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MINOR EXAMINATION-2024

Course Code: CS/IT-101

Date: 27-09-2024 (Fri)

Course Name: Principles of Computer Programming

Time: 04:00 PM - 06:00 PM

Program & Sem: B.Tech (IMT/IMG/CSE/MSCE/EEE), 1st Semester

Max Marks: 30

Instructions:

- (i) Read the all questions carefully and answer accordingly.
- (ii) This Question paper contains fifteen questions.

Part A

Answer all the Questions.

Each question carries *one* marks.

(10 Questions x 1 Mark = 10 Marks)

Q.1. What is the output of this program?

(1 mark)

```
#include<stdio.h>

int main()
{ float x=10; printf("%d",x); return 0; }
```

- (a) 10.1
- (b) Compilation Error
- (c) Garbage value
- (d) 10

Q.2. What is the output of this program?

(1 mark)

```
#include<stdio.h>

enum mixedvar
{ a=2,b=3.56 };

enum mixedvar m;

main()
{ printf("%d%d",a,b); }
```

- (a) 2 3
- (b) 0 1
- (c) Error
- (d) 2 3.56

Q.2. Identify correct C keyword below

(1 mark)

- (a) caste, enum, register, typedef
- (b) break, mend, long, switch
- (c) auto, double, int, struct
- (d) char, extern, intern, return

Q.3. What is the output of the following program

(1 mark)

```
#include <stdio.h>
```

`main()`

```
int c, d;    c = 2 ^ 3;    d=c<<1>>1;
printf("%d %d", c,d);    return 0;
```

(a) 1 0

(b) 0 1

(c) 1 1

(d) 0 0

Q.4. Size of short int, char, and unsigned int in Bits are?

(1 mark)

(a) 4, 8, 16

$\frac{1}{8}$ $\frac{1}{8}$

(b) 4, 8, 16

~~(c)~~ 8, 8, 16.

(d) 4, 6, 8

Q.5. If you do not specify a storage class for a Variable?

(1 mark)

(a) You get compiler error

(b) You get compiler warning

Variable is in automatic storage class

(d) Output is null always

Which of the following characterize the typical execution time of programming language? (1 mark)

(a) Binary > Assembly > ANSI C

(b) Binary > Assembly < ANSI C

(c) Binary < Assembly < ANSI C

(d) Binary < Assembly > ANSI C

Q.7. Which of the following operator has lowest level of precedence (1 mark)

(a) &&

(b) &

(c) .

(d) ?

Q.8. Which is the correct descending sequence of the datatypes with respect to their sizes (1 mark)

(a) double > int > float

(b) int > char > float

(c) char < int < double

(d) double > char > int

Q.9. If x is 5, then what would be the value of:

(1 mark)

`printf("%d", x++ + ++x);`

~~(a)~~ 11

(d) 13

(1 mark)

Q.10. Correct way of defining a symbolic constant

(a) #Define SCOPE=10

(b) # define SCOPE 10;

~~(c)~~ #define SCOPE 10

(d) # Define SCOPE_10

Part B

Answer all the Questions.

Each question carries five marks.

(5 Questions x 4 marks = 20 Marks)

Q.11. (a) Write a C program to implement Ohm's Law using operators. Draw the flow chart for the same. ✓ (2 marks)

Q.11. (b) Write a C program to implement Voltage divider rule using operators. (2 marks)

Q.12. (a) Write a C program to input the distance travelled by a car, and the fuel consumed. Assume the car has a tank capacity of 40 litres. Calculate the milage of the car and the estimated distance that the car can with the leftover fuel. Do not use looping or conditional statements? (2 marks)

Q.12. (b) What is the output of the following program: (2 marks)

```
#include<stdio.h>
void main()
{ char x,y,z; int a;
  x=100;y=86;z=44;a=48;
  printf("Output is %c\n", x-y+z+a);
  printf("Output is %c\n", y-z+a);
  printf("Output is %d\n", x-z%a);
  printf("Output is %c\n", x-z%a); }
```

011111

65

97

98

40

148

92

Q.13. (a) Write a program to calculate Euclidean distance? (2 marks)

(b) Write a program to check whether a number is even or odd using ternary operator(?). (2 marks)

Q.14. (a) What is the output of the following program: (2 marks)

```
#include<stdio.h>
int main()
{ int x=100;
  printf("Output is %d\n", 10 / x + x++);
  printf("Output is %d\n", 10 / x ++x);
  return 0; }
```

Q.14. (b) Briefly discuss the various datatypes in C language (2 marks)

Q.15. The cost of one type of mobile service is Rs. 250 plus Rs. 1.25 for each call made over and above 100 calls. Write a program to read customer codes and calls made and print the bill. Draw flow chart for the program and use only ternary operator. (4 marks)