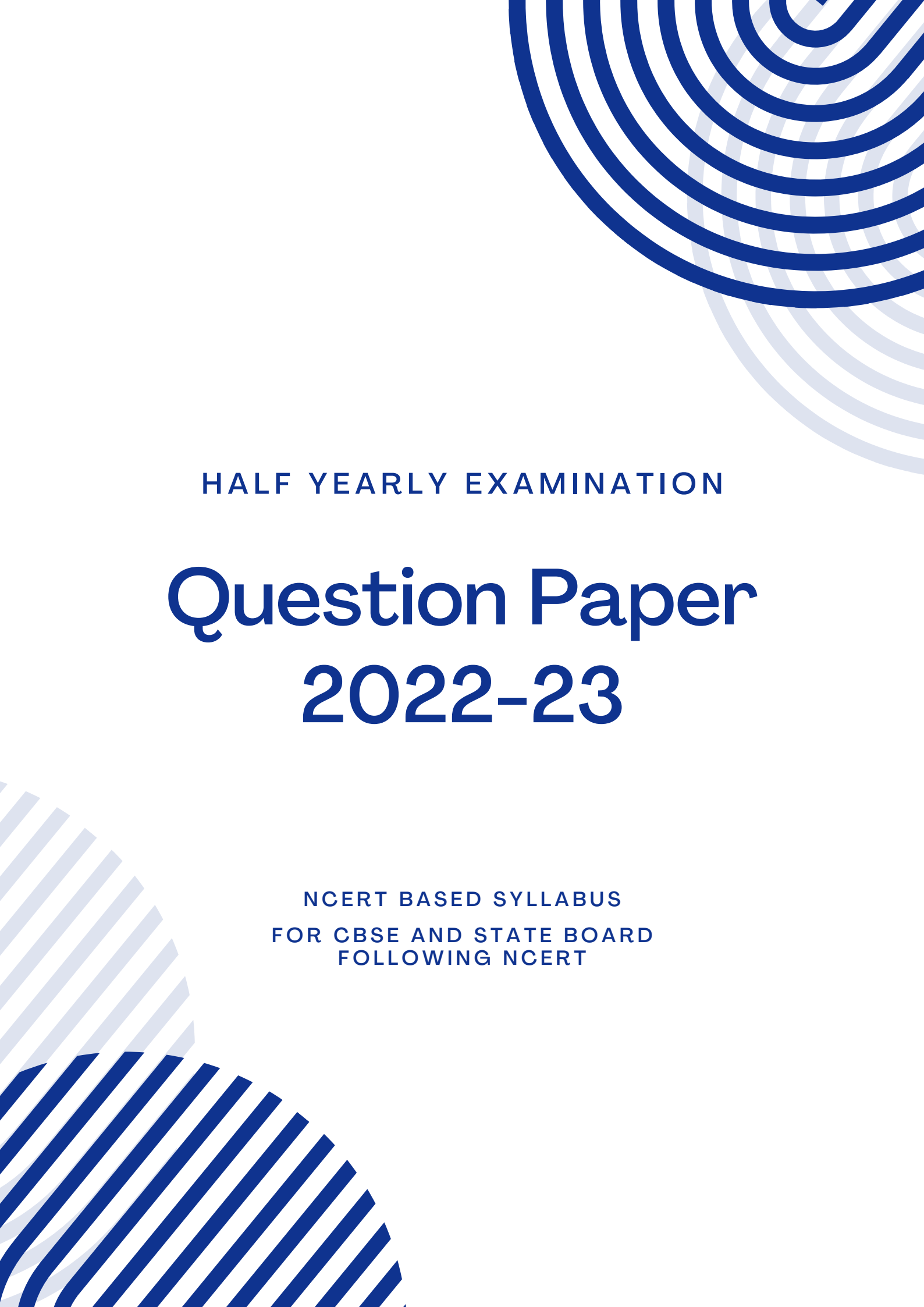




HALF YEARLY EXAMINATION

Question Paper 2022-23

NCERT BASED SYLLABUS
FOR CBSE AND STATE BOARD
FOLLOWING NCERT

Question Paper

PT-2/HALF YEARLY EXAMINATION, 2022-23

Class - XII
Time - 3 Hours

Subject - Computer Science
Maximum Marks-70

General Instructions:-

- The question paper is divided into 4 sections-A,B,C and D.
- Section A, consists of 12 multiple choice questions. Attempt any 10. Each question carry 1 mark.
- Section B, consists of 12 questions. Each question carries 2 marks.
- Section C, consists of 8 questions. Each question carries 3 marks.
- Section D, consists of 3 questions. Each question carries 4 marks.

SECTION-A (Multiple Choice questions) [10x1=10 Marks]

1. Which of the following is a DML command?
(a) DROP
(b) INSERT
(c) ALTER
(d) CREATE
2. Identify the valid declaration of T:
T = {"Roll":123, "Name": "Hiya", "Class":12, "Subject" : "Computer Science"}
(a) dictionary
(b) string
(c) tuple
(d) list
3. Find the valid identifier from the following
(a) Tot\$balance
(b) TRUE
(c) 4thdata
(d) break
4. Suppose a tuple T is declared as T=(10,20,30) and a list L=["mon", "tue", "wed", "thu", "fri", "sat", "sun"], which of the following is incorrect ?
(a) min(L)
(b) L[2] = 40
(c) T[3] = "thurs"
(d) print(min(T))

5. What is the output of the functions shown below?

```
>>>min(max(False,-4,-6),4,9)
```

- (a) -6
- (b) -4
- (c) False
- (d) 9

6. `def interest (p,c,t=2,r=0.09):`

```
    return p*t*r
```

Consider the above defined function, which of the function call are legal.

- 1) `interest(p=1000,c=5)`
 - 2) `interest(r=0.05,5000,3)`
 - 3) `interest(500,t=2,r=0.05)`
 - 4) `interest(c=4,r=0.12,p=5000)`
- (a) 1,2 and 4
 - (b) 2 & 3
 - (c) 1 & 4
 - (d) 3 & 4

7. What will be the output of the following code?

```
x = 3
```

```
defmyfunc():
```

```
    global x
```

```
    x+=4
```

```
    print(x, end=' ')
```

```
print(x, end=' ')
```

```
myfunc()
```

```
print(x, end=' ')
```

- (a) 3 3 3
- (b) 3 5 7
- (c) 3 7 7
- (d) 7 7 7

8. What does `readlines()` method returns?

- (a) Str
- (b) a list of lines
- (c) list of single characters
