SAPTHAGIRI COLLEGE OF ENGINEERING-560057
(Recognized by All India Council for Technical Education,New Delhi)
(Affiliated to Visvesvaraya Technological University, Belagavi)
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Vision and mission of the College

Vision

To be a best institution imparting quality engineering education to deal with community needs through learning and performance.

Mission of the Institution:

- To implement path breaking student centric education methods.
- To augment talent, nurture teamwork to transform to develop individual as responsible citizen.
- To educate the students and faculties about entrepreneurship to meet vibrant requirements of the society.
- Strengthen Industry-Institute Interaction for knowledge sharing.

Vision and mission of the Department

Vision

To be one of the best ECE departments in the University providing globally relevant learning experience for students.

Mission

- Enrich learning experience of students with creative and innovative teaching methods.
- Inculcate societal responsibility in students.
- Develop entrepreneurial skills of students to make them entrepreneurs rather than employees.
- Partner with Industry for focusing on real-life problems and make learning more practical.

Head of the Department
Electronics & Communication
Sapthagiri College of Engineering
Bangalore-560 057

Principal
Sapthagiri College of Engineering
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PROGRAMME OUTCOMES

Graduation students of Bachelor of Electronics and Communication Engineering program at Sapthagiri College of Engineering will attain the following program outcomes in the field of Electronics and communication Engineering

PO-1	Ability to apply the knowledge of mathematics, science, electronics and communication to conceptualize solutions to complex engineering problems.
PO-2	Ability to Identify, formulate and analyse in Engineering domains using first principles of basic sciences and engineering sciences.
PO-3	Ability to design and realize solutions for complex engineering problems with applicable considerations.
PO-4	Ability to support investigations of Research based knowledge including literature survey, design of experiments, data analysis and data interpretation leading to valid conclusions.
-5	Ability to choose modern Engineering tools and resources for Electronics & communication engineering problems and their applications
PO-6	Ability to identify and assess societal, safety and legal issues using contextual knowledge and develop potential to assume consequent responsibilities during engineering practice.
PO-7	Ability to recognize the impact of electronics and communication engineering domain in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
PO-8	Ability to apply ethical principles and practice professional ethics.

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PO-9	Ability to function effectively either as an individual or as a member/leader within diversified and multidisciplinary teams.
PO-10	Ability to communicate on engineering activities understandably, among stake holders and society at large through effective reports, design documentation and effective presentations.
PO-11	Ability to identify and engage in self-learning in the context of technological changes
PO-12	Ability to demonstrate the knowledge of and apply project management principles to manage projects in multidisciplinary environments in team or as an individual.

PROGRAMME SPECIFIC OUTCOMES

At the end of the B.E Electronics & Communication Engineering program, students of sapthagiri college of Engineering are expected to have developed the following program specific outcomes.

	PROGRAM SPECIFIC OUTCOMES
PSO1	Specify, design, build and test analog, digital and embedded systems for signal processing
PSO2	Understand and architect wired and wireless analog and digital communication systems as per specifications, and determine their performance.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Subject Allotment

(For the Academic Year 2021-2022 Even Semester)

Name of the Faculty: **Prof. SHOBHA S**

Designation: Associate Professor

Sl.No.	Subject	Subject Code	Sem /Sec	Batch
1	Python Application Programming	18EC646	6 B	-
2	Python Application Programming Lab	18EC646	6A/6B	-
3	Machine Learning	17EC834 / 15EC834	8 PC	-
4	Embedded System Lab	18ECL66	6 B	B1, B2
5	Project Work Phase - 2	18ECP83/17ECP85	8A/8B/8PC	-

Signature of Faculty

Head of the Department

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PYTHON APPLICATION PROGRAMMING

Course Code	: 18EC646	CIE Marks	: 40
Lecture Hours/Week	: 03	SEE Marks	: 60
Total Number of Lecture Hours	: 40(08 Hrs/module)	Exam Hours	: 03
	CREDITS – 03		

Course Learning Objectives: This course will enable students to

- Learn Syntax and Semantics and create Functions in Python.
- Handle Strings and Files in Python.
- Understand Lists, Dictionaries and Regular expressions in Python.
- Implement Object Oriented Programming concepts in Python
- Build Web Services, Network and Database Programs in Python.

Module – 1

Why should you learn to write programs, Variables, expressions and statements, Conditional execution, Functions,

L1, L2, L3

Module – 2

Iteration, Strings, Files,

L1, L2, L3

Module – 3

Lists, Dictionaries, Tuples, Regular Expressions,

L1, L2, L3

Module – 4

Classes and objects, Classes and functions, Classes and methods,

L1, L2, L3

Module – 5

Networked programs, Using Web Services, Using databases and SQL,

L1, L2, L3

Course outcomes: The students will be able to:

1. Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.
2. Demonstrate proficiency in handling Strings and File Systems.
3. Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions.
4. Interpret the concepts of Object-Oriented Programming as used in Python.
5. Implement exemplary applications related to Network Programming, Web Services and Databases in Python.

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Question paper pattern:

- The question paper will have TEN questions.
- There will be TWO questions from each module.
- Each question will have questions covering all the topics under a module.
- The students will have to answer FIVE full questions, selecting ONE full question from each module.

Text Books:

1. Charles R. Severance, "Python for Everybody: Exploring Data Using Python 3", 1st Edition, Create Space Independent Publishing Platform, 2016 (Chapters 1 – 13, 15).
2. Allen B. Downey, "Think Python: How to Think Like a Computer Scientist", 2nd Edition, Green Tea Press, 2015 (Chapters 15,16,17)

References:

1. Mark Lutz, "Programming Python", 4th Edition, O'Reilly Media, 2011.ISBN-13:978-9350232873.
2. Wesley J Chun, "Core Python Applications Programming", 3rd Edition, Pearson Education India, 2015. ISBN-13: 978-9332555365.
3. Reema Thareja, "Python Programming using problem solving approach", Oxford university press, 2017

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Department of Electronics & Communication Engineering

Course Outcomes & CO Mapping with PO's and PSO's

Subject Name: Python Application Programming

Subject Code: 18EC646

Course Coordinator Name: Prof.Shobha S

Course Outcomes

Course Outcomes	
CO1	Explain Python syntax and semantics and be fluent in the use of Python flow control and Functions.
CO2	Make use of Strings and files to write a python program.
CO3	Construct Lists, dictionaries and apply regular expressions in python for data validation and mining.
CO4	Implement object-oriented programming concepts in python
CO5	Implement exemplary applications related to network programming, web services and databases in python

CO'S Mapping with PO's & PSO's

POs/COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	1	1	-	-	-	-	-	1	1	-	2	-	1
CO2	3	2	1	-	-	-	-	-	1	1	-	2	-	1
CO3	3	3	2	-		-	-	-	1	1	-	2	-	1
CO4	3	3	2	-	-	-	-	-	1	1	-	2	-	1
CO5	3	3	2	1	-	-	-	-	1	1	-	2	-	1
Average Mapping	3	2.4	1.6	1	-	-	-	-	1	1	-	2	-	1

Course Coordinator Module Coordinator HOD

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15CS664

Sixth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Python Application Programming

Time: 3 hrs. Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

1 a. Explain the following :
   i) Skills necessary for a programmer
   ii) Interactive mode
   iii) Short circuit evaluation of expression
   iv) Modulus operator **(04 Marks)**

b. Mention three types of errors encountered in python programs. Explain the basic building block of python with an example python program to display format number ($F_n = 2^{2n} + 1$) for a 'n' value promoted by the users. **(08 Marks)**

c. Describe python language support for arithmetic operators. Write a python programs to calculate student result based on 2 exam, 1 sport event and 3 activities conducted in a college with weightage of the activity = 20% and sports = 20% for 50 marks. **(04 Marks)**

OR

2 a. List and give syntax of all python supported conditional statements along with its usage with an example program to check whether given number is positive or negative or zero. **(08 Marks)**

b. Differentiate between argument and parameter. Illustrate the flow of execution of a python function with an example program to convert given Celsius to Fahrenheit temperature. **(08 Marks)**

Module-2

3 a. Explain while and for loop write a program to generate Fibonacci series up to the given limit by defining FIBONACCI (n) function. **(08 Marks)**

b. Mention the advantages of continue statement. Write a program to compute only even numbers sum within the given natural number using continue statement. **(08 Marks)**

OR

4 a. Define a string. How it can be traversed though using looping statement? Write a python program to display presence of given substring in main string. **(08 Marks)**

b. How computational fault or computational errors are handled in python? Show it with an example python program to copy all lines beginning with vowels from FROM.text file to VOWELTEXT.text file retaining other lines. **(08 Marks)**

Module-3

5 a. Describe any two list opearations and list methods. Write a python program to accept 'n' numbers from user, find sum all even numbers and product of all odd numbers in entered list. **(08 Marks)**

b. List merits of dictionary over list. Write a python program to accept USN and marks obtained, find maximum, minimum and students USN who have scored in the range 100-85, 85-75, 75-60 and below 60 marks separately. **(08 Marks)**

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OR

6 a. Compare and contrast tuples with lists. Explain the following operations in tuples
   i) Sum of two tuples
   ii) Slicing operators
   iii) Compression of two tuples
   iv) Assignments to variables. **(08 Marks)**

b. Explain extracting data using regular expressions. Implement a python program to find for lines having '@' sign between characters in a read text file. **(08 Marks)**

Module-4

7 a. How class can be instantiated in python? Write a python program to express instances as return values to define a class RECTANGLE with members width, height, corner_x, corner_y and member function : to find centre, area and perimeter of a rectangle. **(08 Marks)**

b. Explain init and str method with an example python program. **(08 Marks)**

OR

8 a. Define polymorphism. Demonstrate polymorphism with function to find histogram to count the numbers of times each letters appears in a word and in sentence. **(08 Marks)**

b. What is a pure function? Write a python program to find duration of event if start and end time is given by defining class TIME. **(08 Marks)**

Module-5

9 a. Explain any 2 socket functions. Explain support for parsing HTML using regular expression with an example program. **(08 Marks)**

b. Describe a support of security mechanism employed in Internet application with support of API usage with an example program to get four strings and put them in "hidden.PY". **(08 Marks)**

OR

10 a. Write a note on XML. Design python program to retrieve a node present in XML tree. **(08 Marks)**

b. Brief on structured Query language, with suitable python program explain functions involved in creation of database table in python. **(08 Marks)**

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15CS664

Sixth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Python Application Programming

Time: 3 hrs. Max. Marks: 80

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. Explain the salient features of python. **(05 Marks)**

b. Write a python program to calculate the area of square, rectangle and circle. Print the results. Take input from user. **(05 Marks)**

c. What are user defined functions? How can we pass parameters in user defined functions? Explain with suitable example. **(06 Marks)**

OR

2 a. Explain the concept of conditional execution alternate execution and chained conditions with suitable examples. **(06 Marks)**

b. Write a python program to create a user defined function to find maximum and minimum letter in string. Also find the length the string without using inbuilt function. **(05 Marks)**

c. Explain the concept of type conversion functions and math functions in python with examples. **(05 Marks)**

Module-2

3 a. Explain the working of while loop in python with suitable example. **(05 Marks)**

b. Write a python program to demonstrate counting, summing and average of elements using loops. **(05 Marks)**

c. What is a string? Write a python program to demonstrate traversal through a string with a loop. Also explain the concept of string slicing. **(06 Marks)**

OR

4 a. With syntax and example code, explain the working of definite loop in python. **(05 Marks)**

b. Write a python program to concatenate and compare two strings. Read the strings from user. **(05 Marks)**

c. Explain fileopen, fileclose, fileread and filewrite concepts in python with example. **(06 Marks)**

Module-3

5 a. What is a list? Explain the concept of list slicing and list traversing with example. **(05 Marks)**

b. Explain the concept of comparing tuples. Describe the working of sort function with python code. **(06 Marks)**

c. Write a python program to search for lines that start with 'F' followed by 2 characters, followed by 'm:'. **(05 Marks)**

OR

6 a. What is dictionary? How is it different from list? Write a python program to count occurrence of characters in a string and print the count. **(06 Marks)**

b. With an example program, illustrate how to pass function arguments to list. **(05 Marks)**

c. Write a python program to search lines that start with 'X' followed by any non whitespace characters, followed by ':' ending with number. Display the sum of all these number. **(05 Marks)**

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Module-4

7 a. Define class and object? What are programmer defined types? Explain with example. **(05 Marks)**

b. Illustrate the concept of pure function with python code. **(05 Marks)**

c. What is the difference between method and function? Explain the working of init method with suitable code. **(06 Marks)**

OR

8 a. Define attribute? With the help of python code, explain how functions return instance values. **(06 Marks)**

b. Explain the concept of modifier with python code. **(05 Marks)**

c. What is type based dispatch? Illustrate with python example. **(05 Marks)**

Module-5

9 a. Define socket? Writ a python program that makes a connection to a webserver and follows the rules of HTTP protocol to request a plain test document and display what server sends back. **(06 Marks)**

b. What is XML? How is it used is python? Explain parsing of XML with example. **(05 Marks)**

c. Define cursor? Explain connect, execute and close command of databases with suitable example. **(05 Marks)**

OR

10 a. Write a python code to read the file from web using urelib and retrieve the data of the file. Also compute the frequency of each word in the file. **(06 Marks)**

b. What is JSON? Illustrate the concept of parsing JSON python code. **(05 Marks)**

c. Explain the concept of using JOIN to retrieve data in python. **(05 Marks)**

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Sixth Semester B.E. Degree Examination, Aug./Sept. 2020
Python Application Programming

Time: 3 hrs. Max. Marks: 80

Note: *Answer any FIVE full questions, choosing ONE full question from each module.*

Module-1

1 a. Explain types of error with examples. **(04 Marks)**

b. Explain various Names, Keywords and expressions with examples. **(06 Marks)**

c. Write a python program using try and except, so that your program handles non-numeric input gracefully by printing a message and exiting the program the following shown two execution of the program

```
Enter Hours : 20
Enter Rate  : nine
Error, please enter numeric input
Enter hours  : forty
Error, please enter numeric input.
```

(06 Marks)

OR

2 a. Explain conditional execution, Alternative execution chained conditionals and nested conditionals with examples. **(08 Marks)**

b. Explain break and continue statement with examples in python. **(04 Marks)**

c. Explain with an example what are fruitful functions and void functions. **(04 Marks)**

