GWECA, B. Tech II Sem. Sec-A&C, I Mid-Term Exam.–MAR-2018, CP-II, CS-103, Time: 1 Hr, MM: 20

Q1. A. Take input a String and determine whether it is a palindrome or not. (4)

B. If string is a palindrome then convert all its characters to upper case. E.g. “asDsa” is a palindrome so finally print ASDSA (3)

Q2. A. If you are asked by your neighbour to purchase a computer for him and he wants a latest computer but under 40000. What configuration you will suggest him. Write name of part to be purchased with detailed specifications of each part. E.g. two USB 3.0 ports, etc. (2)

B. What do you mean by CPU speed. What is Byte addressable memory. (2)

C. List out advantages and disadvantages of contiguous memory allocation in context to Arrays. (2)

Q3. Predict output 2+2+3

| **A**. | **B.** | **C.** |
|---|---|---|
| void main()<br>{<br>char<br>A[5]={69,99,103};<br>printf("%s",A);<br>} | void main()<br>{<br>char A[20]="C<br>Programming";<br>char B=77;<br>int f=6;<br>A[f++]=++B;<br>printf("%s",A);<br>} | void main()<br>{<br>char A[2][2]={2,3,4,5};<br>char B[2][2];<br>int i,j;<br>for(i=0;i<2;i++)<br>{ for(j=0;j<2;j++)<br>{ B[i][j]=A[j][i];<br>printf("%d\t",B[i][j]);<br>} printf("\n");<br>}} |

Solutions:

Q1

```
#include <stdio.h>
#include <string.h>
#include <conio.h>
#include <ctype.h>
int main()
{
   char str1[5],str2[5];
   int i,j,len;
   printf("Enter a string to check\n");
   scanf("%s",str1);
   len=strlen(str1);
   for(i=len-1;i>=0;i--)
   {
      str2[j]=str1[i];
      j++;
   }
   str2[j]='\0';
   //puts(str2);
   if(strcmp(str1,str2)==0)
   {
      printf("The input string is a palindrome\n");
      for(i=0;str1[i]!='\0';i++)
```

```
        {
            if(str1[i]>=97&&str1[i]<=122)
            {
                str1[i]-=32;
            }
        }
    }
    printf("%s",str1);

    return 0;
}
```

Q2. A

| Name of component and Specs | Appx Price | Cumulative Price |
|---|---|---|
| HDD I TB | 4000 | 4000 |
| RAM 8GB DDR3 or above | 5000 | 9000 |
| Mother board i5 processor, 2.5GhZ, 1MB L3 cache, USB 3.0 two ports, Ethernet card, inbuilt graphic 1 GB | 9000 | 18000 |
| LED monitor 17 inch | 11000 | 29000 |
| Cabinet | 2000 | 31000 |
| DVD ROM RW | 2000 | 33000 |
| Windows 10 Professional | 5000 | 38000 |
| Microsoft Office | 2000 | 40000 |

Q2. B
2.4Gz = 2.4x10^9 cycles/sec= 2.4x10^9 instructions/sec
CPU can run these many instructions in a second.
Byte Addressable memory: Each byte of a memory has a unique address.

Q2. C

| Adv | Disadv |
|---|---|
| Speedy Access | Fragmentation due to the unused space |
| All elements are at contiguous locations | Complex deletion and insertion of new elements |
| | Static memory allocated aat compile time so memory wastage |

Q3. A
Ecg
Q3. B
C ProgNamming
Q3. C
2 4
3 5