- (d) list of integers

9. A programmer has confusion in understanding the behaviour of opening a file in “w” mode. Clear his/her confusion, by suggesting the correct option among the given below. The behaviour of “w” mode is

- (a) Opening fails if the file already exists already.
- (b) Opening fails if the file does not exist already.
- (c) Opening will be succeeded if file exists with data and keeps the data intact.
- (d) Opening will be succeeded, if the file exists replaces the contents, do not exist, creates a new file.

10. Which of the following statements is true with respect to the files in Python?
- File can be opened with a file handle using open method without any arguments
 - File can be opened with a file handle using open method with one argument to read the file
 - File can be opened with a file handle using open method with one argument to write the file
 - File can be opened with a file handle using open method with one argument to append the file
11. Number of records in a table is called _____
- Cardinality
 - Data inconsistency
 - Degree
 - Record Number
12. Suppose content of 'DATfile.txt' is
The Education of a women is the education of a family.
 What will be the output of the following code?
- ```
myfile=open("DATfile.txt")
X=myfile.read()
Y=X.count('of')
print(y)
myfile.close()
```
- 2
  - 3
  - 4
  - 5

**SECTION-B [12X2=24 Marks]**

13. Give the output given by the following code fragments.
- $y = \text{str}(123)$   
 $\text{print}(y*3)$
  - $5 < 10$  and  $10 < 5$  or  $3 < 18$  and not  $8 < 18$
14. What do you mean by Primary key and Candidate keys in a table? Explain with the help of suitable example from a table containing some meaningful data.
15. Consider the following table PREPAID. Write MySQL commands for the statements given below.

| S_No | C_Name | Model    | Connection |
|------|--------|----------|------------|
| 1    | Sita   | Nokia    | Airtel     |
| 2    | Geeta  | Samsung  | Idea       |
| 3    | Ritesh | LG       | BSNL       |
| 4    | Jayant | Micromax | Reliance   |

- Delete a column name Model.
- Delete a customer record where connection type is BSNL.

