

BUILDING CONSTRUCTION AND MATERIALS 7

DISTANCE LEARNING EXAMINATION

SEMESTER 1, 2000

Instructions to Candidates:

You **must** answer QUESTION 1 and any 3 of the remaining 4 questions

OPEN BOOK Examination - any references permitted

Time: 2 hours

Total Marks: 100 Lecturer: George Zillante

QUESTION 1: (COMPULSORY)

40 marks

The Federal Government has recently approved the construction of another major landmark building on the banks of Lake Burley Griffin in Canberra. It is to be constructed by the private sector and will serve a multi-functional purpose with large display areas for travelling exhibitions and convention facilities on the lower five floors and an international class hotel on the next eighty storeys.

You have been chosen as the builder for the project and your first task is to provide the Government and the developer with a report outlining the specific construction systems, materials and techniques you recommend for the project and why you chose them.

In preparing the report you should note the following:

Location of Building	Canberra, adjacent to Lake Burley Griffin
Height of Building	85 storeys
Finance	Development Bank of Brunei
Purpose of Building	Multi-function/exhibition hall and convention centre and five star hotel

Specific Building Requirements

- Column free space for exhibition hall and convention centre
- view from all sides
- Intelligent built in systems
- High security
- large central atrium in hotel
- strictly controlled internal atmosphere
- provide 180/180/180 FRL to all structural members

QUESTION 2:

20 marks

Discuss the major arising from civil engineering construction which have an impact on building construction.

QUESTION 3:

20 marks

Discuss (with reasons) what rapid formwork system you would recommend for a building with the following specifications:

- luxury apartment building
- located in the CBD of your capital city
- 35 storeys high

QUESTION 4:

20 marks

Explain what you understand by the term “transfer structures” as applied to multi-storey construction.

QUESTION 5:

20 marks

“Innovative construction using steel, timber, etc. is often the result of working in teams, thinking laterally and being prepared to solve problems”.

Discuss **CRITICALLY** the above statement . Illustrate your answer with relevant examples and say whether you agree or disagree with the statement.

ooooooooooooOOOOOOOOOO End of Questions OOOOOOOOOOoooooooooooo