SREENIVASA INSTITUTE OF TECHNOLOGY AND MANAGEMENT STUDIES
(AUTONOMOUS), CHITTOOR

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

PYTHON QUESTION BANK

(2 MARKS QUESTIONS)

UNIT-I

Short answers

1. Mention the various features of Python
2. List out some of the applications of python
3. Define computer science.
4. What is meant by representation and algorithm.
5. Identify and list the limits of computational problem solving.
6. Define Computer algorithm.
7. What is Computer hardware. Mention its parts
8. List out the Computer software.
9. Differentiate Syntax and Semantic errors with example
10. Define program debugging.
11. Give the working functions of compiler and Interpreter
12. Mention the various phases of computational problem solving
13. Define and expand IDLE.
14. Discuss about python standard library.
15. What are the input and output functions used in python, Specify some examples.
16. Write a simple python script for performing the arithmetic operations.
17. Calculate the simple interest using python program
18. Write a python script to convert temperature from Fahrenheit to Celsius
19. Define variable. Give the syntax and example using python
20. Compare C and python programming language.

UNIT-II

Short answers

1. Define Literals. List its types
2. What is numeric literal. Mention its limits of representation
3. Discuss about arithmetic overflow and arithmetic underflow with examples
4. Describe the limitations in the representation of floating-point values
5. Explain the difference between static and dynamic typing
6. Define string literal with example
7. Give the operations of ord() and chr() with example
8. Write any five control characters used in python
9. Give the syntax for various string format functions
10. Classify the line joining methods with example
11. Define an identifier with an example
12. Mention any five keywords used in python with syntax
13. Discuss about operator precedence and associativity with example
14. List out the types of data type with example
15. Explain mixed-type expression with an example
16. Differentiate coercion and Type conversion
17. Write a python script for temperature conversion
18. Define a variable and explain about variable assignment
19. Write about the built-in format function with an example
20. Write a python script to perform the various arithmetic operations

UNIT-III

1. Define control structure.
2. Write syntax for different selection control statements in python.
3. Write syntax for different Iterative control statements in python.
4. Differentiate Definite Vs Infinite loops.
5. Define Indentation in python.
6. What is operator precedence.
7. What is operator associativity.
8. List out different Relational operators in python.
9. List out different Relational operators in python.
10. List out different Boolean operators in python.
11. Explain Membership operators in python.
12. Define expression with example.
13. Explain Short-Circuit Evaluation with example.
14. List out some Logically Equivalent Boolean Expression in python.
15. Write statement for Infinite Error Checking in python.
16. Write python code for Infinite loop.
17. Write python code to determine given number is even or odd.
18. Write python code to display major or minor by reading age of a person.
19. Write python code using arithmetic operators.
20. Write pythn code to determine largest of given three numbers.

UNIT-4

Two marks Questions

1. What is a list?
2. What is a tuple?
3. What is sequence?
4. Define immutable and mutable.
5. What is dictionary?
6. What is a set?
7. Difference between tuple and list.
8. Define linear data structure.
9. What is traversal?
10. How an empty list is created?
11. How an empty tuple is created?
12. Write the syntax for slice operation in the list.
13. Why '+' is called as overload operator?
14. Write for loop syntax.
15. Define range function.
16. How to access list index and list value?
17. List out the operations performed on list.
18. List out the operations performed on tuple.
19. List out the operations performed on dictionary.
20. List out the operators performed on set.

UNIT-5

1.What do you meant by function?

2.How will you define a function. with an example.

3.List out the types of formal arguments in python.

4.Differentiate Default arguments and Keyword arguments.

5. What do you meant by variable length arguments.

6. What do you meant by anonymous function.

7. Differentiate between global vs local variables.

8.Define file?

9.How to opening and closing a file .with an example.

10.What are the different modes of operations in file?

11.How to use read and write a file ?with an example.

12. What do you meant by Class and Object.

13.Explain the purpose of Turtle graphics.

