

**University of Mumbai**  
**Examination June 2021**

**Examinations Commencing from 1<sup>st</sup> June 2021**

Program: Civil Engineering  
Curriculum Scheme: Rev2016  
Examination: BE Semester VI

Course Code: CE-DLO6061 and Course Name: Advanced Construction Equipment

Time: 2 hour

Max. Marks: 80

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Q1.	Effective compaction is not achieved by
Option A:	Rubber tyres
Option B:	Sheep's foot rollers
Option C:	Pneumatic rollers
Option D:	Smooth wheeled rollers
Q2.	Bull Dozers are mainly used for
Option A:	Speeding Earth Fill and clearing work
Option B:	Excavation work
Option C:	Removing wet soil
Option D:	Clearing rocky soils
Q3.	Which of the following piles is used to compact loose granular soil?
Option A:	Friction piles
Option B:	End bearing piles
Option C:	Compaction piles
Option D:	Tension piles
Q4.	Jack hammer can drill holes up to
Option A:	2.5 - 3m
Option B:	4-5 m
Option C:	1-2 m
Option D:	4-6 m
Q5.	The most suitable type of equipment for close range work is
Option A:	Back hoe
Option B:	Clam shell
Option C:	Power shovel
Option D:	Dragline
Q6.	Name the term used to indicate the spacing of drilling bit
Option A:	Drilling bit
Option B:	Drilling pattern
Option C:	Abrasion drill
Option D:	Percussion drilling
Q7.	Which type of ground is favoured for tunnelling with Drift Method?
Option A:	Soft ground
Option B:	Rock
Option C:	Self supporting ground

Option D:	Broken Ground
Q8.	In NATM method of Tunnelling, the soil excavated by Jumbo is carried outside through
Option A:	Trucks
Option B:	Scrapers
Option C:	Rollers
Option D:	belt conveyors
Q9.	The three parts in which tunnel lining is done is
Option A:	Kerb, Drill, Shortcrete
Option B:	invert, gantry, Invert
Option C:	Crest, Invert, revert
Option D:	Overt, Invert, Kerb
Q10.	Structural elements used to transfer load to the ground that have sufficient bearing capacity where there is restricted accessibility and affected by settlement is called as
Option A:	Tunnel Lining trolley
Option B:	Vertical Shaft Sinking Machine
Option C:	Micropiles
Option D:	Jumbo
Q11.	In this particular method of Tunnelling, drilling, blasting, water proofing and lining is done in one stretch
Option A:	Vertical shaft method
Option B:	NATM
Option C:	Needle Beam Method
Option D:	American Method
Q12.	In case of multi-storeyed building, the forms to be removed first are
Option A:	sides of beams and girders
Option B:	column forms
Option C:	bottom of beams
Option D:	bottom of girders
Q13.	The major advantage of Mivan shuttering is
Option A:	It needs skilled labors for alignment maintenance
Option B:	Faster completion of floors
Option C:	It needs skilled labors for alignment maintenance
Option D:	Leakage issue like seepage, leakages during monsoon
Q14.	Which crane is used for industrial and high rise buildings?
Option A:	Derrick crane
Option B:	Traveller crane
Option C:	tower Crane
Option D:	Gantry crane.
Q15.	Which material is preferred to Steel when form work is required for small ones requiring less repetitions?
Option A:	Steel

Option B:	Timber
Option C:	Fibre glass
Option D:	Metal sheets
Q16.	Select the component of a paver in which material is added from the dump truck
Option A:	Screed
Option B:	Hopper
Option C:	Augur
Option D:	Belt
Q17.	The technique used to set pipes in both open and blind tunnels, open cut trenches, wet areas (swamps) and environmental areas, difficult to access job sites is
Option A:	Pipeline insertion system
Option B:	GPR
Option C:	GPS
Option D:	Paver machines
Q18.	The technology which is able to locate both non-metallic as well as metallic subsurface utilities is
Option A:	Pipeline insertion system
Option B:	Incremental launch
Option C:	Ground Penetrating Radar
Option D:	Cantilever method
Q19.	Select the construction equipment which is used to lay asphalt on roads, bridges, parking lots and other such places.
Option A:	GPR
Option B:	GPS
Option C:	bulldozer
Option D:	Paver
Q20.	Equipments required for construction of hydropower plant does not include
Option A:	Wheel type trenching machine
Option B:	Dumpers
Option C:	Cranes
Option D:	Excavators

<b>Q2.</b> <b>(20 Mark)</b>	
A	<b>Explain with neat Sketch (Any Two) 5 marks each</b>
i.	<i>Cone Crusher</i>
ii.	<i>Cut &amp; Cover Method</i>
iii.	<i>Jump formwork</i>
B	<b>Solve any One 10 marks each</b>
i.	<i>Explain the method of Construction of tunnel with Needle Beam Method. Draw a neat sketch and discuss step by step procedure.</i>

ii.	<i>Explain in detail the procedure of Prefabricated housing systems.</i>
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<b>Q3.</b> <b>(20 Marks)</b>	
A	<b>Explain with neat Sketch (Any Two) 5 marks each</b>
i.	<i>GPR</i>
ii.	<i>Construction sequence of Windmill</i>
iii.	<i>Track laying machine</i>
B	<b>Solve any One 10 marks each</b>
i.	<i>Write down the procedure of bridge construction using Balanced Cantilever method.</i>
ii.	<i>Explain in detail the construction of Atomic power station.</i>