVUNL AE 2016)

- A : Varying water regime on a construction site
- B : Overlap of stress distribution in soil from adjoining structures
- C : Consolidation including secondary compression
- D : Unequal expansion of the soil due to excavation for footings

Q:) Coefficient of consolidation fir clays normally: (L.M.R.C. JE 2015)

- A : Decreases with increases in liquid limit
- B : Increases with increases in liquid limit

C : First increases and then decreases with increases in liquid limit.

D : Remains constant at all limits.

Q:) Match the type of test (List 1) with the objective of the test (List 2). SSC JE 25-09-2019 (Morning) List 1

- A. Standard penetration test
- B. Hydrometer test
- C. Proctor test
- D. Vane test

- 1. Grain size analysis
- 2. Shear strength
- 3. Bearing capacity
- 4. Compraction

Codes:

A : A-3, B-1, C-2, D-4 am More, Earn More B : A-3, B-1, C-4, D-2

C : A-2, B-1, C-4, D-3

D : A-4, B-2, C-3, D-1

Q:) In which of the following tests, the failure plane is predetermined? (UPRVUNL JE 2019)

- A : Triaxial test
- B : Vane shear test
- C : Direct shear test
- D : Unconfined compression test

Q:) The depth of water required to being the soil moisture constant of a given soil up to field capacity is known as BSPHCL JE Civil 29.01.2019 (Batch-1)

A : Consumptive use efficiency

- B : Equivalent moisture
- C : Soil moisture deficiency
- D : Hygroscopic water

Q:) Review the following statements and select the most approximate options.

Consider the following statements related to the Mohr-coulomb failure theory:

Failure criterion is independent of the intermediate principal stress.

LMRC J.E. 13.05.2018 (shift-I)

A : Statement A is true B is false

B : Statement B is true A is false

- C : Both statements are true
- D : Both statement are false

Q:) While drawing Mohr's envelope, the relationship can be considered to be a straight line, if the angle of internal friction is assumed to be: DDA JE 23.04.2018 (First shift)

- A : Right angle
- B:Zero
- C : Constant
- D : Acute angle

Q:) The length of the specimen in a triaxial test is kept about times its diameter. LMRC J.E. 13.05.2018 (shift-I) A:0.5 B:2.5 C:5 D:7

Q:) A vane 20 cm. long and 10 cm diameter was pressed into a soft marine clay at the bottom of a bore hole. Torque was applied and failure occurred at 1000 kg cm. The cohesion of the clay in kg./cm² is: MP Vyapam Draftman 2016)

A : $\frac{6}{7\pi}$

B : $\frac{5}{7\pi}$

C : $\frac{4}{7\pi}$

D : $\frac{3}{7\pi}$

Q:) In the triaxial test the major principal stress is: (UKPSC AE (paper-I) 2007)

- A : Deviator stress
- B : Cell pressure
- C : Deviator stress + Cell pressure
- D : None of the above

Q:) The effective stress strength parameters of a soil are c = 10 kPa and ϕ =300, then shear strength on a plane within the saturated soil mass at a point where total normal stress is 300 kPa and pore water pressure is 150 kPa, will be..... (SSC JE 1 MARCH 2017 evening shift)

- A : 90.5 kPa
- B:96.6 kPa
- C: 101.5 kPa
- D: 1.5.5 kPa

Q:) The expansion of soil due to shear at a constant value of pressure is called (UP jal nigam JE 2016/SSC JE 2015)

- A : Apparent cohesion
- B : True cohesion
- C : Dilatancy
- D : Consistency

Q:) What is the tendency of sand expand by applying the shearing load called? or Expansion of soil under shear is known as-AIRPORT AUTHORITY OF INDIA JE 2015) UP jal nigam JE 2015

- A : Thixotropy
- B : Degree of sensitivity
- C : Dilatancy
- D: Remoulding losseern More, Earn More

Q:) The type of triaxial test that never allows for drainage in the test, by sealing off the sample is known as: [UPRVUNL JE 2014]

- A : Unconsolidated undrained test
- B : Consolidated undrained test
- C : Consolidated test
- D : Consolidated drained test

Q:) In direct shear test, proving ring is used to measure: (UKPSC AE (paper-I) 2007)

- A : Displacement
- B : Shear load
- C : Compressive load
- D: ALI (a), and (c)