14.How will you create Multiple Turtle graphics Window with an example.

15.What is meant by variable scope.

16. How will you create Turtle graphics Window with an example.

17. Differentiate Value Returning Functions and Non Value Returning Functions.

18.Write syntax for reading and writing a file.

19. Differentiate Calling function and Called function.

20. Write syntax for Turtle graphics Window.

PYTHON QUESTION BANK

(10 MARKS QUESTIONS)

UNIT-I

1. Explain in detail about computer hardware and soft ware

2. Explain about ComputerAlgorithm.Write the algorithm to determine the given year is leap year or not

3. Write the algorithm to determine the day of the week for a given month,   day and year

4. Write the algorithm to determine the day of the week for a given month,   day and year

5. Define Computational problem solving? List and Explain the various steps involved in computational problem solving

6. Explain about the drake's equation and write the python script for calculating the drake equation

7. Discuss about how to use Python IDLE. Write a simple Python program that displays the following powers of 2, one per line: 2^1 , 2^2 , 2^3 , 2^4 , 2^5 , 2^6 , 2^7 , 2^8 .

8. a)Write a Python program that allows the user to enter any integer base and integer exponent, and displaysthe value of the base raised to that exponent. Your program should function as shown below.

>What base? 10
>What power of 10 ? 4
>10 to the power of 4 is 10000

b)Write a Python program that allows the user to enter a four-digit binary number and displays its value inbase 10. *Each binary digit should be entered one per line, starting with the leftmost digit* , as shown below.

>Enter leftmost digit: 1
>Enter the next digit: 0
>Enter the next digit: 0
>Enter the next digit: 1
>The value is 9

9. a)Write an algorithm to find the reverse of given number
   b)Write an algorithm that finds the given number is Armstrong or not.

10.What do you mean by Software Development Method? Explain how to apply Software Development Method

UNIT-II

1. What is an operator? Discuss about the arithmetic operators in python with suitable examples for each.
2. Discuss Operator precedence and Operator Associativity. Illustrate it with suitable examples.
3. Write a Python script for restaurant tab calculations.
4. Write a Python script for finding Age in seconds.
5. a)What is a Literal? Explain about Numeric and String Literals.
   b) Explain about format() function with examples

6. a)Discuss about limits of Range and Precision in Floating-Point Representation with Examples
   b) Discuss about Arithmetic overflow and under flow
7.a.How the strings are represented in Python? What is the use of *ord( )* function
   b. Explain about the implicit and explicit line joining using Python with the help of a programfor each
8.Explain about variables, identifiers and keywords with suitable example python scripts.

9.Write a Python program that requests from the user a temperature in degrees Fahrenheit, and displays the equivalent temperature in degrees Celsius
10.a) Write a Python program that prompts the user for two floating-point values and displays the result of thefi rst number divided by the second, with exactly six decimal places displayed in scientifi c notation.
b)Write a Python program that prompts the user to enter an upper or lower case letter and displays thecorresponding Unicode encoding.

UNIT-III
1. a)What is a control structure? Write about fundamental forms of control in programming?
   b)List various relational operators in python and explain with appropriate examples?
2. a) Explain about membership operators with suitable examples?
   b) What are the Boolean values in python, List the Boolean operators, write its precedence and the truth tables.
3.Give a logically equivalent expression for each of the following.
   (a) num != 25 or num== 0
   (b) 1 <= 5 num and num<= 50
   (c) notnum> 100 and not num< 0
   (d) (num<0 or num> 100)
4. Write in detail aboutselection control statement in python.
5. Develop a python program to find the numbers of days in month.
6. Explain the while statement in Python. Write a program that sums a series of (positive) integers entered by theuser, excluding all numbers that are greater than 100.
7. Discuss the significance of indentation in Python. Show some valid and invalid indentation withrespect to compound statements.
8. Develop a python program for temperature conversion (Celsius to Fahrenheit / Fahrenheit to Celsius) to Demonstrate the process of Input error checking.
9. Differentiate the following with examples
   a) Finite vs Infinite loops
   b) Definite vs Indefinite loops
10. What are Boolean flags? Explain about the use Boolean flags in indefinite loops with sample program

11.Develop a python program to print the calendar of a month by taking starting day and no of days of a month as input.

