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Candidate

Level 3 Constructing the Built Environment (Civil Engineering) – Sample Questions

Version 1.0 - November 2017

Name

Please note this is not a complete sample theory exam, this document consists of sample questions from across the test specification.

Name two standard formulae which can be used to calculate cut and fill quantities from section drawings.	(
Explain two benefits for the use of software incorporated into total stations.	
State two factors to be considered when designing axial loaded columns.	(

A timber column of rectangular cross-section is 150 mm wide and 250 mm deep. The maximum allowable bending stress must not exceed 6 N/mm ² .
Determine the maximum bending moment in Nmm that the beam can safely carry.
State two items of plant or equipment used in the construction of civil engineering superstructures.
Explain the importance of the Construction (Design and Management) Regulations (CDM) in relation to civil engineering projects.

property. The area selected for the patio comprises well-drained land that slopes up to a height of 3.5 m in an irregular manner. The intention is to cut back the ground to provide the space required for the patio, and to support the remaining ground with a retaining wall. The builder intends to consult a civil engineer to determine the volume of soil to be removed, the dimensions and construction of the retaining wall and the preferred materials to use. Discuss the factors the civil engineer must consider when presenting his or her (12 marks) recommendations.

A builder has been asked to construct an external patio area at the rear of a domestic

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