LAKSHYA INSTITUTE OF TECHNOLOGY

BCA

1ST SEM OLD UNIVERSITY QUESTION

2022

Full Mark – 60

Time – As in Programme

The figures in the right hand margin indicate marks.

Answer all questions

Part – I

1. **Fill in the blanks.** **[8 x 1 = 8]**

   a) The _____ operator return the number of byte the operand occupies.

   b) The _____ function is used to display the output on the screen.

   c) A for loop with no test condition is known as _____ loop.

   d) The pointer variable contains as its value the _____ of another variable.

   e) _____ storage class can be applied only to automatic variable.

   f) The function call strcat (S_2, S_1), appends _____ to _____.

   g) The function _____ gives the current position in the file.

   h) A variable declared, inside a function is called _____.

Part – II

2. **Answer the following within two to three sentences maximum.** **[8 x 1.5 = 12]**

   a) What is a variable?

   b) Why do we need to use comment in program?

   c) What is an array?

   d) What is pointer?

   e) Write the use of go to statement?

   f) What is a static variable?

   g) What is function prototype?

   h) What is meant by Union?

   i) Write the use of function fseek ( ).

Part – III

3. **Answer the following within 75 words.** **[8 x 2 = 16]**

   a) Distinguish between int main ( ) and void main ( ).

   b) Describe the purpose of the qualification const and volatile.

   c) Distinguish between global and local variable.

   d) Difference between while ( ) and do … while ( ).

   e) Compare continue and goto, in term of their functions.

   f) Define null pointer with example.

   g) Write the use and limitation of the function put c ( ).

   h) What is recursion? Write the advantages.

   i) Differentiate between malloc ( ) and calloc ( ).

   j) How does a structure differ from an artay?

Part – IV

Answer the following within 500 words. **[6 x 4 = 24]**

4. Write a program to findout whether a year is leap or not.

   OR

   Write a program that print the even number from 1 to 100.

5. Write a program to find out the largest element of an input array.

   OR

   Write a program to convert a binary number to its decimal equivalent.

6. Write a function is prime ( ) which text a number and return 1 if the number is prime and 0 otherwise.

   OR

   Write a function reversestr ( ) that take a string as argument and reverse it.

7. Write a program to understand how structure members are send to a function.

   OR

   Write a program that append one file at the end of another.

b. Discuss different types of expressions in C with suitable examples. 4

5. a. Write a program to count the frequency of each character in a given string received from the keyboard. 5

b. Explain multi-dimensional arrays in C with an example. 3

6. a. Write a C program to sort an array using pointers. 5

b. Discuss properties and benefits of using pointers. 3

7. a. Discuss the differences between array and structure in C with examples. 5

b. What is a global variable ? How do you declare it and discuss its benefits ? 3

8. Discuss in detail the file management in C. Write a program to copy the contents of one file into another. 3+5

2024

Time :As in Programme

Full Marks : 100

The figures in the right-hand margin indicate marks.

*Answer **all** questions.*

PART-I

1. Answer all questions. 1x10

a. Which of the following is not a valid C keyword ?

i. typedef ii. class

iii. sizeof iv. volatile

b. Which operator is used to perform bitwise AND operation in C ?

i. && ii. &

iii. || iv. |

c. What is the default data type of a variable in C if not specified explicitly ?

d. Which statement is used to terminate a loop in C, in general ?

i. continue ii. return

iii. exit (0) iv. break

e. Name the operator used to increment the value of a variable by one in C.

f. What is the index of the first element in an array ?

g. Name the operator used to access the address of a variable in C.

h. What is the correct syntax to open a file in write mode in C ?

i. fopen ("file.txt", "w"); ii. open("file.txt", "w");

iii. open("file.txt"); iv. file_open("file.txt", "w");

i. Name the operator used to access members of a structure using a pointer.

j. Which file operation mode is used to open a file for both reading and writing ?

PART-II

2. Answer the following question in 50 words each. 2x9

a. Explain the difference between int and float data types in C.

b. Why do we use type qualifiers like const and volatile in C ?

d. Define an array and explain how it is different from a pointer.

e. Differentiate between function declaration and function definition.

f. Differentiate looping vs recursion.

g. What are storage classes ?

h. Define type casting.

i. Define *union* in C.

PART-III

3. Answer any eight questions of the followings in 250 words each. 5x8

a. Explain the structure of a C program along with its compilation and preprocessing stages.

b. Explain the different data types available in C, including their memory size and range on a standard system.

c. Write a program in C to demonstrate the use of arithmetic, relational, and logical operators.

d. Explain the for loop with an example. How is it different from a while loop ?

e. Discuss use of nested switch stagements with an example.

f. Write a program that finds the maximum and minimum elements in a one-dimensional array.

g. Write a program demonstrating the use of *malloc* function.

h. Write a C program to swap two numbers using pointers.

i. Discuss the differences between structures and unions in C. Provide examples to illustrate memory allocation.

j. Explain the usage of command-line arguments in C programming. Provide an example to demonstrate their use.

PART-IV

Answer any four of the following questions in 800 words each. 8x4

4. a. Write a C program that accepts three integers and finds the largest number. 4

d. Write a program to print the following series of integers.

1,2,4,8,16,32...

e. Write a program to enter the elements into a 2D array of order 2*3 and display the elements.

f. Explain various relational and logical operators.

g. Write a program to count the number of characters in a string without using strlen( ).

h. Differentiate between structure and union with example.

i. Discuss different types of storage class used in C programming.

j. Write a program to input a number and find the reverse of it.

PART-IV

Answer any four of the following in 800 words each. 8x4

4. a. Write a program to input ages of three brothers and find out the youngest one. 5

   b. State the concept of operator precedence and associativity. 3

5. a. Write a program to evaluate 1-2+3-4+5-6... up to n terms. 4

   b. Write a program to compute the factors of a given number. 4

6. a. Write a program to calculate factorial of a number using recursion. 5

   b. Differentiate between call by value and call by reference. 3

7. a. Write a program to print the even value elements of an array. 5

   b. Discuss the operations those are allowed on pointers. 3

8. What is command line argument? Write a program to create a file, input text data into it and display the file content. 3 + 5

2024

Time :As in Programme

Full Marks : 100

The figures in the right-hand margin indicate marks.

*Answer **all** the questions*

PART-I

1. Answer all questions. 1x10

   a. A C variable cannot start with

   i) An alphabet ii) A number

   iii) A special symbol iv) Both (ii) and (iii) above

   b. Which of the following statement is wrong?

   i) x =12; ii) ch = 'A' * 'B';

   iii) a= 10 + b; iv) x + y =z;

   c. The expression x= 4 + 2 % -3; evaluates to

   i) -6 ii) 6

   iii) 4 iv) None of the above

   d. Given the statement, maruti.engine.bolts=30;

   Which of the following is true?

   i) structure bolts is nested within structure engine.

   ii) structure engine is nested within structure bolts.

   iii) structure maruti is nested within structure engine.

   iv) structure maruti is nested within structure bolts.

e. On opening a file for reading which of the following activities are performed?

i) The disk is searched for the existence of file.

ii) A pointer is set up which points to the first character in the file.

iii) Reading continues till EOF.

iv) All the above.

f. Which is more appropriate for reading a multiword string?

i) gets( ) ii) printf( )

iii) scanf( ) iv) puts( )

g. Which element of the array does this expression refer to?

ar[4]

h. Which operator can not be used with real operands?

i. Which location is pointed by the file pointer fp after execution of fseek(fp,0,2); ?

j. Which of the following is executed by preprocessor?

i) #include <stdio.h>

ii) return 0;

iii) void main(int argc,char argv[]).

iv) None of the above.

PART-II

2. Answer the following questions in 50 words each. 2x9

a. Evaluate the following arithmetic expression.

x= 5*4/2+12-6/3+7*3 (Assume x is an integer)

b. Mention the library functions used for dynamic memory management.

c. Write the output of the following code.

```
#include<stdio.h>
void main()
{
int a=12,b=8,c;
c= ++a – b++;
printf("%d  %d  %d",a,b,c);
}
```

d. What is wild pointer? Give an example.

e. Write the syntax of switch statement.

f. Does 'x' differ from "x"? Justify.

g. Write the output of the following code.

```
#include<stdio.h>
void main()
{
int num= -5 , j;
j= (num < 0 ? num+4 : num*num);
printf("%d %d ",j,num);
}
```

h. What is the need of a return statement in a function?

i. Convert the following expression into its equivalent C statement.

$p^2 + 4pq + 7q^4$

PART-III

3. Answer any eight questions of the followings in 250 words each. 5x8

a. Differentiate between while and do-while.

b. Write a program to interchange the values of two variables without using third variable.

c. Explain self-referential structure with example.

2018

Full Marks - 50

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

1. Answer the follolwing questions.

a) What is variable? Explain the syntax for variable declation.

b) What is Keyword? Explain with example.

c) Write a program to find greatest among three numbers using conditional operator.

d) What is the difference between continue and goto?

e) Explain the difference betweenn Structure and Union.

f) Write down the output of the following codes.

```
main()
{
        int c= - - 2;
        print ("c=%d",c);
}
```

g) Write down the output of the following codes.

```
#define square (x)x*x
main()
{
        int i;
        i=64/square (4);
        printf ("%d",i);
```

h) Write down the output of the following codes main ()

```
{
        int i = 5;
        printf ("%d%d%d%d%d", i, i ++, i--, ++i,--i);
```

i) Write down the syntax for different file opening modes with example.

j) How many types of function argument are available in C? Explain.

Grolup - B

2. (a) What is Operator? Explain different types of operator with example.

b) Write a programe to calculate factorial of a number.

OR

c) Define the following with example

i) Identifier

ii) Static

d) Write a programe to swap two variable without using third variable.

3.a) Write a programe to display the lower triangular matrix.

b) Explain the different types of loops with syntax and example.

OR

a) Explain the Decision Making statements with appropriate examples.

b) Write program to check a number is Prime or not.

4.a) Differentiate between Call by Value and Call by Function with example.

b) What do yhou mean by Recursion? Write a Program to display Fibonacci series using recursion.

OR

a) Write down different components of User-defined Function with example.

b) Write a program using function where enter employee name, age, basic salary and calculate the gross salary where TA,DA, HRA is 2%, 4%, 5% of Basic salary respectively.

5.a) Define pointer. Write a program to add two numbers using pointer.

b) Write a C program using pointer and Array.

OR

a) Write a C program to reverse a number using pointer.

b) Define the followings with example.

i) NULL pointer

ii) Void pointer

6. a) What are the different file handling functions available in C? Explain with syntax and example.

b) Write a program to create a file, store information into it and display the contents.

OR

a) Write a program to copy the content of one file to other using file handling methods.

b) What is Dynamic Memory Allocation? Explain with example.

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2017

Full Marks - 70

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

1. a) Write a program to print the size of a character constant, double variable and different primitive data types.

b) Write short notes on left shift and right shift operators with an example.

‘ OR

a) What is the fifferences between authomatic and static storage class? Give an example of register storage class.

b) Write a program to find distance between two points (x_1,y_1) and (x_2,y_2)

2. a) A bank provides bonus to all its deposit holders based on following policy: For female depositor having balance more than 10000/- bonus given is 7%. For male depositor having balance more than Rs.10000/- bonus given is 5%. Less than 10000/- balance amount is given with 3% bonus. Calculate the balance amount of a depositor.

b) Write a progam to find second largest number in an integer array.

OR

a) Write a program to count number of vowels present in a string.

b) Print the following Pyramid structure.

$$f(x) = X - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + ...$$

E

F F

G G G

H H H H

I I I I I

3.a) Define a function. What are different types of functions used in C? Why prototyping is necessary?

b) Using recursive function evaluate the following series.

$$f(x) = X - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + ...$$

OR

a) Differentiate between structure and union. Write a program to input data into an Employee union type and display the data.

b) Create a Structure Named Book, Write the functional block to count the number of books of a specific publisher present in your library.

4. a) What is chain of pointers? Write a program to illustrate this.

b) What are the benefits of pointers?

OR

a) Write a programe to illustrate a function returning pointer.

b) Write a program to copy a string to another string using call -by-reference

5.a) Explain differnt functions used for random access file.

b) Using dynamic memory allocation input ‘n’ real numbers into an array and copy the content of the array into another array in reverse order.

OR

a) Using command line argument, input set of lines into a file and read the content of the file.

b) Discuss different file opening modes.

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2022

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

1. Answer all the questions :

a) The operator_____cannot be used with real operands.

b) _____ is known as statement terminator in C.

c) Teh _____ statement is used to take the control out of the loop instantly

d) Array elements can be accessed by _____

e) A pointer variable contains_____ of another variable.

f) _____function gives the current position in the file.

g) _____is the variable which keeps track of number of times the loop is going to be executed.

h) _____operator is used for checking equality of two values.

Group -B

2. Answer any Eight questions

a) Differentiate between 2, '2' and "2".

b) Write the output of the following code

```
#include<stdio.h>
void main()
{
int num = -5, j;
j=(num<0? num+4: num*num);
printf("%d %d ",j,num);
}
```

c) Evaluate the following arithmetic expression.

x=5*4/2+12-6/3+7*3 (Assume x is an integer)

d) Explain the use of goto statement with example.

e) What is preprocessor directive?

f) Define wild pointer with example.

g) Mention the library functions used for dynamic memory management.

h) What is function prototype?

i) Differentiate between write mode (w) and append mode(a) in a file.

j) What is the output of the following code?

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

```
void main ()
{
int ar[ ] = {12,20,31,11,78};
.int i;
for ( i=0; i < 5; i++)
{
if (ar[i]%2==0)
        Printf("%d " ,  ar[i];
   }
}
```

Group-C

3. Answer any Eight questions

a) Write the output of the following code.

```
#include<stdio.h>
void main()
{
        int a = 20, b=10, c;
        c= ++a - b++;
        printf("%d  %d  %d", a,b,c);
```

b) When switch statement is used in C programming? Write the syntax of switch statement.

c) What is storage class? Explain any two of them

d) Differentiate between entry controlled and exit controlled loop.

e) Which pointer operations are allowed?

f) Differentiate between structure and union.

g) Explain operator precedence and associativity.

h) Differentiate between call by value and call by reference.

i) Explain self-referenctial structure

j) What is command line argument?

Group - D

Answer all questions:

4. Differentiate between constant and variable. What are different types of constants? Explain each one in brief.

OR

Write a program to find the largest of any three numbers using nested if-else.

5. Write a program to find the sum of digits of a number by taking the number as input from the keyboard.

OR

Write a program to find a specific element in an array.

