

B.Tech. Civil (Construction Management)

Term-End Examination

December, 2018

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**ET-522 : CONCRETE TECHNOLOGY AND
CONSTRUCTION TECHNIQUES**

Time : 3 hours

Maximum Marks : 70

Note : Answer any **five** questions. All questions carry equal marks.

1. (a) What are Bogue's compounds and what is their importance in relation to the strength of cement ? 7
- (b) Describe in brief the procedure of finding initial and final setting time of cement. 7
2. (a) Discuss the effect of using sea water in concrete mix. 7
- (b) Discuss various functions of admixtures in concrete. 7
3. (a) Explain vacuum dewatering system. Enlist various advantages of vacuum dewatering. 7
- (b) Enlist various types of scaffolding. Describe any one type with the help of a neat sketch. 7

4. (a) What are the different types of caissons ? Describe any one type along with its advantages. 7
- (b) Describe the various precautions to be observed in cold weather concreting. 7
5. (a) Enlist the methods of concrete mix design. Discuss in brief, various steps involved in Indian standard method of mix design. 7
- (b) Discuss the applications of polymer impregnated concrete. 7
6. (a) Describe the frost effect on fresh concrete as well as on hardened concrete. 7
- (b) Describe in brief, various factors affecting the strength of concrete. 7
7. Write short notes on any **four** of the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Curing of Concrete
- (b) Volume Batching vs Weigh Batching
- (c) Grading of Aggregates
- (d) Shotcrete
- (e) Precast Concrete Construction
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