UNIT -IV

1. What is a List? Explain some common list operations in Python
2. a) Differentiate python Lists and Tuples with examples.
   b) Write about nested Lists
3. Explain about Sequences and its operations in python.
4. a) How to iterate over Lists in python using for Loop. Illustrate it with example code.
   b)Explain about the range() function in python with examples.
5. a) Differentiate iterating over list elements and list index values
   b)How to use while loops with Lists? Illustrate it with sample code.
6. Develop a password encryption/decryption program using list in Python
7. a)What is a dictionary? Explain its operations with example?
   b)Write a program which stores the average temperature recorded in a day of the week and display the average temperature of given day.
8. Write about Set Data type and its operations with examples.
9. Develop a python program to generate all possible spellings of the last four digits of any given phone number –use dictionaries.
10. a). Discuss the different options to traverse a List.
    b) Write about list Comprehension

UNIT -V

1. a).Explain the concept of a program routine.
   b). Write a program to swap two numbers using a user defined function.
2. How to define Functions in python?Discus about a value returning function and non value returning function with examples.
3. Develop a program to convert a range of temperatures from Fahrenheit to Celsius and vice-versa using functions.
4. Write short notes on
a).Actual vs. Formal arguments
   b).Mutable vs. Immutable Arguments
5. a). Explain about keyword arguments in python with example.
   b) Explain about default arguments in python with example.
6. Discus about Variable Scope with example programs.
7.What are the steps used for creating a Turtle graphics window.
8. What is an Object? Write about object references.
9. Explain about fundamental turtle attributes.
10. Explain about following turtle attriutes
a).Turtle visibility
   b) Turtle Size
   c) Turtle Shape
   d) Turtle Speed.
11. Discuss about opening, reading and writing Text files with example.
12. Discuss about string processing in python.

PYTHON QUESTION BANK

(MCQ - MULTIPLE CHOICE QUESTIONS)

<u>UNIT-I</u>

1) Which of the following are areas of study in computer science?   [D   ]
   a) database management b) computer graphics c) data mining d) All

2) The computer hardware is based on the use of simple electronic "on/off" switches are called a)RAM   b) Transistors   c) Integrated Chips   d) CPU
   [B   ]

3) Trying all possible solutions to a given problem is referred to as a _____ approach.**[B]**
   a) Bit   b) Brute force   c) Byte   d) Word

4) _____ is a finite number of clearly defined steps that can be systematically followed to produce a desired result for given input in a finite amount of time.
   [B   ]
   a)Flow Chart   b) Algorithm   c) Debugger   d) Editor

5) Moore's Law states that the number of transistors that can be placed on a single silicon chip   doubles
   roughly every _____ years.   [C   ]
   a) 1   b) 2   c) 2 and half   d) 3

6) The expression 27 / 3 - 4 * 1 + 2 = _____?   [C   ]
   a) 8   b) 16   c) 7   d) 32

7) _____is a software act as a bridge between Software and Hardware.   [D   ]
   a) application `   b) Language   c) Debugger   d) Operating
   System

8) The set of program instructions, including related data and documentation, that can be executed by computer is called _____   [B   ]
   a) Memory   b) Software   c) Hardware   d) RAM

9) The set of characters and the acceptable sequences of those characters are called _____ of a language.   [A   ]
   a) syntax   b) Semantic   c) Debugger   d) Compiler

10) A program that translates programs directly into machine code to be executed by the CPU is called ___
   [D   ]
   a) Editor   b) Translator   c) Debugger   d) Compiler

