



विद्या सर्वार्थ साधिका

**ANANDALAYA**  
**PT-1 EXAMINATION**  
**Class : XII**

Subject: Computer Science (083)

MM :40

Date 21-07-2025

Time: 1 Hr 30 min.

**General Instructions:**

1. There are 17 questions in this question paper. All questions are compulsory.
2. This question paper has four sections: Section-A, Section-B, Section-C and Section-D.
3. Section A - Q. No. 1 to 5 are objective type questions and carry 1 mark each.
4. Section B - Q. No. 6 to 10 are short answer questions and carry 2 mark each.
5. Section C - Q. No. 11 to 15 are also short answer questions and carry 3 marks each.
6. Section D - Q. No. 16 and 17 are long answer question and carry 5 marks.

**SECTION A**

1. What type of error occurs when you try to access a list element that doesn't exist? (1)  
(A) TypeError (B) IndexError (C) KeyError (D) ValueError
2. What is the purpose of the `else` block in a try-except-else structure? (1)  
(A) Runs when an exception occurs (C) Runs only after the `finally` block  
(B) Runs only if no exception occurs (D) It's optional and does nothing
3. What does `f.tell()` return? (1)  
(A) The name of the file (B) The size of the file in bytes  
(C) The current position of the file pointer (D) The number of lines in the file
4. What does `csv.DictReader()` do? (1)  
(A) Reads CSV as a dictionary but skips the first row  
(B) Reads CSV rows as dictionaries (keys = header names)  
(C) Encrypts CSV data  
(D) Converts a dictionary to CSV
5. When you `pop()` from a stack, you remove \_\_\_\_\_. (1)  
(A) the oldest element (B) any random element  
(C) the most recently added element (D) the middle element

**SECTION B**

6. What is the use of the `finally` block in exception handling? (2)
7. What is a Queue? How is it different from a Stack? (2)
8. What is a binary file? Write a Python statement to open a binary file named `data.dat` in write mode. (2)
9. What is the difference between text files and binary files? (2)
10. Mention two common methods provided by the `csv` module in Python and write its use. (2)  
Write a line of Python code to read rows from a CSV file named `marks.csv`.

## SECTION C

- 11 Write a program that does the following: (3)
1. Create a list `students = ["Aman", "Sneha", "Ravi", "Neha"]`
  2. Write this list into a binary file named `students.dat` using `pickle`
  3. Read back the data from `students.dat` and print the list.
- 12 What role is played by file modes in file operations ? Describe the various file mode constants and their meanings. (3)
- 13 When a file is opened for output in write mode, what happens when: (3)
- (i) the mentioned file does not exist.
  - (ii) the mentioned file does exist.
- 14 You have a stack named **EventStack** that contains records of books. Each book record is represented as a list containing **Event\_title**, **Incharge\_name**, and **Venue**. Write the following user-defined functions in Python to perform the specified operations on the stack **EventStack**: (3)
- (I) `push_Event(EventStack, new_Event)`: This function takes the stack `EventStack` and a new event record `new_Event` as arguments and pushes the new event record onto the stack.
  - (II) `pop_Event(EventStack)`: This function pops the topmost event record from the stack and returns it. If the stack is already empty, the function should display "Underflow".
  - (III) `peep(EventStack)`: This function displays the topmost element of the stack without deleting it. If the stack is empty, the function should display 'None'.
- 15 Reshma is trying to write a List `S1 = ["Nivedita", 90]` on a binary file `Data.bin`. Consider the following code written by her and answer the questions given below. (3)
- ```
import pickle
students = [ ["Amit", 85], ["Neha", 90], ["Ravi", 78] ]
with open("students.dat", "wb") as file:
    students._____ # Statement1 to add new record
    _____ # Statement2 to records to file
print("Data written to binary file.")
```
1. Write appropriate statement for statement 1 to append new record `S1` to `students`.
  2. Write appropriate statement for statement 2 to write Student records in the file.
  3. What is the location of the file `Data.bin`?

## SECTION D

- 16 Write a Python program to search and display record of a student "Neha" from the binary file `students.dat` (5)
- 17 Write a function, `DispAlphaCount(file)` in Python that counts and displays the number of alphabets in the text file passed as a parameter. (5)