Module-2

3 a. Explain while and for loops with examples. **(04 Marks)**

b. Write a python program to find the largest value from the given set of accepted values. **(06 Marks)**

c. Discuss the string handling methods in python with examples. **(06 Marks)**

OR

4 a. Write a python program to check whither a given string is palindrome or not. **(06 Marks)**

b. Explain with example the syntax of read ( ), write ( ) methods for a file. **(04 Marks)**

c. Develop a python program for creating a copy an existing file. **(06 Marks)**

Module-3

5 a. Explain the difference between a list and a dictionary. **(04 Marks)**

b. Make a list of first ten letters of the alphabet then using the slice operation do the following:

i) Print the first three letters from the list

ii) Print any three letters from the middle

iii) Print the letters from 5th letters to the end of the list. **(04 Marks)**

c. Discuss the lists handling functions in python with example. **(08 Marks)**

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OR

6 a. Differentiate between list and dictionary. **(08 Marks)**

b. Define tuple, explain DSU pattern. Write a python code to determinate tuples by sorting a list of words from longest to shortest using loops. **(04 Marks)**

c. Explain the need of Regular expressions in python language. **(04 Marks)**

Module-4

7 a. Explain classes and attributes in python language with examples. **(05 Marks)**

b. Explain pure functions and modifiers with examples. **(05 Marks)**

c. Write a program that uses class to store the name and marks of students. Use list to store the marks in three subjects. **(06 Marks)**

OR

8 a. Explain initialization method with example. **(04 Marks)**

b. Write a class Rectangle that has attributes length and breadth and a method area which returns the area of the rectangle. **(06 Marks)**

c. What is operator overloading? Write phython code to overload " + " " – " and " * "operator by providing the methods _ _ add_ _, _ _ sub_ _and _ _ mul _ _. **(06 Marks)**

Module-5

9 a. Write a python code for retrieving the romeo.txt file from the web and compute the frequency of each word in the file. **(06 Marks)**

b. Write a note on XML. **(05 Marks)**

c. Explain with a neat diagram of Service Oriented Architecture. **(05 Marks)**

OR

10 a. Describe creation of database table using database cursor architecture. **(08 Marks)**

b. Write a python code for creating employee database, inserting records and selecting the employees working in the company. **(08 Marks)**

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18EC646

Sixth Semester B.E. Degree Examination, July/August 2022
Python Application Programming

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-1

1 a. Explain Conditional Execution , Alternative execution , Chained conditionals and Nested conditionals with examples. **(08 Marks)**

b. Explain the rules of precedence used by Python to evaluate an expression. **(04 Marks)**

c. Write a Python Program to prompt the user for hours and rate per hour for pay computation with time and a half for overtime. To give the employee 1.5 time the hourly rate for hours worked above 40 hours. **(08 Marks)**

OR

2 a. List the features of Python Programming Language (at least FIVE). **(05 Marks)**

b. What are User defined functions? How can we pass parameters in user defined functions? Explain with suitable example. **(06 Marks)**

c. Write a program to prompt for a score between 0.0 and 1.0. if the score is out of range print an error manage and exit. If the score is between 0.0 and 1.0 print a grade using the following table : **(09 Marks)**

Score	>= 0.9	>= 0.8	>= 0.7	>= 0.6	< 0.6
Grade	A	B	C	D	F

Module-2

3 a. With Syntax, explain the finite and infinite looping constructs in Python. What is the need for break and continue statements? Explain with examples. **(08 Marks)**

b. What are String Slices? Explain the Slicing Operator in Python with examples. **(05 Marks)**

c. Write a Python program to accept a file name from the user :
i) Display the number of characters in the file.
ii) Find the frequency of occurrence of the lines which started with a word 'From'. **(07 Marks)**

OR

4 a. List and explain any four built in string manipulation functions supported by Python with examples. **(06 Marks)**

b. Explain file open , file close , file read and file write concepts in Python with examples. **(08 Marks)**

c. Write a Python program to find the largest value from the given set of accepted values. **(06 Marks)**

Module-3

5 a. Lists are mutable. Justify the statement with examples. Discuss the list handling functions in Python with examples. **(08 Marks)**

b. Differentiate between List and Dictionary. **(04 Marks)**

c. Write a Python program to search lines that start with the word 'from' and a character followed by a two digit number between 00 and 99 followed : Print the number if it greater than zero. Assume any input file. **(08 Marks)**

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OR

6 a. Compare and contrast tuples with tests. Explain the following operation in tuples with examples : i) Sum of two tuples ii) Slicing operations iii) Compression of two tuples iv) Assignment to variables. **(10 Marks)**

b. Write a Python program that accept a sentence and build dictionary with LETTERS , DIGITS , UPPERCASE , LOWERCASE as key values and their count in sentence as values. **(06 Marks)**

c. Explain the need of Regular expression in Python language, with an example. **(04 Marks)**

Module-4

7 a. Explain Classes and Attributes in Python language with examples. **(06 Marks)**

b. What is the difference between Method and Function? Explain the working of init method with suitable code. **(06 Marks)**

c. Write a function named move – rectangle that takes a Rectangle and two numbers named dx and dy. It should change the location of the rectangle by adding dx to the x co-ordinate of corner and adding dy to the y co-ordinate of corner. **(08 Marks)**

OR

8 a. Show using a Python code how_ str_ method is invoked when you print an object. Explain its working. **(06 Marks)**

b. Illustrate the concept of Pure function and Modifier with examples. **(06 Marks)**

c. What is Operator Overloading? Write Python code to overload "+" , "-" and "*" operator by providing the methods _ _ add _ _ , _ _ sub _ _ and _ _ mul _ _. **(08 Marks)**

Module-5

9 a. Define Socket. Explain how socket connection can be established to the internet using Python code over the TCP/IP connection and the http protocol to get the web document. **(08 Marks)**

b. Compare and Contrast the Javascript Object Notation (JSON) and XML. Explain parsing of XML with example. **(06 Marks)**

c. Define Cursor. Explain Connect, Execute and Close command of databases with a snippet code. **(06 Marks)**

OR

10 a. What is Embedded SQL? Explain the importance of SQLite data base. **(04 Marks)**

b. Write a note on Google Geo coding Web service. Using Python supported libraries demonstrate with a snippet code. **(08 Marks)**

c. Write a Python code to read the file from web using urllib and retrieve the data of the file. Also compute the frequency of each word in the file. **(08 Marks)**

* * * * *

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1/7

Signature of Scrutinizer

Scheme & Solutions

Subject Title : Python Application Programming **Subject Code :** 18EC646

Question Number	Solution	Marks Allocated
	Module - 1	
1 (a)	Conditional execution : Explanation + Example	1+1
	Alternative Execution : —"—	1+1
	Chained conditionals : —"—	1+1
	Nested conditionals : —"—	1+1
(b)	Rules of precedence used by Python. (1) Parenthesis (2) Exponentation (3) Multiplication & Division (4) Addition and Subtraction Operators with same precedence are evaluated from left to right.	4.
(c)	sh = input ("Enter Hours:") sr = input ("Enter rate:") fh = float (sh) fr = float (sr) If fh > 40 : reg = fr * fh otp = (fh - 40.0) * (fr * 0.5) xp = reg + otp else : xp = fh * fr. Print (xp)	2 5 1
2 (a)	At least FIVE features of python programming language (1) Easy to use (2) free & open source (3) powerful. (4) object oriented language (5) large standard library. (6) Integrated language (7) portable language (8) Strong community.	5
2(b)	A function that you define yourself in a program is known as user defined function. Syntax : def function-name (parameter-list) : function body	2M
	An argument is the value that is sent to the function when it is called. (function call) Syntax : function-name (arguments)	2M
	Example	2M

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Subject Title : Python Application Programming Subject Code : 18EC646

Question Number	Solution	Marks Allocated

2(c)	import sys
	Score = input ("Enter numeric value of score:")
	try:
	score = float (score)
	if score > 1.0:
	print ("Bad score")
	elif: 1.0 >= score >= 0.9:
	print ("Grad is A" + str (score))
	elif : .9 > score >= .8:
	print ("B")
	elif : .8 > score >= .7:
	print ("C")
	elif: .7 > score >= .6:
	print ("D")
	elif : .6 > score >= .5:
	print ("F")
	except ValueError:
	print ("you need to input a number")
		6M.
		2

	Module 2	
3a.	finite looping Construct (Syntax) + Example	2M.
	Infinite looping Construct (Syntax) + Example.	2M.
	Break and Continue are used to prematurely terminate a loop iteration. Break: terminates the loop & transfers the control to the end of the loop. Continue: terminates the ongoing iteration and transfers the control to the top of the loop.	2M
	Example for break & Continue	2M.
(b)	A segment of a string is called a slice.	1M.
	Explanation about slicing operator	2M.
	Examples	2M.
(c)	To accept the filename from the user Display the number of characters in the file To find the occurrence of the lines which started with a word from :	1M 1M 2M

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Subject Title : Python Application Programming Subject Code : 18EC646

Question Number	Solution	Marks Allocated
4(a)	Listing of any four built in string manipulation function Explanation about each function + example	2M. 1 each 1×4=4.
(b)	file open : when you open a file, you are asking the OS to find the file by name and make sure the file exit. Open (filename, mode) + Example file close : Closing a file will free up the resources that were tied with the file. filename.close() + Example file write : In order to write into a file in python, we need to open it in write, append or exclusive creation mode. syntax : filename.write() + Example file read : To read a file, we must open the file in read mode. filename.read() + Example	2M 2M. 2M.

(c)	Largest = None
	Print ('Before :', largest)
	for itervar in [3, 41, 12, 9, 74, 15]:
	if largest is None or itervar > largest:
	largest = itervar
	Print ('Loop :', itervar, largest)
	Print ('Largest :', largest)
		6M

5(a)	Module-3 Justification of List are mutable + Example 1M. We can change the order of items in a list or reassign an item in a list. When the bracket operator appears on the left side of the argument it identifies the element of the list that will be assigned List handling function len() max() 1M + Examples 4M Sum() etc.	3M. 5M
(b)	List: Ordered sequence of objects accessed via their position. Mutable. Places the elements in [] | Dictionary: Unordered sets accessed via keys. Immutable. Places elements in { }	4M.

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Subject Title : Python Application Programming Subject Code : 18EC646

Question Number	Solution	Marks Allocated

5(c)	import re
	hand = open('mbox-short.txt')
	for line in hand:
	line = line.rstrip()
	x = re.findall('^From: *([0-9][0-9]):', line)
	if len(x) >= 0:
	Print(x)
		8M.

6(a)	Comparision between tuples and lists (any 2)	2M.
	Explanation with Example Sum of tuples —	2M
	Slicing operation —	2M.
	Comparision ~~Comprison~~ of two tuples —	2M
	Tuple assignment to variable —	2M.

(b)	str = input("enter the sentence:")
	cletter=0
	cdigit=0
	clower=0
	cupper=0
	d = {}
	for c in str:
	if c.isalpha():
	cletter = cletter+1
	if c.islower():
	clower = clower+1
	if c.isupper():
	cupper = cupper+1
	d['letter'] = cletter
	d['lower'] = clower
	d['upper'] = cupper
	d['digit'] = cdigit
	print(d)
		6M.

(c)	A regular expression is a special sequence of characters that helps you match or find other strings or sets of strings, using a specialized syntax held in a pattern.	2M
	Example —	2M.
	Module-4	
7(a)	Explanation about classes and attributes	3M
	Examples. —	3M.

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Subject Title: Python Application Programming Subject Code: 18EC646

Question Number	Solution	Marks Allocated
7(b)	A method, like a function, is a set of instructions that perform a task. The difference is that a method is associated with an object, while a function is not.	2M
	"init" method is called when an object is created from the class and it allow the class to initialize the attributes of a class.	2M
	Suitable snippet code (Example) —	2M.
7(c)	Class point(): """ Represents a point in 2D space """ Class Rectangle(): """ represents a rectangle attributes width, height, corner (lower left corner) """	2
	box = Rectangle() box.width = 100.0 box.height = 200.0 box.corner = point() box.corner.x = 0.0 box.corner.y = 0.0	— 2
	def move_rectangle (rect, dx, dy): box.corner.x += dx box.corner.y += dy move_rectangle (box, 50, 100)	— 4
8(a)	__str__ method returns a string representation of an object. + Explanation about code	2M
	# inside class Time: def __str__(self): return '%.2d:%.2d:%.2d' % (self.hour, self.minute, self.second)	3M.
	time = Time (9, 45) print (time) # 09:45:00 will be printed.	

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Subject Title : Python Application Programming Subject Code : 18EC646

Question Number	Solution	Marks Allocated
8(b)	Illustration of pure function with an example	3 M.
	Illustration of modifier with an example	3 M.
(c)	Changing the behavior of an operator so that it works with programmer defined types is called operator overloading.	2M.
	Python code to overload "+" "-" and "*" operator	6 M.
	Module-5	
9(a)	Sockets are used to send messages across the network. They provide a form of inter process communication. Sockets are a combination of an IP address and a port.	2M.
	(i) Make a connection to the webserver.	3M
	(ii) Send a the GET command to requests for a document.	
	(iii) Display what the server sends back.	
	Snippet code	3M.
(b)	Comparison between JSON and XML	

JSON	XML
JSON object has a type	XML data is typeless.
It has no display capability	It offers the capability to display data
Supports only UTF-8 encoding	It supports various encoding formats.
It is less secured	More secured

Parsing of XML with an example — 3M.

(c) Cursor is used to interact with the database. Connect operation makes a connection to the database stored in the file. If the file does not exist, it will be created. Once we have a cursor, we can begin to execute commands on the contents of the database using the execute() method. At the end of operation, we will close the connection — 4M.

Snippet code — 2M

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Subject Title : Python Application Programming Subject Code : 18EC646

Question Number	Solution	Marks Allocated
10(a)	Embedded SQL is a method of combining the computing power of a programming language and the database manipulation capabilities of SQ.	2M.
	SQLite is self-contained means it doesn't need any external dependencies like an OS or external library. This feature of SQLite help especially in embedded devices like Android	2M.
(b)	Google Geocoding web service It allows us to make use of their large database of geographical information. We need to submit a geographical search string to their geocoding API. Then Google will return its best-guess as to where on a map we might find our search string and tell us about the landmarks nearby. Snippet code + Explanation	3M. 5M.
(c)	Python code to read the file from the web using urllib and retrieve the data of the file	4M.
	Python code to read the file from the web using urllib and to compute the frequency of each word in the file.	4M.

