

Program: BE Civil Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester VI

Course Code: CE-DLO6063 and Course Name: Ground Improvement Techniques

Time: 1 hour

Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	The effect of salinity in soils is
Option A:	Increase in moisture content & soil turns dry, rough
Option B:	Increase in undrained shear resistance of the soil
Option C:	Decrease in unit weight of soil with increase in salinity
Option D:	Decrease undrained shear resistance of soil
Q2.	How can acid soils are best described
Option A:	Base saturated
Option B:	Base unsaturated
Option C:	Acid saturated
Option D:	Base neutral
Q3.	Who proposed the term gypsum requirement
Option A:	Schofield
Option B:	Schoonover
Option C:	Faraday
Option D:	Terzaghi
Q4.	CCE values for Ca(OH) <sub>2</sub> is?
Option A:	136
Option B:	108
Option C:	179
Option D:	60
Q5.	Fine sand possesses
Option A:	Good plasticity
Option B:	Limited plasticity
Option C:	Reasonable plasticity
Option D:	Clay
Q6.	Coarse grained soils are best compacted by a
Option A:	Drum roller
Option B:	Rubber tyred roller

Option C:	Sheep's foot roller
Option D:	Vibratory roller
Q7.	In dynamic consolidation, the dynamic load of the weight were found to be optimistic for
Option A:	Silt
Option B:	Sand
Option C:	Clay
Option D:	Gravel
Q8.	During the pre-compression method, control over the following aspects is not necessary
Option A:	The rate of filling
Option B:	Over pore pressure responses in the foundation soils
Option C:	Lateral movements in the foundation may all be necessary
Option D:	The potential for immediate settlement
Q9.	The bitumens may sometimes be used to stabilise the sub-grades of roads, preferably in
Option A:	Silty soils
Option B:	Granular sandy soils
Option C:	Gravelly soils
Option D:	Cohesive soils
Q10.	With the increase in the plasticity index of a soil, the quantity of lime required for its stabilisations will
Option A:	Increase
Option B:	Decrease
Option C:	Remain unaffected
Option D:	Sometimes increase and sometimes decreases
Q11.	In cement stabilisation the usual proportion of cement to be added to sandy soil is around
Option A:	5%
Option B:	15% for clayey soils
Option C:	10%
Option D:	20%
Q12.	In cement stabilization the usual proportion of cement to be added to the clayey soil is around
Option A:	15%
Option B:	5%
Option C:	10%
Option D:	20%
Q13.	The rate of injection of grout is not depends on

Option A:	Viscosity of the grout
Option B:	Permeability
Option C:	Shear strength of the soil
Option D:	Type of work
Q14.	Groutability ratio (GR) for soil is defined as
Option A:	$GR = \frac{D_{15}}{D_{85}}$
Option B:	$GR = \frac{D_{10}}{D_{85}}$
Option C:	$GR = \frac{D_{15}}{D_{10}}$
Option D:	$GR = \frac{D_{85}}{D_{15}}$
Q15.	Which of the following soil, preferred as Filler grout
Option A:	Bentonite clay
Option B:	Kaolinite or illite clay
Option C:	Fine sand
Option D:	Silts
Q16.	In Jet grouting, upper nozzle delivers
Option A:	Water
Option B:	Grout
Option C:	Air
Option D:	Both water and grout
Q17.	In Jet Grouting, the distance between two nozzle attached at bottom end of drill pipe is
Option A:	500 mm
Option B:	1000 mm
Option C:	250 mm
Option D:	750 mm
Q18.	Minimum thickness of the compacted sand blanket should be
Option A:	0.8 m
Option B:	0.5 m
Option C:	0.6 m
Option D:	0.9 m
Q19.	Permeability of gravels or stones for using stone column is should be
Option A:	More
Option B:	Less
Option C:	Equal
Option D:	Zero

Q20.	The constant of replacement ratio for square pattern of stone column it should be
Option A:	2
Option B:	0.907
Option C:	0.875
Option D:	0.785
Q21.	What is the condition of stone column, when the materials are placed?
Option A:	Consolidation
Option B:	Compaction
Option C:	Vibration
Option D:	Stable
Q22.	Which is not important in soil Reinforcement Distribution?
Option A:	Location fibre
Option B:	Spacing fibre
Option C:	Orientation fibre
Option D:	Rate of fibre
Q23.	Which is not the Types of soil nailing
Option A:	Self-Drilling Soil Nail
Option B:	Grouted Nail
Option C:	Jet-Grouted Soil Nail
Option D:	Bypass Nail
Q24.	Which is not a soil Reinforcement?
Option A:	Wood fibre
Option B:	Steel fibre
Option C:	Glass fibre
Option D:	Copper fibre
Q25.	While design of Reinforcement Earth Retaining wall which is not consider
Option A:	External Stability
Option B:	Internal Stability
Option C:	Seismic Stability
Option D:	Summer Stability