16. What are the differences between WHERE clause and HAVING clause?
17. Write the output of the queries (a) to (d) based on the table, Mobile given below:

| M_ID  | M-Company | M_NAME   | M_PRICE | M_Mf_Date  |
|-------|-----------|----------|---------|------------|
| MB001 | Samsung   | Galaxy   | 15000   | 12-02-2013 |
| MB003 | Nokia     | N1100    | 12500   | 15-04-2011 |
| MB004 | Micromax  | Unite 3  | 5500    | 17-10-2016 |
| MB005 | Sony      | XperiaM  | 25000   | 20-11-2017 |
| MB006 | Oppo      | SelfieEx | 18500   | 21-08-2010 |

- (a) Select Max(M\_Mf\_Date), Min(M\_Mf\_Date) from Mobile;
- (b) Select \* from Mobile WHERE M\_PRICE>15000 AND Like "S%";
- (c) Select M\_Mf\_Date from Mobile WHERE M\_Name IN ("Galaxy","Unite3");
- (d) Select AVG(M\_Price) from Mobile;
18. Differentiate between Text file and Binary file.
19. Write a program to accept five numbers from the user and write in a file "number.txt" in separate lines.
20. Write a program in Python to copy the alternate lines from file "data.txt" to "story.txt"
21. What do you mean by default parameters? Explain with the help of suitable example.
22. Write definition of a method ODDSum(NUMBERS) to add those values in the list of NUMBERS, which are odd.

Sample Input Data of the List

NUMBERS=[20,40,10,5,12,11]

OUTPUT is 16

23. Write the output of the following code:

```
v = 5
def d(N):
 global v
 v = 25
 if N%9==0:
 v = v * N
 else:
 v = v ** N
 print(v, end="#")
d(2)
print(v)
```

24. What is the difference between a local variable and global variable? Also, give a suitable Python code to illustrate both.

### SECTION-C

[8X3=24 Marks]

25. Write a program to read content from a file "number.txt" and display the sum of numbers present in file.  
for example : if the file contains the following data

Total marks in exam is 25

My roll number is 15

My Address is 207, XYZ

**Output :**

22

26. Write a method `cnt_M()` in python to read lines from a text file 'MYNOTES.TXT', and display those lines, which are starting with the alphabet 'M'.

If the 'MYNOTES.TXT' contents are as follows:

My first book was

Me and My Family.

It gave me chance to be

Known to the world.

The output of the function should be:

Count of lines starting with Meis: 2

27. Write a function `RevText()` to read a text file " Story.txt " and Print only word starting with 'I' in reverse order . Example: If value in text file is: INDIA IS MY COUNTRY  
Output will be: AIDNI SI MY COUNTRY.

28. Find the output and also trace the flow of execution for the following program.

```
def increment(n):
 n.append([49]):
 return n[0], n[1], n[2], n[3]
L=[23,35,47]
m1, m2, m3, m4=increment(L)
print(L)
print(m1, m2, m3, m4)
print(L[3]==m4)
```

29. Write the outputs of the SQL queries (i) to (iii) based on relations EMP and DESIG given below:

| Table: EMP |               |        |     |            |             |
|------------|---------------|--------|-----|------------|-------------|
| E_ID       | Name          | Gender | Age | DOJ        | Designation |
| 1          | Om Prakash    | M      | 35  | 10/11/2009 | Manager     |
| 2          | Jai Kishan    | M      | 32  | 12/05/2013 | Accountant  |
| 3          | Shreya Sharma | F      | 30  | 05/02/2015 | Clerk       |
| 4          | RakeshMinhas  | M      | 40  | 15/05/2007 | Manager     |
| 5          | Himani Singh  | F      | 33  | 19/09/2010 | Clerk       |

| Table: DESIG |      |         |
|--------------|------|---------|
| Salary       | E_ID | DEPT_ID |
| 45000        | 1    | D101    |
| 35000        | 2    | D102    |
| 45000        | 4    | D101    |