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Modified

CBCS SCHEME

USN | | | | | | | | | | |

18CS752

Seventh Semester B.E. Degree Examination, Feb./Mar. 2022
Python Application Programming

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-1

1 a. List the features of Python Programming Language. **(04 Marks)**
b. How Python handles exceptions? Explain with programming example. **(08 Marks)**
c. Write a Python program to find the largest of three numbers. **(08 Marks)**

OR

2 a. Explain the Chained and Nested conditional execution statement along with syntax and flow chart. **(08 Marks)**
b. Explain with example, Fruitful and Non -- fruitful functions in Python. **(06 Marks)**
c. Demonstrate the use of break and continue keyword using a Snippet of code. **(06 Marks)**

Module-2

3 a. Explain Definite and Indefinite loops in Python with example. **(06 Marks)**
b. What are String Slices? Explain the Slicing Operator in Python with example. **(06 Marks)**
c. Write a Python program to count the frequency of occurrence of character within another string. **(08 Marks)**

OR

4 a. List and explain four built -- in string manipulation functions supported by Python. **(08 Marks)**
b. Explain with examples read ( ) and write ( ) methods in file. **(06 Marks)**
c. Write a Python program to generate and print prime numbers in a given range. **(06 Marks)**

Module-3

5 a. What are Lists? Explain any four. List methods with examples. **(06 Marks)**
b. How tuples are created in Python? Explain different ways of creating and accessing them. **(06 Marks)**
c. Write a Python program to count the frequency of each of the word in a given file. **(08 Marks)**

OR

6 a. Explain Dictionaries in Python with examples. **(08 Marks)**
b. Explain the need of regular expressions in Python with example. **(06 Marks)**
c. Implement a Python program using Lists to store and display the average of 'N' integers accepted from the user. **(06 Marks)**

Module-4

7 a. What is a Class? Explain how class and object are created in Python. **(06 Marks)**
b. With example, explain Shallow copy and Deep copy methods in class. **(06 Marks)**
c. Write a program to add two point objects by overloading + operator. Overload __ str __ ( ) to display point as a ordered pair. **(08 Marks)**

OR

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8 a. Explain __ init __ ( ) method with example. (08 Marks)
b. Explain Pure functions and Modifiers with example. (08 Marks)
c. Explain type based dispatch with an example. (04 Marks)

Module-5

9 a. What is Socket? Explain how Socket connection can be established over TCP/IP connection and retrieve the data from a web page. (08 Marks)
b. Explain the significance of XML over the web development. Illustrate with an example. (06 Marks)
c. Write a program to retrieve data from a webpage using urllib and to count the number of words in it. (06 Marks)

OR

10 a. What is JSON? Illustrate the concept of parsing JSON Python code. (06 Marks)
b. Define Cursor. Explain connect , execute and close commands of databases with a suitable example. (08 Marks)
c. Write a program to extract various parts of anchor tag using BeautifulSoup. (06 Marks)

* * * * *

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Gmail

895 Spoorthi PM <pmanjunathvtu@gmail.com>

Sir, Attached 18AI52 scheme and solution

3 messages

895 Spoorthi PM <pmanjunathvtu@gmail.com> Fri, Mar 11, 2022 at 4:14 PM
To: dr.dvashoka@gmail.com

P.MANJUNATH
VTU,EXAMINATION SECTION
BELGAUM-590 018
PH-9449873454

SCH_18AI52.pdf
229K

Dr. DV Ashoka <dr.dvashoka@gmail.com> Mon, Mar 14, 2022 at 11:17 AM
To: 895 Spoorthi PM <pmanjunathvtu@gmail.com>

Dear Sir,

Subject Code	Subject Name	Comments from BOE CS/IS
18CS55	Application Development using Python	As per the scrutiny of same from BOE members, no corrections are required
18CS752	Python Application Programming	As per the scrutiny of same from BOE members, no corrections are required
18CS753	Introduction to Artificial Intelligence	As per the scrutiny of same from BOE members, no corrections are required

Thanks & Regards

Dr. DV Ashoka
Chairman BOE CSE/ISE

Professor and Dean(Research)
Department of ISE
JSS Academy of Technical Education
Uttarahalli road, Srinivasapura (post)
Bangalore-560060

9448851159

[Quoted text hidden]

Dr. DV Ashoka <dr.dvashoka@gmail.com> Mon, Mar 14, 2022 at 11:35 AM
To: 895 Spoorthi PM <pmanjunathvtu@gmail.com>

Dear Sir,

"APPROVED"

B.E

Registrar (Evaluation)
Visvesvaraya Technological University
BELAGAVI - 590018

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211118CS75238089

Visvesvaraya Technological University

Belagavi, Karnataka - 590 018

Signature of Scrutinizer

Scheme & Solutions

Subject Title : PYTHON APPLICATION PROGRAMMING **Subject Code :** 18CS752

Question Number	Solution	Marks Allocated
	MODULE - 1	
1 (a)	i) Easy to code (ii) Free and open source (iii) Object oriented language (iv) High Level Language (v) Portable Language (vi) Integrated Language (vii) Interpreted Language (viii) Dynamically typed language. [8 * ½ = 4 Marks]	(04 Marks)
(b)	In programming there is a chance of runtime errors while doing some program. ex : wrong input a = int(input("Enter a:")) b = int(input("Enter b:")) c = a/b print(c) → Enter a = 12 → Enter b = 0 → ZeroDivisionError 4M marks To handle this try, except block is used ex: a = int(input("Enter a:")) b = int(input("Enter b:")) try: c = a/b print(c) except: print("Division by Zero is not possible") → with explanation 4 Marks	(08 Marks)

(c)	n1 = int(input("Enter 1st number:"))
	n2 = int(input("Enter 2nd number:"))
	n3 = int(input("Enter 3rd number:"))
	if(n1>n2):
	  if(n1>n3):
	  print("1st number is large")
	  else:
	  print("3rd number is large")
	elif(n2>n3):
	  print("2nd number is large")
	else:
	  print("3rd number is large")
		(08 Marks)

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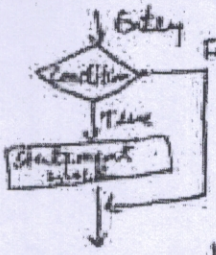
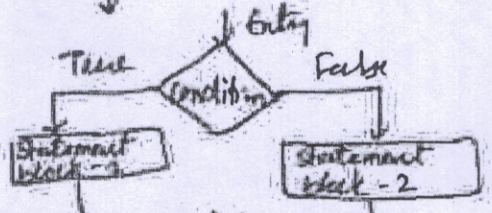
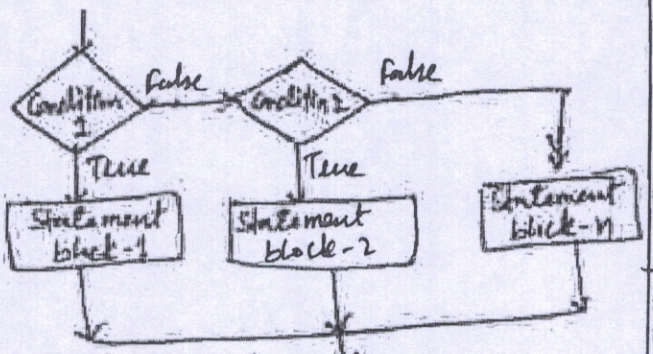
Subject Title : PYTHON APPLICATION PROGRAMMING Subject Code : 18CS752

Question Number	Solution	Marks Allocated

2 (a)	if condition :
	  statement block
	 
	
	→ 02 Marks
	if condition :
	  statement block-1
	else :
	  statement block-2
	 
	
	→ 03 Marks with explanation.
	if condition1 :
	  Statement block-1
	elif condition2 :
	  Statement block-2
	  .
	  .
	  .
	else :
	  statement block-n
	 
	
	→ 03 Marks with explanation
		(08 Marks)

(b)	When a function does not return a value, we call it void function.
	Functions that return value are called fruitful functions
	ex: def addtwo(a,b):
	  added = a+b
	  return added
	x = addtwo(3,5)
	print(x) → 3 Marks
	• Void functions are not fruitful functions
	ex: def addtwo(a,b):
	  added = a+b
	  print(added)
	→ 3 Marks
		(06 Marks)

(c)	• The break statement ends the current loop & jumps to the statement immediately following the loop.
	• The continue statement ends the current iteration & jumps to the top of the loop & starts the next iteration.
	→ 3 Marks
	ex: while True :
	  line = input('>')
	  if line[0] == '#':
	  continue
	  if line == 'done':
	  break
	  print('line')
	print('Done')
	→ 3 marks
		(06 Marks)

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Subject Title : PYTHON APPLICATION PROGRAMMING Subject Code : 18CS752

Question Number	Solution	Marks Allocated
	MODULE – 2	

3(a)	The while loop iterates till the condition is met & hence the number of iterations are usually unknown prior to the loop. Hence, it is called as indefinite loop
	eg: n = 1
	while n<=5:
	  print(n)
	  n = n+1
	print('over')
	→ 03 marks
	when we know total number of times the set of statements to be executed for loop will be used. This is called definite loop. The for loop iterates over a set of numbers, words, lines in a file etc.
	ex: names = ["RAM", "SHAM", "BHEEM"]
	for x in names:
	  print(x)
	→ 03 marks
		(06 marks)

(b)	A segment (s) a portion of a string is called Slicing → 1M Only a required no of characters can be extracted from a string using colon(:) symbol → 1M st[i:j] st = "Hello World" print(st[:]) print[st[:-1]) print(st[0:5]) print(st[7:0]) print(st[-1:]) → 1*4 → 4M	(06 marks)

(c)	def countChar(st,ch):
	  count=0
	  for i in st:
	  if i==ch:
	  count+=1
	  return count
	→ 4M
	st = input('Enter a string')
	ch = input('Enter character to be counted')
	→ 2M
	c = countChar(st,ch)
	print("{0} appended {1} times in {2}".format(ch,c,st))
	→ 2M
		(08 marks)

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Subject Title : PYTHON APPLICATION PROGRAMMING Subject Code : 18CS752

Question Number	Solution	Marks Allocated
4 (a)	4 String functions i) Capitalize : 1st character will be in uppercase s='Hello' str.capitalize(s) ii) upper() : str.upper() # convert to upper case iii) find() : str.find('l') # search a character iv) lower() : str.lower() # convert to lower case 4 X 2 = 8	(08 Marks)
(b)	open() → To read the contents of a file fhand = open('myfirst.txt') s= fhand.read() print('No of char read', len(s)) → 3M write() → To write the contents to a file fhand = open('myfirst.txt','w') s='Hello welcome' fhand.write(s) fhand.close() → 3M	(06 Marks)

(c)	lower = int(input('Enter lower range:'))
	upper= int(input('Enter upper range:'))
	for num in range(lower, upper+1):
	if num>1:
	for i in range(2,num):
	if(num%i)==0:
	break
	else:
	print(num)
	→ 06M
		(06 Marks)

5 (a)	MODULE-3 A list is an ordered sequence of values. — 1M A list can be of any type (int, float, string, tuples, dictionary) — 1M append() : ls=[1,2,3] ls.append('hi') sort() : ls.sort() reverse() : ls.reverse() count() : ls.count(2) 4 X 1 = 4M	(06 Marks)

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Subject Title : PYTHON APPLICATION PROGRAMMING Subject Code : 18CS752

Question Number	Solution	Marks Allocated

5 (b)	A tuple can be created in python as a comma separated list of items – may or may not be enclosed within paranthesis. — 1M
	ex: t = 'Mango', 'Banana', 'Apple' # without paranthesis
	t1 = ('Tom', 341, 'Jelly') # with paranthesis — 1M
	Creating Tuple using Steing
	>>>t = tuple('Hello') — 1½M
	>>>print(t)
	('H', 'e', 'l', 'l', 'o')
	Creating Tuple using list
	t = tuple([3, [12,5], 'Hi'])
	print(t) → 1½M
	(3, [12,5], 'Hi')
	Extracted (or) accessing
	t = ('Mango', 'Banana', 'Appli')
	print(t[1])
	Banana — 1M
		(06 Marks)

(c)	fname = input('Enter file name:')
	try: fhand = open(fname)
	except:
	print('File cannot be opened')
	exit()
	d = dict()
	for line in fand:
	for word in line.split():
	d[word] = d.get(word,0)+1
	print(d)
		(06 Marks)

6 (a)	A dictionary is a collection of unordered set of key: value pairs d = { } (or) d = dict() — 1M — 1M To add items to dictionary, d = {} d['Mang'] = 'Fruit' d['Banana'] = 'Fruit' print(d) {'Mango': 'Fruit', 'Banana': 'Fruit'} — 3M Initializing during creation tel_dit = {'Tom': 3491, 'Jelly': 8134} print(tel_dit) {'Tom': 3491, 'Jelly': 8134} — 3M	(08 Marks)

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Question Number	Solution	Marks Allocated

6 (b)	Regular expression are required for extraction of patterns such as lines/word matching — 1M
	ex: import re — 1M
	fand = open('myfile.txt')
	for line in fand:
	line = line.rstrip()
	if re.search('hai', line):
	print(line)
	→ 4M with explanation
		(06 Marks)

6(c)	total = 0
	count = 0
	while True:
	inp = input('Enter a number:')
	if inp == 'done':
	break
	value = float(inp)
	total = total + value
	count = count + 1
	average = total / count
	print("Total =", total)
	print("Count =", count)
	print("Average =", average)
		(06 Marks)

	MODULE-4	
7(a)	· Class is a user-defined data type which binds data & functions together into a single entity. — 2M · A class can be created using keyword class — 1M class Point: pass — 1M · An object is an instance of a class & it has physical existance — 1M p = point() — 1M	(06 Marks)
(b)	Shallow copy → Constructing new collection of object & then populating it with reference to the child object. → child copies are not created ex: copy.copy() — 3M with program Deep copy → Makes copying process recursive. → child copies are created ex: copy.deepcopy() with program — 3M	(06 Marks)

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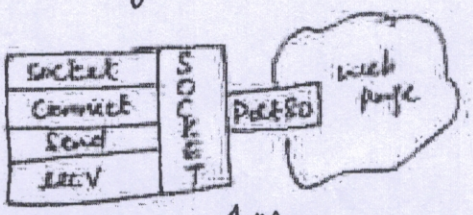
Subject Title : PYTHON APPLICATION PROGRAM Subject Code : 18CS752

Question Number	Solution	Marks Allocated

7(c)	class Point:
	def __init__(self,a=0,b=0):
	self.x=a
	self.y=b
	def __add__(self,p2):
	p3=Point()
	p3.x=self.x+p2.x
	p3.y=self.y+p2.y
	return p3
	def __str__(self):
	return "(%d,%d)"%(self.x, self.y)
	p1=Point(10,20)
	p2=Point(4,5)
	print("p1 is =",p1)
	print("p2 is=",p2)
	p3=p1+p2
	print("Sum =",p3)
		(08Marks)