6. Write a program to calculate factorial of a number using recursion.

OR

Discuss various string handling library functions such as strlen, strcpy, strcmp, strcat, strstr, strev.

7. Write a program to swap any two numbers using pointers.

OR

Write a programe to create a file, input, text data into it an display the file content on the monitor.

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2022

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

1. Answer all the questions :

a) What is Variable? Explain the syntax for variable declaration.

b) What is the difference between continue and goto?

c) How the extern variables are declared?

d) What is the difference between while and do while?

e) The calloc() function is used for_____.

f) What is Keyword? Explain with example.

g) Write the syntax of conditional operator?

h) Write down the output of following codes: main()

```
{
int i=5;
printf (“%d%d%d%d”,i,i++,i--,++i);
}
```

Group -B

Answer any Eight questions

1. Explain the importance of C language.
2. What is the purpose of the scanf() function?
3. Why do we use header files?
4. What is the purpose of adding comments in a program?
5. Write the syntax for nested if an else-if ladder?
6. Write and explain syntax of for loop.
7. Write a program to print the multiplication table from 1 to n?
8. Differentiate between break and continue.
9. Define goto with an example.
10. Define exit and return statements.

Group-C

Answer any Eight questions

1. Distinguish between constant and variable
2. Write a program to check whether the person is eligible to vote
3. Classify the different types of decision making Statements.
4. How switch case works without break statement.

5. Classify the different types of decision making statements.
6. How switch case works without break statement.
7. What is Recursion?
8. What is #include, #define directives.
9. What is a Function? Write the types of functions.
10. Write a program to read and display the elements using 1-D array.

Group-C

Answer all questions:

1. Differentiate betweenconstant and variable. What are the different types of constants? Explain each in brief

   OR

   Write a program to found sum and product of the digits of a given integer number.

2. Define Pointer. Write a program to add two numbers using pointer.

   OR

   Write and explain syntax of for loop. Write a program to generate prime numbers between 1 and N.

3. Write short notes on nested functions. Write a program to display the following pattern.

   *****

   ****

   ***

   **

   *

   OR

   Write a programe to find the sumof even and odd numbers from 1 to n.

4. Explain the following file handlign functions:

a) fseek ()

b) ftell ()

c) rewind()

d) feof()

   OR

   Write a program to copy the content of one file to other.

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2021

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

1. Answer all

(a) What is the difference between the = symbol and ==symbol?

b) What is the modulus operator?

c) Give two example of valid real constant.

d) What is the difference between “C” and ‘C’?

e) Differentiate between while and do while loop.

f) Defien user defined function.

g) What will be the outcome of the following conditional statement if the value of variable s is 10?s>=10 &&s<25&&s!=12

h) Convert the following expression into its equivalent C statement: $b^2 + 4ac + 7c^3$

Group-B

Answer any 8

1.a) What are variables and in what way is it different from constants?

b) What does the && operator do in a program code?

c) What is the functionality of strlen()?

d) What are reserved words?

e) Differentiate between Variable and Constant

f) Differentiate between Compiler and Assembler

g) What are the different types of constants used in C Programming language?

h) Write the functionality of null pointer.

i) State two features of C programming languages.

j) What are the different types of Programming language?

Group-C

Answer any 8

1.a) How do you construct an increment statement or decrement statment in C?

b) What is the difference between Call by Value and Call by Reference?

c) What is a pointer?

d) What is variable initialization and why is it important?

e) What is the differnce between i++ and ++i?

f) What is a nested loop?

g) What is syntax error?

h) What are header files and what are its uses in C programming?

i) Differentiate between Integer Constant and Real Constant

j) Differentiate between Programand Process

Group-D

Answer all

1.a) What are the different types of varibales used in C programming? Give two examples of each category of basic C variable. Also state the rules to construct C variable

OR

b) Write a C program to check whether a number is prime or not.

2.a) What are the different types of Loop Control Statement used in C programming ? Explain each one in brief with suitable example.

OR

b) Write C program to display the following

```
    *
   *   *
  *  *  *
 * * * *
```

3.a) What are the different types of Storage Class used in C programming? Explain each one in brief with suitable example.

OR

b) Write a C program to calculate factorial of a number using function.

4.a) What are the different types of File Opening modes used in C programming?Write a C program toopen an already existing file.\

OR

b) Differentiate between Structure and Union write a C program to implement structure.

***

2021

Full Marks - 70

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

1. (a) Write a Program to convert temperature in degree centigrade to Fahrenheit and vice versa.

b) Write short notes on conditional operator. Write the output of following program.

```
#include
<stdio.h>
main()
{
int a = 2,b,c;
b= a++ - ++a + a++;
c= a - b++*3;
Print f ("%d %d %d", a,b,c);
retuen 0;
}
```

OR

a) What is a Constant? Write the characteristics of real constant and character constant.

b) Write the valid 'C' statements to evaluate the following equiations.

$$Energy = mass\left[acceeration\,x\,height + \frac{(Velocity)^2}{2}\right]$$

2.a) What is the purpose of continue statment?Write a program illustrating the use of continue statment.

b) An electric distribution company charges its consumers as follows:

Consumption units	Rate of change
0-200	Rs. 0.50/unit
201-+400	Rs. 100+Rs.0.65/unit
401-500	Rs. 250+Rs.0.90/unit
500 and above	Rs. 375+Rs.0.100 unit

Write a Programe to find the amount paid by the customer.

OR

a) Write a Programme to Pring following Pyramikd structure.

1 2 3 4 3 2 1

1 2 3 3 2 1

1 2 2 1

1 1

b) Write a Program to print the integers which are divisible by 5 but not divisible by 3 between 1-100.

3.a) Write a function which convert an upper case charaters to lower case and vice versa of an input string.

b) What is an argument? Differentiate between following?

i) Actual and formal arguments

ii) Global and local varriables

iii) Automatic and static variables.

OR

a) Write function which reads the value of 3 sides of a triangle and display its permeter and area. Where S= (a+b+c) /2.

b) Write a program to illustrate nested structure.

4.a) With example, discuss various pointer arithmetics.

b) Using call by reference find GCD of two numbers.

OR

a) Write an example to illustrate pointer to structuref.

b) Discuss different limitations of pointer.

5.a) Discuss the syntax of character I/O functions used in File.

b) Write short notes on command line argument Give an example.,

OR

a) Write a program to illustrate use of realloc() and free()

b) Write short notes on error handlign during I/O operations.

***

2020

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

Answer all

1. How many times below for loop will be executed?

```
#include<stdio.h>
int main ()
{
        int i= 0;
        for (;;)
                Print f (“%d”, i);
        return 0;
}
```

v) 10 times

vi) 1 time

vii) 0 time

viii) Infinite time

2. Find output of the following program?

```
#include<stdio.h>
int main  ( )
{
        char str [ ] = “Smaller”;
        int a = 100;
        printf(a>10? “Greater”: “%s”, str);
}
```

v) Smaller

vi) Greater

vii) 100

viii) Compile time error

3. How many main () function we can have in our project?

a) 1

b) 2

c) No Limit

d) Depends on Compiler

9. Mention the name of different types of storage class variable.

10. What are arguments in a function?

Group-D

Answer all

1.a) Differenciate between constant and variable. What are the different types of constants? Explain each one in brief.

OR

b) State the concept of operator precedence and associativity.

c) Determine the hierarchy of operation and evaluate the expression:

X = 5 + 6 - 4 / 4 * 2 / 2 - 1 + 4 * 3 + 5 * 1 - 8 / 2 + 3 * 5 * / 3

Assume X as integer.

2. Write a C programme to take the radius of circle through the key board and calculate the area and perimeter of that cicle.

OR

Write a C program to check whether a number is prime or not.

3. Write a C programe to display sum of two 3*3 matrix.

OR

Write a C program to enter ten integers and sort in ascending order.

4. Write a C program to delete an already existing file.

OR

Explain the application of Pointer.

***

2018
ITM
Sub -C

1. Answer all following:

a. C programmign language is also known as modular programming language.Why?

b. What is difference between syntax & semantic error?

c. What do you mean by reserved word? Name any three reserve words.

d. Describe wild pointer in C?

e. What is the explanation for prototype function in C?

f. What is the process to generate random numbers in C programming language?

g. What is the differnce between #include "....." And #include<.....>?

h. What are dangling pointers? How are dangling pointers difference from memory leaks?

i. Find the output:

```
int x = 43, y=34;
x = x < y;
x=x++ + ++x + ++x + x++;
print ("%d", x);
```

j. Write a program which does the following. It reads integer n repeatedly until n> 0 is satisfied. It then calculates the number of integers between 1 & n that are divisibel either by 3 or 8 but not by both.

2.a. Explain about the differnt data types in C. Write a program to find the greatest and smallest element from an array.

OR

b. Which are formatted input output functions? Write a C language program using recursive functionto enter 4 digit number and find the sumof all digits of the number.

3.a. Write a C language program to print all amstrong numbers between 1 to 500.

a. Explain details abou the different types storage classes in C.

OR

b. What is multidimensional array? Write a C language program toenter n elements in array and find second smallet number from an array.

4.a. What is function in C? explain different components of function.

b. Cconstruction a funciton to calculate factorial of a number where enter the number as argument and return the result to the main function.

OR

a. Write a C program where enter the string as "Teh participants should be given copy" and prints the number of times the alphabet I occurs in the given string.

b. Differentiate between break & exit.

5.a. Write a program to add two string without using standard library function.

b. Write a programfor the following:

A

AB

ABC

ABCD

ABCDE

OR

a. Write a program to reverse a string without using string library function.

b. Write a program for the following:

1

121

12321

1234321

123454321

6.a. What is a file? What are the different file opening modes are used? Explain with a suitable example.

OR

b. Write the short notes: (any TWO)

i. Pointer to pointer with example.

ii. Call by value and call by reference.

***

2019
Computer Science
SUB-C

1. Answer all the questions : Each carries 1 mark.

a. What is the difference between call by value & call by reference

b. How do you construct an increment statement or decrement statement in C.

c. What is difference between the = symbol and ==symbol?

d. How do you declare a variable that willhold string values.

e. What are header files and what are its uses in C programming

f. What is syntax error.

g. What are variables and it what why is it different from constants.

h. When is the “void” keyword used in a function?

i. What is wrong in this statement? scanf(“%d”, whatnumber):

j. What does the & operator do in a program code?

2. Answer all question . Each carries 8 marks.

a. Explain the steps to execute a C program under any operating system

b. Difference between variables and constants. What are the different types variables used in C programming

OR

c. What are the difference types of operators used in C Programme? Explain each one

d. Write a C program to check whether a no is even or odd.

3.a. Write C programme using loop statement that will show the following output

1

12

123

1234

12345

OR

a. Write a C programming to implement the following vanderwaal’s equation.

RT = (P + a/v) (v - b)

2.a. What is the general from of function in C?

b. Write a C programme to add two 3 x 3 matrix?

OR

c. Explain the use of function toupper () with an example code?

d. Differentiate between strructure and union

3.a. What is a pointer on pointer in C programming language?

b. Write a C programme to swap two numbers using pointer

OR

Write short notes on

i. Array of pointers

ii. Pointer as function argument

4.a. Write a C programme to insert a record into an already existing file.

b. Write a C programme to create a new file.

OR

Write short notes on :

i. Dynamic memory allocation

ii. I/O operations of file.

***

6.(a) Explain circuit diagram, truth table for JK flip flop ?

OR

(b) Write short note on :

(i) FPGA

(ii) Edge Triggering

7.(a) What is Dynamic RAM ? Explain Synchronous RAM and Asynchronous RAM ?

OR

(b) Define different type of Memory ? Explain each one in brief.

2023

Full Marks - 60

Time - As in the Programme

The figures in the right hand margin indicate marks.
Answer ALL groups as per instructions.

Part – I

1. Answer all question : [1 x 8 = 8

(a) The output of XOR gate with two input 1 and 0 is _____.

(b) The RS flip flop gives invalid output for _____ input combination.

(c) What are the universal logic gates ?

(d) What is the full from of S-R flip-flop ?

(e) Expand PROM.

(f) Convert (8867) 10 to binary conversion.

(g) State the De Morgan Theorem.

(h) What do you mean by Latch ?

[Cont...

Part – II

2. Answer any EIGHT questions : [1.5 x 8 = 12

(a) Why RAM is called a volatile memory ?

(b) What is difference between sequential and combination circuit ?

(c) Construct the block diagram of NOR gate ?

(d) Differential between PROM and EPROM.

(e) Construct the circuit diagram of D - flip flop ?

(f) State any two features of counter.

(g) Differential between SRAM and DRAM ?

(h) What is Register ?

(i) Define flip-flop and its type.

(j) Write down XNOR gate truth table ?

Part – III

3. Answer any EIGHT questions : [2 x 8 = 16

(a) Define RAMBUS memory ?

(b) Draw the circuit diagram, truth table of RS flip-flop ?

(c) Explain Tri-state Buffer ?

(d) Write down the method of access of a Magnetic tape ?

[Cont...

(e) Convert (AE.FA) Hexadecimal number to octal number ?

(f) Discuss Shortly on PLD ?

(g) What is the Function of Decoder ?

(h) Discuss Shortly on Guard bit ?

(i) Short note on PAL (Programmable Array Logic) ?

(j) Define Flash Memory ?

Part – IV

Answer all questions : [4 x 6 = 24

4.(a) Briefly discuss different Logic Gates used in computer system with examples and diagrams.

OR

(b) Explain Karnaugh Map ? Minimize the Boolean function

$F(A, B, C, D) = \Sigma m(0, 1, 2, 5, 7, 8, 9, 10, 13, 15)$

5.(a) State and explain Booth Algorithm with suitable example and diagram ?

OR

(b) Explain Carry save addition with suitable example ?

[Cont...

(TH.): DIGITAL LOGIC
UG Sem. - I, Sub: BCA, Paper: CC-I
Full Marks – 60, Time – 3 hrs.
Year - 2021

Answer ***all groups*** as per instructions.
Figures in the right hand margin indicate marks.

