

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SEVENTH SEMESTER B. TECH DEGREE (HONS.) EXAMINATION DEC 19

Course code: 04CE7215
Course Name: Soil Exploration Techniques

Max. Marks : 60

Duration: 3 Hours

PART A

Answer All Questions

Each question carries 3 marks

1. State the necessity for soil exploration program.
2. Explain on the importance of collection of existing information.
3. Explain the suitability of open pit exploration.
4. Write the types of corrections applied to N- values.
5. With a neat sketch write down the steps involved in collection chunk samples.
6. List the different type of samplers and the suitability in terms of soil condition.
7. Draw a typical bore log and what are the information's presented in a bore log.
8. Define rock quality designation.

PART B

Each question carries 6 marks

9. Explain in detail a sub-soil investigation program.
OR
10. What are the guidelines for deciding the depth and number of bore holes?
11. Explain in detail three methods of stabilization of boreholes.
OR
12. What are the different types of augers. Explain the steps involved in drilling borehole using augers.
13. With the help of neat sketch explain standard penetration test.
OR
14. What are the merits and drawbacks of static cone penetration test?
15. Explain the procedure for conducting dynamic cone penetration test.
OR
16. With the help of a neat sketch describe the terms inside clearance, outside clearance and area ratio of sampler and the limiting values for obtaining undisturbed samples.
17. Write short note on the precautions to be taken for handing and transport of samples.
OR
18. Explain with a neat sketch on sampling using piston sampler.
19. What are the equipment's used in offshore exploration?
OR
20. Write short note on the importance of instrumentation of soil engineering.