

Question 1 (10 marks)

You are the Manager of Electrical Engineering at an underground mine. The mine is to install a dewatering pumping system at the rear of the longwall blocks. The pumping system will be installed within a cased borehole from the surface to an area in the goaf which will become flooded and therefore not be able to be inspected.

Your Mine Operator has requested that you advise him of the requirements to complete the project and an expected time frame. Include the following information:

- a) What type of certification will be required for the installation? (1 mark)
- b) In relation to the electrical installation:
 - i) Which items are 'safety critical' for the electrical installation? (2 marks)
 - ii) Briefly explain why each item in i) above is 'safety critical'? (2 marks)
 - iii) Which items will require a SIL assessment? (1 mark)
- c) On the spreadsheet provided develop an expected project plan from the start of the project to the completion, giving the expected time frames and project tasks (4 marks) See spreadsheet over page.

10 N1 Engineering Science Question Paper

N Noddings



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10 N1 Engineering Science Question Paper Book Review: Unveiling the Magic of Language

In an electronic digital era where connections and knowledge reign supreme, the enchanting power of language has become more apparent than ever. Its power to stir emotions, provoke thought, and instigate transformation is truly remarkable. This extraordinary book, aptly titled "**10 N1 Engineering Science Question Paper**," compiled by a very acclaimed author, immerses readers in a captivating exploration of the significance of language and its profound effect on our existence. Throughout this critique, we will delve into the book's central themes, evaluate its unique writing style, and assess its overall influence on its readership.

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