PART–I

1. Answer *all* questions. [1 × 8 = 8]
   a) Convert, $(1110101100)_2$ = (_____)$_{16}$.
   b) The output of a XOR gate with two inputs 0 and 0 is _____.
   c) Booth algorithm used for _____ operation on binary numbers.
   d) An 8-bit word can represent the numbers in 2's complement format ranges from ____ to ____.
   e) The RS flip-flop gives invalid output for _____ input combinations.
   f) A multiplexer has _____ input lines and _____ output lines.
   g) RAMBUS memory stands for _____.
   h) Which of the following is a primary memory?
      i) RAM ii) PROM iii) Cache memory iv) All of these

PART–II

2. Answer *any eight* questions. [1.5 × 8 = 12]
   a) What do you mean by Boolean algebra?
   b) $(AE.FA)_{16}$ = (_____)$_8$.
   c) Which gates are known as universal gates? Justify your answer.
   d) Write down the truth table for XNOR gate.
   e) Stepwise calculate the 2's complement of $(-16)_{10}$.
   f) What is overflow condition in addition of 2's complement numbers?
   g) What is the function of a decoder?
   h) Define latch.
   i) Write down the method of access of a magnetic tape.
   j) What is the difference between SRAM and DRAM?

PART–III

3. Answer *any eight* questions. [2 × 8 = 16]
   a) Define tri-state buffer.
   b) Define De Morgan's Law. Prove it by using suitable method.
   c) Simplify the following Boolean function using K-map.
      $$f(A, B, C, D) = \sum m(0, 1, 2, 8, 9, 10, 11, 13, 15) + d(5, 7)$$
   d) Write down shortly the fast multiplication.
   e) Illustrate shortly Carry-Lookahead Addition.
   f) Discuss shortly on PLDs.

g) Combinational circuit v/s Sequential circuit.
h) Illustrate UP/DOWN Counter with suitable diagram.
i) Define flash memory with its advantages and disadvantages.
j) Discuss shortly on speed, size and cost parameters of memory hierarchy with suitable diagram.

PART–IV

Answer ***all*** questions.

4. *Briefly discuss different Logic Gates used in computer system with suitable examples and diagrams. [6]*

OR

Write short notes on the followings: [3 + 3 = 6]
   i. Character codes v/s weighted binary code
   ii. Synthesis of logic function with suitable example

5. What do you mean by floating point numbers? Briefly discuss IEEE standards for representation of floating point numbers in computer with suitable examples and diagrams. [1 + 5 = 6]

OR

Write short notes on the followings: [3 + 3 = 6]
   i. Bit-pair recoding multiplier
   ii. Addition/subtraction logic unit

6. What do you mean by Flip-flop? Briefly explain circuit diagram, truth table and characteristic equation for JK Flip-flop with suitable diagram. [1 + 5 = 6]

OR

Write short notes on the followings: [3 + 3 = 6]
   i. Shift register
   ii. Finite state machine model

7. Discuss the organization of a magnetic hard disk along with procedure of read/write operations. [6]

OR

Discuss shortly on Read-Only Memories (ROM, PROM, EPROM and EEPROM). [6]

2023

Time :As in Programme

Full Marks : 60

The figures in the right-hand margin indicate marks.

*Answer **all** questions.*

PART-I

1. Answer the following questions. 1x8

   a. Hexadecimal Numbers notation has base ____.

   b. If we convert the decimal number $(7)_{10}$ into octal, then it will be ____.

   c. Each combination of variables in a truth table is called ____

   d. DeMorgan's theorem is important in dealing with ____ and ____ gates.

   e. State any one basic identities of Boolen algebra.

   f. D flip-flop is a slight modification of ____ flip-flop.

   g. CMOS stands for ____.

   h. If the register is capable of shifting its binary information in both direction, it will be called as ____ register.

PART-II

2. Answer any eight within two to three sentences. 1.5x8

   a. What is ROM ? State and define the types of ROM.

b. State the secondary storage devices.

c. What is RAM ? State the operations a RAM could perform.

d. What multiplexer does ?

e. What do you mean by Latch ?

f. What is Register ? State register with parallel load.

g. Simplify the following expression using Boolean algebra:

i. A + AB

ii. AB + AB'

iii. A'BC + AC

h. Construct the block diagram of NOR gate ?

i. Construct the circuit diagram of SR Latch ?

j. State Idempotent Law of Boolean algebra.

PART-III

3. Answer any eight of the following (in maximum 75 words.) 2x8

a. Design an 8x1 Multiplexer using 4x1 Multiplexer.

b. Differentiate between DRAM and SRAM.

c. State the key features of Cache Memory.

d. Differentiate between Cache Hit and Catch Miss ?

e. What do you mean by Race around condition in J-K flip flop.

f. Differentiate between full-adder and half-adder.

g. What is the primary objective of the edge-tirggered flip flop.

h. What is Field-Programmable Gate Array (FPGA) ?

i. What is RAMBUS memory ?

j. State an example to illustrate, why you need a Guard bit, in addition to the Round and sticky bits.

PART-IV

Answer within 500 words each. 6x4

4. State and explain the different types of Logic Gates ? State the functionality of each one with its block diagram and truth table.

OR

Minimize the following Boolean function - F(A, B, C, D) = $\sum$ m(0, 1, 3, 4, 8, 9, 10, 13, 15).

5. Differentiate between half adder and full adder. Construct the circuit diagram and truth table of full adder and also state the simplified Boolean expression for full adder.

OR

Multiply each of the following pairs of signed 2's complement numbers using the Booth's algorithm, assume that X is the multiplicand and Y is the multiplier.

i. X = 110101 and Y = 011011

ii. X = 010111 and Y = 110110

iii. X = +14 and Y = -13

6. What are the different types of Shift Register ? Explain each one in brief with its block diagram.

OR

State the different types of Flip Flops ? Explain each with its circuit diagram, truth table and characteristics equation.

7. Explain Finite State Machine Model. State the synthesis of finite State Machine.

OR

State the different types of memory used in computer system ? Explain each one in brief.

2023

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

Answer all the questions :

1. What are basic properties of Boolean algebra?
2. State the absorption law of Boolean algebra.
3. What are the characteristics of Digital Systems.
4. Expand the term IEEE.
5. Find the 2's complement of the number (1011001101)2
6. Convert (101.01)2 to decimal point.
7. Construct OR gate using NAND gate.
8. Write the logic expression for Full adder.
9. Expand PROM.
10. Write down the characteristic table of JK.

Group-B

Answer any eight questions

1. What is edge triggered flip fops?
2. Convert T Flip Flop to D Flip Flop?
3. Explain the need of Hexadecimal number system.
4. Draw the logical diagram and truth table of half substractor.
5. What is the difference between carry generate and carry propagate?
6. Explain the need of flip flops.
7. Explain the need of counters.
8. Convert 37710 to octal and hexadecimal equivalents.
9. Minimize the function 5 ϕ NÜ (5 ϕ OÜ + 5 ϕ OÜ 5 ϕ PÜ2) + 5 ϕ NÜ5 ϕ OÜ2.
10. Define sequential circuits.

Group-C

Answer any eight questions

1. What is De'Morgan's Law? Prove it by using suitable method.
2. Give the comparisan between synchronous and asynchronous counters.
3. Write the multiply rule for a floating point number?
4. Give the characteristic equation and characteristic table of SR flip-flop.
5. Difference between combinational and sequantial circuits.
6. Write the steps for bit-pair recoding of multipliers.

7. Define ASCII Code. What is the use of ASCII code in input/out devices?
8. Which gates are referred as universal gates. Explain why.
9. What is master-slave flip-flop?
10. Give one application each Multiplexer and Decoder

Group-D

Answer all questions

1. Explain the concept of K-map and simplify the following

   y= C'(A'B'D' + D) + AB'C+D'.

   OR

   Briefly discuss different Logic Gates used in computer system with suitable examples and diagrams.

2. Write a neat block diagram and discuss about full adder. Find out the logic diagramand functional table.

   OR

   Write a neat block diagram and discuss about full adder. Find out the logic diagram and functional table.

   OR

   Write short notes of the following:-

a) Floating point number

b) Booth Algorithm

3. Stae the types of filpflops used in a processor.

   OR

   Short notes on the following:-

a) Multiplexers.

b) Programmable Array Logic (PAL)

4. Define ROM. Explain it's classifications.

   OR

   Short notes on the following:-

a) Secondary storage device

b) Synchronous DRAMS.

***

2022

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

1. Answer all

a) Can we use full adders for adding $(0011)_2$ and $(001)_2$?

b) What do you mean by Latch?

c) State De Morgan's Theorem.

d) $(1111001)_2 = (\quad)_8$.

e) What is the full from of S-R flipflop?

f) $(11110011001110000 1001)_2 = (\quad)_{16}$.

g) $(10010101)_2 = (\quad)_{10}$.

h) What are the universal logic gates?

Group -B

2. Answer any 8

a) Design an 8x1 Multiplexer using 4x1 Multiplxer.

b) Why RAM is called as a volatile memory?

c) Differentiate between Cache Hit and Catch Miss?

d) Distinguish between Multiplexer and Demultiplexer.

e) Distinguish between sequential and combinational circuit.

f) Construct the circuit diagrm of SR Latch?

g) Construct the block diagram of NOR gate?

h) Differentiate between PROM and EPROM.

i) Differentiate between Serial-In-Serial-Out (SISO) and Parallel-In-Serial-Out (PISO) registers.

j) State two features of Counter.

Group-C

3. Answer any 8

a) State the key features of Cache Memory

b) What do you mean by Race arouond condition in J-K flip flop.

c) Diffeeentiate between Flip Flop and Registers.

d) Construct the circuit diagram of SR Latch.

e) Differentiate between DRAM and SRAM.

f) Can we use half adders for adding $(0011)_2$ and $(0001)_2$?

g) Construct the truth table of any one Universal Gate?

h) State Idempotent Law of Boolean algebra.

i) What is the octal equivalent of binary number 10101?

j) Differentiate between Page Fault and Page Hit?

Group-D

Answer All :

4.a) What are the different types of Logic Gates? State the functionality of each one with its block diagram and truth table.

OR

b) Minimize the following Boolean function-

$$F(A,B,C,D) = \sum m(0,1,3,4,8,9,10,13,15)$$

5.a) Differentiate between half adder and full adders. Construct the circuit diagram and truth table of full adders. Also state the simplified Boolean expression for full adder.

OR

b) State and explain the steps of Booth Algorithm to multiply the following positive numbers assuming n=4(4) x(5).

6.a) What are the different types of Flip Flop? Explain each one with its circuit diagram, truth table and characteristics equation.

OR

b) What are the different types of Shift Register? Explain each one in brief with its block diagram.

7.(a) What are the different types of Memory? Explain each one in brief.

OR

b) What are the different types of Read Only Memory ? Explain each one in brief.

***

2022

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

1. Answer all the questions :

a) A simple memory unit is known as_____.

b) Inputs to the shift registers can be serial or _____

c) The decimal equivalent of hex number IA53 is _____

d) What is EPROM?

e) Multiplexers are known as_____.

f) The number of control lines for 8 to 1 multiplexer is _____.

g) When both the inputs to an NOR gate are low, the output will be_____.

h) What is BCD?

2. Answer any Eight of the following questions.

i) What is PAL?

ii) What is guard bit?

iii) Define tri-state buffer.

iv) Convert $(0.345)_{10}$ into an octal number.

v) What is semiconductor?

vi) Design flip-flop circuit with NAND gate.

vii) Define Counters.

viii) What are Latches?

ix) What is the 2's compliment of the number 1101101?

x) What is IEEE standard for flating point numbers?

3. Write short notes. (Answer any Eight)

a) When simplified with Boolean algebra (x+y) (x+y) simplifies to _____.

b) What is Multiplexer?

c) What is Encoder?

d) What is a logic gate?

e) What is need of secondary storage? Give few examples of secondary storage.

f) What is Multiplexer?

g) Draw k-map for 3-variables.

h) Convert a $(450.12)_8$ hexadecimal

i) What is edge triggering?

j) State the De-Morgan's theorem?

4. Answer any Four of the following questions

a) Explain the various Boolean laws with examples

OR

Simplify the Boolean function

$f(A, B,C,D) = \sum (0,1,5,6,7,8,9,12,13)$ AS

i) Sum of products.

ii) Products of sums.

b) Write note on the full-adder with block diagram and truth table.

OR

Define carry-look ahead addition with suitable example.

c) Explain the JK-Flip-flops with a neat diagram.

OR

Difference between register and shift register.

d) List the various types of ROM in details.

OR

Write short notes (Answer any Two)

i) DRAMS

ii) Flash Memory

iii) Finite state machine model

***

2022

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

1. Answer all the questions :

a) To convert BCD to seven segments_____device used.

b) Decimal number 65 is equal to binary number _____

c) Convert $(246)_8$ in to hexadecimal form.

d) What is flash memoryh?

e) What is universal gate?

f) The inverter is _____

g) OR gate and _____ will form the NOR gate.

h) 2's complement of binary number 0101 is _____

2. Answer any Eight of the following questions.

a) Define NOR gate.

b) What is IEEE?

c) State the Associative Law.

d) What is Semiconductor?

e) Write the 2's compliment of the number 11101110.

f) Convert $(0.435)_{10}$ into a binary number.

g) What are latches?

h) What is Pal?

i) Convert the hexadecimal number (IA92) to binary.

j) What is tri-state buffer?

3. Write short notes:

a) Explain Demultiplexer

b) Define Counters.

c) What is Decoder?

d) Convert (369-25) in to a Octal number.

e) What is DRAMS?

f) Draw K-map for 4-variables.

g) Write the truth table for AND gate.

h) Write two features of Optical Disk.

i) Convert the binary number $(110000001111100)_2$ to hexadecimal number.

j) What is flash memory?

4. Answer any Four of the following questions

a) Explain the various number system with example

OR

Simplify the Boolean function F (A,B,C,D) = (0,1,4,6,8,10,12,14,15) as

i) Sum of products

ii) Products of Sum

b) Write note on the half-odder with block diagram and truth table.

OR

Explain Booth multiplication algorithm with suitable example.

c) Explain the S-R Flip-Flops with a neat diagram.

OR

Difference between counter and register.

d) List the various types of Ram in details.

OR

Write short notes on (Answer any Two) :

i) Hard Disks

ii) Semi-conductor

iii) EEPROM

***

2021

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

1. Answer all

a) Can we use half adders for adding (0011)2 and (0001)2?

b) What do you mean by Mod-n Counter?

c) What is Unsinged Binary Division?

d) $(100001001)_2$ = ($)_{10}$

e) What is the full form of IEEE?

f) $(1100000111000001001)_2$ = ($)_{16}$

g) $(100000101101)_2$ = ($)_8$

h) What are the basic logic gates?

