

# **BLUEPRINT**

## **Distribution of Marks:**

<b>Unit No.</b>	<b>Unit Name</b>	<b>Marks</b>
<b>I</b>	Computer Systems and Organisations	<b>10</b>
<b>II</b>	Computational Thinking and Programming – 1	<b>45</b>
<b>III</b>	Society, Law and Ethics	<b>15</b>
<b>TOTAL</b>		<b>70</b>

## **Design of the Question Paper:**

<b>Division</b>	<b>Question Typology</b>	<b>No of Questions</b>	<b>Marks</b>	<b>Total Marks</b>
Part-A	Objective type Questions	15	<b>1</b>	1 x 15 = 15
	Case-based Questions	2	<b>4</b>	4 x 2 = 08
Part-B	Short Answer type Questions	10	<b>2</b>	2 x 10 = 20
	Long Answer type Questions	4	<b>3</b>	3 x 4 = 12
	Very Long Answer type Questions	3	<b>5</b>	5 x 3 = 15
<b>TOTAL</b>				<b>70</b>

## Pattern of the Question Paper:

Division	Question Typology	No of Questions from each Section		
		Unit-I Computer Systems and Organisations	Unit-II Computational Thinking and Programming – 1	Unit-III Society, Law and Ethics
Part-A	Objective type Questions (1 marks each)	3 (with 2 extra questions)	9 (no extra questions)	3 (with 4 extra questions)
	Case-based Questions (1 marks each)	0	8 (with 2 extra questions)	0
Part-B	Short Answer type Questions (2 marks each)	2 (one internal choice)	6 (one internal choice)	2
	Long Answer type Questions (3 marks each)	1	2 (one internal choice)	1 (one internal choice)
	Very Long Answer type Questions (5 marks each)	0	2	1 (one internal choice)
<b>Total Marks section wise</b>		<b>10</b>	<b>45</b>	<b>15</b>
		<b>70</b>		

## CENTRAL ZONE SAINIK SCHOOLS CENTRALISED ANNUAL EXAMINATION

**Class : XI**  
**Time : 3 Hrs**

**Subject : Computer Science (083) Python**  
**Max Marks : 70**

### **General Instructions:**

- i. This question paper contains two parts A and B. Each part is compulsory.
- ii. Both Part A and Part B have choices.
- iii. Part-A has 2 sections:
  - a) Section-I is short answer questions, to be answered in one word or one line.
  - b) Section-II has two case studies questions. Each case study has 4 case-based sub-parts. An examinee is to attempt any 4 out of the 5 subparts.
- iv. Part-B is Descriptive Paper.
- v. Part-B has three sections.
  - a) Section-I is short answer question of 2 marks each in which two questions have internal options.
  - b) Section-II is long answer questions of 3 marks each in which two questions have internal options.
  - c) Section-III is very long answer questions of 5 marks each in which one question has internal option.
- vi. All programming questions are to be answered using Python Language only.

### **PART-A**

#### **SECTION-I**

**Attempt any 15 questions from question no 1 to 21.**

**Select the most appropriate option out of the options given for each question.**

1. The set of instructions given to the computer is called [1]
  - a) Program
  - b) ALU
  - c) CU
  - d) Storage
2. Can lists and tuples be used as keys to dictionaries? [1]
3. Name volatile and non-volatile memories of a mobile system. [1]
4. 1 TB is equivalent to how many bytes- [1]
  - a) 1024
  - b)  $(1024)^2$
  - c)  $(101)^2$
  - d)  $(1024)^4$
5. Which of the following is not a valid identifier? [1]

- a) My book
  - b) @book
  - c) \_book
  - d) Book@
6. Why Python is a cross platform language. [1]
7. Which operation result in 8? [1]
- a) 65//8
  - b) 17%9
  - c) 2\*\*4
  - d) 64\*\*0.5
8. Name a Python function to: [1]
- a) Delete a given element from the list.
  - b) Add an element in the beginning of the list
9. What is the difference between two statements: [1]
- a) t = (0)
  - b) t = (0,)
10. Cyber crimes are punishable under which Act? [1]
11. Which jump statement transfers the control of flow to the beginning of the loop? [1]
12. Malicious and Non malicious are two forms of : [1]
- a) Spyware
  - b) Adware
  - c) Spam
  - d) VIRUS
13. What is the need of recycling of e-waste? [1]
14. Expand the following: [1]
- a) ASCII
  - b) SDRAM
15. The smallest individual unit in a program is called ..... [1]
- a) keywords
  - b) integers
  - c) token
  - d) key
16. Name some types of Internet frauds. [1]
17. What is Identity Theft? [1]
18. Which of these is not an optical media? [1]
- a) CD's
  - b) Blu ray Disk
  - c) DVD's
  - d) Flash Memory
19. What is flowchart? [1]
20. What is private browsing. [1]
21. A strong password should contain: [1]
- a) Both uppercase and lowercase letters.

