MCA/IIS/205/13

MCA 2nd Semester Examination, 2013

SYSTEM PROGRAMMING

PAPER—CS-MCA-205

Full Marks : 100

Time : 3 hours

Answer **Q. No. 1** and any **five** 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. Write any *five* questions from the following : 2 × 5

(*a*) What is STSTO ?

(*b*) Write down the advantage of assembly language.

(*c*) What is static linking ?

(*d*) What is Bootstrap loader ?

(*e*) What is lexical expansion ?

(*f*) What is binder ?

(*g*) What is linkage editor ?

2. (*a*) Write down the General machine structure based upon 1 BM system/360.

(*b*) Discuss about 'Long Way, no looping' scheme with following assumptions :

(*i*) 10 number stored in core whose beginning core location is 952.

(*ii*) The program is in core starting at absolute location 952.

(*iii*) The number 49 is at absolute location 48.

(*iv*) Register 1 contains 48.

From the above assumptions the number 49 add to the content of 10 adjacent full words in memory.

8 + 4

3. (*a*) Write down the function of assemblers.

   (*b*) Discuss pass 1 data bases of Data structure of assembler design.

   (*c*) Write the function of USING and BALR. 2 + 8 + 2

4. (*a*) Discuss the format of Data Base of assembler design procedure.

   (*b*) Describe macro instruction Arguments. 8 + 4

5. (*a*) What is macro instructions ?

   (*b*) Discuss about macro calls within macros.

   (*c*) Why we use base register to calculate total number of bit in memory for an add instruction. 1 + 8 + 3

6. (*a*) Write down the basic tasks that any macro instruction processor must perform.

   (*b*) Write down the specification of data base format of a two pass algorithm of macro processor. 6 + 6

7. (*a*) Compare relocating loader and Direct linking loader.

   (*b*) State the disadvantages of compile-and-Go loader.

   (*c*) What is Relocation ? 6 + 4 + 2

8. (*a*) What is linking ?

   (*b*) Give the design of a linker. Briefly explain. 2 + 10

[*Internal Assessment* : 30 Marks]
