

Babu Banarasi Das -National Institute of Technology & Management, Lucknow
B. Tech third Year (Fifth Semester) 2018-19
Department of Civil Engineering

Concrete Technology (RCE-052)
Assignment: I (Unit 1)

NOTE-ATTEMPT ALL PARTS

1. What are the raw materials used for production of cement?
2. What is clinker how is it produced?
3. How are aggregates classified?
4. What is soundness of cement how is it tested?
5. Describe the role played by gypsum in the hydration reaction of cement.
6. List the various types of cement indicating their use for different applications.
7. Describe the hydration reaction of important bogue's compounds indicating the product of hydration.
8. How does increasing the quantity of water influence the properties of fresh and hardened concrete.
9. Define fineness modulus give the practical range of fineness modulus value of coarse and fine aggregate.
10. What are the important chemical test conducted on cement to determine its quality?

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Assignment: II (Unit 2)

NOTE-ATTEMPT ALL PARTS

1. Distinguish between plasticizers and superplasticizers.
 2. Why are chlorine based accelerators not used in prestressed concrete structures ?
 3. How does a surface active agent increase workability?
 4. Why do plasticizers perform better than surface active agents ?
 5. How are mineral admixtures classified?
 6. Distinguish between pozzolanic and cementitious admixtures.
 7. What are the properties of fly ash as supplementary cementing material?
 8. What are the chemical and physical properties of silica fumes and its application?
 9. How are GGBFS obtained?
 10. What are the properties and effects of pozzolana on concrete?
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Assignment: III (Unit 3)

NOTE-ATTEMPT ALL PARTS

1. What measures can be taken to make the mix proportioning economical and scientific?
2. What is packing density?
3. Why is mix proportioning cannot be computerized?
4. List all the mix design methods.
5. Briefly explain IS method of mix design.
6. Briefly explain ACI method of mix design.
7. Explain properties of concrete related to mix design.
8. What are the physical properties of materials required for mix design.
9. Explain minimum voids method of proportioning concrete mix.
10. Explain maximum density method of concrete mix.

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Assignment: IV (Unit 4)**

NOTE-ATTEMPT ALL PART

1. Explain different stages of manufacturing concrete.
 2. What is volume batching.
 3. Explain weight batching.
 4. Explain different method of mixing of concrete
 5. What are the performance attributes of mix concrete.
 6. Explain methods of placing of concrete.
 7. Explain segregation. Briefly.
 8. Briefly explain bleeding of concrete.
 9. What is workability and explain all the test related to workability of concrete?
 10. Why curing of concrete is done and explain its different methods?
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Assignment: V (Unit 5)**

NOTE-ATTEMPT ALL PARTS

1. What are the advantages of self compacting concrete?
2. Write a brief note on fibre reinforced concrete.
3. What are the uses of high strength concrete also explain its properties?
4. How are ready mix concrete prepared?
5. What is recycled aggregate concrete?
6. Explain Ferro cement.
7. Explain modulus of elasticity and poisson's ratio of concrete.
8. Explain creep and shrinkage of concrete.
9. How is compressive strength of concrete obtained?
10. Write a brief note on flexural strength of concrete as per BIS.