8(a)	It is a special method, which is similar to constructor method — 1M init indicates initialization, invoked automatically when an object is created — 1M __init__(self) — 1M Example program with explanation — 5M	(08 Marks)
(b)	Pure functions It does not produce side effect. It communicates with the calling program only through parameters and a return value — 1M example program — 3M Modifiers when you want a function to modify one (or) more of the object it gets as arguments — 1M example program — 3M	(08 Marks)
(c)	Type based dispatch is used to add a value (int) to an object — 1M example program — 3M	(04 marks)
	MODULE-5	
9(a)	Socket is much like a file, except that a single socket provides a two-way connection between two programs. — 1M  fig — 1M socket.socket(socket.AF_INET, socket.SOCK_STREAM) — 1M example program — 5M	(08 Marks)

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Subject Title : PYTHON APPLICATION PROGRAMMING Subject Code : 18CS752

Question Number	Solution	Marks Allocated
9(b)	XML (eXtensible Markup language) → Suited for exchanging document style-data — 3M → Exchange dict, list & internal information → XML is more structured Example program — 3M	(06 Marks)

9(c)	import urllib.request
	fhand = urllib.request.urlopen('http://data.pr4e.org/romeo.txt')
	counts = dict()
	for line in fhand:
	word = line.decode().split()
	for word in words:
	counts[word] = counts.get(word,0)+1
	print(counts)
		(06 Marks)

10(a)	Python provides a module json to parse the data in JSON page import json — 1M — 1M example program with explanation — 4M	(06 Marks)
(b)	curs a() → File handles to perform operations on the data stored in database — 1M execute() → Method used to execute commands on database close() → Method used to close connection — 1M — 1M example program — 5M	(08 Marks)
(c)	from bs4 import BeautifulSoup ctx = ssl.create_default_context() url = input('Enter-') html = urlopen(url, context=ctx).read() soup = BeautifulSoup(html, "html.parser") tags = soup('a') for tag in tags: print(tag) print(tag.get('href', None)) print(tag.contents[0]) print(tag.attrs)	(06 Marks)

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Registrar (Evaluation)
Visvesvaraya Technological University
BELAGAVI - 590018

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Bengaluru - 560 057

Sri Srinivasa Educational & Charitable Trust

SAPTHAGIRI COLLEGE OF ENGINEERING

F-ADN-03/R0

(Affiliated to VTU, Belagavi, and Recognized by AICTE, New Delhi)
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(ISO: 9001-2015 and ISO: 14001-2015 certified Institute)

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057

Calendar of Events for AY: 2021-22 (6th & 8th Semester)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Events (Higher semesters)
April-2022					1	2	3	
	4	5	6	7	8	9	10	02: Chandramana Ugadi 04 : Commencement of 6th & 8th Semester classes
	11	12	13	14	15	16	17	13: Proctor report-I 14: Ambedkar Jayanthi
	18	19	20	21	22	23	24	15: Good Friday
	25	26	27	28	29	30		
May-2022							1	
	2	3	4	5	6	7	8	03: Basava Jayanthi/Ramzan 09 – 11 : IA Test-I
	9	10	11	12	13	14	15	20: Proctor report-II 21: Parents Teachers Meet-1
	16	17	18	19	20	21	22	
	23	24	25	26	27	28	29	
	30	31						
June-2022			1	2	3	4	5	08 – 10 : IA Test-II 16: Proctor report-III 18: Parents Teachers Meet-2 24-26:International Conference 30: Last Working Day (8th Sem)
	6	7	8	9	10	11	12	
	13	14	15	16	17	18	19	
	20	21	22	23	24	25	26	
	27	28	29	30				
July-2022					1	2	3	02: Mini Project Exhibition Day (6thSem) 04 - 06: IA Test-III 13 - 15: IA Test-IV 15: Proctor report-IV VTU Theory Exams (8th sem): 04th July - 20th July-22 21: Project Exhibition Day (8thSem) Project viva (8th Sem): 22th July to 30th July-2022 16: Last Working Day (6th Sem) VTU Lab Exam: 18/07/2022 - 29/07/2022
	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	
	25	26	27	28	29	30	31	
August-2022	1	2	3	4	5	6	7	VTU Theory Exams: 01/08/2022 - 20/08/2022 5: Varamahalakshmi Vratha 9: Moharam 15: Independence Day 30: Swarna Gowri Vratha 31: Ganesh Chaturi
	8	9	10	11	12	13	14	
	15	16	17	18	19	20	21	
	22	23	24	25	26	27	28	
	29	30	31					

Total number of working days in EVEN semester: 90 days

Commencement of ODD semester for AY 2022-23: 22/08/2022

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Dr. B.S. KRISHNA
Professor & Head
Department of Chemistry
Sapthagiri College of Engineering
BENGALURU - 560 057

Principal
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Chikkasandra, Hesaraghatta Road

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ACADEMIC YEAR: 2021-22 EVEN SEMESTER

INDIVIDUAL TIME TABLE

Name of the Faculty:**Prof. Shobha S** Designation: **Associate Professor**

Subject: Python Application Programming (18EC646) / Machine Learning (17EC834/15EC834) Lab: **ES Lab**
Semester/Section : **VI B/ VIII PC**

Time / Day	8:30 am – 9:30 am	9:30 am – 10:30 am	10:30 am – 10:50 am	10:50 am – 11:50 am	11:50 am – 12:50 pm	12:50 pm – 1:45 pm	1:45 pm – 2:40 pm	2:40 pm – 3:35 pm	3:35 pm – 4:30 pm
MON				18EC646 B		LUNCH BREAK			
TUE	18ECL66 / ES LAB / B1								18EC646 PAP LAB (A/B) (T)
WED	17EC834 / 15EC834 8 PC		SHORT BREAK	18EC646 B			18ECL66 / ES LAB / B2		
THU		18EC646 B			17EC834 / 15EC834 8 PC				
FRI	17EC834 / 15EC834 8 PC	17EC834 / 15EC834 8 PC			18EC646 B				
SAT									

Time-Table Coordinator

HOD

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DEPARTMENT OF ELECTRONICS &COMMUNICATIONENGINEERING

Time-table for the academic year 2021-22(EVENSemester) **wef:04-04-2022**

Semester & Section: VI B | **Room No : ALH**

Class Teacher Name: Prof. Kalavathi S

PERIOD	1	2		3	4		5	6	7
TIME	8:30am – 9:30am	9:30am – 10:30am	10:30am - 10:50am	10:50am - 11:50am	11:50am - 12:50pm	12:50 pm - 01:45 pm	01:45 pm - 02:40 pm	02:40 pm - 03:35 pm	03:35 pm - 04:30 pm
DAY									
MON	18EC62 (ES)	18EC61 (DC)		18EC646 (PAP)	Tutorial	LUNCH BREAK	18ECM68- Mini Project		
TUE	18ECL66-ES LAB (B1) / 18ECL67-COM LAB (B2)				Tutorial		18EC62 (ES)	18EC61 (DC)	18EC646-PAP LAB
WED	OE	18EC62 (ES)	KAERB TROHS	18EC646 (PAP)	18EC63 (MWA)		18ECL66-ES LAB (B2) / 18ECL67-COM LAB (B3)		
THU	18EC61 (DC)	18EC646 (PAP)		OE	18EC63 (MWA)		18ECM68- Mini Project		
FRI	18EC63 (MWA)	18EC61 (DC)		OE	18EC646 (PAP)		18ECL66-ES LAB (B3) / 18ECL67-COM LAB (B1)		
SAT	OE	18EC63 (MWA)		18EC62 (ES)	Tutorial				

Subjects Allocation

Subject Code	Subject Title	Faculty Name	Faculty Code
18EC61	Digital Communication	Prof.Shilpa V	SV
18EC62	Embedded Systems	Prof.Kalavathi S	KS
18EC63	Microwave & Antennas	Prof. Shobha H	SH
18EC646	Python Application Programming	Prof. Shobha S	SS
18XX65X	Open Elective	-	
18ECL66	Embedded System Laboratory	B1- Prof. Shobha S, Prof. Preethi T S B2-Prof. Shobha S, Prof. Kalavathi S B3- Prof.Peethi T S, Prof.Kalavathi S	
18ECL67	Communication Laboratory	B1- Prof. Manasa M G, Prof. Madhu H M B2-Prof. Manasa M G, Prof. Veena N B3- Prof. Manasa M G, Prof. Madhu H M	
18ECM68	Mini Project	Dr. A M Nagaraj, Prof. Girish J R	

Time-Table Coordinator

HOD

Principal

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Bangalore -560 057.

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DEPARTMENT OF ECE

Calendar of Events for AY: 2021-22 (6th & 8th Semester)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Events (Higher semesters)
April-2022					1	2	3	02: Chandramana Ugadi 04 : Commencement of 6th & 8th Semester classes 13: Proctor report-I 14: Ambedkar Jayanthi 15: Good Friday 27, 28, 29: Project Review 4
	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	
	25	26	27	28	29	30		
May-2022							1	03: Basava Jayanthi/Ramzan 09 – 11 : IA Test-I 17:Industrial visit 20: Proctor report-II 21: Parents Teachers Meet-1 23:Industrial visit 25, 26, 27: Project Review 5
	2	3	4	5	6	7	8	
	9	10	11	12	13	14	15	
	16	17	18	19	20	21	22	
	23	24	25	26	27	28	29	
	30	31						
June-2022			1	2	3	4	5	08 – 10 : IA Test-II 16: Proctor report-III 18: Parents Teachers Meet-2 22, 23 : Project Demo 24-26:International Conference 30: Last Working Day (8th Sem) 21-25: Certification course
	6	7	8	9	10	11	12	
	13	14	15	16	17	18	19	
	20	21	22	23	24	25	26	
	27	28	29	30				
July-2022					1	2	3	02: Mini Project Exhibition Day (6thSem) 04 - 06: IA Test-III 13 - 15: IA Test-IV 15: Proctor report-IV VTU Theory Exams (8th sem): 04th July - 20th July-22 21: Project Exhibition Day (8thSem) Project viva (8th Sem): 22th July to 30th July-2022 16: Last Working Day (6th Sem) VTU Lab Exam: 18/07/2022 - 29/07/2022
	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	
	25	26	27	28	29	30	31	
August-2022	1	2	3	4	5	6	7	VTU Theory Exams: 01/08/2022 - 20/08/2022 5: Varamahalakshmi Vratha 9: Moharam 15: Independence Day 30: Swarna Gowri Vratha 31: Ganesh Chaturi
	8	9	10	11	12	13	14	
	15	16	17	18	19	20	21	
	22	23	24	25	26	27	28	
	29	30	31					

Total number of working days in EVEN semester: 90 days
Commencement of ODD semester for AY 2022-23: 22/08/2022

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DEPARTMENT OF ECE

Calendar of Events for AY: 2021-22 (4th Semester)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Events (4th Semesters)
May-2022							1	03: Basava Jayanthi 23 : Commencement of 4th Semester classes
	2	3	4	5	6	7	8	
	9	10	11	12	13	14	15	
	16	17	18	19	20	21	22	
	23	24	25	26	27	28	29	
	30	31						
June-2022			1	2	3	4	5	20 – 22 : IA Test-I 25: Proctor report-I 24-26: International Conference
	6	7	8	9	10	11	12	
	13	14	15	16	17	18	19	
	20	21	22	23	24	25	26	
	27	28	29	30				
July-2022					1	2	3	02: Parents Teachers Meet-1 09: Seminar 18 – 20 : IA Test-II 23: Proctor report-II 25:Certification course
	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	
	25	26	27	28	29	30	31	
August-20	1	2	3	4	5	6	7	5: Varamahalakshmi Vratha 9: Moharam 13: Parents Teachers Meet-2 15: Independence Day 18 – 20 : IA Test-III 25: Proctor report-III 29: Mini Project Exhibition Day 30: Swarna Gowri Vratha 31: Ganesh Chaturi
	8	9	10	11	12	13	14	
	15	16	17	18	19	20	21	
	22	23	24	25	26	27	28	
	29	30	31					
September-2022				1	2	3	4	01 – 03 : IA Test-IV 03: Last Working Day (4th Sem) 08: Proctor report-IV VTU Lab Exam: 05/09/2022 - 13/09/2022 VTU Theory Exams:16/09/2022 - 08/10/2022
	5	6	7	8	9	10	11	
	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	
	26	27	28	29	30			

Total number of working days in EVEN semester: 92 days
Commencement of ODD semester for AY 2022-23: 10 /10/2022

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SAPTHAGIRI College of Engineering Creating Tomorrow

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

SAPTHAGIRI COLLEGE OF ENGINEERING

LESSON PLAN FOR THE ACADEMIC YEAR: ODD 2021-22

(Faculty)

Course	PYTHON APPLICATION PROGRAMMING				Course code		18EC646
Faculty	Shobha S				Semester/Sec		6A&B
Core/Elective	Contact Hours /week			Total Hours	Assessment		Credits
Core	L	T	P	40	CIE	SEE	3
	3	-	-		40	60	
Prerequisites							

Course Objectives	
1.	Learn syntax and semantics and be fluent in the use of Python flow control and Functions.
2.	Handle Strings and files to write a python program.
3.	Understand Lists, dictionaries and apply regular expressions in python for data validation and mining.
4.	Understand object-oriented programming concepts in python
5.	Build services and databases in python

Syllabus	
MODULE 1	RBT Level
Why should you learn to write programs, Variables, expressions and statements, Conditional execution, Functions,	L1-L3
MODULE 2	
Iteration, Strings, Files,	L1-L3
MODULE-3	
Lists, Dictionaries, Tuples, Regular Expressions,	L1-L3
MODULE-4	
Classes and objects, Classes and functions, Classes and methods,	L1-L3
MODULE-5	
Networked programs, Using Web Services, Using databases and SQL,	L1-L3

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

SAPTHAGIRI COLLEGE OF ENGINEERING

LESSON PLAN FOR THE ACADEMIC YEAR: ODD 2021-22

(Faculty)

Course outcomes	
At the end of this course the students will be able	
CO1	**Explain Python syntax and semantics and be fluent in the use of Python flow control and Functions.**
CO2	**Make use of Strings and files to write a python program.**
CO3	**Construct Lists, dictionaries and apply regular expressions in python for data validation and mining.**
CO4	**Implement object-oriented programming concepts in python**
CO5	**Implement exemplary applications related to network programming, web services and databases in python**

