University of Mumbai
Examination 2020under cluster____(Lead College Shortname)
Program: Civil Engineering
Curriculum Scheme:Rev2016
Examination: Third Year   Semester V   CourseCode:CEC 505____ and
Course Name: Transportation Engineering-I

Time: 1 hour   Max. Marks: 50

===

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

Q1.	If the elevations along a road increase, the slope of the road along the longitudinal direction is known as
Option A:	gradient
Option B:	grade
Option C:	positive grade
Option D:	negative grade
Q2.	The contour interval is 15 meter and ruling gradient is 1 in 20, the road length between two consecutive contours has to be
Option A:	300 m
Option B:	75 m
Option C:	5 m
Option D:	100 m
Q3.	The current highway development works in India are undertaken by
Option A:	NHAI
Option B:	Govt. of India
Option C:	State governments
Option D:	NHDP
Q4.	A priority intersection has a single-lane one-way traffic road crossing an undivided twolane two-way traffic road. The traffic stream speed on the single-lane road is 20 kmph and the speed on the two-lane road is 50 kmph. The perception-reaction time is 2.5 s, coefficient of longitudinal friction is 0.38 and acceleration due to gravity is 9.81 m/s2. A clear sight triangle has to be ensured at this intersection. The minimum lengths of the sides of the sight triangle along the two-lane road and the single-lane road, respectively will be
Option A:	122 m and 36 m
Option B:	111 m and 15 m
Option C:	61 m and 18 m
Option D:	50 m and 20 m
Q5.	Which one is the top quality construction in the group of flexible pavements?
Option A:	Mastic asphalt
Option B:	Sheet asphalt

Option C:	Bituminous carpet
Option D:	Bituminous concrete
Q6.	The distance travelled by a moving vehicle during perception and brake reaction times, is known as
Option A:	sight distance
Option B:	stopping distance
Option C:	lag distance
Option D:	none of the above
Q7.	If the distance of a vehicle moved is 25m and the observed travel time is 15 sec then the space mean speed is
Option A:	4m/s
Option B:	5m/s
Option C:	6m/s
Option D:	7m/s
Q8.	On an already existing flexible road the type of treatment given for bituminous surfacing is
Option A:	Seal coat
Option B:	Tack coat
Option C:	Prime coat
Option D:	Spray of emulsion
Q9.	The critical combination of stresses for corner region in cement concrete roads is
Option A:	Load stress + warping stress- frictional stress
Option B:	Load stress + warping stress + frictional stress
Option C:	Load stress + warping stress
Option D:	Load stress + frictional stress
Q10.	Road roughness is measured using
Option A:	Benkelman beam
Option B:	Bump integrator
Option C:	Dynamic cone penetrometer
Option D:	Falling weight deflectormeter
Q11.	The overlay design is laid for a maximum life span of
Option A:	5 years
Option B:	7 years
Option C:	9 years
Option D:	10 years
Q12.	The removal of earth for highway formation is
Option A:	Embankment
Option B:	Sub grade
Option C:	Excavation

Option D:	Filling
Q13.	Which of the following tests measures the toughness of road aggregates?
Option A:	crushing strength test
Option B:	abrasion test
Option C:	impact test
Option D:	shape test
Q14.	The annual average daily traffic is calculated by the formula
Option A:	ADT*DF*WF
Option B:	ADT*DF*WF*SF
Option C:	ADT*WF
Option D:	ADT*SF
Q15.	Driving vehicles on wet surfaced roads, is dangerous because it may
Option A:	skid
Option B:	slip
Option C:	overturn
Option D:	all the above
Q16.	The east west corridor of National highway connects which of the following cities?
Option A:	Delhi-Bombay
Option B:	Bombay-Madras
Option C:	Kolkata-Vadodara
Option D:	Porbandar- Silichar
Q17.	Obligatory points through which the alignment should not pass are _____
Option A:	Religious structure and costly structures
Option B:	Intermediate towns
Option C:	Important cities
Option D:	Important places of worship
Q18.	Primary system of roads consists of
Option A:	National highway
Option B:	Expressway
Option C:	National highway and Expressway
Option D:	State highway
Q19.	If aggregate impact value is 20 to 30 percent, then it is classified as
Option A:	exceptionally strong
Option B:	strong
Option C:	satisfactory for road surfacing
Option D:	unsuitable for road surfacing
Q20.	Rigid pavements are designed by
Option A:	Rigid plate theory
Option B:	Elastic plate theory

Option C:	Infinite layer theory
Option D:	Interlocking of aggregates
Q21.	Which of the following tests measures the hardness of road aggregates?
Option A:	crushing strength test
Option B:	abrasion test
Option C:	impact test
Option D:	shape test
Q22.	The dowel bars are provided _____
Option A:	Longitudinally
Option B:	Laterally
Option C:	Any direction required
Option D:	In base of pavement
Q23.	The design charts of flexible pavement are prepared based on _____
Option A:	Climate
Option B:	Past experience
Option C:	Location
Option D:	Traffic
Q24.	The rate of growth in traffic in urban areas is assumed as _____
Option A:	7.5%
Option B:	8.0%
Option C:	8.5%
Option D:	9.0%
Q25.	The common types of failure in the cement slabs don't include
Option A:	Mud pumping
Option B:	Development of structural cracks
Option C:	Spalling of joints
Option D:	Erosion

University of Mumbai
Examination 2020under cluster____(Lead College Shortname)
Program: Civil Engineering
Curriculum Scheme:Rev2016
Examination: Third Year Semester V Course   Code: CEC_505   and
Course Name: Transportation Engineering-I

Time: 1 hour   Max. Marks: 50
==

Question Number	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	A
Q2.	A
Q3.	A
Q4	B
Q5	D
Q6	C
Q7	C
Q8.	B
Q9.	C
Q10.	B
Q11.	D
Q12.	C
Q13.	C

Q14.	B
Q15.	B
Q16.	D
Q17.	A
Q18.	C
Q19.	C
Q20.	B
Q21.	B
Q22.	B
Q23.	B
Q24.	A
Q25.	D