Group-B

1. Answer Any 8

a) What are Disk Performance parameters?

b) Why RAM is called as a volatile memory?

c) Differentiate between DRAM and SRM/

d) Distinguish between Multiplexer and Demultiplexer.

e) Distringuish between binary code and Gray Code.

f) What is the functionality of Semiconductor Memory?

g) What do you meanby Guard Bit?

h) Differentiate between PROM and EPROM

i) Write the functionality of Fast Adder.

j) State two features of Counter.

Group-C

1. Answer Any 8

a) $(1111100000101101)_2$ = ($)_8$

b) $(1001100000101101)_2$ = ($)_{10}$

c) F (P,Q,R,S) = oM (1,2,3,4,5,11,12,13,14,15)

d) $(1100000111000001001)_2$=($)_{16}$

e) Subtract (-1) from (-4) inbinary.

f) Write the truth table for AND

g) What ti Tautology?

h) Design an 8x1 Multiplexer using 4x1 Multiplexer.

i) Add ($0.473x10^5$) and ($0.55 x 10^2$) by using floating -pointarithmetic.

j) Differentiate between Serial-In-Serial-Out (SISO) and Parallel-In-Serial-Out (PISO) registers.

k) Write two features of Optical Disk

Group-D

Answer all

1.a) Write the simplified SOP (Sum of Product) form of the boolean expression (P+Q'+R'). (P+Q'+R). (P+Q+R')

OR

b) Write the application of Karnaugh Mapswith suitable example.

2.a) Find the decimal equivalent in IEEE 754 single format that is close to the given floating-point binary number : 01000011111110000000000000000000

b) Subtract $(-1)_{10}$ from $(-4)_{10}$ inbinary. Distinghish between Sing Magnitude and 2's Complement REpresentation.

3.a) What are the different types of Flip Flop? Explain each one in brief with suitable example.

OR

b) Write short notes on : Programmable Logic Devices (PLDs).

4.a) What are the different types of Read Only Memories ? Explain each one in brief.

OR

b) Differentiate between Asynchronous DRAMS and Synchronous DRAMS

***

2021

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

1. Answer all the following questions that carry 1 marks each.

a) What is ring counter?

b) Convert $(234)_{10} = (\ )_2$

c) What is the use of Guard bits?

d) Which gate is known as coincidence detector?

e) Write the use of controlled invertor.

f) Write the use of register file.

g) What is transmission gate?

h) What do you mean by min-term and max-term?

2. Answer any Eight the following questions that carry 1.5 marks each.

a) What is tri-state buffer?

b) What is edge-triggered flip-flop?

c) What is the use of booth algorithm?

d) How truncation generated in floating point numbers?

e) Write the differences between mealy and Moore state machine.

f) Prove the pair of expression for equivalence $(x \vee y)' \equiv x'y'$

g) Write an example of 2-to-1 mux.

h) Show that the NAND gate is univeral.

i) How to execute a full subtractor from a full adder?

j) Write the difference between latch and flip-flop.

3. Answer any Eight the following questions that carry 2 marks each

a) Difference between SRAM and DRAM.

b) What is the use of bidirectional shift register?

c) Find the decimal equivalent of the 2's complement number $(10110101)_2$

d) Show the representation of the decimal number 12.125 in the ANSI/IEEE short and long format.

e) Define binary half-adder.

f) Explain carry save addition with example.

g) Define Field Programmable Gate Array.

h) What are the advantages of ROM?

i) What is need of UP/DOWN counters?

j) Find the decimal equivalent of the unsigned binary number $(1101.0101)_2$

4. Answer all the following questions that carry 6 marks each

i) Minimize the following Boolean expression using Boolean law.

a) $AB + \overline{AC} + \overline{ABC}\,(AB + C)$

b) $\bar{x}\bar{y}\bar{z} + \bar{x}y\bar{z} + X\bar{y}\bar{z} + xy\bar{z}$

Discuss the need of multiplexer ? Draw the logic diagram of 4 x 1 multiplxer.

ii) Define binary adder. Explain the truth table and circuit diagram of types of adder.

OR

Write short notes on (Answer any TWO)

a) Floating point operation

b) Carry lookhead addition

c) Minimization using Karnaugh maps'

iii) Discuss CPLD architecture and its applications.

OR

What is finite state Machine (FSM) ? Discuss types of FSM.

iv) Explain types of ROM and their advantages

OR

Discuss the need and types of secondary storage in computer system.

***

2020

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

1. Answer all the questions :

i) What is the simplified SOP (Sum of Product) form of the boolean expression

(P + Q'+R'), P+Q'+R). (P+Q+R')

ii) What is the minterm expansion of f (P,Q,R) = PQ+QR'+PR

iii) In what technology, the implementation of the register file is by using an array of memory locations.

iv) IN a three BUS architecutref, how many input and output ports are there?

v) For a 3 BUS architecture, is the below code correct for adding three numbers?

PCourt, R=B, Marin, READ, Inc PC

WMFC

MDRout, R=B, IRin

R4outa, R5outb,SelectA, ADD, R6in, End

vi) What is the main advantages of multiple bus organisation over a single bus?

vii) What is the minimum time delay between two successive memory read operations?

viii) VLSI stands for what?

ix) The cells in a row are connected to a common line called what?

x) Differentiate between arithmetic and logic instruction?

xi) Differentiate between ROM and PROM?

xii) What is Tri-state buffer?

2. Answer any Eight.

a) State the parameters using which the performance of a Hard Disk is measureed.

b) What is UP/DOWN counter?

c) Define the term Register.

d) State the functionalities of Optical Disk.

e) State two characteristic of Multipiler.

f) What is FPGA?

g) State two important characteristics of Multiplexer.

h) What role an I/O module plays while performing I/O.

i) State the characteristics of Flash Memory.

j) What ids the octal representation of binary number 1111100101

3. Answer anyh Eight

a) Simplify SOP (sum of product) form of the boolean expression

(P+Q'+R'), (P+Q'+R), (P+Q+R')

b) Explain the concept of K-Map.

c) State the functionalities of any two logic gates.

d) Discuss some characterstic of DRAM.

e) What is PLD? State the important characterisitics of PLD.

f) State the various approaches used for performing I/O. What role an I/O module plays while performing I/O.

g) What steps a processor takes, when a interrupt occurs.

h) State the characteristics of CPLD.

i) State the architecture of digital computer.

j) Explain the functions of a processor.

4. Answer all

a) i) Explain the concept of K-Map.

OR

ii) State the functionalities of different types of logic gates.

b) i) Discuss some characteristic of Flating point number system

OR

ii) Write the steps of Booth Algorithm

c) i) What is PLD? State in important characteristics of PLD.

OR

ii) State the types of flip used in a processor.

d) i) Give a brief classification of ROM.

ii) Write down the major feature of DRAM.

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2023

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicates marks.

Answer All questions

1. Answer all the questions. [1 × 8 = 8

(a) OR gate and _____ will form the NOR gate.

(b) $(11111000001111)_2 = (\_\_\_\_\_)_{16}$.

(c) What do you mean by latch ?

(d) What is EEPROM ?

(e) Multiplexers are known as _____.

(f) $(10001100)_2 = (\_\_\_\_\_)_{10}$

(g) What is flash memory ?

(h) What is BCD?

2. Answer any eight of the following questions. [1.5 × 8=12

(a) Convert $(0.565)_{10}$ into an octal number.

(b) What is semiconductor ?

(c) Which of the memory is volatile memory ?

(d) Define counters.

(e) What are latches ?

(f) What is T flip flop ?

(g) What is the 2's compliment of the number 11100110 ?

[P.T.O.

(h) State two features of Counter ?

(i) State the key features of Cache Memory.

(j) Define tri-state buffer.

3. Write short notes. [2 × 8=16

(a) Different between PROM and EPROM.

(b) What is De multiplexer ?

(c) What is encoder ?

(d) Explain D- Flip-Flop ?

(e) Explain ROM and its types.

(f) What is multiplexer ?

(g) Draw k-map for 2-variables.

(h) Convert a $(474.12)_8$ to hexadecimal.

(i) What is Number system ?

(j) State the Associative law.

4. Answer the following questions. [6 × 4=24

(a) Explain the various Types of number system with example.

OR

Simplify the Boolean function
f(A,B,C,D)=”(0,1,5,6,7,8,9,11,12,13,14) as

(a) Sum of products

(b) Products of sums.

(b) Write note on the half-adder with block diagram and truth table.

OR

Explain Booth multiplication algorithm (-6*3).

[Cont...

(c) Explain the SR-Flip-flops with a neat diagram.

OR

Difference between Encoder and Decoder.

(d) What are the different types of Read Only Memory ? Explain each one in brief.

OR

Short note :

(a) Semi-conductor

(b) EPROM

(c) DRAMS

Part – IV

Answer all within 500 words maximum :

4. Describe the energy flow in Eco-system. [7

OR

Describe the source, effects and control of water pollution.

5. Discuss the causes and effects of population growth in India. [7

OR

Write an essay on HIV/AIDS, its prevention, control measures and awareness.

6. Write a note on Environmental Movements in Odisha. [7

OR

Give an account of Women welfare in India.

7. Describe the salient features of the Wild Life Protection Act,1972. [7

OR

Discuss the equitable distribution of natural resources and wealth between rich and the poor countries will lead to sustainable life- styles.

2023

Full Marks - 80

Time - As in the Programme

The figures in the right hand margin indicate marks.

Answer ALL questions.

Part – I

1. Answer the following question with ONE word or fill in the blank : [1 x 12 = 12

(a) The peeling of Ozone Umbrella is mainly caused due to the release of _____ gas into the atmosphere.

(b) Water which is suitable for _____ is called _____ water.

(c) The collection of individuals which belongs to the same species when live together in a region is known as _____.

(d) _____ disease continues for many days and causes _____ on body.

(e) In _____ diseases, microbes cannot be transmitted from infected person to a susceptible person by contact or by any other methods.

[Cont...

(f) Narmada Bachavo Movement is led by _____.

(g) The Central Pollution Control Board (CPCB) is established under _____.

(h) Our society has changed a lot for women as a result of their struggle for _____.

(i) A _____ plays numerous roles in the transmission of knowledge.

(j) The resources that reproduce within a specified time span are _____.

(k) Air is a _____.

(l) A place where animals are protected in their natural habitat is called _____.

Part – II

2. Answer any EIGHT questions within TWO or THREE sentences maximum : [2 x 8 = 16

(a) Define Ecosystem.

(b) What is Biosphere ?

(c) What do you mean by Nitrogen Cycle ?

(d) What is Pollution ?

(e) Give some examples of Non-Communicable Diseases.

(f) What are the objectives of SPCB ?

(g) What are the 4 types of natural resources ?

[Cont...

(h) Differentiate the recyclable, renewable and non-renewable resources.

(i) In your own words, define "Conservation."

(j) Give the full form of ODRAF and NDMA.

Part – III

3. Answer any EIGHT questions within 75 words maximum : [3 x 8 = 24

(a) Describe the scope of environmental science.

(b) Differentiate between Ecology and Ecosystem.

(c) Differentiate between "population explosion and population clock".

(d) Lay out how people's health is negatively impacted by pollution.

(e) Describe the role of women in environment.

(f) Discuss some of the functions of Central Pollution Control Board.

(g) Give the features of Water Act, 1974.

(h) What is meant by Natural Resources and list out the problems associated with natural resources exploitation.

(i) How will you create awareness among people about natural resources ?

(j) How does soil erosion occur ? State your remedy for the same.

[Cont...

2023

Time :As in Programme

Full Marks : 80

The figures in the right-hand margin indicate marks.

*Answer **all** questions.*

PART-I

1. Fill in the blanks. 1x12

ଶୂନ୍ୟସ୍ଥାନ ପୂରଣ କର ।

a. The study of human population is called ____.
ମନୁଷ୍ୟ ଜନସଂଖ୍ୟା ପତନକୁ ____ କୁହାଯାଏ ।

b. The influenza virus chiefly transmited by ____.
ଇନ୍‌ଫ୍ଲୁଏଞ୍ଜା ଭୂତାଣୁ ମୁଖ୍ୟତଃ ____ ଦ୍ୱାରା ସଞ୍ଚାରିତ ହୋଇଥାଏ ।

c. The daily atmospheric condition of an area is called as ____.
ଗୋଟିଏ ଅଞ୍ଚଳର ବାୟୁମଣ୍ଡଳର ଦୈନନ୍ଦିନ ଅବସ୍ଥାକୁ ____ କୁହାଯାଏ ।

d. The ____ remain at the base of a pyramid of energy.
ଶକ୍ତିର ପିରାମିଡ୍‌ରେ ତଳ ସ୍ତରରେ ____ମାନେ ଅବସ୍ଥାନ କରୁଛନ୍ତି ।

e. The chief contributor gases of acid rain are ____ and ____.
ଅମ୍ଳବର୍ଷାର ମୁଖ୍ୟ ବାଷ୍ପଗୁଡ଼ିକ ହେଲା ____ ଏବଂ ____ ।

f. The Water Act was enacted in the year of ____.
ଜଳ ପ୍ରଦୂଷଣ ଆଇନ ____ ମସିହାରେ ପ୍ରଣୟନ ହୋଇଥିଲା ।

g. Rhizobium remains symbiotic in the roots of ____ crops.
ରାଇଜୋବିଅମ୍ ବ୍ୟାକ୍ଟେରିଆ ____ ଗଛର ଚେରରେ ସହଜୀବୀ ଭାବରେ ସ୍ଥାପନ କରେ ।

h. The wildlife protection Act enacted in the year of ____.
ବନ୍ୟପ୍ରାଣୀ ସୁରକ୍ଷା ଆଇନ ____ ମସିହାରେ କାର୍ଯ୍ୟକାରୀ ହୋଇଥିଲା ।

i. Both fog and smoke form ____ in the atmosphere.
ବାୟୁମଣ୍ଡଳରେ ଧୂଆଁ ଓ କୁହୁଡ଼ି ମିଶ୍ରଣରେ ____ ସୃଷ୍ଟି ହୁଏ ।

(Turn Over)

j. The KYOTO protocol is about the reduction of ____.
କିୟୋଟୋ ପ୍ରୋଟୋକଲ୍/ମୁସାବିଦ୍ ____ର ହ୍ରାସ ବିଷୟରେ ଗଠିତ ହୋଇଥିଲା ।

k. The Chernobyl disaster is associated with ____ pollution.
ଚେର୍ନୋବିଲ ବିପର୍ଯ୍ୟୟ ____ ପ୍ରଦୂଷଣ ସହିତ ଜଡ଼ିତ ।

l. Ban on single use polythene restricts polyethene bags below ____ of thickness.
____ ଠାରୁ କମ୍ ମୋଟେଇ ଥିବା ଏକକ ବ୍ୟବହାର ପ୍ଲାଷ୍ଟିକ୍ ବ୍ୟବହାର ଉପରେ କଟକଣା ଅଛି ।

