

Code No: 09A50501

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B. Tech III Year I Semester Examinations, June/July - 2014

PRINCIPLES OF PROGRAMMING LANGUAGES

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

Answer any five questions  
All questions carry equal marks

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- 1.a) Discuss language evaluation criteria and the characteristics that affect them.
- b) What do you mean by programming paradigms? Explain different programming paradigms with examples.
2. Rewrite the following expression in prefix, postfix and infix notation.  
 $(b/2 + \sqrt{b/2}) * (b(2) - a*c) / a$   
Further give the abstract syntax tree for the above expression.
- 3.a) What determines whether an object is allocated statically on the stack or in the heap?
- b) Explain pointer and reference data types.
- 4.a) Differentiate between Boolean condition evaluation techniques in C and Pascal.
- b) Define the structured sequence control statements. Explain the conditional statements and its implementation with suitable example.
- 5.a) Explain various parameter passing methods.
- b) Write about generic sub-programs.
6. Define semaphores. Explain how cooperation synchronization and competition synchronization are implemented using semaphores. Give an example on Java thread.
- 7.a) Explain exception handling in Ada.
- b) Write about applications of logic programming.
- 8.a) Explain list processing in LISP using scheme functions.
- b) Discuss about meta language value declaration statements.

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