11) The process of finding and correcting errors in a computer program is called ____.[C]
   a) Editor   b) Translator   c) Debugger   d) all

12) Which of the following is not example for computer hardware parts?   [C   ]
   a) Keyboard   b) Mouse   c) OS   d) Printer

13) If the hardware gives incorrect results, then any program run on that hardware is __[B]
   a) reliable   b) unreliable   c) Trustable   d) acceptable

14) All information within a computer system is represented by the use of only two digits, 0 and 1 ,
   called _____ representation   [B   ]
   a) decimal   b) binary   c) hexa decimal   d) octal

15) Group of eight bits are called _____   [A   ]
   a) byte   b) nibble   c) word   d) tera

16) Which of the following is example for flash memory.   [D   ]
      a) CD   b) DVD   c) hard disk   d) pen drive

17) The _____ of a language is the meaning associated with each syntactically correct sequence of

  characters   [B   ]
      a) syntax   b) semantics   c) translator   d) debugger

18) Pictorial representation of steps to solve a given problem is called _____   [A   ]
      a)Flow Chart   b) Algorithm   c) Debugger   d) Editor

19) Writing an algorithm for a given problem is comes under ____ software development step.
      a) Design   b) Testing   c) Implementation   d) Maintenance [A   ]

20) Writing program for a given problem is comes under _ software development step. [C]
      a) Design   b) Testing   c) Implementation   d) Maintenance

UNIT-II

1) _____ is the creator of the Python programming language, first released in the early
  1990s.   [B   ]
      a) Dennis Ritchie   b) Guido van Rossum c) Al-Khwarizmi   d) al-jabr

  2) Python IDLE typically includes _____   [D   ]
      a)Editor   b)Translator   c) Debugger   d) all

3) In Python, _____ function is used to request and get information from the user.[B   ]
      a) print   b) input   c) format   d) ord

4) Output of the given python shell >>>format(23102.25, ' , .2f ') is _____   [B   ]
      a) 23.25   b)23,105.25   c) 23,102.25   d)23.102,25

5) The default encoding in Python uses _____   [C   ]
      a) ASCII   b) unicode   c) UTF-8   d) All

6) What is the value of X if X = 2%5   [A   ]
      a) 2   b) 5   c) 1   d) 3

7) The combination of operators and operands that evaluated to a single value is called [A]
      a) Expression   b) static   c) Dynamic   d) variable

8) When operators are having the same level of precedence for evaluation then we shall consider operator   [C   ]
      a) Priority   b) Precedence   c) Associatively   d) All

9) An expression with operands of different type is called _____.   [C   ]
      a) implicit   b) explicit   c) mixed   d) all

10) ._____conversion of operands can be applied even if loss of information results.[B]
      a) implicit   b) explicit   c) mixed   d) all

11) A _____ is a sequence of one or more characters.   [D   ]
      a) variable   b) keyword   c) data type   d) literal

12) ____ is the limit to the size of an integer that can be represented in Python.   [D   ]
      a) 256   b) 65536   c) 16777216   d) No limit

13) Range of the float numbers in python is _____ [A]
     a) 10^{-308} to 10^{308} b) 10^{-208} to 10^{208} c) 10^{-108} to 10^{108} d) 10^{-408} to 10^{408}

14) Division of two float numbers may result in arithmetic _____ [B]
     a) overflow   b) underflow   c) error   d) all

15) ____ encoding scheme is intended to be a universal encoding scheme. [B]
     a) ASCII   b) unicode   c) UTF-8   d) All

16) ____ function in python converts ASCII codes into corresponding characters. [A]
     a) chr( )   b) ord( )   c) ascii( )   d) utf( )

17) Program lines in python may be explicitly joined by use of the _____ symbol [C]
     a) -   b) /   c) \   d) _

18) ____ function in python used to get address of a variable. [D]
     a) chr( )   b) ord( )   c) address( )   d) id( )

