

Q : Varnishes which have methylated spirit of wine in which soft resins are dissolved are known as: [UPRVUNL JE 2020]

A : Lacquers

B : Turpentine varnishes

C : Oil varnishes

D : Cutback

Q : Calculate the super elevation to be provided on the horizontal curve of radius 100 m. Design speed is 50 km/h and the design coefficient of lateral friction of 0.15 is fully developed.: [UPRVUNL JE 2020]

A : 0.99

B : 0.047

C : 0.919

D : 0.917

Q : Heating asphalt with sand and mineral fillers produced:
[UPRVUNL JE 2020]

A : Asphaltic felt

B : Asphaltic terrazzo

C : Distilled asphalt

D : Mastic asphalt

Q : Calculate the quantity of bleaching powder require per day for disinfecting 2 million litre day.(Take dosage of chlorine as 1 ppm and bleaching powder contains 40% available chlorine.): [UPRVUNL JE 2020]

A : 4 kg

B : 8 kg

C : 6 kg

D : 10 kg

Q : In industrial building to obtain a hard-wearing surface, the finishing provided above concrete topping is: [UPRVUNL JE 2020]

A : Granolithic finishing

B : Sand finish

C : Basaltic finishing

D : Marble finishing

Q : When rigid hardening is tested for fineness in terms of specific surface by Blaine's air permeability test as per IS : 4031 - 1988, the specific surface must NOT be less than: [UPRVUNL JE 2020]

A : 225 m²/kg

B : 375 m²/kg

C : 325 m²/kg

D : 400 m²/kg

Q : The property of soil which allows it to be deformed rapidly without rupture and without volume change is called:

[UPRVUNL JE 2020]

A : Shrinkage

B : Liquidity

C : Compressibility

D : Plasticity

Q : In a standard penetraton test the number of blows required for penetration of ground for 15 cm, 30 cm, 45 cm, and 60 cm from ground level are 2,4,7 and 9. Then the observed SPT value is:[UPRVUNL JE 2020]

A : 11

B : 9

C : 22

D : 6

Q : As per IS: 456 - 2000, the maximum area of tension reinforcement in a beam shall not exceed _____. Where b = breadth of beam, D = overall depth of beam: [UPRVUNL JE 2020]

A : $0.06bD$

B : $0.04bD$

C : $0.08bD$

D : $0.12bD$

Q : As per IRC standard, aggregates subjected to soundness test should have an average loss in weight not more than _____ when tested in sodium sulphate after 10 cycles.: [UPRVUNL JE 2020]

A : 0.12

B : 0.18

C : 0.1

D : 0.15

Q : In which of the following tests, the failure plane is predetermined?:
[UPRVUNL JE 2020]

A : Vane shear test

B : Triaxial test

C : Unconfined compression test

D : Direct shear test

Q : When the angular number of and aggregates sample is 2, it indicate that the aggregates are more._____: [UPRVUNL JE 2020]

A : Flaky

B : Angular

C : Rounded

D : Partly rounded

Q : During hydraulic design of sewer, if D is the diameter of upper circular portion, the overall depth of a standard egg shaped section is:

[UPRVUNL JE 2020]

A : $2D$

B : $1.50D$

C : D

D : $1.25D$

Q : According to Westergaard, the equivalent radius of resisting section b is given as $b = \underline{\hspace{2cm}}$ where 'a' is the radius of wheel distribution and 'h' is the slab thickness.: [UPRVUNL JE 2020]

A :

$$\sqrt{1.6a^2 + h^2} - 0.675h \text{ when } a < 1.724 'h'$$

B :

$$\sqrt{1.6a^2 + h^2} - 0.625h \text{ when } a > 1.724 'h'$$

C :

$$\sqrt{1.6a^2 + h^2} - 0.675h \text{ when } a > 1.724 'h'$$

D :

$$\sqrt{1.6a^2 + h^2} - 0.625h \text{ when } a < 1.724 'h'$$

Q : Asbestos cement sheets possess which of the following properties?..:

[UPRVUNL JE 2020]

- I. Fire resistant
- II. Vermin resistant
- III. Water resistant

A : I and II

B : II and III

C : I and III

D : I,II and III

Q : Which of the following is used in soil classification?..:

[UPRVUNL JE 2020]

A : Cassagrande's chart

B : Prandtl chart

C : Plasticity chart

D : Newmark's chart

Q : The square root of time fitting method is used to determine:
[UPRVUNL JE 2020]

A : Compaction

B : Coefficient of consolidation

C : Coefficient of permeability

D : Stress distribution under soil.

Q : On which of the following is the sedimentation analysis of particle size distribution based?.: [UPRVUNL JE 2020]

A : Stoke's law

B : Darcy's law

C : Khoslas law

D : Kennedy law

Q : As per IRC standards, the maximum super elevation that can be provided on hill road not bound by snow is: [UPRVUNL JE 2020]

A : 0.08

B : 0.1

C : 0.07

D : 0.04

Q : For a flexible footing the distribution of contact pressure is uniform in: [UPRVUNL JE 2020]

A : Sandy soil

B : Clayey soil

C : Silty soil

D : All type of soil

Q : If 1% solution of a sewage sample is incubated for 5 day at 20% C and depletion of oxygen was found to be 3 ppm, BOD of the sewage is:

[UPRVUNL JE 2020]

A : 300 ppm

B : 225 ppm

C : 200 ppm

D : 250 ppm

Q : Which of the following is the major cause of flexible pavement failure by frost heaving?.: [UPRVUNL JE 2020]

A : Heavy loading

B : Improper bonding

C : Presence of groundwater

D : Improper mixture

Q : The type of stone used generally for masonry work in industrial area exposed to smoke and chemical fumes is.: [UPRVUNL JE 2020]

A : Granite

B : Limestone

C : Marble

D : Sandstone

Q : In mix design of concrete as per IS 10262;2009 the water content for 25 mm-50 mm slump range was found to be 186 L. What would the volume of water if the mix design was intended for 100 mm slump value keeping other parameters contains.: [UPRVUNL JE 2020]

A : 197 L

B : 186 L

C : 191.6 L

D : 180.4 L

Q : The value of runoff coefficient 'C' for bituminous and cement concrete pavement lies between____.: [UPRVUNL JE 2020]

A : 0.8 and 0.9

B : 0.4 and 0.65

C : 0.3 and 0.58

D : 0.35 and 0.70