

Code No: R05012301

**R05****Set No. 2**

**I B.Tech Examinations, June 2011**  
**COMPUTER PROGRAMMING FOR BIOTECHNOLOGISTS**  
**Bio-Technology**

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

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) In what way array is different from an ordinary variable?  
 (b) What conditions must be satisfied by the entire elements of any given array?  
 (c) What are subscripts? How are they written? What restrictions apply to the values that can be assigned to subscripts?  
 (d) What advantage is there in defining an array size in terms of a symbolic constant rather than a fixed integer quantity?  
 (e) Write a program to find the largest element in an array. [2+2+4+4+4]
2. What do you mean by functions? Give the structure of the functions and explain about the arguments and their return values. [16]
3. (a) Why have I/O devices presented a bottle neck to efficient use of the computer?  
 (b) How does an ink jet printer create characters on a print page? What are advantages and disadvantages of ink jet printers. [6+10]
4. Write a biojava program to construct codon table of amino acids. [16]
5. Write a program to convert a postfix expression to a fully parenthesized infix expression. For example, AB+ would be transformed in to (A+B) and AB+C - would be transformed into ((A+B)-C). [16]
6. (a) C program contains the following declarations and initial assignments.  

```
int i=8, j=5, k;
float x=0.005, y = - 0.01, z;
char a,b,c='d', d='c';
```

 Determine the value of each of the following assignment expressions.  
 i. `i -= (j > 0) ? j : 0;`  
 ii. `a = (y >= 0) ? y : 0;`  
 iii. `i += (j - 2);`  
 iv. `z = (j == 5) ? i : j;`  
 (b) What are the increment and decrement operators? Explain with proper example with differentiates prefix and postfix operations. [4+6+6]
7. A company markets Hardware items. Create a structure "hwItem" that stores the title of the item, it's price, an array of three floats so that it can record the sale in rupees of a particular item for the last three months, category of the item and it's original equipment manufacturer. Write a short program that provides facility to read N no. of items information, append new item, and displays all records. [16]

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8. (a) Describe the distinct features of Unix Operating system.  
(b) Describe the file management features of Windows operating system. [8+8]

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**R05****Set No. 4**

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  - i.  $i = (j > 0) ? j : 0;$
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3. (a) Why have I/O devices presented a bottle neck to efficient use of the computer?  
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4. (a) Describe the distinct features of Unix Operating system.  
(b) Describe the file management features of Windows operating system. [8+8]
5. Write a biojava program to construct codon table of amino acids. [16]
6. What do you mean by functions? Give the structure of the functions and explain about the arguments and their return values. [16]
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(d) What advantage is there in defining an array size in terms of a symbolic constant rather than a fixed integer quantity?  
(e) Write a program to find the largest element in an array. [2+2+4+4+4]

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8. Write a program to convert a postfix expression to a fully parenthesized infix expression. For example,  $AB+$  would be transformed into  $(A+B)$  and  $AB+C-$  would be transformed into  $((A+B)-C)$ . [16]

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**R05****Set No. 1**

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 iii.  $i += (j - 2);$   
 iv.  $z = (j == 5) ? i : j;$   
 (b) What are the increment and decrement operators? Explain with proper example with differentiates prefix and postfix operations. [4+6+6]
7. A company markets Hardware items. Create a structure "hwItem" that stores the title of the item, it's price, an array of three floats so that it can record the sale in

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rupees of a particular item for the last three months, category of the item and it's original equipment manufacturer. Write a short program that provides facility to read N no. of items information, append new item, and displays all records. [16]

8. Write a biojava program to construct codon table of amino acids. [16]

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**R05****Set No. 3**

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 (b) How does an ink jet printer create characters on a print page? What are advantages and disadvantages of ink jet printers. [6+10]
2. (a) C program contains the following declarations and initial assignments.  
 int i=8, j=5, k;  
 float x=0.005, y = - 0.01, z;  
 char a,b,c='d', d='c';  
 Determine the value of each of the following assignment expressions.  
 i. i --(j>0) ? j:0;  
 ii. a = (y>=0)? y : 0;  
 iii. i += (j-2);  
 iv. z = (j ==5)? i : j;  
 (b) What are the increment and decrement operators? Explain with proper example with differentiates prefix and postfix operations. [4+6+6]
3. What do you mean by functions? Give the structure of the functions and explain about the arguments and their return values. [16]
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- (d) What advantage is there in defining an array size in terms of a symbolic constant rather than a fixed integer quantity?
- (e) Write a program to find the largest element in an array. [2+2+4+4+4]

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