PART-II

2. Answer any eight of the following within two to three sentences each. 2x8
ନିମ୍ନଲିଖିତ ଯେକୌଣସି ଆଠଟିର ଉତ୍ତର ଦୁଇ ବା ତିନୋଟି ବାକ୍ୟରେ ଦିଅ ।

a. Sanitization
ବିଶୋଧନ

b. Food chain
ଖାଦ୍ୟ ଶୃଙ୍ଖଳ

c. Soil pollution
ମୃତ୍ତିକା ପ୍ରଦୂଷଣ

d. Earth summit
ବିଶ୍ୱ ଶିଖର ସମ୍ମିଳନୀ

e. Carbon foot print
ଅଙ୍ଗାର ପାଦଚିହ୍ନ

f. IMD
ଆଇଏମ୍‌ଡି

g. Survival skills during lightening
ବିଜୁଳି ମାରିବା ସମୟର ନୈପୁଣ୍ୟତା

h. Role of Revenue Department in flood management
ବନ୍ୟା ପରିଚାଳନାରେ ରାଜସ୍ୱ ବିଭାଗର ଭୂମିକା

i. Pandemic disease
ବିଶ୍ୱ ମହାମାରୀ

j. Sustainable development
ପରିପୋଷଣକାରୀ ବିକାଶ

PART-III

3. Answer any eight of the following within 75 words each. 3x8
ନିମ୍ନଲିଖିତ ଯେକୌଣସି ଆଠଟିର ଉତ୍ତର ୭୫ ଶବ୍ଦରେ ଦିଅ ।

a. Ecosysem
ପରିସଂସ୍ଥା

b. Water cycle
ଜଳଚକ୍ର

c. Sound pollution
ଶବ୍ଦ ପ୍ରଦୂଷଣ

d. Anthropogenic causes of global warming
ବିଶ୍ୱତାପନର ମନୁଷ୍ୟକୃତ କାରଣଗୁଡ଼ିକ

e. Flood disaster
ବନ୍ୟା ବିପର୍ଯ୍ୟୟ

f. Earthquake
ଭୂମିକମ୍ପ

g. Corporate Social Responsibility
ଶିଳ୍ପ ସଂସ୍ଥାମାନଙ୍କର ସାମାଜିକ ଦାୟିତ୍ୱବୋଧ

h. Balanced diet
ସନ୍ତୁଳିତ ଆହାର

i. Quarantine
କ୍ୱାରେନ୍‌ଟାଇନ୍

j. National Health Mission
ଜାତୀୟ ସ୍ୱାସ୍ଥ୍ୟ ମିଶନ

PART-IV

Answer all the following within 500 words each. 7x4
ନିମ୍ନଲିଖିତ ସମସ୍ତ ପ୍ରଶ୍ନର ଉତ୍ତର ୫୦୦ ଶବ୍ଦରେ ଦିଅ ।

4. Describe the components and usefulness of atmosphere.
ବାୟୁମଣ୍ଡଳର ଉପାଦାନ ଓ ଉପକାରିତା ସମ୍ବନ୍ଧରେ ବର୍ଣ୍ଣନା କର ।

OR/କିମ୍ବା

Discuss the causes, effects and control measures of air pollution.
ବାୟୁ ପ୍ରଦୂଷଣର କାରଣ, ପ୍ରଭାବ ଏବଂ ନିୟନ୍ତ୍ରଣ ଉପାୟଗୁଡ଼ିକ ଆଲୋଚନା କର ।

5. Explain, in brief, the effects of population explosion and the methods adopted to control population growth.
ଜନସଂଖ୍ୟା ବିସ୍ଫୋରଣର ପ୍ରଭାବ ଏବଂ ଏହାକୁ ନିୟନ୍ତ୍ରଣ କରିବା ପାଇଁ ଅବଲମ୍ବନ ପଦ୍ଧତିଗୁଡ଼ିକ ସଂକ୍ଷେପରେ ବ୍ୟାଖ୍ୟା କର ।

OR/କିମ୍ବା

Discuss the different steps taken by government for a sustainable development.
ପରିପୋଷଣକାରୀ ବିକାଶ ପାଇଁ ସରକାର ନେଇଥିବା ପଦକ୍ଷେପଗୁଡ଼ିକ ଆଲୋଚନା କର ।

6. Discuss the organization, functions and a few success stories of NDRF or ODRAF.
NDRF କିମ୍ବା ODRAFର ସଙ୍ଗଠନ, କାର୍ଯ୍ୟ ଓ କେତୋଟି ସଫଳ କାହାଣୀ ଆଲୋଚନା କର ।

OR/କିମ୍ବା

Give an account of survival skills adopted during and post-disaster periods of cyclone and fire.
ଘୂର୍ଣ୍ଣିବାତ୍ୟା ଓ ଅଗ୍ନି ବିପର୍ଯ୍ୟୟରୁ ବଞ୍ଚିରହିବା ନୈପୁଣ୍ୟ ଏବଂ ଏହା ପରବର୍ତ୍ତୀ କାର୍ଯ୍ୟପନ୍ଥା ଉପରେ ରେଖାପାତ କର ।

7. Discuss the different approaches of life style management for maintaining a good health.
ଏକ ସୁନ୍ଦର ସୁସ୍ଥ ଜୀବନ ପାଇଁ ଆବଶ୍ୟକ ବିଭିନ୍ନ ଜୀବନଚର୍ଯ୍ୟା ପରିଚାଳନା ଉପରେ ଆଲୋଚନା କର ।

OR/କିମ୍ବା

Explain three non-communicable diseases with their causes and effects.
ତିନିଗୋଟି ଅଣ-ସଂକ୍ରାମକ ରୋଗର କାରଣ ଏବଂ ପ୍ରଭାବଗୁଡ଼ିକ ବ୍ୟାଖ୍ୟା କର ।

2018

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

1. (a) Define photochemical smog.

b) Explain cyclone management

c) How does earthqueak occurs.

d) What are the important aspects of sustainable development?

e) What are the important causes of climate change?

f) What is Green Hosue Effect?

g) Define population density?

h) What is full form of HIV & AIDS?

i) What are the causes of ozone layer depletion?

j) Define Lmmigration?

Group - B

2. a) Explain the four spheres of present above Earth surface.

b) Explain Nitrogen Cycle.

OR

a) Explain any Two :-

i) Carbon Cycle

ii) Ecology

iii) Ecosystem

3. a) What is Pollution? Explain causes and effects of Air Pollution.

b) Explain different type of Natural Disasters and write donw methods to manage these situations.

OR

a) Explain causes and effects of any two Polluctions.

i) Thermal Pollution

ii) Noise Pollution

iii) Soil Pollution

4. a) Explain Urbanization and how its affects to the environment?

b) Defien the terms like ‘Species’ & ‘Community”

OR

Explain different Communicable Diseases . Also describe its transmission methods and how to control such Diseases.

5. a) Explain diffeent Environemntal movements in India and also in Odisha.

OR

a) Explain followings

i) Central pollution Control Board.

ii) Role of Women in Environmental Movements.

6.a) What is Natural Resources? Explain different Natrual REsources and why do we need to conserve all the these REsources?

OR

b) Explain any TWo :-

i) Water Act

ii) The Wildlife Act

iii) Environmental Protection

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2022
Full Marks - 60
Time - As in the Programme
Sub: Atomic Structure, Bonding, General Organic Chemistry & Aliphatic Hydrocarbons
The figure in the right hand margin indicate marks
Answer All question.

Part-I
(Answer all questions)

1. Answer the following question with ONE word or fill in the blank.

a) _____and _____are two examples of greenhouse gases?

b) The lower part of atmosphere is called_____?

c) Presently, there are_____numbers of notified biosphere reserve in India?

d) _____is the macro and _____is the micro nutrient present in soil.

e) Harmful algal blooms and fish kills i the water bodies are the results of a process called_____

f) Which UN agency works for the welfare of children?

g) Who heads the central pollution control board (CPCB) meeting?

h) Name a key person linked to Narmada Bachao Andolan?

i) What is AIDS stands for?

j) _____are those resources which we are not extracting at present despite technological availability.

k) NDMA stands for_____

l) _____is an example of exnaustible resource.

Part-II

2. Answer any EIGHT questions within TWO or THREE sentences maximum

a) Define Ecological Pyramid?

b) What is genetic effect of nuclear radiation?

c) Write two effects of global warming?

d) What is the signficance of Red Data book?

e) What is mutualism in environmental science?

f) Write two objectives of SPCB?

\g) What is Buffer Zone?

h) Differentiate between Hazard and Disaster?

i) What are the causes of soil erosion?

j) Differentiate between epidemic and pandemic diseases?

Part-III

3. Answer any EIGHT questions within 75 words maximum

a) Explain the term “Ozoe Layer Depletion”?

b) Write on three scopes of environemntal study?

c) Define the term population density, and populatin distribution?

d) What are the features of K-species and R-species?

e) Differentiate between biotic and abiotic factors?

f) What are the powers of CPCB?

g) What are the major causes of population growth?

h) Differentiate between renewable and non-renewable resources?

i) Explain Air Act 1981?

j) Explain the terms BOD and COD in water sample?

Part-IV

Answer all within 500 words maximum

4.(a) Discuss causes, advantages, disadvantages and solution of Acid Rain?

OR

b) What are different segments and elements of environemnt, explain in brief? Write the name of any four environmental concerns presently we are facing?

5.a) What are the communicable diseases and non communicable diseases, explain with examples? What are the characteristics of communicable diseases?

OR

b) Explain the various causes of Urbanization? What are its effects on society? Write the solutions of urbanization?

6.a) Explain about different causes of environmental conflicts?Explain the role of women in environmental movements?

OR

b) Write a short note on Bishnoi Movement?

7. a) What are the purposes of wildlife conservation? What are the different threats to wildlife? Write two steps to be taken for wildlife conservation?

OR

b) Write one aspect of disaster management? Explain natural disaster management? Write a short note on effective way of natural disaster management.

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2022

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

1. Answer all the questions:

a) What is vector bome disease?

b) What is CPCB?

c) Which chemical used to kill pest in agriculture?

d) Jungle Bachao Andolan started from which state of India?

e) What is goal of water act and which year it was started?

f) Define BOD.

g) What is greenhouse gas?

h) Which layer of atmosphere protect earth from harmful UV ray?

2. Answer any EIGHT of the following questions:

a) Explain food chain with an example.

b) What is ecological pyramid?

c) Write notes on non-communicable disease with an example.

d) What is water borne dieseae?

e) What is the role of SPCB?

f) Write a short note about AIDS.

g) Write short note on Appiko movement.

h) What is ammonification?

i) Difference between renewable and non-renewable resources.

j) What is Ecology?

3. Answer any EIGHT of the following questions.

a) Define food web with an example.

b) Write short note on nitrogen cycle.

c) Discusss various layers of atmosphere.

d) Write the impact of urbanization on our society.

e) Write the impact of overpopulation.

f) What is Biodiversty ? Discuss about hte types of biodiversity.

g) What is chipko Movement?

h) What ae the role of women in environmental movement?

i) Explain forest as an ecosystem.

j) What are the laws of thermodynamics?

4. Answer any FOUR of the following questions.

a) Describe about structure and function of ecosystem

OR

Write the cause, effect and control of water pollution.

b) Write a detailed note about control method of population.

OR

Define natural disasters. Explain the impact of flood& its management.

c) Write the structure and function of central pollution control board.

OR

Write a note on different environmental movement in India.

d) Explain briefly about the wild life and its management. Discuss the procedure of conservation.

OR

Discuss different types of soil erosion and its conservation metod.

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2022

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

1. Answer all the questions:

a) In Ecological Pyramid, Pyramid of Energy is always_____.

b) The process in which ammonia is converted into nitrite is called_____.

c) All population of a given area is called_____.

d) The birth rate of a population per unit area at a given time is called _____.

e) Malaria is a _____type of disease.

f) The movement of individuals from an area & return to the same area aferwards is called_____.

g) _____is the leader of Chipko Movement.

h) CPCB stands for_____.

i) Save Silent Valley Movement occurs in _____ state of India.

j) The Water Act enacted in the year_____.

k) Solar energy is a _____ type of natural resources.

l) An_____is a sudden shaking (vibration) of ground caused disturbances in the eart crust.

2. Answer any EIGHT of the following questions:

i) What is Food Chain? Define with example.

ii) Different between nitrification & de-nitrification.

iii) What is Pollutants? What is the full form of PAN?

iv) Who is the leader of Bishnoi Movement? What is the cause of Bishnoi movement?

v) What is communicable disease? Give two examples of water borne disease.

vi) What is the role of State Pollution Control Board?

vii) Difference between Renewable & Non-renewable resources.

viii) Write a note on Narmada Bachao Andolon.

ix) What is Biodiversity? Difference between in-Situ & Ex-Situ Conservation.

x) When the Air Act Established? What is its objectives?

3. Answer any EIGHT of the following questions

a) Write a note on Atmosphere.

b) Describe Carbon Cycle.

c) Control measures against soil pollution.

d) Give a brief note on Air Borne disease

e) What are the consequences of overpopulation?

f) Write a brief note on Appiko movement.

g) Write a note on role of women in Environment moverment.

h) What is Natrual disaster?What is the Behavioural response during & after the cyclone?

i) Write a note on Wild Life Protection Act.

j) Define Urbanization. Write two effects of Urbanization.

4. Answer any FOUR of the following questions.

a) Write a note on structure & function of Ecosystem.

OR

Write a detailed notes on causes effect & measures of control of Air-Pollution.

b) What are Communicable Diseases?

OR

Write a note on control methods of population.

c) Write a note on different environment movements in Odisha.

OR

Write the structure & function of Central Pollution Control Board.

d) Write a note on management & conservation of soil.

OR

What are natural disasters ? Write about flood & its management.

***

2020

Full Marks - 50

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

(Answer all questions. Each carries 2 marks)

1. (i) What is Biosphere?

ii) How Lithosphere, Hydrosphere & Atmosphere interact Biosphere?

iii) What is Green Marketing?

iv) How Eco Mark helpful?

v) What is Plastic Waste?

vi) Describe the categories of Plastic & its Recovery.

vii) How Ozone layer depletion causes?

viii) Give the difference between GIS, GPS & RS.

ix) Define the term Eco labelling.

x) What is Green Technology?

