

NEW

2017

BCA 3rd Semester Examination

SYSTEM PROGRAMMING

PAPER—2102

Full Marks : 70

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Q. No. 1 and any four from the rest.

1. Answer any *five* questions : 5×2

(a) What is cross assembler ?

(b) What is the function of linker ?

(Turn Over)

- (c) Write down the disadvantages of "Compile-and-go" loader.
 - (d) What do you mean by hashing ?
 - (e) What are macro instruction arguments ?
 - (f) What are the difference between system program and application program ?
 - (g) What is the difference between object file and executable file ?
2. (a) Differentiate between open sub-routine and closed sub-routine.
- (b) What is assembly language ? Give its advantage and disadvantages.
- (c) Write down the operations of Pass 2 assembler.
- $3+(2+4)+6$
3. (a) What is the difference between MAR and MBR ? Give a diagrammatic representation of their work flow.
- (b) What are the advantage of using Base register and Index register in addressing mode.

(c) What is an overlay structure ? What is its use ?

(2+3)+4+(2+4)

4. (a) State the functions of a loader.

(b) What are the advantages and disadvantages of 'compile and go loader' ?

(c) Explain absolute loader and list its limitations.

4+5+6

5. (a) Write an assembly language program to subtract two numbers using macro where the subtraction operation is performed within macro and values are supplied as arguments.

(b) What are the functions of END, START, EXTRN in pseudo-operation ?

(c) Write down the applications of linker.

7+4+4

6. Write short notes on (any three) :

3×5

(a) Syntax analyser ;

(b) Debug monitor ;

(c) Pre-processor ;

- (d) Dynamic linking ;
 - (e) Text editor.
7. (a) State two advantages and disadvantage at load time over binding at assembly time.
- (b) Describe the difference between static linking and dynamic linking.
- (c) What do you mean by debugging ? Briefly explain different debugging scheme. 4+6+5
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