

[4]

```
int main()  
{  
    int a, b, *p1, *p2, x, y, z ;  
    a = 12;  
    b = 4;  
    p1 = &a;  
    p2 = &b;  
    x = (*p1) * (*p2)-6;  
    y = ((4* (- (*p2))) / (*p1))+10;  
    printf("a=%d, b=%d\n", a, b);  
    printf("x=%d, y=%d\n", x, y);  
    *p2 = *p2+3;  
    *p1 = *p2-5;  
    printf("z=%d \n", z);  
    return(0);  
}
```

4+1+3

Ex/SC/UG/GE/TH/01/2022

BACHELOR OF SCIENCE EXAMINATION, 2022

(1st Year, 2nd Semester)

COMPUTER SCIENCE - I

PAPER – GE-2

Time : 1 hour 15 minutes

Full Marks : 24

The figures in the margin indicate full marks.

Answer **any three** questions from the following.

1. i) Find the output of the following program: 4×2

```
#include<stdio.h>  
int main()  
{  
    int x = 6, y, z ;  
    y = --x ;  
    z = x-- ;  
    printf ("\n %d %d %d", y-x, z+x, x++) ;  
    return 0;  
}
```

- ii) Determine the hierarchy of operations and evaluate the following expression, where “x” is a float variable.

$$x = 7.0 / 22 * (3.14 + 2) * 3 / 5$$

- iii) Rewrite the following program using conditional operators:

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

[Turn over

[2]

```
int main()  
{  
    float sal;  
    printf ("Enter the salary") ;  
    scanf ("%f", &sal) ;  
    if (sal < 40000 && sal > 25000)  
        printf ("Manager") ;  
    else  
        if (sal < 25000 && sal > 15000)  
            printf ("Accountant");  
        else  
            printf ("Clerk") ;  
    return 0;  
}
```

iv) Find the output of the following program:

```
#include<stdio.h>  
int main()  
{  
    int i = 1, j = 1;  
    for ( ; ; )  
    {  
        if (i > 5)  
            break ;  
        else  
            j += i ;  
    }  
}
```

[3]

```
printf ("\n %d", j) ;  
i += j;  
}  
return 0;  
}
```

2. i) Explain the concept of **type conversion** in C with proper examples.
- ii) Write an algorithm and flow chart to print the first "N" Fibonacci numbers. (Note: The Fibonacci numbers are 0, 1, 1, 2, 3, 5, 8, 13, 21, 34,, N where each number is the sum of the preceding two.)
- iii) What is pseudocode? Explain with a proper example. 2+4+2
3. i) Describe the utilities of strcmp () function.
- ii) Write a C-program to print a string in reverse using a pointer.
- iii) Describe structure pointer variable with a suitable example. 1+4+3
4. i) Write a C-program to merge the contents of two files into another file.
- ii) What is the return type of malloc () or calloc () function?
- iii) Write the output of the following program:

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

[Turn over