2019

SYSTEM PROGRAMMING

PAPER —2102

Full Marks : 70

Time : 3 hours

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

The figures in the right-hand margin indicate marks

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

Illustrate the answers wherever necessary

1. Answer any *five* questions :　　　　　2 × 5

   (*a*) What is system program ?

   (*b*) What is pre-processor ?

   (*c*) What is the difference between object file and executable file ?

(d) What do you mean by hashing ?

(e) Differentiate between compiler and Assembler.

(f) What is linker ?

(g) What is 'Boot-strap' loader ?

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

(b) Explain absolute loader and list its limitations.

(c) What is the advantage and disadvantage of 'compile and go loader' ?   4 + 6 + 5

3. (a) What is macro ?

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

(c) 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.
2 + 6 + 7

4. (a) What is assembly language ? Give its advantage and disadvantage.

(b) Explain the working of a two pass assembler.

(c) Compare dynamic linking and dynamic loading. (2 + 4) + 4 + 5

5. (a) What do you mean by debugging ? Briefly explain different debugging scheme.

(b) Write the algorithm of a single pass macro-processor.

(c) Write down the advantage and disadvantage of load time over binding at assembly time ?
5 + 6 + 4

6. (a) What is the difference between open sub-routine and closed sub-routine ?

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

(c) Explain the various phases of compiler.
3 + 6 + 6

7. Write short notes on any *three* : 5 × 3

(i) Text editor

(ii) Overlay Structure

(iii) Dynamic linking

(iv) Macro call within macro

(v) Assembly language programming.