

Directorate of Education, GNCT of Delhi
Mid Term Examination 2025–26
Class XI – Informatics Practices (065)

Time Allowed: 3 Hours

Maximum Marks: 70

General Instructions:

1. All questions are compulsory.
2. This question paper contains five sections: Section A to E.
3. Marks are indicated against each question.
4. Use Python language for programming questions.
5. Attempt all parts of a question together.

Section A (1 mark each)

1. ROM is a type of non-volatile memory that retains data even when the power is off.
(a) True
(b) False
(c) Sometimes
(d) None of these
2. Identify any one example of system software.
(a) MS Word
(b) Operating System
(c) Spreadsheet
(d) Browser
3. Which memory unit is larger?
(a) 1 MB
(b) 1 GB
(c) 1024 KB
(d) 1 TB
4. State one advantage of cache memory.
(a) Stores permanent data
(b) Speeds up data access
(c) Reduces power consumption
(d) Expands storage capacity
5. Which Python operator is used to check membership in a sequence?
(a) in
(b) is
(c) ==
(d) not
6. Predict the output: `print(3 * 'IP')`
(a) IP
(b) 3IP
(c) IPIPIP

- (d) Error
- 7. Define mutable data type with one Python example.
 - (a) int
 - (b) list
 - (c) tuple
 - (d) string
- 8. Which loop executes at least once in Python, if it existed conceptually like in other languages?
 - (a) while
 - (b) for
 - (c) do-while
 - (d) until
- 9. Identify one application of utility software.
 - (a) Word Processing
 - (b) Data Recovery
 - (c) Web Development
 - (d) Database Design
- 10. Which function returns the number of characters in a string in Python?
 - (a) size()
 - (b) len()
 - (c) length()
 - (d) count()
- 11. Choose the correct statement: Tuple elements are —
 - (a) mutable
 - (b) immutable
 - (c) deletable
 - (d) dynamic
- 12. Arrange in increasing order: KB, MB, GB, TB.
 - (a) TB < GB < MB < KB
 - (b) KB < MB < GB < TB
 - (c) GB < KB < MB < TB
 - (d) MB < KB < GB < TB
- 13. In Python, what will be the output of bool(0)?
 - (a) True
 - (b) False
 - (c) 0
 - (d) None
- 14. Which statement is used to exit from a loop in Python?
 - (a) exit
 - (b) continue
 - (c) stop
 - (d) break
- 15. Differentiate between hardware and software in one line.
 - (a) Hardware is physical; software is logical.

- (b) Hardware is temporary; software is permanent.
 - (c) Hardware cannot fail; software can.
 - (d) Both are same.
16. What is the full form of ALU in computer architecture?
- (a) Arithmetic Logic Unit
 - (b) Algorithm Logical Unit
 - (c) Array Logic Utility
 - (d) Advanced Logic Unit
17. Which type of memory can be directly accessed by the CPU?
- (a) Cache
 - (b) Secondary
 - (c) Flash
 - (d) Magnetic Disk
18. What is the purpose of using the 'and' logical operator in Python?
- (a) To join strings
 - (b) To combine conditions
 - (c) To compare numbers
 - (d) To end a loop
19. Pandas library in Python is mainly used for _____.
- (a) Graphics
 - (b) Data Analysis
 - (c) Animation
 - (d) Web Design
20. Assertion (A): Lists in Python are mutable.
Reason (R): The contents of a list can be modified after creation.
- (a) Both A and R are true, and R is the correct explanation of A
 - (b) Both A and R are true, but R is not the correct explanation
 - (c) A is true, R is false
 - (d) Both A and R are false
21. Assertion (A): Application software interacts directly with hardware.
Reason (R): Application software always controls memory access.
- (a) Both A and R are true
 - (b) A is true, R is false
 - (c) A is false, R is true
 - (d) Both A and R are false

Section B (2 marks each)

22. Explain the difference between concatenation and replication operators in Python with examples.
23. Identify and correct the errors in the following code:
- ```
num = input('Enter:')
if num % 2 = 0:
 print('Even')
```

24. Differentiate between '==' and 'is' operators with suitable examples.  
25. Compare append() and extend() methods in lists using examples.

**OR**

Write Python code to remove the element 'apple' from list fruits = ['apple','mango','pear'].

26. Predict the output:

```
data = [2, 4, 6]
data.append(8)
data.remove(4)
print(data)
```

27. Evaluate the following:

- (a)  $5 ** 2$
- (b)  $10 \% 3$
- (c)  $10 // 3$
- (d)  $4 + 3 * 2$

**OR**

Explain operator precedence with an example.

28. Classify the following as mutable or immutable: list, string, set, tuple.

### **Section C (3 marks each)**

29. Differentiate between system software and application software with two examples each.

**OR**

Explain any three types of input and output devices.

30. Explain interactive and script modes of executing Python programs with one difference.  
31. Write a Python program using NumPy to create an array [3,6,9,12], then display its mean and maximum value.

**OR**

Create NumPy array [5,10,15] and multiply each element by 2.

32. Write the output of the following code:

```
names=['Anju','Darshana','Mona','Rupesh']
removed=names.pop(2)
names.sort()
print(names)
print('Removed:',removed)
```

### **Section D (4 marks each)**

33. Yamini accidentally deleted files from her computer and used a recovery tool to restore them.  
(a) Explain how recovery software can retrieve deleted data. (2)  
(b) Define data recovery. (1)  
(c) Suggest one permanent data deletion method. (1)

34. State True or False for each statement:

- (i) Python is case-sensitive.
- (ii) A list can contain another list.
- (iii) del keyword deletes variable reference.
- (iv) int('25.5') gives error.

**OR**

- (i) input() always returns integer.
- (ii) Tuples are mutable.
- (iii) 'for' is a Python keyword.
- (iv) print('2'+2) outputs 4.

### **Section E (5 marks each)**

35. With the help of a neat labeled diagram, explain the four main functional units of a computer and their roles in data processing.

36. **Predict the output of the following code:**

```
print('Hello'[1:4])
print('CS'*2+'11')
print('Result:',8>6,3==4)
print('A','B',sep='#',end='!')
print('C\nD\tE')
```

37. **Fill in the blanks:**

```
nums=[1,2,3,4]
nums._____ #a add 5
nums._____ #b remove 2
print(_____) #c length
student={'id':11,'name':'Ravi'}
student._____ #d add key ('grade','A')
print(student._____) #e get name
```

**OR**

```
cities=['Delhi','Goa','Kolkata']
cities._____ #a add Chennai
cities._____ #b remove Goa
print(_____) #c total cities
info={'roll':7,'class':'11B'}
info._____ #d add ('marks',95)
print(info._____) #e get class.
```