Code No: RR100204 **RR**

I B.Tech Year(RR) Supplementary Examinations, May/June 2010
INFORMATION TECHNOLOGY AND NUMERICAL METHODS
(Common to Electrical & Electronic Engineering, Electronics & Communication Engineering, Computer Science & Engineering, Electronics & Instrumentation Engineering, Bio-Medical Engineering, Information Technology, Electronics & Control Engineering, Computer Science & Systems Engineering, Electronics & Computer Engineering, Instrumentation & Control Engineering and Bio-Technology)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. What is the purpose of Input and output devices? What is the difference between text-type and non-text type data? Give three examples of each type of data. [16]

2. (a) Write a brief notes on user interface features of an operating system.
   (b) Write short notes on the program running features in operating system.
   [8+8]

3. (a) What is meant by 'portability' in computer languages.
   (b) Distinguish between third generation and fourth generation languages.
   [6+10]

4. Explain:
   (a) Network servers
   (b) File servers
   (c) Application servers
   (d) Spooling.
   [4+4+4+4]

5. Explain the following with respect to word document using Keyboard shortcut and using Mouse
   (a) Moving around in a word
   (b) Selecting text in word
   (c) Entering and deleting text
   (d) Finding and replacing text and other parts of a word document.
   [4+4+4+4]

6. (a) Obtain formulae using the Newton - Raphson technique to calculate the following
      i. $x^{1/3}$
      ii. 1/a
   (b) Find cube root of 16 and 1/16 using these iterative formulae obtained.
   [8+8]

7. (a) Obtain truncation error formula in Newton's forward interpolation method.
   (b) Fit a polynomial for f(x) whose values are 1.005, 1.020, 1.045, 1.081 at x = 0.1, 0.2, 0.3, 0.4. Use forward interpolation and then find f(0.16).
   [8+8]

8. (a) Evaluate $I = \int_0^{0.8} (1+(\sin x/x)).dx$ with an error $< 10^{-5}$ using Simpson's rule.
   (b) Give an algorithm for linear regression.
   [9+7]

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