ARBA MINCH UNIVERSITY
ARBA MINCH INSTITUTE OF TECHNOLOGY
FACULTY OF CIVIL ENGINEERING
COTM STREAM EXIT EXAM PREPARATION QUESTIONS

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1. What are the fresh and harden properties of concrete as a construction material and explain those properties?
2. What are the properties of steel that make it an ideal construction material?
3. Describe the main factors affecting the durability of concrete?
4. What is porosity? How it can affect the properties of concrete?
5. Explain the difference between volume batching and weight batching?
6. What are the factors that affects the mixing time of concrete?
7. What is chemical reactivity of coarse aggregates? How did you control these chemical reactions?
8. Explain briefly methods of manufacturing bricks and give a comparison two of those methods?
9. Differentiate between ·blending and segregation of concrete. What are the main consequences of bleeding and segregation?
10. Explain different types of stones and their properties? At what condition did those stone used for?
11. Explain the function of concrete ingredients in concrete mixture?
12. List various ferrous and non-ferrous metal products used in construction? Explain advantages and disadvantages of ferrous metals?
13. Explain briefly how aggregate crushing value test determined in the construction material laboratory?
14. What is Efflorescence' of brick refers to?
15. Explain the various methods of curing concrete?
16. What is seasoning of timber? Enumerate and explain various defects in timbers.
17. What are the fundamental processes in project construction?

18. What type of foundation do you recommend for black cotton soil, for saturated clay soil and for the bridge site around river area? Why?
19. What is design and planning in construction?
20. What are the main criteria used to select an ideal construction site?
21. List and explain skills and knowledge used in the preparation of working drawings?
22. What are the causes of differential settlement of foundation and what measurement you take to solve those problems?
23. Write at least four types of buildings based on occupancy and explain them?
24. List at least four requirements which the floor must satisfy?
25. Explain in detail the factor which considered during selection of doors and window depending on their operational work?
26. Write and explain the requirement of good plastering work?
27. List and explain the types of brick bonds with the help of drawing?
28. Write and explain the function staircase?
29. What is the difference between frame structure, shell structure and dome structure?
30. Explain the design and construction process?
31. What are the roles of main participants in construction industry?
32. Identify the different types of specification formats used in the construction industry?
33. Outline the relationship between the documents which makeup the Construction Documents?
34. Describe the different types of contracts?
35. Explain different methods used to selection of contractor?
36. Explain the bidding process, including the documents included in the bidding requirements
37. Describe the Conditions of the Contract , their purpose and content
38. Explain the distinct roles of Drawings and Specifications.
39. Describe the various methods of specifying.

40. Describe the types and purpose of construction bonds and insurance.
41. Explain the Negotiated Contract delivery method with special emphasis on the use of fast-tracked construction.
42. Explain the concept of "Design-Build" as a construction delivery system
43. Describe the documents which are included in the contract?
44. What is the role of the stakeholders which are involved in Construction Projects?
45. What function does work break down structure serve in planning and scheduling construction operation?
46. Draw and explain the relationship of life cycle the project and level of influence on cost?
47. Define project management and list the three stages of project management with a brief description of each stage?
48. What are different phases of construction projects, contract administration and procedures for public projects?