Sanjay Ghodawat University, Kolhapur

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

2018-19
EXM/P/09/01

Year and Program: **2018-19** | **School of Technology** | **Department of Civil Engineering** (M. Tech. Construction Engineering & Management)

Course Code: **CEM5102** (CSE5102) | **Course Title:** Underwater Construction | **Semester – I**

Day and Date Wednesday 29/05/2019 | **End Semester Examination (ESE)** | Time: 3 Hrs. (2.30 to 5.30 pm.) Max Marks: **100**

Instructions: 1) All question are compulsory

Q.1	a	Brief description of excavation and earthmoving plants used in building construction?	10	L_4	CEM5082.1
	b	Explain slope failure mechanisms in open trench excavation?	10	L_4	CEM5082.2
		OR			
Q.1	a	Explain in details ground anchor used in building excavation?	10	L_4	CEM5082.1
	b	Brief in details excavation support methods a) Soil nailing b) Soldier beam and lagging	10	L_4	CEM5082.2
Q.2	a	Explain shoring techniques in building construction?	10	L5	CEM5082.3
	b	Explain in details Sequential Excavation Method (NATM) Tunneling?	10	L_4	CEM5082.4
		OR			
Q.2	a	Brief about different underpinning methods used for foundation strengthening?	10	L_5	CEM5082.3
	b	Write a note on a) Slurry Tunneling Systems b) Pressurized Face or Pressure Balance Tunnel Machines	10	L_4	CEM5082.4
Q.3	a	Brief about different component of the outlet works is often in dam embankment?	10	L_4	CEM5082.5
	b	Elaborate advantages and disadvantages of using steel pipe for conduits?	10	L_4	CEM5082.5
Q.4	a	What are recommendations for compaction of soils and rock zones against the conduit?	10	L_4	CEM5082.6
	b	Describe how the load carrying capacity of under reamed pile with single and double bulbs is determined.	10	L_4	CEM5082.6
Q5	a	Describe the various components of a well foundation with their functions.	10	L_5	CEM5082.5
	b	When tension and laterally loaded piles are used? Mention the type of structures where these piles are used.	10	L_4	CEM5082.6

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