Group -B

(Answer all questions. Each Carries 12 marks)

2.(a) What is Energy REsoruces? Explain about the Non Renewable resoruces & types.

b) What is Renewable resoruces? Why alternative Renewable soruces need to the environment?

OR

a) How Land use planing to the environemnt. Describe Land Resources.

b) Explain about Nuclear Energy Resources

3.a) Write the 12 pinciples of Green Chemistry?

b) Explain about Iso certification for the substances.

OR

a) How Green computing design helpful for the Environment?

b) Explain the causes of climate change? How Global warmign resonsible for it?

4.a) Describe the States of EIA?

b) What is Solid Waste? Explain abot the E-Waste sources, Causes & Management.

OR

a) What is EIA? Explain its Roles & objectives.

Write the different between EIA, EIS & EA.

b) Describe about the Environmental Protection Act. 1986.

5. Write short notes on : (Any two)

i) Water Act

ii) Air Act

iii) Wildlife Protection Act.

***

2020

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All questions including Q.No-1.

1. Answer the following questions.

a) What are the control methods of population?

b) What are the effects of radiation pollution?

c) What is soil pollution?

d) Define wild life management.

e) What is radiation pollution?

f) Hoiw does nitrogen return to the soil?

g) How can land pollution be prevented?

h) What is soil erosion?

i) What is biogeochemical cycle?

j) What are the compositions of air?

2. Explain various components of ecosytem in details.

OR

Discuss various components of environment and layers of each component with suitable diagram.

3. Define urbanization. Discuss its effect on the society.

OR

Discuss different sources of water pollution. Explain different measures to control over water pollution.

4. What is noise pollution? Discuss different sources of noise pollution? What are the effects of noise pollution?

OR

What are communicable diseases? Write down its transmission methods. How it is different from non-communicable diseases.

5. Write down the role of Central and State Pollution Control Board in details.

OR

Discuss various environment movements in India for safety of the environment. Also explain how women contribute towards such movement.

6. Write down different steps taken by the government for management and conservation of wild life.

OR

Write short notes. (Answer any two)

a) Wild life Act, 1972

b) Environment Protection

c) Conservation of natural resources

d) Management of natural disaster

***

2019

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Group-A

1. Define each of the following in ONE sentence only.

i) Ecology

ii) Pollution

iii) Disaster

iv) Disease

v) Urbanization

vi) NItrogen Cycle

vii) Conservation

viii) Wildlife

ix) Biosphere

x) Atmosphere

Group-B

2. Give an account of carbon cycle with diagrm.

OR

Explain hydrosphere with its importance.

3. Describe the causes and control measures of soil pollution.

OR

Enlist the management during and after cyclone.

4. State the control measures of population.

OR

Give an account of non-communicable diseases.

5. Discuss the role of women in environmental movements.

OR

Mention the role of State Pollution Control Board.

6. Narrate the conservation of wildlife in detail.

OR

Give an account of conservation of forest with its importance.

***

2022

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

PART-I

1. Answer in one sentence

(a) Give one example of manmade disaster.

b) Give one example of Natural Disaster.

c) Cholera is example of what types of disease?

d) What are the mode of communication to warn people during Natural Disaster.

e) What is the Green House Gases?

f) What is the importance of Ozone Layer?

g) Give one soical cause behind the population growth in India.

h) Give one economic cause responsible for population growth.

i) What was the main objective of the Environment protection Act-1986?

j) What step can be taken to prevent soil erosion?

k) What types of forest has the maximum biodiversity?

l) What is meant by life style diseases?

PART-II

2. Answer any eight of the following within two to three sentences each

a) What is light pollution?

b) What is the necessity of Quarantine?

c) What is Hydrosphere?

d) What are the importance of The Wild Life Protection Act-1972?

e) What cause Tsunami?

f) What is Vehicular pollution?

g) What is the significance of environment?

h) What is nitrification?

i) HOw to protect one from lighting?

j) What is Immunity?

PART-III

3. Answer any eight of the following within 75 words each.

a. Biosphere

b. Ecosystem

c. Sound pollution

d. Community

e. Global warming

f. Sustainable Development

g. Man-made Disaster

h. National Disaster Management Authority

i. Preventive measures of Covid-19

j. HIV and AIDs

k. Methods to control population growth

PART-IV

Answer the following within 500 words each.

4. Explain the signficance of carbon cycle.

OR

Discuss the causes, effects and measures to control industrial pollution.

5. What is climate change?Explain its causes & effects on environment.

OR

Explain the effects of increasign urbanisation on society and growth

6. Give a brief description of types of disasters and there effects.

OR

What are the various institutions and their role in disaster management? Explain.

7. Give an accoutn of communicable diseases and their transmission.

OR

Explain the role of different sector in managing Health Disaster.

***

2021

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

1. Fill in the blanks.

i) Carbon dioxide, methane, nitrous, oxide and chlorofluorocarbon are together called _____gases.

ii) _____proposed the term “ecosystem”.

iii) _____is defined as group of individuals of any one kind of organism.

iv) The port of the earth where differed ecosystems operate is called the_____

v) The transfer of food energy from plant sources through a service of organization in an ecosystem is known as_____

vi) When sulpher dioxide and nitrogen oxides reacts in the atmosphere if forms _____ rain.

vii) Unwanted sound is called _____

viii) Increased radiation from atomic bomb blasts or radioactive wastes are hazardous, because such radiations are called_____ radiation.

ix) An_____is a sudden shaking (vibrations) of ground caused by disturbances in the earth’crust.

x) The diseases that are transferred from one person to another is called_____ diseaes.

xi) In ecosystem the living organism are placed in different levels called _____level.

xii) The plants synthesize/prepare their own food, so they are called_____

2. Answer any EIGHT of the following

i) What is soil erosion and what are its effect?

ii) Define ecosystem and this termwas given whom?

iii) What are the causes of air pollution?

iv) Give difference food chain and food web.

v) Define atmosphere

vi) When was building protection act established? Write its objective.

vii) When was the water act established and what was its objective.

viii) Write down the role of central pollution control boards.

ix) Define pollutants? How many ways they are available?

x) What is photochemical smong?

3. Answer any EIGHT of the following:

i) Write a note on hydrosphere.

ii) Give some points for conservation of soil.

iii) Write some points on flood.

iv) Write the functions of State Pollution Control Board.

v) Define urbanization and its effects.

vi) What are natural resoruces and its types.

vii) How resources can be conserved?

viii) Write a note on carbon cycle.

ix) What are the components of lithospehere?

x) What are the causes and effects of radiation pollution?

4. Answer any FOUR of the following

i) What do you mean by ecosystem? What are the different components of ecosystem?Mention in detail

ii) What are communicable diseases? Mention some communicable diseases.

iii) Write notes on different environmental movements in India.

iv) Write notes on Environment protection. Discuss various acts related to Environmental Protection.

v) What are natural disasters? Write some of the disaster and their management.

vi) Write a detailed notes on causes, effect and measures of control of air pollution.

vii) Write a note on management and conservaiton of wildlife.

***

2021

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Part-I

A. Define the following:

1. Ecological pyramid
2. Chipko movement
3. SPCB
4. CNG
5. CPCB
6. Noise Pollution
7. Sustainable Development
8. Nuclear Hazard
9. Water Conservation
10. Biodiversity
11. Child Welfare
12. Red Data Book

Part-II

B. Answer the following questions

1. What is the causes of soil erosion?
2. Write two effects of airpollution?
3. Write scope of the environment?
4. What is the meanign of K-selected species?
5. What do you mean Communicable diseases?Give the two examples.
6. What are the main objectives of State PollutionControl Board?
7. What is the difference between Hazard & Disaster?
8. Write the name of two Non Communicable diseases.
9. What is the main objective of Wild life Protection Act 1972?
10. What are the causes of Acid Rain?

Part-III

C. Answer the following questions in brief (any 8)

1. Define the term population density
2. Define the term population distribution?
3. What is a Eco-system?
4. Differentiate between Biotic factors & Abioticfactors.

5. Differentiate between communicable diseases and non -communicable diseases.
6. Whatisacommunity?
7. How does radiationcause Pollution? Write two examples.
8. What do you mean by Speciation & Competition of Individuals?
9. What are the objectives of CPCB?
10. What are natural resources?

Part-IV

D. Answer the following questions

1. Describe broadly the constituents of atmosphere and atmosphere structure? Mention which major gasses are present in different levels of atmosphere?

   OR

   What are different segments and elements of environment? Explain in brief.

2. Explainvarious causes of Urbanization and its effects on society? How does population affect ecology?

   OR

   Explain different modes of contact of communicable diseases and non-communicable diseases? What are the steps to betaken prevent disease transmission?

3. What are the root causes of environmental movements? What are different types of environmental movements? Explain the role of women in environmental movements?

   OR

   Explain Functions and powers of CPCB?

4. Classify natural resources? What are the causes of depletion of natural resources?

   OR

   What is natural disaster and classify them? What are the aspects of disaster management? Write a short note on effective way of natural disaster management?

***

2021

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks

Answer All question.

Part - I

1. a. Fill in the blanks with word(s)

a) World Environment Day is observed every year on _____

b) Silent Valley is situated in the state of _____

c) Maximum biodiversity is found in the _____ forests.

d) _____is the major constituent of biogas.

e) For measuring intensity of earthquake _____ scale is used

f) Social erosion can be prevented by _____

g) Cholera is a _____ type of disease

h) Generic name of man is _____

i) _____ is the national animal of India.

j) Coal is a _____ resoruce

k) _____ is a fossil fuel

l) Wildlife protection Act was enacted in the year _____

PART-II

2. Answer any eight questions, each within two to three sentence

(a) Food chain (b) Biosphere

c) Contact Tracing d) Mortality

e) Hydrosphere f) Renewable Resource

g) Pandemic disease h) Quarantine

i) Tsunami j) Social afforestation

PART-III

3. Answer any eight questions, each within 75 words

a) Troposphere

b) Threats to biodiversity

c) Effect of yoga on Covid patients

d) Radiation pollution

e) The Wildlife Protection Act

f) Renewable energy

g) Natural Disaster management

h) Explain 3R principle

i) Ozone layer depletion

j) Corporate Social Responsibility

k) Chipko Movement

PART-IV

Answer any four questions, each within 500 words

4. Describe the nitrogen cycel and its significance.

OR

Discuss the causes, effects and measures to control water pollution.

5. What is sustainable development? Discuss the steps taken by government towards sustainable development.

OR

Discuss the causes of population growth and different methods adopted to control population.

6. Explain global warmign with its causes and effects.

OR

Discuss the preparedness measures taken by government for disaster management.

7. Discuss the different preventive measure adopted during Covid-19 pandemic.

OR

Briefly discuss on water borne diseases.

8. Discuss the effects of urbanisation on the society and methods of urban wastes managment.

OR

Write notes on :

a) NDRF b) Communicable disease

9. Discuss environmental laws.

OR

Discuss the characteristics of a community.

***

2019
SUB-EVS
BSc. ITM

1. Write the answer of the flowign questions.

a) Define food chain.

b) Write down the biotic component of an ecosystem

c) Defien the composition of air.

d) Defien noise pollution

e) Define biodiversity.

f) Give two examples of control method of population.

g) Write down the major roles of State Pollution Control Board.

h) What is objective of Chipko movement?

i) What is air pollution?

j) Define wild life management.

2. Write down the structure and function of ecosystem.

OR

Write notes on:

a) Atmosphere

b) Nitrogen cycle

3. Define water pollution. Write down the sources of water pollution. Explain different measures to control water pollution.

OR

Write notes on :

a) Flood and its management

b) Thermal Pollution

4. Define what are communicable diseases? Write down its transmisson methods.

OR

Explain the following terms in detail.

a) Urbanization

b) Population Growth Curve

5. Write down the role of Central Pollution Control Board in details

OR

a) Appiko Movement

b) Role of Women in Environmental Movements

6. Write down the conservation of wild life and discuss its management methods.

OR

a) Wild Life Act

b) Soil Erosion and conservation

OR

Give an account on water pollution with all its effect, causes and measures to control it

(b) What is population ? Describe all its characteristics.

OR

Write a detailed note on urbanisation and its impact.

(c) Give a detailed note on the major environmental movements in India

OR

Write a note on role of women in environmental movements.

(d) Write a note on different types of environmental laws of our country.

OR

What do you mean by disaster ? Give a note on the preparedness before and after flood and earthquake.

2023

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicates marks.

Answer All questions

1. Answer all the Questions. [1 × 12 =12

(a) Write the full form of SPCB ?

(b) Who first use the term 'ecosystem' ?

(c) The living component of ecosystem us called _____.

(d) Which layer in the atmosphere protects the living organism from harmful radiation of the sun ?

(e) The Chipko movement started in which village of Uttar Pradesh ?

(f) In which year, the water Act was started?

(g) Write an example of in-situ conservation.

(h) _____ is the aggregation or arrangement of individual in a population.

(i) _____ means exit of individual in a group of population.

(j) _____ is the number of offspring produced per female per unit time.

(k) In which state of India, Silent valley movement was started ?

(l) _____ is the sudden shaking of ground caused in the Earth's crust.

2. Answer any eight of the following questions. [2 × 8=16

(a) What do you mean by biogeochemical cycle ?

(b) Define food chain with examples

(c) What was the aim of NARMADA BACCHAO ANDOLAN ?

(d) What is an earthquake ?

(e) What are pollutants ?

(f) Define Trophic level.

(g) What is pollution ? Write name some of the environmental pollution.

(h) What do you mean by non- communicable diseases give some examples

(i) Define Denitrification.

(j) What was the objectives of Water Act ?

[Cont...

3. Answer any eight of the following questions. [3 × 8=24

(a) Describe the steps of nitrogen cycle.

(b) Write down the Control measures of noise pollution.

(c) Write a note on Appiko movement.

(d) Differentiate between biotic and abiotic component of ecosystem.

(e) Write a note on consumers of ecosystem.

(f) What is community ? Write 3 characteristics of community.

(g) Write a note on water and vector borne diseases.

(h) Write some steps that should be taken after the cyclone.

(i) Differentiate between renewable and non-renewable resources.

(j) Define urbanization. Write two impacts of urbanization.

4. Answer any four of the following questions. [7 × 4=28

(a) What is ecosystem ? Describe it in details.

[Cont...

2021

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicates marks.

Answer ALL questions.

1. Answer any FOUR of the following questions : [2ò6=12

   (a) Write down two properties of an algorithm.

   (b) What is the difference between intermediate mode and script mode ?

   (c) Define range function.

   (d) How to input data in python program ?