Lesson Plan

Period	Date	Topic Planned	Actual Date	Topics Covered	Remarks
Module-1					
1.	4/04	Introduction to python programming	4/04	Introduction to python programming	
2.	6/04	Why you should learn to write programs	6/04	Why you should learn to write programs	
3.	7/04	Variables in python With example programs	7/04	Variables in python With example programs	
4.	8/04	Expressions and statements in python With example programs	11/04	Expressions and statements in python With example programs	
5.	11/04	Conditional execution in python	13/04	Conditional execution in python	
6.	13/04	Functions in python	18/04	Functions in python	
7.	18/04	Question paper Programs	20/04	Question paper Programs	
8.	20/04	Question paper Programs	21/04	Question paper Programs	
At the end of this topic students able to Explain Python syntax and semantics and be fluent in the use of Python flow control and Functions.					
Module-2					

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9.	21/04	Iteration in python	22/04	Iteration in python	
10.	22/04	Programs on iteration	27/04	Programs on iteration	
11.	25/04	Strings in python	28/04	Strings in python	
12.	27/04	Programs on strings	29/04	Programs on strings	
13.	28/04	Files in python	4/04	Files in python	
14.	29/04	Programs on Files	5/04	Programs on Files	
15.	2/05	Question paper Programs	6/04	Question paper Programs	
16.	5/05	Question paper Programs	10/05	Question paper Programs	
At the end of this topic students able to Make use of Strings and files to write a python program.					
Module-3					
17.	5/05	Lists in Python	19/05	Lists in Python	placement training
18.	6/05	Programs on Lists	29/05	Programs on Lists	
19.	07/05	Dictionaries in Python	24/05	Dictionaries in Python	
20.	16/05	Programs on Dictionaries	26/05	Programs on Dictionaries	
21.	18/05	Tuples in Python	30/05	Tuples in Python	
22.	19/05	Programs on Tuples	2/06	Programs on Tuples	
23.	20/05	Regular Expressions in Python	5/06	Regular Expressions in Python	
24.	23/05	Programs on Regular Expressions	6/06	Programs on Regular Expressions	
At the end of this topic students able to Construct Lists, dictionaries and apply regular expressions in python for data validation and mining.					
Module-4					
25.	25/05	Classes and objects in python	06/06	Classes and objects in python	
26.	26/05	Programs on Classes and objects in python	8/66	Programs on Classes and objects in python	
27.	27/05	Classes and functions in python	20/6	Classes and functions in python	
28.	31/05	Programs on Classes and functions in python	22/06	Programs on Classes and functions in python	
29.	1/06	Classes and methods in python	27/06	Classes and methods in python	
30.	2/06	Programs on Classes and methods in python	7/07	Programs on Classes and methods in python	

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31.	3/06	Question paper Programs	07/07	Question paper Programs	
32.	6/06	Question paper Programs	07/07	Question paper Programs	
At the end of this topic students able toImplement object-oriented programming concepts in python					
Module-5					
33.	13/06	Network programs in python	9/07 online	Network programs in python	covered
34.	15/06	Network programs in python	9/07 online	Network programs in python	syllabus
35.	16/06	Programs on web services	10/7 online	Programs on web services	using
36.	17/06	Programs on web services	10/7 online	Programs on web services	online
37.	20/06	Using data bases in python	10/7 online 17/07	Using data bases in python	classes
38.	22/06	Using data bases in python	online 19/07	Using data bases in python	
39.	23/06	SQL in python		SQL in python	
40.	24/06	Programs on SQL in python		Programs on SQL in python	
At the end of this topic students able to Implement exemplary applications related to network programming, web services and databases in python					

PROGRAMME OUTCOMES

Program outcomes are narrower statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge and behavior. Graduation students of **Bachelor of Electronics & Communication Engineering** program at Sapthagiri College of Engineering will attain the following program outcomes**in the field of Electronics & Communication engineering.**

	PROGRAM OUTCOME
PO1.	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2.	**Problem analysis**: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3.	**Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4.	**Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5.	**Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities

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	with an understanding of the limitations.
PO6.	**The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7.	**Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8.	**Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9.	**Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10.	**Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11.	**Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12.	**Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME SPECIFIC OUTCOMES

At the end of the B.E Electronics & Communication Engineering program, students of sapthagiri college of Engineering are expected to have developed the following program specific outcomes.

	PROGRAM SPECIFIC OUTCOMES
PSO1	Specify, design, build and test analog, digital and embedded systems for signal processing
PSO2	Design wired and wireless analog and digital communication systems as per specifications, and determine their performance.

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

SAPTHAGIRI COLLEGE OF ENGINEERING

LESSON PLAN FOR THE ACADEMIC YEAR: ODD 2021-22

(Faculty)

CO-PO Mapping

Mapping of Course outcomes, Program Objectives and Program specific outcomes **Note:** 1 = Slight 2 = Moderate 3 = Strong														
Course outcomes	**Program Outcomes**												**PSOs**		**Total**
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	
CO-1	3	1	1	-	-	-	-	-	1	1	-	2	-	1	
CO-2	3	2	1	-	-	-	-	-	1	1	-	2	-	1	
CO-3	3	3	2	-		-	-	-	1	1	-	2	-	1	
CO-4	3	3	2	-	-	-	-	-	1	1	-	2	-	1	
CO-5	3	3	2	1	-	-	-	-	1	1	-	2	-	1	
Average	**3**	**2.4**	**1.6**	**1**	-	-	-	-	**1**	**1**	-	**2**	-	**1**	

Signature of HOD

Signature of faculty

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4	1SG19EC064	praveen.A	1	2	3	4	5	6	7	8	9
5	1SG19EC065	praveen.B.R	1	2	3	3	4	5	5	6	7
6	1SG19EC066	preetam Hegde	0	1	2	3	4	5	6	7	8
7	1SG19EC67	Preethi . kulkarni	0	1	2	3	4	4	5	6	7
8	1SG19EC68	Priya	0	1	2	3	4	5	6	7	8
9	1SG19EC69	purushotham.R	0	1	2	3	4	5	6	7	8
10	1SG19EC 70	R. Kishore	0	1	2	3	4	4	5	6	7
11	1SG19EC71	Rachana.M	0	1	2	2	3	4	5	6	7
12	1SG19EC72	Rahul.N	1	2	3	4	5	6	7	8	9
13	1SG19EC73	Rahul.N	0	1	2	3	4	4	5	6	7
14	1SG19EC74	Rahul kumar Yadav	1	2	3	3	4	5	5	6	7
15	1SG19EC75	Rajapu Rishikesh	0	1	2	3	4	4	5	6	7
16	1SG19EC76	Rakesh L	1	2	3	4	5	6	7	8	9
17	1SG19EC77	Ranjith.SG	1	1	2	3	4	5	6	7	8
18	1SG19EC78	Ravikiran .	0	1	1	2	3	4	5	6	7
19	1SG19EC79	Revayya Kabbarmath	1	2	3	4	5	6	7	8	9
20	1SG19EC80	Rohith.D.G	0	1	1	2	3	4	5	6	7
21	1SG19EC81	Ruthvik Gowda.H	1	2	2	3	4	5	6	7	8
22	1SG19EC82	S.Raveesh koti	1	1	2	3	4	5	6	7	8
23	1SG19EC83	Sagar A	1	2	3	3	4	5	6	7	8
24	1SG19EC84	Sai Ganesh.C.S	1	2	3	4	5	6	7	8	9
25	1SG19EC85	Sangeeth.M	1	1	2	3	4	5	6	7	8
	Initial										

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10	11	12	13	14	15	15	1
8	9	10	11	12	13	14	1
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9	10	11	12	13	14	15	1
8	8	8	8	8	8	8	

Sapthagiri College of Engineering

Department of Electronics and Communication Engineering

Students Name List

Semester: 6th 'B'

Academic Year: 2021–22

Sl. No	USN	Name of the student
1.	1SG19EC061	POORNIMA S
2.	1SG19EC062	PRASHANTH K B
3.	1SG19EC063	PRATHIK R GOWDA
4.	1SG19EC064	PRAVEEN A
5.	1SG19EC065	PRAVEEN B R
6.	1SG19EC066	PREETAM HEGDE
7.	1SG19EC067	PREETI KULKARNI
8.	1SG19EC068	PRIYA
9.	1SG19EC069	PURUSHOTHAM R
10.	1SG19EC070	R KISHORE
11.	1SG19EC071	RACHANA M
12.	1SG19EC072	RAHUL N
13.	1SG19EC073	RAHUL N
14.	1SG19EC074	RAHULKUMAR YADAV
15.	1SG19EC075	RAJAPU RISHIKESH
16.	1SG19EC076	RAKESH L
17.	1SG19EC077	RANJITH S G
18.	1SG19EC078	RAVIKIRAN
19.	1SG19EC079	REVAYYA KABBURMATH
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22.	1SG19EC082	S RAVEESH KOTI
23.	1SG19EC083	SAGAR A
24.	1SG19EC084	SAI GANESH C S
25.	1SG19EC085	SANGEETH M
26.	1SG19EC086	SANJAY K
27.	1SG19EC087	SANKEERTH M
28.	1SG19EC088	SHASHANK R
29.	1SG19EC089	SHIVAM KUMAR O
30.	1SG19EC090	SHIVAM KUMAR SHARMA
31.	1SG19EC091	SHIVAM SHIVA
32.	1SG19EC092	SHIVANI V
33.	1SG19EC093	SHREYAS G RAJ
34.	1SG19EC094	SHUBHAM PATHAK
35.	1SG19EC095	SINDHU S
36.	1SG19EC096	SM FARAZ HUSSAIN
37.	1SG19EC097	SNEHARANI U
38.	1SG19EC098	SRINIVAS N KAUSHIK
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40.	1SG19EC100	SUCHARITHA M G
41.	1SG19EC101	SUMANA M
42.	1SG19EC102	SUMANTH C GOWDA
43.	1SG19EC103	SUSHMA B O
44.	1SG19EC104	SUSHMA M M
45.	1SG19EC105	SWAROOP S
46.	1SG19EC106	TAPAN
47.	1SG19EC107	TARANUM BANU
48.	1SG19EC108	THANUSHREE G
49.	1SG19EC109	V VARSHINI
50.	1SG19EC110	VAISHNAVI U S
51.	1SG19EC111	VANDHANA S
52.	1SG19EC112	VARSHA M
53.	1SG19EC113	VIJAYAKUMAR S N
54.	1SG19EC114	VIKRAM PARASANAGOUDRA
55.	1SG19EC115	VINUTHA H V
56.	1SG19EC116	VINUTHA M J
57.	1SG19EC117	VISMAYA B V
58.	1SG19EC118	YAMUNA A C
59.	1SG19EC120	YASHASWINI S
60.	1SG20EC400	GOWTHAM S MAGAR
61.	1SG20EC401	HARSHITH V
62.	1SG20EC402	HONNESH BABU P N
63.	1SG20EC403	LAKSHMISHA J P
64.	1SG20EC405	~~NIKHIL S S~~ SULTAS

HOD

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Subject:PAP

Subject Code:18EC646

Assignment -I

1. List and give syntax of all python supported conditional statements along with its usage with an example program to check whether the given number is positive or negative or zero.
2. Explain salient features of python.
3. Differentiate between compiler and interpreter.
4. What is user defined functions? how can we pass parameters in it with an example.
5. Explain the rules of precedence and by python to evaluate an expression
6. List the rules to declare the variable in python. Demonstrate at least 3 types of variables.
7. How python handles exceptions? Explain with an example.
8. What are python words and sentences with example.
9. What are fruitful and void functions with example.
10. With syntax explain finite and infinite looping constructs in python.

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PAP-Quiz-1

Answer all questions. All questions carry equal marks.

* Required

1. Email *

2. USN: *

3. Name: *

4. Email Id: *

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5. 1. How is a code block indicated in Python? * 1 point

Mark only one oval.

- ◯ Brackets
- ◯ Indentation
- ◯ Key
- ◯ None of the above

6. 2. The order of precedence in the Python language is: A) Exponential * 1 point
B) Parentheses C) Division D) Multiplication E)
Subtraction F) Addition

Mark only one oval.

- ◯ B,A,D,C,F,E
- ◯ A,B,D,C,F,E
- ◯ A,B,C,D,E,F
- ◯ B,A,D,C,E,F

7. 3. What is the output of the following code : print (9//2) * 1 point

Mark only one oval.

- ◯ 4.5
- ◯ 4.0
- ◯ 4
- ◯ error

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8. 4. What will be the output of the following code : print (type(int)) * 1 point

Mark only one oval.

- type 'int'
- type 'type'
- Error
- zero

9. 5. Which of the following is the use of id() function in python? * 1 point

Mark only one oval.

- Id returns the identity of the object
- Every object doesn't have a unique id
- All of the mentioned
- None of the mentioned

10. 6. Which module in Python supports regular expressions? * 1 point

Mark only one oval.

- re
- regex
- pyregex
- None of the above mentioned

11. 7. Given a string s = "Welcome", which of the following code is incorrect? * 1 point

Mark only one oval.

- print(s[0])
- print (s.lower())
- s[1] = 'r'
- print (s.strip())

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12. 8. Which of the following function convert a string to a float in python? * 1 point

Mark only one oval.

- ◯ int(x [,base])
- ◯ long(x [,base])
- ◯ float(x)
- ◯ str(x)

13. 9. Which statement is correct? * 1 point

Mark only one oval.

- ◯ List is immutable && Tuple is mutable
- ◯ List is mutable && Tuple is immutable
- ◯ Both are Mutable.
- ◯ Both are Immutable

14. 10. What type of data is: arr = [(1,1),(2,2),(3,3)]? * 1 point

Mark only one oval.

- ◯ Array of tuples
- ◯ Tuples of lists
- ◯ List of tuples
- ◯ Invalid type

15. 11. What error occurs when you execute the following Python code snippet? * 1 point

apple = mango

Mark only one oval.

- ◯ SyntaxError
- ◯ NameError
- ◯ ValueError
- ◯ TypeError

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16. 12. Is Python case sensitive when dealing with identifiers? * 1 point

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ machine dependent
- ◯ none of the mentioned

17. 13. Which is the correct approach of declaring and initialising a variable, 'a' with value 10? * 1 point

Mark only one oval.

- ◯ a=10
- ◯ int a=10
- ◯ int a; a=10
- ◯ declare a=10

18. 14. Which of the following is an invalid variable? * 1 point

Mark only one oval.

