PMM/KS/15/7015

Faculty of Engineering & Technology

Fourth Semester B.E. (Comp. Sci. Engg.) (C.B.S.) Examination

SYSTEM PROGRAMMING

Paper—V

Time : Three Hours] [Maximum Marks : 80

INSTRUCTIONS TO CANDIDATES

(1) All questions carry marks as indicated.

(2) Solve Question 1 **OR** Question No. 2

(3) Solve Question 3 **OR** Question No. 4

(4) Solve Question 5 **OR** Question No. 6

(5) Solve Question 7 **OR** Question No. 8

(6) Solve Question 9 **OR** Question No. 10

(7) Solve Question 11 **OR** Question No. 12

(8) Assume suitable data wherever necessary.

1. (a) What are the various data formats used in assembler ? Explain them. 7

(b) Explain in detail the instruction formats used in assembler of IBM 360/370 machine. 7

OR

2. (a) Explain the databases, flowchart and algorithm for Pass-1 assembler. 10

(b) Write short notes on —

The general machine structure of IBM 360. 4

3. (a) Explain —MDTC, MNTC and MDTP in detail. 7

(b) What is conditional macro expansion ? Explain in detail. 6

OR

4. (a) What is a macro call within macro or nested macro call ? Explain the utility of stack frame with example. 8

(b) Explain one pass macro-processor for macro definition with macro definition. 5

5. (a) What are the four basic functions of loaders ? How do relocating loaders perform these functions ? 8

(b) Explain the following types of address format :

(1) Absolute

(2) Simple Relocatable. 5

OR

6. (a) What is the order of RLD, ESD, TXT, END and LDT cards in bunch of object decks ? Why they are in this order ? 8

(b) Explain dynamic linking and dynamic loading. 5

7. (a) Explain in detail the format of common object file. 8

(b) What is symbolic debugger ? Explain. 5

OR

8 (a) What do you mean by source code control system ? 7

(b) Explain make and link editor 6

9 (a) Explain the steps in installation of Linux device drivers in detail 8

(b) Write short note on SCSI RAM drivers 5

OR

10 (a) Explain all the entry points for line printer device driver. 8

(b) Design a device driver for handling a RAM disk 5

11. Explain compiler and various phases of compiler in detail 14

OR

12. (a) What is cross compiler and bootstrapping ? 8

(b) What are token recognizers ? Explain ways of designing token recognizers. 6