   (e) S="UTKAL UNIVERSITY"

   print(S[-10 : -4]), what is the output of the code ?

   (f) Define ternary operator in python.

2. Answer any FOUR of the following questions : [4ò4=16

   (a) Write down the difference between List and Tuple.

   (b) Explain python Dictionaries.

   (c) What is Pseudocode ? Explain with example.

   (d) What is an identifier ? Write down the rules for naming identifiers.

3. Answer any FOUR of the following questions : [5ò5=25

   (a) What is documentation ? Write some advantages of documentation.

   (b) Draw a flowchart to calculate the average of 5 numbers.

   (c) Define Top-down and Bottom-up programming.

   (d) What is String and how do you create a String in Python ?

   (e) Explain bitwise operator with example.

[Cont...

4. Answer any THREE of the following questions : [9ò3=27

(a) What is Debugging ? Explain types of error in programming.

(b) What is an algorithm ? Write down the characteristic of an algorithm. Write an algorithm to find all the roots of a quadratic equation $ax^2 + bx + c = 0$.

(c) Define Flowchart. Draw a flowchart to find the Fibonacci series till the term < = 100.

(d) What is Data type ? Explain Basic Data type available in python.

(e) What is Function in Python ? How to set default argument in function ? Explain it with a suitable example.

(f) Define Loop ? Explain different types of loop available in python.

III - S - B.Sc. - (ITM) - SEC - I - (PP)

2024

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL the questions.

GROUP - A

(Answer all questions. Each question carries 1 mark)

1. Answer all questions :- [1 * 12 = 12]
   a) Define program.
   b) Define instructions.
   c) Define keyword.
   d) Define decision table.
   e) Define immutable.
   f) Write the membership operators used in python?
   g) Define two mutable data types?
   h) Temp-123 is an valid identifier. (True / False)
   i) Write the output of

```
t=(1,2,3,'r')
print(t[2]+t[-3])
```

   j) What do you mean by traversing of string?
   k) Which function is used to return smallest element of list?
   l) String is a mutable data type. (true or False)

GROUP - B

(Answer any EIGHT questions. Each question carries 2 marks)

2. Answer any eight questions:- [2 * 8 =16]
   a) Define Python.
   b) Define high level programming language.
   c) Define slicing a string?

d) Define algorithm?
e) Define mutable data type. Give example.
f) Define append() function in list. Give example.
g) How to declare single and multiline comment?
h) What is the use on sum() in list?
i) What is the use of as keyword in python?
j) Define IndexError in python?

GROUP - C

(Answer any EIGHT questions. Each question carries 3 marks)

3. Answer any eight questions:- [3 * 8 = 24]
   a) Define nested list?
   b) Define modes of operation in python programming language.
   c) Define flow of control of data.
   d) Define function.
   e) Write a program to calculate the factorial of a number.
   f) Define debugging.
   g) Explain concatenation and repitition operations in string.
   h) What is the difference between tuple and list data type?
   i) Difference between append() and extend() function in List.
   j) What is the use of default argument?

GROUP - D

(Answer all questions. (Each question carries 7 marks each)

4. What is the concept of problem solving? What are the steps involved in order to find solution of an problem.

   OR

   Define error and debugging in programming. Explain the types of errors used in programming language.

5. Explain the types of problem solving techniques in brief.

   OR

   Short notes on:-
   a) Structured programming language
   b) Programming methodology

6. Write a Program to calculate total marks, percentage and grade of a student. Marks obtained in each of the three subjects are to be input by the user. Assign grades according to the following criteria:
   Grade A: Percentage >=80
   Grade B: Percentage>=70 and <80
   Grade C: Percentage>=60 and <70
   Grade D: Percentage>=40 and <60
   Grade E: Percentage<40

   OR

   Explain the following list methods with an example.
   a) len() b) extend() c) insert() d) index()
   e) sort() f) max() g) min()

7. Write a python program to calculate the series 1+3!+5!+7!+…+n!.

   OR

   Write a python program to create a list of 10 elements defined by the user. And then calculate the average of even numbers in python.

*

(b) Explain different types of loop statements used in python with example.

6.(a) Explain different token used in python with example.

OR

(b) Discuss the structure and elements of python program.

7.(a) What is a function in python ? Write a function to calculate the square of a Number ?

OR

(b) Discuss various data types in python.

III - S - BCA - SEC - 1 -
(Python Programming) - (R & B)

III - S - BCA - SEC - 1 -
(Python Programming) - (R & B)

2024

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

Group - A

1. Answer all questions : [8 x 1 = 8

(a) Define Keyword.

(b) Define source code.

(c) Explain bug in programming.

(d) Missing semicolon(;) is a _____ type of error ?

(e) Which symbol of flowchart is used for decision making ?

(f) What is the use of break statement ?

(g) What is the answer of the expression (22%3) ?

(h) What is the answer of the expression (3 ^ 4) ?

[Cont...

Group - B

2. Answer all questions : [8 x 1.5 = 12

(a) What is an algorithm in python program ?

(b) What is the use of an interpreter ?

(c) Write the snippet to display "hello world" in python interpreter ?

(d) What do you mean by an assignment statement ?

(e) Write any two disadvantage of flowchart ?

(f) Define range function ?

(g) How to input data in python program ?

(h) What is flow iteration ?

(i) Write the nested if statement with syntax ?

(j) Define ternary operator in python.

Group - C

3. Answer any 8 questions : [8 x 2 = 16

(a) Write the types of error in programming ?

(b) Draw a flowchart to calculate the average of 5 numbers.

(c) What is pseudo code explain with example ?

(d) What do you mean by default argument ? How it is implemented ?

[Cont...

(e) What is Boolean Operator ? How it is used in Python ?

(f) What is identifier and write down the rules for naming an identifier ?

(g) What is break statement in python programming ?

(h) How do you create a default argument function in python.

(i) Write the advantage of documentation.

(j) Write down an algorithm to find the largest number among three different number entered by the user.

Group - D

Answer all questions : [4 x 6 = 24

4.(a) Define Error. Explain different types of error produced by a program.

OR

(b) Write a program in python to covert the given temperature from Fahrenheit to Celsius and vice versa ?

5.(a) What are symbol used in a flowchart ? Draw a flowchart to calculate factorial of a number ?

OR

[Cont...

(c) Write a program in python the display star in right angled triangular shape.

OR

Explain any two types of looping statement with suitable example.

(d) What is Function ? How it different from methods. Describe about the anonymous function.

OR

Write a program in python to check whether a given number is prime or not using function.

III - S - B.Sc. - (ITM) - SEC - I -
(Python Programming)

2023

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer any EIGHT of the following questions : [1 x 8 = 8

(a) Which library is used for doing approximate and phonetic matching of strings ?

(b) What is Cherrypy ?

(c) Python schedules the garbage collector depending upon a number called _____.

(d) Which package is used for processing array of single or multidimensional type ?

(e) Which is a python imaging library ?

(f) Write the name of the library that consists of web related functions.

(g) Which is the standard python compiler implement c ?

[P.T.O...

(h) What is the extension of byte code of python file ?

2. Answer any EIGHT of the following questions : [2 x 8 = 16

(a) Which website is used to download python freely ?

(b) Write any two ways a python program can be executed ?

(c) Write any two built in data type in python ?

(d) Write the name of the data type that represents sequence of number and is generally used to repeat a for loop ?

(e) Write a two bit wise operator ?

(f) Write any one membership operator used in python ?

(g) Write the general format of input() function ?

(h) Which command is used to read all the command line argument except 0th argument ?

(i) What is control statement ?

(j) What is assert statement ?

3. Answer any EIGHT of the following questions : [3 x 8 = 24

(a) Write any two types of sequences in python ?

(b) Describe the concept of tuple ?

[Cont...

(c) Explain list with example.

(d) What is Set ? Explain it with example.

(e) What is byte code ? Can you run python byte code ?

(f) What is PVM ?

(g) What is multiple comments ? Explain it with example.

(h) Explain Boolean data type with example.

(i) What is frozen set ?

(j) What is the need of type() function ?

4. Answer any FOUR of the following questions : [8 x 4 = 32

(a) Briefly explain about different type of data type used in python programming.

OR

Write a program in python to convert numbers of octal, binary and hexadecimal system in to decimal number system.

(b) Explain different types of operator with example.

OR

Write a program in python to display all even numbers that lies in between 0 to 100.

[Cont...

(c) A list of integers : numbers = [12, 7, 5, 18, 25, 3, 10], a tuple of integers: values = (15, 30, 10, 5, 50, 25) and set of integers: unique_numbers = {20, 15, 30, 25, 10}. Perform the following tasks :

(i) From the list numbers, find all numbers greater than 10 and calculate their sum.

(ii) From the tuple values, find the largest and smallest elements and explain the immutability of tuples.

(iii) From the set unique_numbers, add the number 35, and then remove all numbers less than 20. Print the updated set.

(iv) Explain with examples how lists, tuples and sets differ in terms of their usage.

OR

Explain the different types of operators in Python with examples.

(d) Explain any two types of looping statement with suitable example.

OR

Write a program to check whether a given number is an Armstrong number or not using function.

2024

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer any EIGHT of the following questions : [1 x 8 = 8

(a) What is the role of the Python interpreter ?

(b) What is the difference between break and continue statements ?

(c) What is program design ?

(d) What is flowchart ?

(e) Name any two arithmetic operators in Python.

(f) How is a list different from a dictionary in Python ?

(g) What is default argument in a Python function ?

(h) What is tuple in Python ?

2. Answer any EIGHT of the following questions : [2 x 8 = 16

(a) Write any one membership operator used in python.

[Cont...

(b) How do you define a function in Python with as keyword arguments ? Give an example.

(c) How tuple is different from a list ?

(d) What is list slicing ? Give an example.

(e) How to add a new key-value pair to a dictionary in Python ?

(f) Differentiate between break, continue, and pass in Python.

(g) Explain dictionary with example.

(h) What is debugging, and why is it essential in programming ?

(i) What is the purpose of an algorithm in program design ?

(j) Write the difference between the top-down and bottom-up programming methodologies.

3. Answer any EIGHT of the following questions : [3 x 8 = 24

(a) What is f-string ? Give an example.

(b) What is documentation ? Write its type.

(c) Write the difference between interpreter and compiler.

(d) What is PVM ? Explain its work flow.

(e) Write the differences between set and frozen set.

[Cont...

(f) Draw the flow chart to find factorial of a number.

(g) Write a program to check a number whether it is even or odd using function.

(h) If a = [3,6,1,4,5,2], sort the list in ascending and descending order.

(i) Write a program to check the string is palindrome or not. (Take user input)

(j) Explain keyword variable length function with example.

4. Answer any FOUR of the following questions : [8 x 4 = 32

(a) Explain the steps involved in program design with an example. How does a well-structured design improve program efficiency and readability ?

OR

Discuss the different types of errors in programming and explain with suitable examples.

(b) Draw a detailed flowchart to create a program that calculates the area and circumference of a circle based on the user's input radius.

OR

Explain the concept of a decision table. Create a decision table for a program that determines eligibility for a loan based on conditions like age, income, and credit score.

[Cont...

31/5/2025

I-S-NEP-BCA-Major-1-P-2-Intro to Python Prog.

2024

Time :As in Programme

Full Marks : 100

The figures in the right-hand margin indicate marks.

*Answer **all** the questions*

PART-I

1. Answer all questions. 1x10

   a. Classes are created using _____keyword.

   b. We can check if a list is empty using_____operator.

   c. A function is defined using _____keyword.

   d. _____data structure allows duplicate element.

   e. _____ method closes the file and ensures that any changes made to the file are saved.

   f. _____ returns a tuple consisting of quotient and remainder.

   g. _____ function initializes objects attributes automatically when object is created.

   h. _____ block always runs regardless of whether an exception occurred or not.

   i. _____ function is used to return unique identifier of an object.

   j. _____functions are called inline functions.

PART-II

2. Answer the following questions in 50 words each. 2x9

   a. Explain the difference between mutable and immutable types in python with examples.

   b. What is Dictionary? Write the syntax of creating dictionary .

   c. Write the difference between set & dictionary.

   d. What are the modes of opening a file?

   e. State the difference between iteration and recursion?

   f. Describe three built-in functions of string in python?

   g. What is operator overloading?

   h. What is the use of input () function in python. How strings are declared?

   i. Write the difference between selective control & iterative control.

PART-III

3. Answer any eight questions of the followings in 250 words each. 5x8

   a. Write a python program to define a function that will receive a number as per user choice and find sum of digits

   b. WAP to receive names of 5 students & print the name that has highest length.

   c. Discuss various built in functions and methods applicable to python dictionary with example.

   d. Write a recursive function that reverses the list of numbers that it receives.

   e. What is single inheritance? Explain with suitable example

   f. WAP to enter three integers and print the largest of the three.

   g. Explain the three ways of decision control in a program with examples.

   h. WAP to implement stack data structure.

   i. Write the difference between stack data structure and Queue data structure.

   j. What is a tuple? Explain the concept of looping in tuples.

PART-IV

Answer any four of the following in 800 words each. 8x4

4. a. What is class? Write a program using class. 5

   b. Explain the use of set, tuple and dictionary . 3

5. a. WAP using recursive function to obtain the running sum of first n natural numbers. 5

   b. What is looping in Python? Give one example of a loop statement. 3

6. a. What is the use of lambda() function in map() and reduce() explain with examples. 5

   b. What is the use of break & continue statement in python? Give an example to show this. 3

7. Explain hybrid inheritance and hierarchical inheritance with suitable examples. 8

8. a. Explain the basic set operations and set methods and built in functions on sets. 5

   b. Write the two types of recursion with example. 3

III - S - BSc. - Computer. Sc. (H)

(PYTHON PROGRAMMING) (R/B)

2022

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL the questions.

1.Answer all the question. [1 X 8 = 8]

a) What is the role of interpreter?

b) Which symbol of flowchart is used for decision making.

c) Missing semicolon (;) is a _____ type of error.

d) What is debugging?

e) What is the use of break statement?

f) Who was the founder of python?

g) Define algorithm.

h) S="I am expert in Python"

Print(S[-10 : -6])

what is the output of the above code?

2. Answer any eight from the following questions. [2 X 8 = 16]

a) Write any two disadvantages of flowchart.

b) What is the difference between intermediate mode and script mode?

c) What is python dictionary?

d) How to input data in python program.

e) Write down the difference between List and Tuple.

f) Define range function.

g) Write the nested if statement with syntax.

h) What is python shell?

i) Write down two properties of an algorithm.

j) Define ternary operator in python.

