Code No: R05010106 **R05** **Set No. 2**

I B.Tech Examinations,December 2010
C PROGRAMMING AND DATA STRUCTURES
Common to CE, BME, IT, AE, ICE, E.COMP.E, ETM, E.CONT.E, EIE, CSE, ECE, CSSE, EEE

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Explain about file handling functions.
   (b) What are the reasons for defining sets of data as sequential files instead of arrays. [16]
2. (a) How to use pointer variables in expressions? Explain through examples.
   (b) Write a 'C' Program to illustrate the use of pointers in arithmetic operations. [8+8]
3. (a) Why is it possible to use the same variable names for actual and formal arguments.
   (b) Distinguish between function prototype and function definition.
   (c) What is recursion. What is its advantage. [5+5+6]
4. Write a C program for implementation of Queues using linked lists. [16]
5. (a) What is 'union' in C? How is data stored using union.
   (b) Write a program to pass address of a structure variable to user defined function and display the contents. Use a structure object boy with three fields: name, age and height. [6+10]
6. What is sorting? Explain about tree sorting technique with suitable examples.[16]
7. (a) What is a string constant? How do string constants differ from character constants? Do string constants represent numerical Values?
   (b) Summarize the standard escape sequences in C. Describe them.
   (c) What is a variable? How can variables be characterized? Give the rules for variable declaration.
   (d) What is the purpose of type declarations? What are the components of type declaration? [4+4+4+4]
8. (a) What is the maximum number of nodes in a binary tree that has 'm' leaves?
   (b) Explain the properties of binary trees. [8+8]

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Code No: R05010106 **R05** **Set No. 4**

I B.Tech Examinations,December 2010
C PROGRAMMING AND DATA STRUCTURES
Common to CE, BME, IT, AE, ICE, E.COMP.E, ETM, E.CONT.E, EIE, CSE, ECE, CSSE, EEE

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

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. (a) What is 'union' in C? How is data stored using union.
   (b) Write a program to pass address of a structure variable to user defined function and display the contents. Use a structure object boy with three fields: name, age and height. [6+10]
2. (a) Explain about file handling functions.
   (b) What are the reasons for defining sets of data as sequential files instead of arrays. [16]
3. (a) What is a string constant? How do string constants differ from character constants? Do string constants represent numerical Values?
   (b) Summarize the standard escape sequences in C. Describe them.
   (c) What is a variable? How can variables be characterized? Give the rules for variable declaration.
   (d) What is the purpose of type declarations? What are the components of type declaration? [4+4+4+4]
4. What is sorting? Explain about tree sorting technique with suitable examples.[16]
5. (a) How to use pointer variables in expressions? Explain through examples.
   (b) Write a 'C' Program to illustrate the use of pointers in arithmetic operations. [8+8]
6. (a) Why is it possible to use the same variable names for actual and formal arguments.
   (b) Distinguish between function prototype and function definition.
   (c) What is recursion. What is its advantage. [5+5+6]
7. Write a C program for implementation of Queues using linked lists. [16]
8. (a) What is the maximum number of nodes in a binary tree that has 'm' leaves?
   (b) Explain the properties of binary trees. [8+8]

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Code No: R05010106 **R05** **Set No. 1**

I B.Tech Examinations,December 2010
C PROGRAMMING AND DATA STRUCTURES
Common to CE, BME, IT, AE, ICE, E.COMP.E, ETM, E.CONT.E, EIE, CSE, ECE, CSSE, EEE

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

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Write a C program for implementation of Queues using linked lists. [16]
2. (a) What is the maximum number of nodes in a binary tree that has 'm' leaves?
   (b) Explain the properties of binary trees. [8+8]
3. (a) Explain about file handling functions.
   (b) What are the reasons for defining sets of data as sequential files instead of arrays. [16]
4. (a) Why is it possible to use the same variable names for actual and formal arguments.
   (b) Distinguish between function prototype and function definition.
   (c) What is recursion. What is its advantage. [5+5+6]
5. (a) How to use pointer variables in expressions? Explain through examples.
   (b) Write a 'C' Program to illustrate the use of pointers in arithmetic operations. [8+8]
6. What is sorting? Explain about tree sorting technique with suitable examples.[16]
7. (a) What is a string constant? How do string constants differ from character constants? Do string constants represent numerical Values?
   (b) Summarize the standard escape sequences in C. Describe them.
   (c) What is a variable? How can variables be characterized? Give the rules for variable declaration.
   (d) What is the purpose of type declarations? What are the components of type declaration? [4+4+4+4]
8. (a) What is 'union' in C? How is data stored using union.
   (b) Write a program to pass address of a structure variable to user defined function and display the contents. Use a structure object boy with three fields: name, age and height. [6+10]

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Code No: R05010106 **R05** **Set No. 3**

I B.Tech Examinations,December 2010
C PROGRAMMING AND DATA STRUCTURES
Common to CE, BME, IT, AE, ICE, E.COMP.E, ETM, E.CONT.E, EIE, CSE, ECE, CSSE, EEE

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What is the maximum number of nodes in a binary tree that has 'm' leaves?
   (b) Explain the properties of binary trees. [8+8]
2. Write a C program for implementation of Queues using linked lists. [16]
3. (a) How to use pointer variables in expressions? Explain through examples.
   (b) Write a 'C' Program to illustrate the use of pointers in arithmetic operations. [8+8]
4. (a) What is a string constant? How do string constants differ from character constants? Do string constants represent numerical Values?
   (b) Summarize the standard escape sequences in C. Describe them.
   (c) What is a variable? How can variables be characterized? Give the rules for variable declaration.
   (d) What is the purpose of type declarations? What are the components of type declaration? [4+4+4+4]
5. (a) Explain about file handling functions.
   (b) What are the reasons for defining sets of data as sequential files instead of arrays. [16]
6. (a) What is 'union' in C? How is data stored using union.
   (b) Write a program to pass address of a structure variable to user defined function and display the contents. Use a structure object boy with three fields: name, age and height. [6+10]
7. (a) Why is it possible to use the same variable names for actual and formal arguments.
   (b) Distinguish between function prototype and function definition.
   (c) What is recursion. What is its advantage. [5+5+6]
8. What is sorting? Explain about tree sorting technique with suitable examples.[16]

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