# FUNCTIONS : QUESTION BANK

## CLASS – XII Subject: Computer Science

Question Bank – 1

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| Q1. | Define a function in brief? Write syntax to create a user-defined function. | |
| Q2. | Write advantages of using functions. | |
| Q3. | Name at least 3-3 examples of built-in function and functions in module. | |
| Q4. | Write a function differ() which accept two numbers and print the difference between them.<br>For example: differ(18,15) will print 3 differ(6,10) will print 4 | |
| Q5. | Write a function rectangle() which accept length and breadth of a rectangle, and return area and perimeter of it. Use this function in main-program to accept length and breadth and print its area and perimeter. | |
| Q6. | Write a function which accept two numbers and return their sum, subtraction, division and multiplication. Use this in main-program to accept two numbers and print all four basic mathematical calculation. | |
| Q7. | Write a function which accept a number as argument and return twice of the number, if given number is even otherwise return thrice of the number. Use this function in main-program to test it. | |

Question Bank – 2

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| Q1. | Write a function which input person name as argument and print greeting message as:<br>Good Morning <person-name> | |
| Q2. | Write a function which accept a number as argument and return 0, if it is an even number else return 1.<br>Use this function in main program to accept a range from user (from lower to upper number) and print the even numbers between them. | |
| Q3. | What do you mean by Formal and Actual Parameters? Explain giving example. | |
| Q4. | Write definition of a function HowMany(ID, VALUE) to count and display number of times the VALUE is present in the list ID.<br>For example, if the ID contains [115, 25, 65, 59, 74, 25, 110, 250] and the VALUE contains 25, the function should print: **25 found 2 times**. | |
| Q5. | Write definition of a method EvenSum(NUMBERS) to add those values in the list of NUMBERS, which are odd.<br>Example, if NUMBERS contain [1, 2, 3, 4, 5, 6], the it should print 9. | |
| Q6. | Write a function myfunc() which accept two numbers as parameter and return the sum of square of first number and square root of second number.<br>Example: if a=4, b=16, then myfunc(a,b) will return 20. | |
| Q7. | Write a function printDate() which accept day, month, and year as parameter and print in the given format.<br>Example: if d=15, m=4, y=2024, then printDate(d,m,y) will print 15-APR-2024. | |

Question Bank – 3

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| Q1. | What do you mean by default argument in a function? Explain giving example. | |
| Q2. | Explain the three types of functions depending on their return value with example. | |
| Q3. | Name the python library modules which need to be imported to invoke the following functions:<br>(i) floor() (ii) randint() (iii) plot() (iv) sin() | |
| Q4. | Write definition of a method ZeroEnding(SCORES) to add all those values in the list of SCORES, which are ending with zero(0) and display the sum.<br>Example, if SCORES contain [200, 456, 300, 100, 234, 678], the sum should be displayed as 600. | |

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| Q5. | Write definition of a method printPrime(NUMBERS) to print prime numbers of the list of NUMBERS. Example, if NUMBERS contain [1, 2, 3, 4, 5], the it should print 2, 3, 5. | |
| Q6. | Differentiate direct and indirect recursion with an example. | |
| Q7. | Write a function isPrime(N) which input a number as argument and return 0, if the number is Prime else 1. Code another function isPalin(N) which input a number and return 0, if the number is Palindrome else 1.<br>Now in main-program accept lower and upper range from user to print palprime numbers between them. A palprime is a number which is both – palindrome and prime as well.<br>Example: Entre lower limit :100<br>Entre upper limit :150<br>The palprimes are :101 131 | |

Question Bank – 4

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| Q1. | Write a function findGrade(marks), which accept marks as argument and return the grade as per given criteria:<br>Marks: 90-100 \| 75-90 \| 60-75 \| 45-60 \| 33-45 \| <33<br>Grade: A \| B \| C \| D \| E \| F<br>Now in main-program, accept marks of 40 students in a subject of your class and predict the number of students in each grade. | |
| Q2. | Generate twin prime numbers between 1 and 100. Twin prime numbers are the two numbers whose difference is 2 and both are prime numbers. Like (3,5), (11,13) etc. | |
| Q3. | Write the function which print as:<br>If display1() prints '*' six times<br>If display2(int n) prints '#' n times<br>If display3(int n, char ch) prints ch for n times<br>Call these functions in main-program and see the output. | |
| Q4. | Write a function findDistance(), which accept two points as arguments and return distance between them.<br>Use the function in main-program to get the distance between (0,3) and(0,10).<br>Hint: p1=(0,3)<br>p2=(0,10)<br>d=findDistance(p1,p2)<br>print('The distance between',p1,'and',p2,'is',d) | |
| Q5. | Write a function findVowel(), which accept a message as argument and return the number of vowels in it. Test the same function in main-program.<br>Hint: Original message is : This is a pen Output: The numbers of vowels are 4 | |

Question Bank – 5

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| Q1. | The following function is created for you:<br>def findInterest(principal, rate=5, time=2):<br>interest=(principal * rate * time)/100.0<br>return interest<br>then, find the output of the following code:<br>(a) print(findInterest(1000, 10, 5)) (b) print(findInterest(2000, 3))<br>(c) print(findInterest(5000)) (d) print(findInterest()) | |
| Q2. | Write a function midPoint() which accept two points of 2-D and return the midpoint of them. For example mid-point of (2, 4) and (6, 6) is (4, 5). Use the function in main-program to test your Python code on the above values. | |
| Q3. | Write two forms of import statement. | |

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| Q4. | Write a function myfunction(), which accept a list as argument and returns the index number of highest element of the list. Example – suppose the list is L=[9, -45, 457, 85, 99], then if we call myfucntion(L), it must return 2, which is index number of highest element of the list. | |
| Q5. | Write a function countMe(), which accept a message and a letter as argument and returns the frequency of the letter in the message. For example – if the message is "This is KV Bharatpur" and the letter is 'i', then it must return 2 i.e. frequency of 'i' in the message.<br>Use the above example in main-program to test your function. | |
| Q6. | What is the difference between Actual Parameter and Formal Parameter? Explain giving example. | |
| Q7. | Write a function myfunction(), which accept a number as argument and prints number and its square upto 1 in reverse order.<br>For example, if we call the function in main-program as<br>Myfunction(5), then output will be:<br>Number Square<br>5 25<br>4 16<br>3 9<br>2 4<br>1 1 | |

Question Bank – 6

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| Q1. | Write a function which accept a list and multiply its all elements and returns it. If any number is zero, then it leaves that zero. Example if the list is L=[1,2,3,5,0,-6,4,5], the it returns -3600. Write main function to test the sample list. | |
| Q2. | Write a python program that accepts hyphen-separated sequence of words as input and prints the words in a hyphen-separated sequence after sorting them alphabetically.<br>Sample input string: vikash-vipin-ayush-navneet-shivanshu-abhishek<br>Expected output: abhishek-ayush-navneet-shivanshu-vikash-vipin- | |
| Q3. | Consider below given function headers. Identify which of these will cause error and why?<br>(i) def func (a = 1, b):<br>(ii) def func (a = 1, b, c = 2):<br>(iii) def func (a = 1, b = 2, c = 3): | |
| Q4. | Find and write the output of the following Python code:<br>data=["P",20,"R",10,"S",30]<br>times=0<br>alpha=""<br>add=0<br><br>for c in range(1,6,2):<br>times = times + c<br>alpha = alpha + data [c-1] + "$"<br>add = add + data[c]<br>print (times, add, alpha) | |