

Saurabh Rawat

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- September 2016

B.Tech VII Semester

COURSE CODE: 10B13CE736

MAX. MARKS: 15

COURSE NAME: Underground Technology

COURSE CREDITS: 03

MAX. TIME: 1Hr

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. Describe the process of construction of a bored cast – in – situ pile using tremie concreting along with neat and labelled figures. [3]
2. State the method that should be used for excavation for basement construction for the following cases: [6]

Case	No. of floors of basement	No. of floors of super structure	Excavation Depth (m)	Soil type	Depth to water table (m)	Distance to nearest building (m)
A	1	3	5	Clayey silt	10	50
B	1	3	5	Silty sand	10	10
C	2	10	9	Clean sand	5	50
D	2	10	9	Silty sand	8	10
E	2	10	9	Silty sand	15	Hospital at 10
F	4	15	16	Silty clay	18	20

3. For a multistoried building one has the option of placing one large diameter pile directly beneath each column or of constructing a pile cap with three smaller diameter piles underneath each column. Which is to be preferred? Compare listing the advantages and disadvantages of both. [3]
4. Differentiate between well points and deep wells along with the help of labelled figures. [3]