3. Answer any Eight from the following question. [3 X 8 = 24]

a) What do you mean by default argument. How it is implemented?

b) What is pseudo code explain with example.

c) Draw a flowchart to calculate the average of 5 numbers.

d) Define Top-down and Bottom-up programming.

e) Write down an algorithm to find the largest number among three different number entered by the user.

f) What is Boolean operator? How it is used in Python?

g) What is an identifier and write down the rules for naming an identifier.

h) What are the advantages of Tuple over List.

i) How do you create a String in python?

j) Write the advantages of documentation.

[Cont...

4. Answer the following question. [4 X 8 = 32]

(a) Define problem and explain different stages in solving a problem using computer.

OR

Define error. Explain different types of error produced by a programme.

(b) What are the symbols used in a flowchart? Draw a flowchart to calculate factorial of a number.

OR

Explain different types of loop statements used in python with example.

(c) Discuss the structure and elements of python program.

OR

Explain top-down and bottom-up problem solving techniques with their advantages.

(d) Discuss various data types used in python.

OR

What is function in python? Write a function to calculate the square of a number.

II - S - BSc. - Computer. Sc. (H)
(PYTHON PROGRAMMING) (R/B)

[Cont...

2024

Time :As in Programme

Full Marks : 100

The figures in the right-hand margin indicate marks.

*Answer **all** the questions*

PART-I

1. Answer all questions. 1x10

a. Part of a computer that processes all instruction _____.

b. The first generation of computers used which technology?

c. Which language does the computer understand?

d. _____ is responsible for carrying out arithmetic and logicoperation.

e. _____memory could not store data and information permanently.

f. Scanner is a _____ device

g. Which type of software is designed to control the operations of a computer?

h. The full formof WWW is_____.

i. Hub is used in _____ topology.

j. Which of the following is the smallest unit of data in a computer?

i. Bit ii. Byte iii. Kbiv. Gb

PART-II

2. Answer the following questions in 50 words each. 2x9

a. What is flow chart?

b. Differentiate between hardware and software.

c. Differentiate between cache memory and register..

d. Differentiate between RAM and ROM.

e. Differentiate between system software and application software.

f. What is firmware?

g. Write any two advantages of Peer to peer computing.

h. Define middleware.

i. What is e-learning?

PART-III

3. Answer any eight questions of the followings in 250 words each. 5x8

a. Write some characteristics of a computer.

b. Discuss various generation of a computer.

c. Differentiate between primary memory and secondary memory.

d. Write some components and characteristics ofa computer network.

e. Briefly explain about five input devices.

f. Differentiate between LAN MANand WAN.

g. Write some services provide by an operating system.

h. Write the difference between internet and WWW.

i. What is email? Write some steps to send or receive an email.

j. Explain different types of e-banking services in detail.

PART-IV

Answer any four of the following in 800 words each. 8x4

4. Explain the basic structure and working of a computer with a suitable block diagram. 8

5. Explain the type of network topologies withsuitable diagram. 8

6. Discuss different types of memory in detail. 8

7. a. Define flow chart. Discuss about different symbols used in flow chart Draw a flow chart to check a number is even or odd. 5

b. Write an algorithm to find sum and average of three input number. 3

8. Define the cloud computing. Explain about different types of cloud computing services and deployment models. 8

2024

Time :As in Programme

Full Marks : 100

The figures in the right-hand margin indicate marks.

*Answer **all** the questions*

विभाग - क

1. निम्नलिखित प्रश्नों का उत्तर 1 या 2 शब्दों मे दीजिये । 1x10

(क) अंग्रेजी में प्रयोजनमूलक हिंदी को क्या कहते हैं ?

(ख) संविधान की आठवीं अनुसूची में आज कितनी भाषायें उल्लिखित हैं ?

(ग) संसदीय राजभाषा समिति, 1957 के अध्यक्ष कौन थे ?

(घ) टिप्पणी को अंग्रेजी में क्या कहते हैं ?

(ङ) कौन हमारे हृदय की भावनाओं को खोल कर रख देते हैं ?

(च) Approval का हिंदी शब्द क्या है ?

(छ) प्रसारण का अंग्रेजी शब्द क्या है ?

(ज) डिफरेंस इंजन का निर्माण किसने किया था ?

(झ) डॉ. रघुवीर किस सिद्धान्त के समर्थक थे ?

(ञ) मेमोरी कितने प्रकार की होती है ?

विभाग - ख

2. किन्हीं 9 प्रश्नों का उत्तर 1-2 वाक्यों में दीजिये । 2x9

(क) प्रयोजनमूलक हिंदी की कोई एक परिभाषा दीजिये ।

(ख) 'ख' क्षेत्र में कौन-कौन से राज्य आते हैं ?

(ग) टिप्पणी की परिभाषा कैसी होनी चाहिये ?

(घ) अंतर्राष्ट्रीयतावादी सिद्धान्त का दूसरा नाम क्या है ?

(ङ) Action as proposed may be taken - का हिंदी अनुवाद क्या है ?

(Turn Over)

(च) संबंधित कागज लेकर विचार - विमर्श करें - का अंग्रेजी अनुवाद क्या है ?

(छ) पारिभाषिक शब्दावली की एक परिभाषा लिखिये ।

(ज) पल्लवन की परिभाषा दीजिये ।

(झ) संकल्प किसमें प्रकाशित किया जाता है ?

(ञ) डाटा संसाधन से क्या अभिप्राय है ?

(ट) कंप्यूटर की परिभाषा लिखिये ।

विभाग - ग

3. किन्हीं 8 प्रश्नों का उत्तर 200 शब्दों में दीजिये । 5x8

(क) प्रयोजनमूलक हिंदी की क्या-क्या समस्यायें हैं ?

(ख) मुंशी आयंगर फॉर्मूला क्या है ?

(ग) हिंदी के कार्यसाधक ज्ञान से क्या अभिप्राय है ?

(घ) आलेखन की भाषा कैसी होनी चाहिये ?

(ङ) व्यक्तिगत पत्र की भाषा-शैली कैसी होती है ?

(च) पारिभाषिक शब्दावली के अर्थ और स्वरूप पर प्रकाश डालिये ।

(छ) माइक्रो कम्प्यूटर किसे कहते हैं ?

(ज) संक्षेपण के स्वरूप की चर्चा कीजिये ।

(झ) पारिभाषिक शब्दावली का स्वरूप क्या है ?

(ञ) भारत में कम्प्यूटर की विकास यात्रा का परिचय दीजिये ।

विभाग - घ

किन्हीं 4 प्रश्नों का उत्तर 500 शब्दों में दीजिये । 8x4

4. प्रयोजनमूलक हिंदी के भेदों का सविस्तार आकलन कीजिये ।

5. वैश्वीकरण के दौर में हिंदी के विविध रूपों की चर्चा कीजिये ।

6. आलेखन की परिभाषा देते हुये उसकी विशेषताओं पर प्रकाश डालिये ।

7. विविध आधारों पर पारिभाषिक शब्दावली के भेदों का विवेचन कीजिये ।

8. कम्प्यूटर के विविध प्रकारों का विवेचन कीजिये ।

2024

Time :As in Programme

Full Marks : 100

The figures in the right-hand margin indicate marks.

*Answer **all** the questions*

'କ' ବିଭାଗ

୧. ଗୋଟିଏ ବାକ୍ୟରେ ଉତ୍ତର ଦିଅ । ୧x୧୦

(କ) ଓଡ଼ିଆ ଭାଷାରେ ପ୍ରଚଳିତ ଦୁଇଟି ତୁର୍କୀ ଶବ୍ଦ ଲେଖ ।

(ଖ) 'ସନ୍ଧ୍ୟା ହେବାରୁ ସମସ୍ତ ପକ୍ଷୀଗୁଡ଼ିକ ନିଜ ନିଜ ବସାକୁ ଫେରିଗଲେ ।' - ବାକ୍ୟର ଶବ୍ଦରୂପ ଲେଖ ।

(ଗ) 'ଗାଁ ମଜଲିସ୍' କେଉଁ ସମ୍ବାଦପତ୍ରର ସ୍ତମ୍ଭ ?

(ଘ) ଫିଚର କାହାକୁ କୁହାଯାଏ ?

(ଙ) ସଂକ୍ଷିପ୍ତକରଣ କରିବା ସମୟରେ କେଉଁ ପ୍ରକାର କଥାବସ୍ତୁ ଉପସ୍ଥାପନ କରିବା ବିଧେୟ ?

(ଚ) ଅନୁଚ୍ଛେଦଟିକୁ ସଂକ୍ଷିପ୍ତ କରିସାରିବା ପରେ ଶେଷରେ କ'ଣ ସ୍ଥିର କରାଯାଏ ?

(ଛ) ସରଳ ବାକ୍ୟ କାହାକୁ କୁହାଯାଏ ?

(ଜ) "ଶରତ ଋତୁ ଯେବେ ଆସେ, ପୋଖରୀରେ କଇଁଫୁଲ ଫୁଟେ ।" - ଏହା କି ପ୍ରକାର ବାକ୍ୟ ଲେଖ ?

(ଝ) ପ୍ରଶ୍ନସୂଚକ ବାକ୍ୟ କାହାକୁ କହନ୍ତି ?

(ଞ) 'ଅନ୍ଧର ଲଉଡ଼ି' - ରୁଢ଼ିର ଅର୍ଥ ଲେଖ ।

'ଖ' ବିଭାଗ

୨. ପ୍ରତ୍ୟେକ ପ୍ରଶ୍ନର ଉତ୍ତର ଦୁଇଟି ବାକ୍ୟରେ ୫୦ ଶବ୍ଦ ମଧ୍ୟରେ ଦିଅ । ୨x୯

(କ) ନିରପରାଧୀ, ପରିକ୍ଷା, ଭୂବନେଶ୍ୱର, ଜନତାମାନେ, ରୋଗି - ଶବ୍ଦଗୁଡ଼ିକର ଶୁଦ୍ଧରୂପ ଲେଖ ।

(ଖ) ଦୁଇଟି ଯୌଗିକ ବାକ୍ୟ ଲେଖ ।

(Turn Over)

(ଗ) ଗଠନ ଦୃଷ୍ଟିରୁ ବାକ୍ୟ କେତେ ଭାଗରେ ବିଭକ୍ତ ଓ ସେଗୁଡ଼ିକ କ'ଣ କ'ଣ ?

(ଘ) ମନୋରଞ୍ଜନଭିତ୍ତିକ ଫିଚର କହିଲେ କ'ଣ ବୁଝ ?

(ଙ) ବିଜ୍ଞାପନର ଦୁଇଟି ଉପକାରିତା ଲେଖ ।

(ଚ) ସାମାଜିକ ସ୍ତମ୍ଭ ରଚନା କହିଲେ କ'ଣ ବୁଝ ଲେଖ ?

(ଛ) ଅନୁଚ୍ଛେଦରେ ପ୍ରଦତ୍ତ ପ୍ରଶ୍ନର ଉତ୍ତର ଦେବା ପାଇଁ କେଉଁ ଦିଗ ପ୍ରତି ଧ୍ୟାନ ଦେବା ଉଚିତ୍ ?

(ଜ) ଦୁଇଟି ତୁଳନାତ୍ମକ ରୂଢ଼ି ଲେଖ ।

(ଝ) ଶବ୍ଦର ସଂଜ୍ଞା କ'ଣ ଲେଖ ।

'ଗ' ବିଭାଗ

୩. ଯେକୌଣସି ଆଠଟିର ଉତ୍ତର ୨୫୦ ଶବ୍ଦ ମଧ୍ୟରେ ଦିଅ । ୫x୮

(କ) ବିଜ୍ଞାପନର ସଂଜ୍ଞା ଓ ସ୍ୱରୂପ ଲେଖ ।

(ଖ) ବାପାଙ୍କ ପାଖକୁ ଏକ ଇ.ମେଲ୍ ପ୍ରେରଣ କର ।

(ଗ) ବୃହତ୍ ଅନୁଚ୍ଛେଦଟିକୁ ସଂକ୍ଷିପ୍ତକରଣ କରିବାର କୌଶଳଗୁଡ଼ିକ କ'ଣ ଲେଖ ?

(ଘ) ବାକ୍ୟର ଲକ୍ଷଣ ବିଷୟରେ ଆଲୋଚନା କର ।

(ଙ) ବାକ୍ୟର ଅଙ୍ଗ ବିଷୟରେ ଆଲୋଚନା କର ।

(ଚ) ଆଦେଶ ସୂଚକ ବାକ୍ୟ କାହାକୁ କହନ୍ତି ଲେଖି ୧୦ଟି ଉଦାହରଣ ଦିଅ ।

(ଛ) ଓଡ଼ିଆ ଭାଷାର ଶବ୍ଦ ସମ୍ଭାର ସମ୍ପର୍କରେ ଲେଖ ।

(ଜ) 'ଧରିବା' କ୍ରିୟା ଲଗାଇ ୫ଟି ରୂଢ଼ି ଲେଖ ।

(ଝ) ଅନୁଚ୍ଛେଦରେ ବାକ୍ୟର ଗୁରୁତ୍ୱ ବର୍ଣ୍ଣନା କର ।

(ଞ) ବିଜ୍ଞାପନର ଲକ୍ଷଣ ବା ବୈଶିଷ୍ଟ୍ୟ ବିଷୟରେ ଲେଖ ।

'ଘ' ବିଭାଗ

ଯେକୌଣସି ଚାରିଟିର ଉତ୍ତର ୮୦୦ ଶବ୍ଦ ମଧ୍ୟରେ ଦିଅ । ୮x୪

୪. ବିଭିନ୍ନ ପ୍ରକାର ବିଜ୍ଞାପନ ସମ୍ବନ୍ଧରେ ଆଲୋଚନା କର ।

୫. ଫିଚରର ସଂଜ୍ଞା ଓ ପ୍ରକାରଭେଦ ବିଷୟରେ ଆଲୋଚନା କର ।

୬. +୨ ପରୀକ୍ଷା ପାଇଁ ପରାମର୍ଶ ଦେବା ଉଦ୍ଦେଶ୍ୟରେ ସାନଭଉଣୀ ନିକଟକୁ ପତ୍ର ଲେଖ ।

୭. ରୂଢ଼ିର ସଂଜ୍ଞା ଓ ପ୍ରକାରଭେଦ ବିଷୟରେ ଆଲୋଚନା କର ।

୮. ବାକ୍ୟର ପ୍ରକାରଭେଦ ବିଷୟରେ ଆଲୋଚନା କର ।