Midterm (Apr 7 2016)

Name:

1. Write all of variables and its size in C order by size (variable)

|  |  |
| --- | --- |
| char | 1 |
| short | 2 |
| int | 4 |
| long | 4 |
| float | 4 |
| double | 5 |

1. What keyword can tell us size of the variable? (variable)

sizeof

1. What range of the variable “int” and “unsigned int” (variable)

int : -2^31 ~2^31 -1

unsigned int : 0 ~ 2^32

1. Which of the following is the correct order of evaluation for the below expression? (operator, priority)

a = 4+2 – 1 \* 10 / 2 % 10

1. \* / % + - = (0)
2. = \* / % + -
3. / \* % - + =
4. \* % / - + =
5. fill out the all blanks (operator)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a | b | a&b | a|b | a^b |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 |

1. what is different “&” and “&&”?, when can you use “&&”? (operator)

& is for bitwise operation

1. && is for logical operation
2. true & false condition

if(…) , while(…), for(;…;) that keyword can use with logical opertaion

1. What will be the output of the program ? (string, pointer)

|  |
| --- |
| 1. **#include<stdio.h>**
2. int main()
3. {
4. char str[20] = "Hello";
5. char \*const p=str;
6. \*p='M';
7. printf("%s\n", str);
8. return 0;
9. }
 |

Mello

1. Convert switch to if/else? (control statement)

|  |
| --- |
| **#include<stdio.h>**int main(){ int i=3; switch(i) { case 1: printf("Hello\n"); case 2: printf("Hi\n"); case 3: continue; default: printf("Bye\n"); } return 0;} |

Ans)

**#include<stdio.h>**

int main()

{

 int i=3;

 if(i == 1)

 {

 printf("Hello\n");

 }

 else if(i==2)

 {

 printf("Hi\n");

 }

 else if(i == 3)

 {

 continue;

 }

 else

 {

 printf("Bye\n");

 }

 return 0;

}

1. Convert “for” to “while” (control statement)

|  |
| --- |
| **#include<stdio.h>**int main(){ int i,sum=0;  for(i = 0 ; i < 100 ; i++) { sum += i; }  printf(“%d\n”,sum);} |

Ans)

**#include<stdio.h>**

int main()

{

 int i,sum=0;

 i = 0;

 while(i < 100)

 {

 sum += i;

 i++

 }

 printf(“%d\n”,sum);

}

1. What will be the output of the program ? (operator)

|  |
| --- |
| 1. **#include<stdio.h>**
2. int main()
3. {
4. int i=4, j=8;
5. printf("%d, %d, %d\n", i|j&j|i, i|j&j|i, i^j);
6. return 0;
7. }
 |

 i =4 : 0100 j= 8: 1000

 i|j ->1100

 i|j&j -> 1000

i|j&j|i -> 1100

i^j -> 1100

12, 12, 12

1. What will be the output of the program ? (pointer)

|  |
| --- |
| 1. **#include<stdio.h>**
2. int main()
3. {
4. char str[25] = "IndiaBIX";
5. printf("%s\n", str+2);
6. return 0;
7. }
 |

Ans) diaBIX

1. If the size of integer is 4bytes, What will be the output of the program?

|  |
| --- |
| **#include<stdio.h>**int main() { int arr[3] = {2, 3, 4}; char \*p; p = arr; printf("%d, ", \*p); p = ((int\*)p+1); printf("%d", \*p); return 0; } |

arr[0] 0x00 0x00 0x00 0x02

arr[1] 0x00 0x00 0x00 0x03

arr[2] 0x00 0x00 0x00 0x04

ans)

2

3

1. Write code simple calculator by using function concept (sum,minus,divide….)