19) Set of values, and a set of operators that may be applied to those values is called _[A]
     a) data type   b) keyword   c) literal   d) function

20) Which of the following is not a built in data type in python [C]
     a) int   b) float   c) double   d) string

UNIT-III

1) Control flow is the order that instructions are executed in a program.(True/False) [T]
2) A _____ is a statement that determines the control flow of a set of instructions. [A]
     a) Control Statement   b) Control Structure   c) Control line d)b&c
3) A ____ is a set of instructions and the control statements controlling their execution.[B]
     a) Control Statement   b) Control Structure   c) Control line d)b&c
4) There are _____ fundamental forms of control in programming. [C]

     a) 1   b) 2   c) 3   d) 4
5) _____ is not a fundamental form of control in programming. [A]
     a) Primitive   b) Sequential   c) Selection   d) Iterative
6) A program consisting of only sequential control is referred to as a ____ . [A]
     a) Straight-line program   b) Batch Program   c) Inline Function   d) None
7) Sequential Control is provided by a control statement that ____ executes instructions.[A]
     a) Sequentially   b) Selectively c) Iteratively   d) None
8) Selection control is provided by a control statement that ____ executes instructions.[B]
     a) Sequentially   b) Selectively c) Iteratively   d) None
9) Iterative control is provided by a control statement that _____ executes instructions.[C]
     a) Sequentially   b) Selectively c) Iteratively   d) None
10) The Boolean data type contains _____ Boolean values. [B]
     a) 1   b) 2   c) 3   d) 4
11) == is a _____ operator. [A]
     a) Relational   b) Arithmetic c) Boolean   d) None
12) 'in' is a _____ operator. [D]
     a) Relational   b) Arithmetic c) Boolean   d) Membership
13) Boolean Operator's are also known as _____ Operator's. [D]
     a) Relational   b) Arithmetic c) Boolean   d) Logical
14) 'not' is a _____ operator. [C]
     a) Relational   b) Arithmetic c) Boolean   d) None
15) 'x<y' is logically equivalent to _____. [A]
     a) not(x>=y)   b) not(x<y)   c) not(x<=y)   d)not(x=y)
16) 'if statement' is a _____ control statement. [A]
     a) Selection   b) Sequential   c)Iterative   d)None

17) 'while statement' is a _____ control statement.   [C   ]
  a) Selection   b) Sequential c)Iterative   d)None
18) Control comes out of the loop, once the condition becomes _____(True/**False**)
19) An **finite loop** is an iterative control structure that never terminates. (True/**False**) [   ]
20) A **definite loop** is a program loop in which the number of times the loop will iterate can be determined before the loop is executed. (**True**/False)   [   ]

UNIT-IV

1) A list is a non linear data structure.(True/**False**)   [   ]
2) A list is a immutable data structure.(True/**False**)   [   ]
3) A list is a fixed length data structure.(True/**False**)   [   ]
4) Elements in the list have _____ ordering.   [A   ]
  a) Linear   b) Non-Linear   c) Semi-Linear   d) None
5) Lists have _____ indexing.   [A   ]
  a) Zero-based   b) One-based   c) Two-based   d) None
6) All lists have index values as _____   [B   ]
  a) 0……n   b) 0…….n-1   c) 1……….n   d) 1…..n-1
7) Write an example of a list _____.
8) Empty list is denoted by _____.   [C   ]
  a) { }   b) ( )   c) [ ]   d)< >
9) If A=[1,2,3,5,8] then A[5]= _____.   [D   ]
  a) 5   b) 8   c) 3   d) None
10) If A=[1,2,3,5,8] then A[0]+A[2]+A[4]= _____.   [A   ]
  a)12   b) 13   d) 14   d) 15
11) SITAMS=['CSE','ECE','EEE','CIVIL','IT','EIE']
    SITAMS[4]='MECH'
    print SITAMS
  What is the Output of the above program? _____   [C   ]
  a) ['CSE','ECE','EEE','CIVIL','IT','EIE']
  b) ['CSE','ECE','EEE','CIVIL','IT','MECH','EIE']
  c) ['CSE','ECE','EEE','CIVIL', 'MECH','IT','EIE']
  d) ['CSE','ECE','EEE','CIVIL', 'MECH','EIE']

