



SB-4311

M. C. A. (Sem. II) Examination  
March / April – 2011

Paper - 201 : Advanced 'C' Programming &  
System Software

Time : 3 Hours]

[Total Marks :70

Instruction :

नीचे दृशावेक निशानीवाणी विगतो उतरवडी पर अवश्य लपवी.  
Fillup strictly the details of signs on your answer book.

Name of the Examination :  
M. C. A. (Sem. 2)

Name of the Subject :  
201 : Advanced 'C' Programming & System Software

Subject Code No. : 4 3 1 1 Section No. (1, 2,.....): Nil

Seat No. :

Student's Signature

- 1 Answer any seven : 14
- What is Index addressing mode ?
  - What is a good data structure to use for storing lines of text ?
  - What is an execution error ? Differentiate it from syntactic error. Give examples.
  - What is the right way to use errno ?
  - Define terms : Translation time, Compile time.
  - You can't use dynamically allocated memory after you free it, can you ? Justify your answer.
  - What's the difference between `#include <>` and `#include ""` ?
  - What is a bootstrap loader ? Why is it required ?
  - What does a run-time "null pointer assignment" error mean ?
  - Compare Macros and Subroutines.
- 2 Answer the following : 14
- What is binding ? Explain the different types of binding. 4
  - Explain the design of absolute linking. 5
  - Write notes on Dynamic Linking. 5

- 3 Answer the following : 14
- (a) Explain program relocation with example. 4
  - (b) Write an algorithm for the first pass of the assembler. 5
  - (c) Explain fopen( ) function. Write a program to copy the content of one file into another. 5
- 4 Answer the following : (any two) 14
- (a) Define forward reference and state the problems it causes.
  - (b) Write note on TSR Programs.
  - (c) Explain with an example how macro processor allows the invocation of macro with in macro.
- 5 Answer any **one** : 14
- (a) Write a program to read details of User like user Id, User Name and Password from keyboard, write it to a file named passwd.txt. Thereafter, ask for the User Id and Password to be searched. Validate it against data stored, and output 'Valid User' if both User Id and Password matches, or else output 'Invalid User/Password'.
  - (b) Declare a structure called hospital consisting of the following members: patient id, patient name and disease name. Using this structure write a 'C' program to create a file "patient.dat". There must be one record for every patient in the file. Accept the data from the user. Using the "Patient.dat" write a 'C' program to search for the details of the patient whose name is entered by the user and displays all the detail of all patients.
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