- ◯ a_b
- ◯ foo
- ◯ 1st_string
- ◯ my_string_1

19. 15. In Python, a variable may be assigned a value of one type, and then later assigned a value of a different type: * 1 point

Mark only one oval.

- ◯ True
- ◯ False

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PAP Quiz-2

* Required

1. Email *

2. USN *

3. Name *

4. 1.colors = ["red", "green", "burnt sienna", "blue"] colors[2]=? 1 point

Mark only one oval.

- 'blue'
- 'green'
- 'burnt Sienna'
- 'red'

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5. 2. Which of these is the correct code for creating a list of names? 1 point

Mark only one oval.

- nameList = John, Harry, Jesse, John, Harry, Harry
- nameList = ["John", "Harry", "Jesse", "John", "Harry", "Harry"]
- nameList = ("John", "Harry", "Jesse", "John", "Harry", "Harry")
- nameList = [John, Harry, Jesse, John, Harry, Harry]

6. 3. What is printed when the following code is run? a = (1, 2, 3, 4) 1 point
print(a[1:-1])

Mark only one oval.

- Error, tuple slicing doesn't exist
- B. [2, 3, 4]
- C. (2, 3, 4)
- D. (2, 3)

7. 4. What is printed when the following code is run? 1 point

```
def practice(m):
    m = list(m)
    x, y = m
    return y
m = ('have', 'fun')
print(practice(m))
```

Mark only one oval.

- have
- ['have', 'fun']
- fun
- ('have', 'fun')

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8. 5. Choose the correct option. 1 point

Mark only one oval.

- In Python, a tuple can contain only integers as its elements.
- In Python, a tuple can contain only strings as its elements.
- In Python, a tuple can contain both integers and strings as its elements.
- In Python, a tuple can contain either string or integer but not both at a time.

9. 6. What will be the output of below Python code? tuple1=(5,1,7,6,2) 1 point

```
tuple1.pop(2)
print(tuple1)
```

Mark only one oval.

- (5,1,6,2)
- (5,1,7,6)
- (5,1,7,6,2)
- Error

10. 7. What is the output of the following program? tuple1 = (1, 2, 4, 3) 1 point

```
tuple2 = (1, 2, 3, 4)
print(tuple1 < tuple2)
```

Mark only one oval.

- Error
- True
- False
- Unexpected

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11. 8. Which keyword is used for function in Python language? 1 point

Mark only one oval.

- Function
- Def
- Fun
- Define

12. 9. Which of the following functions is a built-in function in python? 1 point

Mark only one oval.

- factorial()
- print()
- seed()
- sqrt()

13. 10. What will be the output of the following Python statement? 1 point

```
>>>"a"+"bc"
```

Mark only one oval.

- bc
- abc
- a
- bca

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14. 11. What arithmetic operators cannot be used with strings in Python? 1 point

Mark only one oval.

- ◯ *
- ◯ -
- ◯ +
- ◯ all of the above

15. 12. Which of the following statements is used to create an empty set in Python? 1 point

Mark only one oval.

- ◯ ()
- ◯ []
- ◯ {}
- ◯ set()

16. 13. What are the two main types of functions in Python? 1 point

Mark only one oval.

- ◯ System function
- ◯ Custom function
- ◯ Built-in function & User defined function
- ◯ User function

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17. 14. What will be the output of the following Python code snippet? 1 point

```
z=set('abc$de')
'a' in z
```

Mark only one oval.

- ◯ Error
- ◯ True
- ◯ False
- ◯ No output

18. 15. What will be the output of the following Python code snippet? 1 point

```
test = {1:'A', 2:'B', 3:'C'}
test = {}
print(len(test))
```

Mark only one oval.

- ◯ 0
- ◯ None
- ◯ 3
- ◯ An exception is thrown

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Department of Electronics and Communication

QUIZ-1

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Quiz-2

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3	2022/07/06 4:19:14 AM EST	prathikrg@gmail.com	9.00 / 15	1SG19EC063	Prathik R Gowda
4	2022/07/06 4:19:48 AM EST	apraveen628@gmail.com	14.00 / 15	1SG19EC064	PRAVEEN A
5	2022/07/06 4:21:01 AM EST	praveen.manu555@gmail.com	14.00 / 15	1SG19EC065	Praveen B R
6	2022/07/06 4:18:48 AM EST	preetamhegde85@gmail.com	13.00 / 15	1SG19EC066	Preetam Hegde
7	2022/07/06 4:19:03 AM EST	preetikulkarni944@gmail.com	10.00 / 15	1SG19EC067	Preeti kulkarni
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10	2022/07/06 4:19:10 AM EST	rachanarachuraj23@gmail.com	7.00 / 15	1SG19EC071	Rachana M
11	2022/07/06 4:18:17 AM EST	rahulnayak80505@gmail.com	11.00 / 15	1SG19EC072	RAHUL N
12	2022/07/06 4:19:51 AM EST	rahuln19092001@gmail.com	8.00 / 15	1SG19EC073	RAHUL N
13	2022/07/06 4:19:40 AM EST	yadavrahul52643@gmail.com	12.00 / 15	1sg19ec074	Rahul Kumar Yadav
14	2022/07/06 4:19:55 AM EST	rishirokx2303@gmail.com	13.00 / 15	1sg19ec075	Rajapurishikesh
15	2022/07/06 4:20:13 AM EST	messirakesh15@gmail.com	11.00 / 15	1SG19EC076	Rakesh L
16	2022/07/06 4:19:42 AM EST	kiranmailar3111@gmail.com	10.00 / 15	1SG19EC078	Ravikiran
17	2022/07/06 4:19:36 AM EST	revayyakabburmath@gmail.com	11.00 / 15	1SG19EC079	REVAYYA KABBURMATH
18	2022/07/06 4:23:07 AM EST	Rohith14bal@gmail.com	12.00 / 15	1SG19EC080	Rohith D G
19	2022/07/06 4:21:01 AM EST	ruthvikgowdah@gmail.com	14.00 / 15	1SG19EC081	Ruthvik Gowda H
20	2022/07/06 4:21:58 AM EST	raveeshkoti@gmail.com	15.00 / 15	1SG19EC082	S.Raveesh koti
21	2022/07/06 4:19:57 AM EST	stormzshadow123@gmail.com	10.00 / 15	1SG19EC083	Sagar.A
22	2022/07/06 4:20:24 AM EST	gane222001@gmail.com	12.00 / 15	1SG19EC084	Sai Ganesh CS
23	2022/07/06 4:22:29 AM EST	sangeethelangode2001@gmail.com	13.00 / 15	1SG19EC085	Sangeeth M
24	2022/07/06 4:16:18 AM EST	sanjay8310761538@gmail.com	13.00 / 15	1sg19ec086	Sanjay K
25	2022/07/06 4:17:43 AM EST	sankeerthms2001@gmail.com	14.00 / 15	1SG19EC087	Sankeerth M
26	2022/07/06 4:20:38 AM EST	shashugowda2001@gmail.com	14.00 / 15	1SG19EC088	SHASHANK R
27	2022/07/06 4:22:00 AM EST	shivamk.omprakash@gmail.com	15.00 / 15	1SG19EC089	Shivam Kumar O
28	2022/07/06 4:21:47 AM EST	dhoni23287@gmail.com	14.00 / 15	1SG19EC090	SHIVAM KUMAR SHARMA
29	2022/07/06 4:19:35 AM EST	Shivamchoudhary9431@gmail.com	12.00 / 15	1sg19ec091	Shivam Shiva
30	2022/07/06 4:20:05 AM EST	shivanishilpa2002@gmail.com	12.00 / 15	1SG19EC092	SHIVANI.V
31	2022/07/06 4:19:22 AM EST	shreyasraj93598@gmail.com	14.00 / 15	1SG19EC093	Shreyas G Raj
32	2022/07/06 4:20:17 AM EST	rajp9693759948@gmail.com	9.00 / 15	1sg19ec094	Shubham Pathak
33	2022/07/06 4:20:33 AM EST	sindhusainath44@gmail.com	14.00 / 15	1sg19ec095	Sindhu s
34	2022/07/06 4:18:10 AM EST	smfarazhussain64@gmail.com	12.00 / 15	1SG19EC096	SM FARAZ HUSSAIN
35	2022/07/06 4:20:17 AM EST	sneharaniu@gmail.com	9.00 / 15	1sg19ec097	Sneharani u
36	2022/07/06 4:20:27 AM EST	srinivaskaushik2241@gmail.com	12.00 / 15	1SG19EC098	Srinivas N Kaushik
37	2022/07/06 4:20:02 AM EST	shreeshabelavadi@gmail.com	14.00 / 15	1SG19EC099	SUBHASH BS
38	2022/07/06 4:19:14 AM EST	sucharithamg@gmail.com	11.00 / 15	1SG19EC100	SUCHARITHA M G
39	2022/07/06 4:17:47 AM EST	msumana008@gmail.com	9.00 / 15	1SG19EC101	Sumana M
40	2022/07/06 4:21:59 AM EST	gowdasumanthc@gmail.com	15.00 / 15	1SG19EC102	Sumanth C Gowda
41	2022/07/06 4:18:58 AM EST	sushmabo2001@gmail.com	9.00 / 15	1SG19EC103	Sushma B O
42	2022/07/06 4:21:59 AM EST	tapanupa4321@gmail.com	15.00 / 15	1sg19ec106	Tapan
43	2022/07/06 4:20:05 AM EST	taranum275@gmail.com	12.00 / 15	1SG19EC107	Taranum Banu

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44	2022/07/06 4:20:22 AM EST	thanushree2811@gmail.com	9.00 / 15	1SG19EC108	Thanushree.G
45	2022/07/06 4:18:47 AM EST	vvarshinivenkatesh@gmail.com	11.00 / 15	1sg19ec109	V VARSHINI
46	2022/07/06 4:20:11 AM EST	vaishnavisrinivas000@gmail.com	12.00 / 15	1SG19EC110	Vaishnavi U S
47	2022/07/06 4:17:49 AM EST	Vandhanasrinivasan131@gmail.com	9.00 / 15	1SG19EC111	Vandhana.S
48	2022/07/06 4:20:35 AM EST	varsha.muniraju@gmail.com	13.00 / 15	1SG19EC112	Varsha M
49	2022/07/06 4:19:27 AM EST	itsvijayakumarsn@gmail.com	12.00 / 15	1sg19ec113	VijayaKumar S N
50	2022/07/06 4:20:24 AM EST	parasanagoudrav@gmail.com	10.00 / 15	1SG19EC114	Vikram parasanagoudra
51	2022/07/06 4:19:23 AM EST	vinuthahv2358@gmail.com	13.00 / 15	1SG19EC115	Vinutha. H. V
52	2022/07/06 4:19:05 AM EST	vinutha0814@gmail.com	11.00 / 15	1SG19EC116	Vinutha M.J
53	2022/07/06 4:20:20 AM EST	vijivismaya012@gmail.com	14.00 / 15	1sg19ec117	Vismaya B V
54	2022/07/06 4:21:45 AM EST	yamuna.ac02@gmail.com	9.00 / 15	1SG19EC118	Yamuna A C
55	2022/07/06 4:20:21 AM EST	yashaswinishivanna55@gmail.com	14.00 / 15	1SG19EC120	Yashaswini S
56	2022/07/06 4:20:30 AM EST	gowthamsmagar@gmail.com	12.00 / 15	1SG20EC400	Gowtham S Magar
57	2022/07/06 4:18:43 AM EST	harshavbt@gmail.com	7.00 / 15	1SG20EC401	Harshith V
58	2022/07/06 4:19:49 AM EST	honnesh1452000@gmail.com	10.00 / 15	1SG20EC402	Honnesh Babu p n
59	2022/07/06 4:18:21 AM EST	lakshmishaj1999p@gmail.com	8.00 / 15	1SG20EC403	Lakshmisha j p
60	2022/07/06 4:19:43 AM	suhas00613@gamil.com	11.00 / 15	1SG20EC41	Suhas S

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SAPTHAGIRI COLLEGE OF ENGINEERING
Department of Electronics and Communication
Internal Assessment Test –I

Subject: PAP
Semester: VI(A and B)
Duration: 1hours

Sub Code:18EC646
Max Marks: 30
Date: 11:5:2022

Note: Answer any two full questions, choosing one from each module

uestio n No.	Questions	Marks	BLT	CO's
	Module-1			
1 a.	Illustrate the salient features of python	5	L2	CO1
b.	Explain the following a) Skills necessary for a programmer b) Modulus operator	5	L2	CO1
c.	Differentiate between complier and interpreter.	5	L3	CO1
	OR			
2 a.	List and give syntax of all python supported conditional statements along with its usage with an example to check whether given number is positive or negative.	7	L1, L2	CO1
b.	Explain break and continue statement with an example in python	4	L2	CO1
c.	Write python program to calculate largest of three numbers.	4	L3	
	Module-1			
3 a.	Differentiate between argument and operator. Illustrate the flow of python function with an example program to convert given Celsius and Fahrenheit temperature.	7 2+5	L2	CO1
b.	Write a python program to calculate area of a circle, square and rectangle. Print results. Take input from user.	4	L2	CO1
c.	Evaluate the following i)(2**3**2) ii) -18//2 iii) (10 - 4 * 2) iv) (2**4+(5+5)**(1+1))	4	L3	CO1
	OR			
4	Define definite and infinite loops in python with example	7	L3	CO1
b.	Write Python program to print prime numbers from 2 to 50	4	L2	CO1

c.	What is the output of following python code?
	i)
	x = 10
	y = 50
	if x ** 2 > 100 and y < 100:
	print (x, y)
	ii) age=2
	if age<10:
	print(age)
	else:
	print (age +3)
		4	L3	CO1

CO1: Examine Python Syntax and Semantics and be fluent in the use of Python flow control and Functions

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#14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore – 560057.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Subject:PAP

Subject Code:18EC646

Assignment -I

1. List and give syntax of all python supported conditional statements along with its usage with an example program to check whether the given number is positive or negative or zero.
2. Explain salient features of python.
3. Differentiate between compiler and interpreter.
4. What is user defined functions? how can we pass parameters in it with an example.
5. Explain the rules of precedence and by python to evaluate an expression
6. List the rules to declare the variable in python. Demonstrate at least 3 types of variables.
7. How python handles exceptions? Explain with an example.
8. What are python words and sentences with example.
9. What are fruitful and void functions with example.
10. With syntax explain finite and infinite looping constructs in python.

