

Sample Paper – 2014
Class – XI
Subject – Computer Science

General Instructions

- All questions are compulsory.
- Marks are indicated against each question.

1. Which is not a keyword of Python (1)
 (i) pass (ii) try (iii) exec (iv) elseif
2. What is the difference between Runtime and Syntax errors? (1)
3. Classify the following variable names of Python into valid and invalid category (1)
 (i) 1no (ii) num (iii) num1num (iv) num.1
4. (i) Write the 1's Complement form of the following binary numbers: (2)
 100010111, 11101
 (ii) Write the 1's Complement form of the following : (2)
 -99, -10
5. Fill in the blanks: (1½ x 6)
 (i) $(1011101.01111)_2 = (\underline{\hspace{2cm}})_{10}$ (iv) $(200)_{10} = (\underline{\hspace{2cm}})_2$
 (ii) $(354)_8 = (\underline{\hspace{2cm}})_2$ (v) $(2BA)_{16} = (\underline{\hspace{2cm}})_2$
 (iii) $(A6D12)_{16} = (\underline{\hspace{2cm}})_8$ (vi) $(165512)_8 = (\underline{\hspace{2cm}})_{16}$
6. Write a program in python to accept **Sales Made** and the name of salesman, calculate and display the **Commission** and the Salesman's name. The **commission** is calculated as follows : (3)

Sales Made (INR)	Commission Rate
30001 onwards	15%
22001 to 30000	10%
12001 to 22000	7%
5001 to 12000	3%
0 to 5000	0%
7. Write a program in python to check whether a number is even or odd? (2)

8. How can you give comments in Python. Explain with suitable examples (2)
9. What is difference between '/' and '/'/' operators in Python? Explain with an example (2)
10. Expand the following: (2)
- (i) RISC (ii) TFT (iii) MICR (iv) OCR
11. Write a Python program to compute the simple interest on a given amount and time. If the time is 2 years or more, rate of interest is 3% and 5% otherwise. (3)
12. State the basic units of a computer. Name the subunits that make the CPU and give the functions of each of the subunits. (3)
13. Categorize the following as hardware and software. (2)
- (i) Central Processing Unit (ii) Internet Explorer (iii) Hard disk (iv) UNIX
14. Distinguish between (i) DVD and Blue Ray Disk (ii) L1 cache and L2 cache (3)
15. Write the corresponding Python expressions for the following mathematical expressions: (2)
- (i) $\sqrt{a^2 + b^2 + c^2 + |d|}$ (ii) $2(yz) - xe^{2x} + 4\cos^{-1}x$
16. Predict the output of the following programs: (1½ x 2)
- (i)
- ```

a = 4; b = 3
if (a >= 4) : a += 1
if (a > 5) :
 a += 1
 print a
print b

```
- (ii)
- ```

x = 2
y = ( x < 5 )
x = x + y
if ( x < 2 ) :
    x += 0
elif ( x > 2 ) :
    x += 1

```

else:

x += 2

print x

17. Write the use of the following functions with examples : (5)

(i) fmod() (ii) trunc() (iii) ceil() (iv) pow() (v) pi()

18. How microprocessors are classified. (2)

19. An electricity board charges according to following rules (3)

For the first 100 units - 2 Rs per unit

For the next 200 units - 3 Rs per unit

Beyond 300 units - 4 Rs per unit

All users have to pay meter charges also, which is 50 Rs. Write a program to read a number of units consumed and print charges

20. Explain the following terms : (6)

(i) Bandwidth (ii) Clock speed (iii) Cache Memory
(iv) Ports (v) Non-Impact printers (vi) DDR SDRAM

21. Give two major innovations in the second generation computers? (2)

22. "Logical errors can usually be detected by the compiler". Do you agree with the statement? Justify (2)

23. Find the error from the following code segment and rewrite the corrected code underlining the correction made: (1½ x 2)

```
(i) a = raw_input ("Enter First Number")
    b = raw_input ("Enter Second Number")
    if (a=>b):
```

```
print a "is a biggest number"  
else  
print b "is a biggest number"
```

```
(ii) x = 1 : y = '2'  
if (x < y):  
    y += 2  
elif(x > y):  
    y += 4  
print y+=1
```

24. Define the two modes of interaction with Python? (2)

25. Write any four features of Python? (2)

Paper Submitted By:

Name Jasvinder Singh
Email prince61980@gmail.com
Phone No. 0564126556