

Roll No.

CE-7003 (CBGS)**B.E. VII Semester**

Examination, November 2018

Choice Based Grading System (CBGS)**Modern Construction Technique and Equipment***Time : Three Hours**Maximum Marks : 70***Note:** i) Solve any five questions.

ii) All questions carry equal marks.

1. a) Enlist the various properties of aluminium and glass as an effective building material. 7
b) What are the types of finishes and treatments used in building construction processes? 7
2. a) Define sealant. Explain its types and role in construction. 7
b) Explain the composition of grout and its varieties. Name the various types of admixtures and their uses. 7
3. a) Explain the role of polymer membranes coatings in construction. <https://www.rgpvonline.com> 7
b) What are glazed bricks? Explain various types of flooring and facade materials. 7
4. a) Explain the process of heat treatment in steels. What is water jet cut stainless steel? 7
b) What are precast concrete panels? How thick are precast concrete panels? Give advantages of using them. 7

5. a) Describe 3D-volumetric construction. Explain slip-formwork. 7
b) Explain various tunnel boring methods. 7
6. a) Differentiate between: <https://www.rgpvonline.com> 7
i) Excavation and Dredging
ii) Trenching and Tunneling
b) Describe the drilling and blasting process in construction. What are the compaction and erection equipments used in construction? 7
7. a) Describe the different types of pile driving equipments with neat sketches. What are the hauling equipments used in construction? 7
b) What is sensing technology? Describe types of sensors with their functions. 7
8. a) How is physical measurement done by using piezoelectric strain measurement? <https://www.rgpvonline.com> 7
b) Write short notes on: (Any two) 7
i) Piezoelectric and Electrostrictive material
ii) Shape memory alloys
iii) Electro rheological fluids

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