- b) A word that is easy to remember.
- c) A filter for an internet connection that monitors outgoing and incoming activity.
- d) A combination of characters, digits and symbols.

## SECTION – II

**Both the Case study based questions are compulsory. Attempt any 4 sub parts from each question. Each question carries 1 mark.**

22. Which string method is used to implement the following:
- a) to count the number of characters in the string. [1]
  - b) to change the first character of the string to uppercase. [1]
  - c) to check whether a given character is a letter or a number. [1]
  - d) to change lowercase letters to uppercase. [1]
  - e) change one character to another character. [1]
23. Observe the following program and answer the question that follows:
- ```
import _____ # Line-1
x = 3
N = random.randint (1, x)
for i in _____(N) : # Line-2
    print (i, '#', i + 1)
```
- a) What is the minimum number of times the loop will execute? [1]
  - b) What is the maximum number of times the loop will execute? [1]
  - c) Find out, which line of output(s) out of (i) to (iv) will not be expected from the program? [1]
    - i. 0 # 1
    - ii. 1 # 2
    - iii. 2 # 3
    - iv. 3 # 4
  - d) Name the module should import in Line-1. [1]
  - e) Name the function should use in Line-2. [1]

## PART-B

### SECTION-I

- 24. Draw a flowchart to print the sum of first 100 natural numbers. [2]
- 25. Write the ASCII code for EXAM. [2]

**OR**

Draw a logic circuit for the Boolean Expression:

$$F = A \cdot B' + (B' + C) \cdot A$$

- 26. What is system software? What are its components? [2]

27. What is bug? Name different type of errors in Python. [2]  
28. Explain E-waste management in India. [2]  
29. Write the features of Python. [2]

**OR**

Write the output of these codes:

i. `m = 60`  
`if m > 40 or m < 100 and m == 120:`  
`print ("I am in if")`  
`else:`  
`print ("I am in else")`

ii. `m ,n = 6, 18`  
`if (m - n == 15) :`  
`print (" Equal ")`  
`else:`  
`print ("Not Equal")`

30. What are the difference between list and tuple? [2]  
31. What are cookies? How are they used by websites to track you? [2]  
32. Rewrite the following code fragment using for loop. [2]

```
i = 100
while i>0 :
    print (i)
    i - = 3
```

33. Rewrite the code after correcting errors. [2]
- ```
a = int ["Enter a number for a: "]
for in range (1,15)
if a = b
    print "Equal Numbers"
else
    print "Not equal numbers"
```

### **SECTION-II**

34. Do as directed: [3]
- Convert the Decimal number 781 to its Binary equivalent.
  - Convert Binary number 101101.001 to its Decimal equivalent.
  - Convert Octal number 321.7 into its Binary equivalent.
35. Import statement takes two forms, one is `import <module>` and second is `from <module> import <object>`. Why is it possible to use the objects of the imported module without dot notation in second form not in first one. [3]

36. List some precautions to be taken while using emails. [3]

**OR**

List major amendments of IT act (2008).

37. Write a program that reads a string and displays the longest substring of the given string.

**OR** [3]

Write a program to check given number is ARMSTRONG or not.

**SECTION-III**

38. What is Cyber-Crime? How can you report it? Name the cyber crimes with which the IT Act deals. [5]

**OR**

What are Social Sites? Give four usage rules for social sites.

39. Write a program that repeatedly asks the user to enter product names and prices. Store all of them in a dictionary whose keys are product names and values are prices. And also write a code to search an item from the dictionary. [5]

40. Write a program to input the value of x and n and print the sum of the following series:  
 $x - x^3/2! + x^5/3! - x^7/4! + \dots$  up to 'n' terms. [5]

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