

B.E. Civil Engineering (Model Curriculum) Sem-IV
PCCCE402 : Concrete Technology

P. Pages : 1

Time : Three Hours



GUG/W/22/13716

Max. Marks : 80

- Notes :
1. All questions carry equal marks.
 2. Due credit will be given to neatness and adequate dimensions.
 3. Assume suitable data wherever necessary.
 4. Illustrate your answers wherever necessary with the help of neat sketches.
 5. Retain the construction lines

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| 1. | a) | Explain in brief water requirement for hydration of cement. | 8 |
| | b) | Explain various mechanical properties of aggregates and its limitation. | 8 |
| OR | | | |
| 2. | a) | What are the various factors responsible for unsoundness of cement. | 8 |
| | b) | Explain the term Fineness Modulus and also state its importance. | 8 |
| 3. | a) | Explain various factors affecting creep and shrinkage. | 8 |
| | b) | Explain flow table test. | 8 |
| OR | | | |
| 4. | a) | Enlist the various methods of workability and discuss suitability of each method. | 8 |
| | b) | Explain the Abram's water cement ratio and also discuss significance of water cement ratio. | 8 |
| 5. | a) | Explain in brief effect of temperature on curing and strength gain. | 8 |
| | b) | How would you determine the flexural strength of concrete, discuss with neat sketch. | 8 |
| OR | | | |
| 6. | a) | Explain the entraining agent and its effect on the properties of concrete. | 8 |
| | b) | Enlist NDT methods and also state its importance. | 8 |
| 7. | a) | Enlist the codes of test of durability of concrete also describe any one test. | 8 |
| | b) | Explain Super plasticizing admixtures and give its classification. | 8 |
| OR | | | |
| 8. | a) | Explain in brief acceptance criteria for concrete. | 8 |
| | b) | Enlist and explain different types of admixtures. | 8 |
| 9. | a) | Explain in brief stepwise I.S. Code methods of mix design. | 8 |
| | b) | Explain the different statistical parameters used in concrete. | 8 |
| OR | | | |
| 10. | a) | What are the various factors affecting mix design? | 8 |
| | b) | Explain ACI method of mix design. | 8 |
