UNIVERSITY OF KWAZULU – NATAL

EXAMINATIONS JUNE 2011

BSC : PROPERTY DEVELOPMENT

ENPD3TA - CONSTRUCTION TECHNOLOGY & PROCESSES 3A

DURATION: 3 HOURS TOTAL MARKS: 100

INTERNAL EXAMINER: MR. A R PEER

EXTERNAL EXAMINER: MR. K CHETTY

INSTRUCTIONS:

This is NOT an open book examination

Marks are allocated to each question

This exam counts 60% towards the total final mark

Answer all questions (Questions 1 – 10)
QUESTION 1 PARTITIONING & SUSPENDED CEILINGS

Define partitioning, its purpose, advantages and the factors that affect the choice of partitioning to be selected. (15 Marks)

QUESTION 2 THERMAL INSULATION & ACOUSTICS

What are the advantages of thermal insulation? (5 Marks)

QUESTION 3 THERMAL INSULATION & ACOUSTICS

‘Thermafoam’ is widely used today as polyurethane foam type insulation on roofs. List 8 advantages of ‘Thermafoam’. (8 Marks)

QUESTION 4 SECURITY SYSTEMS

An upmarket 4-storey office building comprising one floor of parking and 3 floors of offices has been developed for a single tenant whose main activity is consulting in all the construction disciplines. Discuss the communication systems you would consider necessary for the effective functioning of their business operations and those necessary for the security of the building. (15 Marks)

QUESTION 5 WASTE DISPOSAL

Waste is disposed of in various ways. Discuss what is involved in the following processes of waste disposal: Landfill, Incineration & Recycling. (12 Marks)

QUESTION 6 WASTE DISPOSAL

A refuse room is located at the bottom of a chute in a building. List 6 requirements of a refuse room to meet municipal standards. (6 Marks)

QUESTION 7 BUILDING MAINTENANCE

7a. ‘Maintenance keeps up a building’s appearance and extends its life.’ Discuss the various types of Maintenance using a diagrammatic presentation as a guide. (10 Marks)

7b. Poorly designed foundations are a major cause of structural failure in buildings. Discuss the causes of movement in foundations and the various ways in which it can be addressed. (10 Marks)

QUESTION 8 GENERAL (Fire Protection)

To reduce accidents Escalators are equipped with many safety features. List and briefly explain 3 safety features of escalators. (6 marks)

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QUESTION 9 GENERAL (Fire Protection)

List 5 types of portable fire extinguishers  (5 Marks)

QUESTION 10 GENERAL (Security Systems)

Draw and annotate the following types of fencing:

10a) 1800mm High overall chain link fence with 3 strands barb wire at top.  (4 Marks)

10b) 2400mm High steel palisade fence. Assume typical steel member sizes.  (4 Marks)

TOTAL 100 Marks