

B.Tech. Civil (Construction Management)**Term-End Examination****June, 2008****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 : 2×5=10

- (a) What are the qualities of water for making good concrete ?
- (b) What are the different tests on aggregates ? Explain them briefly.
- (c) What are the various types of cement ? Explain briefly.

2. Answer any **two** of the following : 2×5=10
- (a) What is workability of concrete ? Enumerate the different tests on concrete to know workability. Explain any one in detail.
 - (b) What is segregation ? What are the factors affecting the segregation of concrete ?
 - (c) Explain weight batching and volume batching.
3. Differentiate between any **four** of the following : 4×2 $\frac{1}{2}$ =10
- (a) OPC and PPC
 - (b) Under Vibration and Revibration
 - (c) Water curing and Steam curing
 - (d) Low heat cement and Expansive cement
 - (e) Accelerators and Retarders
4. Answer any **two** of the following : 2×5=10
- (a) Write the step-by-step procedure for concrete mix design using IS code.
 - (b) What is Gel-Space Ratio ? Discuss its significance.
 - (c) What are the factors affecting the strength of concrete ?
5. Answer any **two** of the following : 2×5=10
- (a) What are the general precautions to be observed during cold-weather concreting ?

- (b) What is polymer concrete ? What are the properties and applications of polymer concrete ?
- (c) What is Ready Mixed Concrete (RMC) ? Describe the properties and uses.

6. Answer any **two** of the following :

2x5=10

- (a) What do you understand by cement grouting ? Explain clearly.
- (b) What is sheet-piling ? What are the types of sheet-piling systems ?
- (c) What is scaffolding ? What are the types of scaffolding ? Explain neatly.

7. Answer any **two** of the following :

2x5=10

- (a) What do you understand by formwork ? What are the types of formwork ?
- (b) What do you understand by precast concrete construction ?
- (c) What are the different methods of soil stabilisation ? Explain clearly.

