Program: BE Civil Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: CE-DLO7043 and Course Name: Pavement Subgrade materials

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 bearing capacity of clayey soil obtained from plate load test is _____from actual value.
Option A:	same
Option B:	greater
Option C:	less
Option D:	double
Q2.	In the plate loading test for determining the bearing capacity of soil, the size of square bearing plate should be.
Option A:	between 300mm and 750mm
Option B:	less than 300mm
Option C:	greater than 1m
Option D:	between 750mm and 1m
Q3.	Settlement for sandy soil is usually _____the settlement indicated by plate bearing test.
Option A:	greater than
Option B:	less than
Option C:	equal to
Option D:	no effect
Q4.	During a CBR test, the load sustained by a remoulded soil specimen at 2.5mm penetration is 60.5kg and at 5mm penetration is 80.5kg assuming that the load penetration curve is convex throughout, the CBR value (%) of the sample is
Option A:	6.5
Option B:	5.5
Option C:	4.4
Option D:	3.9
Q5.	If consistency index of soil is equal to zero, the soil is in which state
Option A:	Solid
Option B:	Liquid
Option C:	Semi-Solid

Option D:	Solid
Q6.	the additive not used in soil cement stabilisation is?
Option A:	sodium hydroxide
Option B:	sodium carbonate
Option C:	calcium chloride
Option D:	sugar
Q7.	The object of tri-axial compression test is to determine _____ of soil under lateral confinement
Option A:	shear strength
Option B:	permeability
Option C:	Tensile strenght
Option D:	Compressive strenght
Q8.	The maximum difference in specimen length measured during _____
Option A:	loading phase
Option B:	unloading phase
Option C:	pause phase
Option D:	uncaused phase
Q9.	calculate the intensity of vertical pressure due to point load of 4200kg at a depth of 4m from the surface and distance of 2m from axis of loading from boussinesq's equation.
Option A:	71.74 kg/m^2
Option B:	60kg/m^2
Option C:	65.2kg/m^2
Option D:	100kg/m^2
Q10.	Resilient modulus is the elastic modulus based on recoverable strain under ____loads
Option A:	repeated
Option B:	wind
Option C:	pedestrian
Option D:	wind and pedestrian
Q11.	stone aggregate do not have to resist_____.
Option A:	weathering effect
Option B:	traffic load
Option C:	wheel load stress
Option D:	soil load
Q12.	in heavy compaction test free fall height is _____mm.
Option A:	310
Option B:	450
Option C:	200

Option D:	400
Q13.	if the aggregates are weak for road surface then they are having crushing value as
Option A:	less than 10%
Option B:	between 10% to 20%
Option C:	greater than 35%
Option D:	greater than 50%
Q14.	For Sulphur modified bitumen the percentage of Sulphur to be added to bitumen is_____
Option A:	15-18
Option B:	16-18
Option C:	13-15
Option D:	14-16
Q15.	Addition of lime in bitumen helps in_____
Option A:	Accelerates oxidation process
Option B:	Retards oxidation process
Option C:	Doesn't affect oxidation
Option D:	Reverses oxidation process
Q16.	Polymers added to bitumen helps to_____
Option A:	increase softening point
Option B:	decrease softening point
Option C:	doesn't change softening point
Option D:	Accelerates softening process
Q17.	Tar is obtained from_____
Option A:	wood
Option B:	petroleum
Option C:	coal
Option D:	kerosene
Q18.	weight of compacted uncoated specimen in air is 1295gm and weight of compacted uncoated specimen in water is 695 gm calculate bulk density of compacted mix (without paraffin coating)
Option A:	10.128 gm/cc
Option B:	2.158 gm/cc
Option C:	4.158gm/cc
Option D:	5.339 gm/cc
Q19.	Determine specific gravity of combine aggregate in bituminous mix design having maximum theoretical specific gravity 2.6 the bitumen content is 9% by weight of mix and its specific gravity is 1%
Option A:	3.088

Option B:	4.088
Option C:	5.088
Option D:	6.088
Q20.	If the air void is 8% and total volume is 150 cc calculate volume of void_____ cc
Option A:	11
Option B:	12
Option C:	14
Option D:	15
Q21.	Calculate bulk specific gravity of a compacted bituminous concrete mix from the following data specimen weight in air is 3055.1 gm and specimen weight in water is 1725.7 gm
Option A:	2.298
Option B:	3.298
Option C:	1.298
Option D:	5.298
Q22.	For asphalt binder grade PG 64-22, what does 22 signifies?
Option A:	Performance value
Option B:	Maximum Viscosity value
Option C:	Minimum Pavement Temperature value
Option D:	Minimum Ductility value
Q23.	What is rotational viscometer used for?
Option A:	Measures binder properties at high temperature
Option B:	Provides viscosity at low temperature
Option C:	Measures binder properties at low temperature
Option D:	Measures viscosity at room temperature
Q24.	The temperature in Marshall's method is _____
Option A:	25
Option B:	30
Option C:	35
Option D:	60
Q25.	Compaction is accomplished in Super pave method using
Option A:	Gyratory compactor
Option B:	Proctor test
Option C:	Modified compaction test
Option D:	Rammer