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SAPTHAGIRI COLLEGE OF ENGINEERING
Department of Electronics and Communication
Internal Assessment Test –I

Subject: PAP
Semester: VI(A and B)
Duration: 1hours

Sub Code:18EC646
Max Marks: 30
Date: 11:5:2022

Note: Answer any two full questions, choosing one from each module

uestio No.	Questions	Marks	BLT	CO's
	Module-1			
1 a.	Illustrate the salient features of python	5	L2	CO1
b.	Explain the following a) Skills necessary for a programmer b) Modulus operator	5	L2	CO1
c.	Differentiate between complier and interpreter.	5	L3	CO1
	OR			
2 a.	List and give syntax of all python supported conditional statements along with its usage with an example to check whether given number is positive or negative.	7	L1, L2	CO1
b.	Explain break and continue statement with an example in python	4	L2	CO1
c.	Write python program to calculate largest of three numbers.	4	L3	
	Module-1			
3 a.	Differentiate between argument and operator. Illustrate the flow of python function with an example program to convert given Celsius and Fahrenheit temperature.	7	L2	CO1
b.	Write a python program to calculate area of a circle, square and rectangle. Print results. Take input from user.	4	L2	CO1
c.	Evaluate the following i)(2**3**2) ii) -18//2 iii) (10 - 4 * 2) iv) (2**4+(5+5)**(1+1))	4	L3	CO1
	OR			
4 a.	Define definite and infinite loops in python with example	7	L3	CO1
b.	Write Python program to print prime numbers from 2 to 50	4	L2	CO1

c.	What is the output of following python code?
	i)
	x = 10
	y = 50
	if x ** 2 > 100 and y < 100:
	print (x, y)
	ii) age=2
	if age<10:
	print(age)
	else:
	print (age +3)
		4	L3	CO1

CO1: Examine Python Syntax and Semantics and be fluent in the use of Python flow control and Functions

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SAPTHAGIRI COLLEGE OF ENGINEERING
Department of Electronics and Communication
Internal Assessment Test –I

Subject: PAP
Semester: VI(A and B)
Duration: 1hours

Sub Code:18EC646
Max Marks: 30
Date: 11:5:2022

Note: Answer any two full questions, choosing one from each module

Questio No.	Questions	Marks	BLT	CO's
	Module-1			
a.	Illustrate the salient features of python	5	L2	CO1
b.	Explain the following a) Skills necessary for a programmer b) Modulus operator	5	L2	CO1
c.	Differentiate between complier and interpreter.	5	L3	CO1
	OR			
a.	List and give syntax of all python supported conditional statements along with its usage with an example to check whether given number is positive or negative.	7	L1, L2	CO1
b.	Explain break and continue statement with an example in python	4	L2	CO1
c.	Write python program to calculate largest of three numbers.	4	L3	
	Module-1			
a.	Differentiate between argument and operator. Illustrate the flow of python function with an example program to convert given Celsius and Fahrenheit temperature.	7	L2	CO1
b.	Write a python program to calculate area of a circle, square and rectangle. Print results. Take input from user.	4	L2	CO1
c.	Evaluate the following i)(2**3**2) ii) -18//2 iii) (10 - 4 * 2) iv) (2**4+(5+5)**(1+1))	4	L3	CO1
	OR			
a.	Define definite and infinite loops in python with example	7	L3	CO1
b.	Write Python program to print prime numbers from 2 to 50	4	L2	CO1

c.	What is the output of following python code?
	i)
	x = 10
	y = 50
	if x ** 2 > 100 and y < 100:
	print (x, y)
	ii) age=2
	if age<10:
	print(age)
	else:
	print (age +3)
		4	L3	CO1

CO1: Examine Python Syntax and Semantics and be fluent in the use of Python flow control and Functions

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SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU. F-IAT-05/R0

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGG.

SCHEME & SOLUTION

Sem. & Sec.: VI A & B | Academic Year: | Date: 16/05/22

Subject: PAP | Subject Code: 18EC646

Duration: 1 hr | Max. Marks: 30

INTERNAL ASSESSMENT TEST - I

Q. No.	Solutions	Marks Allocated
1a)	* Easy to code * Free and open source * object Oriented Language * GUI programming suppt * High level language * Large standard library * portable language * Integrated language → can be integrated with C & C++ * Interpreted language → execution line by line * Dynamically typed language → variable is decided at run time	5
b) (1)	* programming language → need to know the vocabulary and the grammar * Need to tell story in python → story is program & programmer must develop skill & art in Constructing story (2) 3%2 Remainder = 1 modulus operator returns remainder	2.5 + 2.5
c)	**Compiler** * Scans whole program * Less Mem → execution * Converts source code to object code * errors shown at end Ex C, C++ **Interpreter** * Translates program one statement at a time * more time → execution * does not convert to object code but scans line by line * errors shown line by line Ex MATLab, python	5

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Q. No.	Solutions	Marks Allocated
2a	1. If x = input ('enter the number') if x < 0: print ('number is -ve') print ('number is +ve')	3.5
	2. If x < 0: print ('number is -ve') else print ('number is +ve')	3.5
B	3. while True: line = input ('>') if Line[0] == '#' Continue if Line == 'done' break	4

C	m1 = float (input ('enter the marks'))
	m2 = float (input ('enter the marks'))
	M3 = float (input ('enter the marks'))
	if (m1 > m2):
	if (m2 > m3):
	total = (m1+m2)/2
	else:
	total = (m1+m3)/2
	elif (m1 > m3):
	total = (m1+m2)/2
	else:
	total = (m2+m3)/2
		4

	x = input ('enter the no')
	y = input ('enter the no')
	z = input ('enter the no')
	if x > y & x > z:
	low = x
	elif y > x & y > z:
	low = y
	else:
	low = z	

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Q. No.	Solutions	Marks Allocated
3a)	argument = A value provided to a function when the function is called. This value is assigned to the corresponding parameter in the function x = input ('enter temp in celsius') fah = (x * 1.8) + 32 print ('temp in Fahrenheit is', fah)	2+5
b)	r = input ('enter the radius') Area1 = 3.14 * r * r print ('the area of circle is', Area1) x = input ('enter the side of square') Area2 = x * x print ('the area of square is', Area2) y = input ('enter the side1 of rectangle') z = input ('enter the side2 of rectangle') Area3 = y * z print ('the area of rectangle is', Area3)	4
c	(i) = 512 (ii) -9.0 (iii) 2 (iv) 116	4
4a)	n = 5 while n > 0: print(n) n = n - 1 print ('out of while loop')	3.5+3.5
	n = 10 while True: print(n, end = ' ') n = n - 1 print ('Done!')	

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Q. No.	Solutions	Marks Allocated

b)	lower = int(input("enter the lower value:"))
	upper = int(input("enter the upper value:"))
	for number in range(lower, upper+1)
	if number > 1:
	for i in range(2, number):
	if (number % i) == 0
	break
	else else
	print(number)
		4

c)	① (x; y) = (None) ② age = 2	2+2

Name and Signature of

1. Course coordinator:
2. Scrutinizer:

Approved

HOD, ECE

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SAPTHAGIRI COLLEGE OF ENGINEERING
Department of Electronics and Communication
Internal Assessment Test –I

Subject: PAP
Semester: VI(A and B)
Duration: 1hours

Sub Code:18EC646
Max Marks: 30
Date: 11:5:2022

Note: Answer any two full questions, choosing one from each module

uestio n No.	Questions	Marks	BLT	CO's
	Module-1			
1 a.	Illustrate the salient features of python	5	L2	CO1
b.	Explain the following a) Skills necessary for a programmer b) Modulus operator	5	L2	CO1
c.	Differentiate between complier and interpreter.	5	L3	CO1
	OR			
2 a.	List and give syntax of all python supported conditional statements along with its usage with an example to check whether given number is positive or negative.	7	L1, L2	CO1
b.	Explain break and continue statement with an example in python	4	L2	CO1
c.	Write python program to calculate largest of three numbers.	4	L3	
	Module-1			
3 a.	Differentiate between argument and operator. Illustrate the flow of python function with an example program to convert given Celsius and Fahrenheit temperature.	7 2+5	L2	CO1
b.	Write a python program to calculate area of a circle, square and rectangle. Print results. Take input from user.	4	L2	CO1
c.	Evaluate the following i)(2**3**2) ii) -18//2 iii) (10 - 4 * 2) iv) (2**4+(5+5)**(1+1))	4	L3	CO1
	OR			
4	Define definite and infinite loops in python with example	7	L3	CO1
b.	Write Python program to print prime numbers from 2 to 50	4	L2	CO1

c.	What is the output of following python code?
	i)
	x = 10
	y = 50
	if x ** 2 > 100 and y < 100:
	print (x, y)
	ii) age=2
	if age<10:
	print(age)
	else:
	print (age +3)
		4	L3	CO1

CO1: Examine Python Syntax and Semantics and be fluent in the use of Python flow control and Functions

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGG.

SCHEME & SOLUTION

Sem. & Sec.: VI A & B | Academic Year: | Date: 16/05/22

Subject: PAP | Subject Code: 18EC646

Duration: 1 hr | Max. Marks: 30

INTERNAL ASSESSMENT TEST - I

Q. No.	Solutions	Marks Allocated
1a)	* Easy to code * Free and open source * object oriented Language * GUI programming suppt * High level language * Large standard library * portable language * Integrated language → can be integrated with C & C++ * Interpreted language → execution line by line * Dynamically typed language → variable is decided at run time	5
b) (1)	* programming language → need to know the vocabulary and the grammar * Need to tell story in python → story is program & programmer must develop skill & art in Constructing story (2) 3%2 Remainder = 1 Modulus operator returns remainder	2.5 + 2.5
c)	Compiler * Scans whole program * Less Mem → execution * Converts source code to object code * errors shown at end Ex C, C++ Interpreter * Translates program one statement at a time * more time → execution * does not convert to object code but scans line by line * errors shown line by line Ex MATLab, python	5

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Q. No.	Solutions	Marks Allocated
2a. 1.	If x = input ('enter the number') if x < 0: print ('number is -ve') print ('number is +ve')	3.5
2.	If x < 0: print ('number is -ve') else print ('number is +ve')	3.5
b	3. while 'True': line = input('>') if Line[0] == '#' continue if Line == 'done' break	4

c	M1 = float (input ('enter the marks'))
	M2 = float (input ('enter the marks'))
	M3 = float (input ('enter the marks'))
	if (M1 > M2):
	if (M2 > M3):
	total = (M1+M2)/2
	else:
	total = (M1+M3)/2
	elif (M1 > M3):
	total = (M1+M2)/2
	else:
	total = (M2+M3)/2
		4

	x = input ('enter the no')
	y = input ('enter the no')
	z = input ('enter the no')
	if x > y & x > z:
	las = x
	elif y > x & y > z:
	las = y
	else:
	las = z	

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Q. No.	Solutions	Marks Allocated
3a)	argument = A value provided to a function when the function is called. This value is assigned to the corresponding parameter in the function x = input ('enter temp in celsius') fah = (x*1.8) + 32 print ('temp in Fahrenheit is', fah)	2+5
b)	r = input ('enter the radius') Area1 = 3.14 * r * r print ('the area of circle is', Area1) x = input ('enter the side of square') Area2 = x * x print ('the area of square is', Area2) y = input ('enter the side1 of rectangle') z = input ('enter the side2 of rectangle') Area3 = y * z print ('the area of rectangle is', Area3)	4
c	(i) = 512 (ii) -9.0 (iii) 2 (iv) 116	4
4a)	n=5 while n>0: print(n) n=n-1 print ('out of while loop')	3.5+3.5
	n=10 while True: print(n, end=' ') n=n-1 print ('Done!')	

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Q. No.	Solutions	Marks Allocated
b)	lower = int(input("enter the lower value:"))	
	upper = int(input("enter the upper value:"))	
	for number in range(lower, upper+1)	
	if number > 1:	
	for i in range(2, number):	
	if (number % i) == 0	
	break	4
	else	
	print(number)	
c)	(1) (x; y) = None (2) age = 2	2+2

Name and Signature of

1. Course coordinator:
2. Scrutinizer:

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SAPTHAGIRI COLLEGE OF ENGINEERING
Department of Electronics and Communication
Internal Assessment Test –II

Subject: PAP
Semester: VI (A and B)
Duration: 1hours
Note: Answer any two full questions, choosing one from each module

Sub Code: 18EC646
Max Marks: 30
Date: 15:6:2022

Q. no	Questions	Marks	BLT	CO's
	Module-2			
1 a.	Define a string. how it can be traversed using looping statement. Write a python program to display presence of substring in main string.	8	L1, L2	CO2
b.	Explain fileopen, fileclose, fileread and filewrite concepts with an example in python	7	L2	CO2
	OR			
a.	List and explain any four built in string manipulation functions supported by python.	8	L1, L2	CO2
b.	Write a python program to accept a file name from the user: (i) Display first N lines of line. (ii) Find the frequency of occurrence of the word accepted from the user in the file	7	L2	CO2
	Module-3			
3 a.	What is list? Explain the concept of list slicing and list traversing with example	8	L2	CO3
b.	Differentiate Pop and remove methods on lists and explain both methods with an example each and how to remove more than one element from a list.	7	L2	CO3
	OR			
4 a.	Make a list of first ten letters of the alphabet the using slice operation do the following. (i) Print first three letters of the string (ii) Print any three letters from middle (iii) print 5th letter to end of the list (iv) Print all letters in the list	8	L3	CO3

	Write the output of following code.
	(i)
	``
	L1= [0.5*x for x in range (0,4)]
	Print(L1)
	``
	(ii)
	``
	List = [x+y for x in ['Hello ', 'Good '] for y in ['Dear', 'Bye']]
	print(List)
	``
	(iii)
	``
	a = [1, 2, 3, 4, 5]
	sum = 0
	for ele in a:
	    sum += ele
	print(sum)
	``
		7	L3	CO3

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CO2: Make use of Strings and files to write a python program.

CO3: Construct Lists, dictionaries and apply regular expressions in python for data validation and mining.

(50)

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGG.