- i) SELECT Designation, count(\*) FROM EMP GROUP BY Designation;  
 ii) SELECT AVG(Age) FROM EMP;  
 iii) SELECT EMP.Name, EMP.Designation, DESIG.Salary FROM EMP, DESIG WHERE EMP.E\_ID = DESIG.E\_ID AND EMP.Age>35;
30. Write a function that takes two numbers and returns the number that has minimum one's digit. [For example, if numbers passed are 491 and 278, then the function will return 491 because it has got minimum one's digit out of two given numbers (491's 1 is <278's 8)].
31. Write the output of the following code fragment:
- ```
deffunc(b):
    global x
    print('Global x=', x)
    y = x + b
    x = 7
    z = x - b
    print('Local x = ',x)
    print('y = ',y)
    print('z = ',z)
x=5
func(10)
```
32. Write a menu-driven python program using different functions for the following menu:
1. Check no. is Palindrome or not
 2. Check no. is Armstrong or not
 3. Exit

SECTION-D

[3X4=12 Marks]

33. Write queries (a) to (d) based on the tables EMPLOYEE and DEPARTMENT given below:

Table: EMPLOYEE

EMPID	NAME	DOB	DEPTID	DESIG	SALARY
120	Alisha	23-Jan-1978	D001	Manager	75000
123	Mamta	04-April-1992	D002	AO	59000
129	Navjot	12-Jul-1971	D003	Supervisor	40000
130	Jimmy	30-Dec-1980	D004	Sales Rep	
131	Faiz	06-Apr-1984	D001	Dep Manager	65000

Table : DEPARTMENT

DEPTID	DEPTNAME	FLOORNO
D001	Personal	4
D002	Admin	10
D003	Production	1
D004	Sales	3

- (a) To display the average salary of all employees, department wise.
- (b) To display the name and respective department name of each employee whose salary is more than 50000.
- (c) To display the names of employees whose salary is not known, in alphabetical order.
- (d) To display DEPTID from the table **EMPLOYEE** without repetition.

34. Design a Menu driven program to display the following in the file "textfile.txt".

- 1. Number of Vowels
- 2. Number of Words
- 3. Frequency of alphabet 'a'
- 4. Frequency of word 'the'

35. A Book store is considering to maintain their inventory using SQL to store the data. As a database administer, shashank has decided that:

Name of database - BOOK STORE

Name of table - BOOK

The attribute of BOOK are as follows:

Code - alphanumeric of size 10

Bname - character of size 30

Cust_code - float

Price - numeric

Type - character of size 25

Table : BOOK				
Code	Bname	Cust_code	Price	Type
F101	The priest	C083	315	Fiction
L102	German easy	C312	410	Literature
C103	Tarzan in the lost world	C113	100	Comic
F102	Untold story	C083	215	Fiction
C102	War heroes	C113	150	Comic
F103	Poison Garden	C083	200	Fiction

- (i) Write the degree and cardinality of Table BOOK.
- (ii) Insert the following data into the attributes Code, BName, Cust_code and Price.
Code = 'C105' Bname = "City heroes" Cust_code= 'C113' and Price=75
- (iii) Rahul want to remove all the records from the table BOOK. Which command will he use from the following:
 - (a) DROP TABLE BOOK;
 - (b) DELETE FROM BOOK;
 - (c) DROP DATABASE BOOK STORE;
 - (d) DELETE BOOKS FROM BOOK;
- (iv) Now Rahul wants to display the structure of the table BOOK, i.e, name of the attributes and their respective data types that he has used in the table. Write the query to display the same.