12) fruit=['banana','mango','apple']
    fruit.append('cherry')
    What is the Output of the above program? _____
  a) b) c) d)
13) A tuple is a non linear data structure.(True/False)   [   ]
14) A tuple is a immutable data structure.(True/False)   [   ]
15) A tuple is a fixed length data structure.(True/False)   [   ]
16) Elements in the tuple have _____ ordering.   [   ]
  a) Linear   b) Non-Linear   c) Semi-Linear   d) None
17) Empty tuple is denoted by _____.   [   ]
  b) { }   b) ( )   c) [ ]   d)< >
18) If s='python' then what is s[1:]   [   ]
  a) ython   b) python   c) thon   d) hon
19) Lists, Tuples and Strings come under _____.   [   ]
  a) Functions   b) Programs   c) Sequences   d) None

20) If we want to copy list1 to list2 then we use _____.   [   ]
    a) list2=list1   b) list2=list(list1)   c) list1=list2   d) list1=list(list2)

UNIT-V

1) A dictionary is a _____.   [   ]
    a) Linear   b) Associative   c) Semi-Linear   d) None

2) A dictionary has _____ pairs.   [   ]
    a) Key, Value   b) Key, Key   c) Value, Value   d) None

3) When cmp( ) method is used to compare two dictionaries (dict1 and dict2), and if
    dict1>dict2 then cmp( ) method returns _____
    [   ]
    a) 0   b) 1   c) -1   d) -2

4) A Set can have duplicate values.(True/False)   [   ]

5) A={1,2,4} and B={2,4,5} then A|B=_____   [   ]
    a) set([1, 2, 4, 5])   b) set([1, 2, 2, 4, 5])   c) set([1, 2, 2, 4, 4, 5])   d) None

6) A _____ is a named group of instructions performing some task.   [   ]
  a) Function   b) Program   c) Instruction   d) None

7) When a function terminates, execution automatically returns to the point from which
 it was called. (True/False)   [   ]

8) The first line of a function definition is the _____.   [   ]
  a) Function Header .   b) Function Footer   c) Function trailer   d) None

9) A function header starts with the keyword _____.   [   ]
  a) fun   b) def   c) func   d) None

10) The function name is followed by a comma-separated list of identifiers "parameters."
  (True/False)   [   ]

11) A local variable is a variable that is only accessible from _____.   [   ]
  a) within a given function.   b) outside the function   c) outside the file   d) none

12) A global variable is a variable that is defined outside of any function definition.
  (True/False)
    [   ]

13) A Text file can be opened in _____ modes.   [   ]
  a) 1   b) 2   c) 3   d) 4

14) To **deallocate** a memory location means to change its status from "currently in use" to
  "available for reuse." (True/False)
    [   ]

15) **Garbage collection** is a method of automatically determining which locations in
  memory are no longer in use and deallocating them. (True/False)

16) Which of the following are fundamental operations of all types of files   [   ]
    a) Open   b) read   c) write   d) close   f) all

17) ____ refers to a means of controlling a graphical entity in a graphics window with x,
  y coordinates   [   ]
    a) Turtle   b) circle   c) pen   d) line

18) The center point of the window is at coordinate _____   [   ]
    a) (0,0)   (100,100)   c) (250,250)   d)
        (150,150)

19) ____ is one of the first concepts that a baby understands during its development.[ ]
    a) Class   b) object   c) attribute   d) method

20) The period of time that a variable exists is called its _____   [   ]
Scope   b) life time   c) local   d) global