

B.Tech. Civil (Construction Management)

Term-End Examination

June, 2010

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

Time : 3 hours

Maximum Marks : 70

*Note : Answer all questions. All questions carry equal marks.
Support your answer with neat sketches, wherever
necessary.*

1. Answer *any two* of the following :
- (a) Enumerate the qualities of aggregates for making good concrete. 5
 - (b) What are the different tests on cement ? Explain any two in brief. 5
 - (c) Explain the following :
 - (i) Bulking of sand. 2½
 - (ii) Alkali - aggregate reaction 2½
2. Answer *any two* of the following :
- (a) What is bleeding of concrete ? Write the different factors affecting the bleeding. 5
 - (b) Explain the slump - cone test, with sketches. 5
 - (c) What are the different methods of compaction of concrete ? 5

3. Differentiate between *any four* of the following : **4x2½=10**
- (a) Volume batching and weigh batching
 - (b) Retarders and air - entraining admixtures.
 - (c) Internal vibrator and external vibrator
 - (d) Water curing and membrane curing
 - (e) Under vibration and over vibration.
4. Answer *any two* of the following :
- (a) What is creep of concrete ? Explain the different factors that affect the creep. **5**
 - (b) What is meant by shrinkage of concrete ? Explain the types of shrinkage. **5**
 - (c) Explain the Rebound Hammer test on hardened concrete. **5**
5. Answer *any two* of the following :
- (a) What is Fibre Reinforced Concrete (FRC) ? What are the properties and applications of FRC ? **5**
 - (b) What is prepacked concrete ? How it can be manufactured ? **5**
 - (c) What is ferrocement ? What are the properties and application of ferrocement ? **5**
6. Answer *any two* of the following :
- (a) What are the different methods for deep excavation in water - logged soils ? Explain them clearly. **5**
 - (b) Explain the different types of scaffolding. **5**
 - (c) What is cement grouting ? Explain. **5**

7. Answer *any two* of the following :
- (a) What are the different methods of soil stabilization ? 5
 - (b) What is vacuum dewatering ? Explain. 5
 - (c) What is large panel construction ? Explain the construction of root panel. 5
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