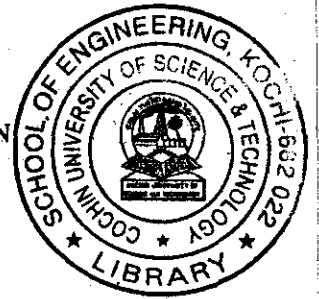Code No. BTS 117 (F)

B.TECH. DEGREE III SEMESTER (SUPPLEMENTARY) EXAMINATION IN INFORMATION TECHNOLOGY, JUNE 2001

IT 303 PROGRAMMING TECHNIQUES AND PRACTICES
(1995 Admissions)

Time: 3 Hours   Maximum Marks: 100

(All questions carry *equal* marks)

I.   What is the system development life-cycle? Briefly describe the activities it includes.
                                                          OR
II.   (a)   What is meant by 'Good programming'?
         (b)   What objectives guide the design of computer program specification?

III.   (a)   Describe elementary data types defined in programming languages and operations on
                them.
         (b)   Compare two searching algorithms.
                                                          OR
IV.   (a)   Explain fundamental data types and derived data types defined in programming
                languages.
         (b)   Give an algorithm to sort n integers in non-decreasing order.

V.   Explain the following:
                        (i)   Catalytic checking   (ii)   Egoless programming
                                                          OR
VI.   Explain Top-down program design and bottom-up program design.

VII.   (a)   How does code indentation contribute to readability of a program and to subsequent
                programming change?
         (b)   What are the major approaches to verify a program process data accurately?
                                                          OR
VIII.   (a)   What are the problems and disadvantages of parallel testing?
         (b)   Explain various coding techniques.

IX.   Are corrective maintenance and debugging the same thing? Explain your answer.
                                                          OR
X.   What is the role of software maintenances in successful use of a software system?

XI.   How does a report generator differ from a query language?
                                                          OR
XII.   Describe the utilities commonly available that can enhance the programmers
                productivity.

XIII.   Is the absence of 'GOTO' statement alone enough to result in 'structured programming'?
                Comment.
                                                          OR
XIV.   Illustrate the use of a suitable tabular technique in evaluating a complex combination of
                conditions to select an appropriate action.

XV.   (a)   What is the purpose of post-installation review?
         (b)   Explain the difference between a preprocessor and macro processor.
                                                          OR
XVI.   Explain multiprogramming? What are the advantages and disadvantages of
                multiprogramming?

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