MS – 432

IV Semester B.C.A. Examination, May 2011
(Old Scheme)
4 BCA 1 : SYSTEM SOFTWARE

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **any eight** of the following : **(3×8=24)**

1. What is the difference between system software and application software.
2. What do you mean by Pseudo-op ? Explain LTORG with an example.
3. What are the advantages and disadvantages of a base register in address formation ?
4. Define a fixed table and a variable table with an example.
5. What is MOT ? Give its format.
6. Define the following terms :
   a) Macro b) Macro call c) Macro Expansion
7. Explain GEST and LISA used in the design of Direct linking loader.
8. What is the use of STACK in syntax phase ?
9. What is the purpose of interpretation phase of compiler ?
10. Explain EXTRN and ENTRY statements.

SECTION – B

Answer **any four** of the following : **(14×4=56)**

11. a) Explain the various instructions formats of IBM 360/370.
    b) Write a note on formal systems. **(10+4)**
12. a) Explain in detail, address modification using index register with an example program.
    b) What is literal ? Explain with an example. **(10+4)**

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3. a) Draw a flowchart for simple one-pass macroprocessor and explain.
   b) Explain advanced Macro facilities. **(10+4)**

4. a) Explain the Passl algorithm of Direct linking loader using flowchart.
   b) Sketch the 4 basic functions of loader. **(10+4)**

5. Briefly explain the different phases of compiler with a neat block diagram. **(10+4)**

6. Write a short note on :
   a) Radix sort technique.
   b) Overlay structure for linking.
   c) Optimization. **(6+5+3)**