[07 – 3116]

III/IV B.Tech. DEGREE EXAMINATION.

First Semester

Computer Science and Engineering

SYSTEMS PROGRAMMING

(Effective from the admitted batch of 2006–2007)

Time : Three hours   Maximum : 70 marks

First question is compulsory.

Answer any FOUR from the remaining questions.

All questions carry equal marks.

Answer all parts of any question at one place.

1.   (a)   What is the difference between procedure and Program?

     (b)   Bits in memory may represent data or instructions. How does the processor know whether a given location represents an instruction or a piece of data?

     (c)   What is the use of Index register?

     (d)   Define Pseudo-op table.

(e) Define Macro Definition Table.

(f) Define Overlays.

(g) Distinguish between Compiler and Interpreter.

2. (a) Describe general machine structure.

(b) Explain the Data formats for the system 360.

3. Explain the following with examples.

(a) USING

(b) BALR

(c) LITERALS

(d) LOOP.

4. Explain in detail the design of 2 pass assemblers.

5. Explain one-pass macro processor to handle macro calls within macro definitions. Draw a neat flow chart for it.

6. (a) Describe the function of each of the RLD, ESD, TXT and END cards.

(b) Discuss the design of an Absolute Loader.

7. (a) Explain how to develop Interpreters.

(b) What databases are used in loaders? Explain.

8. (a) Explain the features of Debug monitors.

(b) Explain the procedure to develop software tools.