

NEW

2016

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 Question no. 1 and any four from the rest.

1. Answer any five questions : 5×2

(a) What is 'Boot-strap' Loader ?

(b) What is the disadvantage of assembly language ?

(c) Distinguish macroprocessor and preprocessor.

(Turn Over)

- (d) What is the role of base register ?
 - (e) What do you mean by forward references ?
 - (f) What is cross-compiler ?
 - (g) Compare macro and subroutine.
2. (a) What is an assembler ?
- (b) Briefly explain the task of pass 1 and pass 2 of a two pass assembler.
- (c) Explain the role of the following databases of a two pass assembler :
- (i) Machine Op Table (MOT) ;
 - (ii) Symbol Table (ST) and Literal Table (LT) ;
 - (iii) Pseudo OP Table (POT). 2+4+(3×3)
3. (a) Define Macro.
- (b) Draw flowcharts for macro call within macro. Also explain it.
- (c) Write down some uses of linker. 2+9+4

4. (a) What is loader ? State the functions it must perform.
(b) Why should we use register, index register and displacement format for the formation of address.
(c) Compare dynamic loading and dynamic linking.
(2+3)+5+5
5. (a) What is the difference between directive and indirective statement ?
(b) Write an assembly language program to add two numbers using macro. (The addition operation is performed within macro and values are supplied as arguments).
(c) Explain briefly the various phases of compiler.
3+7+5
6. Write short note on any three : 3×5
(a) Text editor ;
(b) FSM ;
(c) Interpreter ;
(d) Lexical analyser ;
(e) Debug monitor.
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