

**Engineering Services Personality Test Questions in Civil Engineering**  
**CIVIL ENGINEERING - CE (Memory based question of ESE-2013)**

All the questions have been collected from students who appeared for ESE-2013 Personality Test

**Panel members :** IMG Khan, P. Agrawal, Vijay Singh, Dr. Reddy, P.K. Mishra, KK Paul, Alka sirohi, Rajni razdhan , S. Tripathi (Chairperson Dr. D.P. Agarwal)

1. What is flexural strength of concrete in rigid pavement?
2. Tell me about relative stiffness of concrete?
3. What is modulus of subgrade reaction? How it is find?
4. What is problem in doing work with flexible pavement?
5. What is porosity & void ratio?
6. Explain the phenomenon of lique faction, boiling of sand & quick sand?
7. Tell us Isohyetal method?
8. Method of measuring precipitation?
9. What is cone of depression?
10. Explain the term green building? Do you know any such building in India?
11. Explain the curve between stress & strain for mild steel?
12. Why the compressive strength of steel is more than tensile strength of steel?
13. What are the basic properties of steel? Stress or strain? and Why?
14. What is code of OPC for different grade?
15. What is a water hammer? How it is prevented?
16. Tell me the application of water hammer?
17. Tell me the distribution system of your local area?
18. If a point load is applied at mid-point of the beam, then what is the deflection on a simply supported beam or fixed beam?
19. What is the role of transverse bar in column?
20. Which type of steel is used in off-shore structure for making a column? Fe 250, Fe 415 or Fe 500 ?
21. What is effect of fluoride in drinking water?
22. Role of torsional reinforcement in slabs?
23. Why do we always go for a over reinforced section?
24. What are the various theories of failure?
25. What are the various losses in a pipe flow?
26. Explain hardy cross methods?
27. What is broad crested weir?
28. What is difference between weir & a barrage?
29. What are principle stresses?
30. What do you understand by hydro static pressure?
31. What is difference b/w fluid kinematics & fluid statics?
32. What is factor of safety?
33. What are the various kind of connection used in steel structure?

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34. What is column base?
35. What is catchment area of a dam?
36. Where is plate girder used?
37. What is project crashing & resource levelling?
38. Difference b/w resource levelling & resource allocation?
39. Why mild steel is commonly used in earth quake resistant structure?
40. What is bending moment diagram?
41. What is shear force diagram?
42. Difference b/w a cement mortar & concrete?
43. How can you measure the workability of concrete at site?
44. What is the relation b/w strength of a cube & strength of a cylinder?
45. What is mechanical gauge?
46. Application of venturimeter?
47. How do you measure discharge in a open channel flow?
48. What is weber's number?
49. For what value of Reynolds's number the flow is laminar in pipe?
50. Method of irrigation?
51. Difference b/w rigid pavement & flexible pavement?
52. Design data for continuous beam by working stress method?
53. Difference between under bridge & road over bridge?
54. What are the various data required for design of aquifer?
55. What is TBM (temporary bench mark)?
56. What is indeterminacy of a structure?
57. What are various energy methods?
58. What are various type od column?
59. What is difference b/w under-reinforced & over-reinforced section?
60. What do you understand by index properties of soil?
61. What are the causes of failure of barrage?
62. What are the various kind of soil?
63. What is C-fi soil?
64. RCC column and footing design?
65. Difference b/w Concrete & steel bridge?
66. Composition of cement?
67. Lacey's&kennedy method of design of canal?
68. What is BOD & COD?
69. What is difference b/w WSM & LSM?
70. Draw the shear force & bending moment diagram for a fixed beam with udl?
71. What is finite element method of design?
72. What is self-compacting concrete?
73. Draw rough sketch of a culvert?
74. What are the various factors to be considered in spillway design?
75. What is the function of ballast?
76. What are the various factors to be considered while designing an earth quake resistance structure?

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77. How to decrease the thickness of a two way slab?
78. Minimum cover for a RCC column & a slab?
79. What is fly ash content in coal?
80. What is the various method of canal layout?
81. Explain working of a total station?
82. What is the various method of alignment of road?
83. What are the various types of road?
84. What is cross drainage works?
85. What is our national water policy?
86. Difference is the between ultimate stress philosophy & working stress philosophy?
87. What is unit hydrograph?
88. What is the difference b/w water shed & ridge alignment?
89. What is carbon credit?
90. Function of railways sleeper, ballast & rail?
91. Explain bituminous mix design?
92. What are various Atterberg limits?
93. Difference b/w shallow & deep foundation?
94. What is SPT number?
95. Tell me the definition of topography?
96. What is the design philosophy of a two way slab?
97. What is the difference b/w CPM&PERT?
98. Difference b/w delta & duty?
99. What is the function of weep hole?
100. What are the various earth compacting instruments?
101. What is unique gauge policy in railway?
102. What is anchorage length?
103. What is inter-river connection project?
104. What are the various types of surveying?
105. What is counterfort retaining wall?
106. What is super elevation?
107. What is negative super elevation?
108. What the factors to be considered while designing a road on curve?
109. Explain Archimedes' principle?
110. What is Euler's law?
111. What is Buoyancy?
112. What is the various kinds of roofs?
113. What are river training works?
114. What is the difference b/w gyrones & spurs?
115. What isvarious water borne diseases?
116. What are Ecoli bacteria?
117. What is difference b/w hydraulic and hydrologic routing?
118. Method of seepage control in earthen dam?
119. Define a flexibility matrix?
120. What is drop panel?

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121. What grade of steel is most commonly used in RCC work and why?
122. What is TMT bar & how it is different from HYSD bar?
123. What is gable frame? Show the reinforcement detailing for a gable frame
124. What is active earth pressure & passive earth pressure?
125. What kind of software is presently used in structural analysis?
126. What equipment is used to gauge the depth of ground water table?
127. Why rail wagon have their opening at the bottom?
128. What are types of plastering?
129. What are the various factors to be considered while lying out of a runway?
130. What is wind rose diagram?
131. What is the various method of tunnelling in hard rock?
132. What is fibre reinforced concrete?
133. What is drag line?
134. Various types of geosynthetics?
135. What is the degree of indeterminacy of a two hinged arc ?
136. What is the difference b/w a impulse & reaction turbine?
137. What is reciprocating pump?
138. What kind of pump is commonly used in concrete pumping?
139. Difference b/w consolidation & compaction?
140. What is Well logging?



**Complete questions booklet is ready to collect from centre admin.**

**If you have any questions related to interview then feel free to share.**

**We wish you all the best!!!!!!.....**

**E.I.I. Team**

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