



STAMFORD COLLEGE

SCHOOL OF COMPUTER SCIENCES

DIPLOMA IN INFORMATION TECHNOLOGY

STC112 : PROGRAMMING LANGUAGE CONCEPTS & PARADIGMS

Date : 7 May 2007 (Monday)

Time : 9.00 a.m. – 11.00 a.m.

Duration: 2 hours

Instructions to Candidates

Answer ALL questions.

Please ensure that this examination paper contains FIVE questions on TWO printed pages before you start the examination.

Books, papers and other written materials are not allowed to be brought into the examination hall. A candidate who violates the examination rules of Stamford College or commits a malpractice will be disqualified from the examination.

Candidates may use calculators provided the calculators give no printout, have no work display facilities, are silent and cordless.

Write your Examination Index Number on each page of your answer booklet.

Answer ALL questions.

Question 1

- (a) List any five reasons for studying a programming language. (10 marks)
- (b) Describe the operation of the general language Generator. (4 marks)
- (c) Differentiate between “Syntax “ and “Semantics”. (6 marks)
- (Total =20 marks)

Question 2

Briefly describe the meaning of the following terms:

- (i) Lexical
 - (ii) Syntax
 - (iii) Semantics
 - (iv) Non-terminal symbol
 - (v) Terminal symbol
- (20 marks)
- (Total =20 marks)

Question 3

- (a) Define the term “Overloaded Operators”. Give an example to support your answer. (6 marks)
- (b) List and define the three primitive data types with appropriate examples. (8 marks)
- (c) Define “Ternary Operator” and give an example. (6 marks)
- (Total =20 marks)

Question 4

- (a) Explain the following terms with examples:
- (i) Narrowing conversion
 - (ii) Widening conversion
- (10 marks)

Question 4 (continued)

(b) What are the primary design issues of Names?

(10 marks)

(Total =20 marks)

Question 5

(a) Define the following terms:

- (i) Lifetime
- (ii) Scope
- (iii) Descriptor

(6 marks)

(b) Define the term “Strongly Typed” Programming Language.

(4 marks)

(c) What are the formal parameters? What are the actual parameters? Give an example of a function declaration statement?

(10 marks)

(Total =20 marks)

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