SCHEME & SOLUTION

Sem. & Sec.: 6TH A&B Academic Year: Date: 15/6/2022

Subject: PAP Subject Code: 18EC646

Duration: 1Hr Max. Marks: 30

INTERNAL ASSESSMENT TEST - II

Q. No.	Solutions	Marks Allocated
1a	*string is a collection of alphabets, words & other characters. * strings are immutable i.e cannot be changed after their creation.	2
	fruit = "banana" index = 0 while index < len(fruit) letter = fruit[index] print(letter) index = index + 1	3

	s = input('enter a string');
	st = input('enter a word')
	if
	ss = s.split()
	if ss in s
	print("yes found")
	else
	print("no, not found")
		3

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Q. No.	Solutions	Marks Allocated

b.	# fileopen
	fhand = open('mbox.txt') ✓
	print (fhand)
		2×2=4

	# f = open ("mbox.txt"), 'w')
	l = 'sce'
	f.write (l) ✓
	f. close() ✓
		1.5×2=3

	f = open ("mbox.txt") in = f.read () print (in[:20]) ✓	2×4=8
2a)	1. count 5 is upper 2. endswith 6 join 3 find 7 split 4 is lower 8 startswith	
3a)	list → sequence of values, mutable Ex l=[10, 20, 30, 40] l=[1, 2, 3, 4, 5] for i in range(len(l)) p[i] = l[i] * 2 print (p)	2 3.5×2=7
	l = ['a', 'b', 'c'] l[1:2] => ['b']	3×2=6

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Q. No.	Solutions	Marks Allocated

2) a)
```
fhand = open ('mbox.txt')
nl = input ('enter the no of lines')
for in in range (nl)
    line = fhand.readline()
    print (line)
```

```
fhand = open ('mbox.txt')        ct = dict()
for i in fhand → line
→ words = i.split() → split into words
    for j in words
        if j not in counts
            counts [word] = 1
        else
            counts [word] t = 1
print (counts)
```

3.5 x 2 = 7

b)
```
n = [1, 2, 3, 4, 5, 6]
n.remove(3) → matching element removed
>> [1, 2, 4, 5, 6]
n.pop(1)
>> [1, 3, 4, 5, 6] → remove element at an index value
```

2 x 4

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Q. No.	Solutions	Marks Allocated
	0 1 2 3 4 5 n= [1, 2, 3, 4, 5, 6] det n[1:3] >> [1, 4, 5, 6]	1.5
4a)	l = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j'] print(l[0:3]) —— (1) l = len(l) h = n//2 print(l[h-1: h+2]) —— (2) print(l[5:]) —— (3) print(l) —— (4)	4×2=8
(b)	L1 = [0, 0.5, 1, 1.5] List = ['HelloDear', 'HelloDyar', 'GoodDear', 'GoodDyar'] >> sum = 15	2×2.5=5 2

Name and Signature of

1. Course coordinator:
2. Scrutinizer:

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Approved

HOD, ECE

USN	1	S	G							

SAPTHAGIRI COLLEGE OF ENGINEERING
Department of Electronics and Communication
Internal Assessment Test –III

Subject: PAP
Semester: VI (A and B)
Duration: 1hours
Note: Answer any two full questions, choosing one from each module

Sub Code:18EC646
Max Marks: 30
Date: 7:7:2022

Q. no	Questions	Marks	BLT	CO's
	Module-3			
1 a.	Explain Dictionaries in Python with example	4	L2	CO3
b.	(1) What will be the output of the following Python code? d = {"john":40, "peter":45} d["john"] =? (2) a, b=6,7 b, a=a, b print (a, b)	4	L3	CO3
c.	Explain Tuples with an example Write a python code to determine tuples by sorting a list.	7	L2	CO3
	OR			
2 a.	What is a regular expression? Explain the process of finding pattern of text with regular expressions and associated methods in python with an example.	8	L1, L2	CO3
b.	Explain the following operations in Tuples i) sum of Tuples ii) Slicing operations iii) Assignment to variables.	7	L2	CO3
	Module-4			
3 a.	Explain classes, objects and attributes in Python with example.	8	L2	CO4
	Explain pure functions and modifiers with examples	7	L2	CO4
	OR			
4 a.	Write a class rectangle that has attributes length and breadth and a method area which returns area of a rectangle.	8	L3	CO4
b.	Show using a python code how __init__ method is invoked when an object is initiated and explain its working	7	L2	CO4

CO3: Construct Lists, dictionaries and apply regular expressions in python for data validation and mining.

CO4: Implement object-oriented Programming concepts in Python

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(50)

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGG.

SCHEME & SOLUTION

Sem. & Sec.: VI A & B Academic Year: 2021-22 Date: 15/7/22

Subject: PAP Subject Code: 18ECC46

Duration: 1Hr Max. Marks: 30

INTERNAL ASSESSMENT TEST - III

Q. No.	Solutions	Marks Allocated

1a)	Socket is a way of connecting two nodes on a n/w to communicate with each other.
	import socket
	s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
	s.connect(("data.pr4e.org", 80))
	cmd = 'GET http://...'.encode()
	s.send(cmd)
	while True:
	data = s.recv(512)
	if (len(data) < 1):
	break
	print(data.decode())
	s.close()
		2+6M

b)	HOST = "data.pr4e.org" PORT = 80 s = socket.socket(socket.AF_INET, socket.SOCK_STREAM) s.connect((HOST, PORT)) s.sendall(b'...') count = 0 picture = b''	12

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Q. No.	Solutions	Marks Allocated

```
while True:
    data = s.recv(5120)
    if (len(data) < 1): break
    time.sleep(0.25)
    count = count + len(data)
    print(len(data), count)
    picture = picture + data

s.close()

pos = picture.find(b"\xff\xd8\xff\xe0")
picture = picture[pos:]
fhand = open("stuff.jpg", "wb")
fhand.write(picture)
fhand.close()
```

7M

a) import urllib.request, urllib.parse, urllib.error
counts = dict()
fhand = urllib.request.urlopen('http://data.pr4e.org/romeo.txt')
for line in fhand
    words = line.decode().split()
    for word in words
        counts[word] = counts.get(word,0) + 1
print(counts)

8M

b) Using beautiful Soup
import urllib.request, urllib.parse, urllib.error
from bs4 import BeautifulSoup
url = input('enter - ')
html = urllib.request.urlopen(url).read()
soup = BeautifulSoup(html, 'html.parser')
tags = soup('a')
for tag in tags:
    print(tag.get('href', None))

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Q. No.	Solutions	Marks Allocated

3a) JSON is data exchange form

input JSON

```
input = ''' [ {  "id" : "001",
                 "x" : "2",
                 "name" : "chuck"
              }
              {  "id" : "009",
                 "x" : "7"
                 "name" : "chuck"
              }
] '''
```

```
info = json.loads(input)
print('User count:', len(info))
for item in info
    print('name', item['name'])
    print('Id', item['id'])
    print("Attribute", item['x'])
```

7M

b) XML → Markup language

Tags → extra info

XML tags → to transfer info from one place to another

```
import xml.etree.ElementTree as ET
tree = ET.fromstring(data)
print (name:, tree.find(name).text)
print (Attr:, tree.find(email).get('hide'))
```

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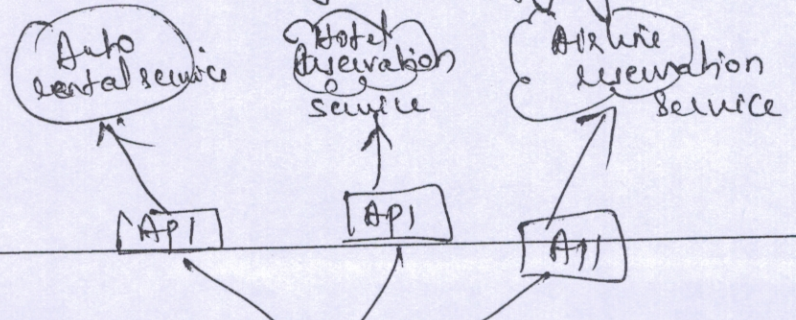
4a) SoA → only one copy of data



explanation

3+4M

Q. No.	Solutions	Marks Allocated
b	pgm takes the search string and Constructs a Url with the search string as a properly encoded parameter import urllib.request explain encoding	7

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2. Scrutinizer:

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HOD, ECE

Sl. No.	USN	Name of the student	IA-1	IA-2	IA-3	IA-4	avg-IA	assgn	Final
1	1SG19EC061	POORNIMA S	28	25	53	A	27	10	37
2	1SG19EC062	PRASHANTH K B	30	29	59	A	30	10	40
3	1SG19EC063	PRATHIK R GOWDA	28	30	58	A	30	10	40
4	1SG19EC064	PRAVEEN A	0	17	17	34	14	10	24
5	1SG19EC065	PRAVEEN B R	18	15	33	A	18	10	28
6	1SG19EC066	PREETAM HEGDE	28	29	57	114	28	10	38
7	1SG19EC067	PREETI KULKARNI	12	15	27	A	17	10	27
8	1SG19EC068	PRIYA	0	0	0	A		10	10
9	1SG19EC069	PURUSHOTHAM R	2	20	22	A	12	10	22
10	1SG19EC070	R KISHORE	11	22	33	A	14	10	24
11	1SG19EC071	RACHANA M	15	24	39	A	19	10	29
12	1SG19EC072	RAHUL N	21	21	42	A	22	10	32
13	1SG19EC073	RAHUL N	19	20	39	A	16	10	26
14	1SG19EC074	RAHULKUMAR YADAV	6	18	24	48	13	10	23
15	1SG19EC075	RAJAPU RISHIKESH	12	16	28	56	15	10	25
16	1SG19EC076	RAKESH L	23	21	44	A	21	10	31
17	1SG19EC077	RANJITH S G	15	15	30	60	21	10	31
	1SG19EC078	RAVIKIRAN	A	14	14	28	17	10	27
19	1SG19EC079	REVAYYA KABBURMATH	17	8	25	50	17	10	27
20	1SG19EC080	ROHITH DG	4	10	14	A	11	10	21
21	1SG19EC081	RUTHVIK GOWDA H		12	12	24	15	10	25
22	1SG19EC082	S RAVEESH KOTI	23	19	42	A	22	10	32
23	1SG19EC083	SAGAR A	13	22	35	70	22	10	32
24	1SG19EC084	SAI GANESH C S	13	19	32	64	18	10	28
25	1SG19EC085	SANGEETH M	5	20	25	50	21	10	31
26	1SG19EC086	SANJAY K	21	11	32	A	20	10	30
27	1SG19EC087	SANKEERTH M	26	28	54	A	28	10	38
28	1SG19EC088	SHASHANK R	0	12	12	24	15	10	25
29	1SG19EC089	SHIVAM KUMAR O	0	8	8	16	12	10	22
30	1SG19EC090	SHIVAM KUMAR SHARMA	26	21	47	A	23	10	33
31	1SG19EC091	SHIVAM SHIVA	26	29	55	A	26	10	36
32	1SG19EC092	SHIVANI V	7	4	11	22	12	10	22
33	1SG19EC093	SHREYAS G RAJ	27	28	55	A	27	10	37
34	1SG19EC094	SHUBHAM PATHAK	18	28	46	A	21	10	31
35	1SG19EC095	SINDHU S	28	16	44	A	21	10	31
36	1SG19EC096	SM FARAZ HUSSAIN	0	2	2	4	14	10	24
37	1SG19EC097	SNEHARANI U	0	13	13	26	19	10	29
38	1SG19EC098	SRINIVAS N KAUSHIK	19	11	30	A	16	10	26
39	1SG19EC099	SUBHASH BS	28	28	56	A	27	10	37
40	1SG19EC100	SUCHARITHA M G	0	18	18	36	17	10	27
41	1SG19EC101	SUMANA M	25	19	44	A	21	10	31
42	1SG19EC102	SUMANTH C GOWDA	17	13	30	60	15	10	25
43	1SG19EC103	SUSHMA B O	13	18	31	62	23	10	33
44	1SG19EC104	SUSHMA M M	19	24	A	43	23	10	33
45	1SG19EC105	SWAROOP S	12	24	A	36	20	10	30
46	1SG19EC106	TAPAN	A	21	21	A	12	10	22
47	1SG19EC107	TARANUM BANU	15	19	34	68	22	10	32
48	1SG19EC108	THANUSHREE G	0	17	17	A	10	10	20
49	1SG19EC109	V VARSHINI	16	18	34	68	21	10	31
50	1SG19EC110	VAISHNAVI U S	25	30	55	A	28	10	38
51	1SG19EC111	VANDHANA S	17	20	37	74	23	10	33
52	1SG19EC112	VARSHA M	27	25	52	A	28	10	38
53	1SG19EC113	VIJAYAKUMAR S N	15	18	33	18	19	10	29
54	1SG19EC114	VIKRAM PARASANAGOUDRA	17	20	37	A	17	10	27
55	1SG19EC115	VINUTHA H V	26	30	56	A	28	10	38
56	1SG19EC116	VINUTHA M J	16	21	37	A	20	10	30
57	1SG19EC117	VISMAYA B V	21	23	44	A	22	10	32
58	1SG19EC118	YAMUNA A C	13	A	13	26		10	10
59	1SG19EC120	YASHASWINI S	22	22	44	A	21	10	31

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60	1SG20EC400	GOWTHAM S MAGAR	16	15	31	62	14	10	24
61	1SG20EC401	HARSHITH V	20	20	40	80	19	10	29
62	1SG20EC402	HONNESH BABU P N	15	21	36	72	18	10	28
63	1SG20EC403	LAKSHMISHA J P	9	15	24	48	15	10	25
64	1SG20EC412	Suhas	5	9	14	28	14	10	24

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Recognised by AICTE, New Delhi & Affiliated to VTU, Belgaum

Individual Staff Appraisal

Name:Prof. Shobha S	Sub Code:18EC646	Sub Name:Python Application Programming
on:6B	Department:ECE	Total Students given Feedback:59

Questions	Total Rating	Out of Max	Per(%)
Adequacy Of Learning Material Provided.	499	590.0	84.58
Audibility/Clarity of Lecture.	534	590.0	90.51
[illegible]ability Of the Faculty After the Class Hours.	544	590.0	92.20
Chalk-Talk/ICT Tools Usage.	542	590.0	91.86
Interaction with the students in the class.	532	590.0	90.17
Impartial assessment of Students.	544	590.0	92.20
Discipline & Control on the class.	523	590.0	88.64
Planning Of Effective Teaching.	534	590.0	90.51
Regular & Punctual to the Classes.	539	590.0	91.36
Syllabus Coverage as per the Lesson Plan.	540	590.0	91.53
Total :	5331	5900	90.36

eview:

Very good

HOD SIGNATURE

Head of the Department
Electronics & Communication
Sapthagiri College of Engineering
Bangalore-560 057

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Branch : EC Semester : 6

Sl NO.	USN	18EC646
1	1SG19EC002	36
2	1SG19EC003	20
3	1SG19EC004	40
4	1SG19EC005	40
5	1SG19EC006	35
6	1SG19EC007	37
7	1SG19EC008	38
8	1SG19EC009	40
9	1SG19EC011	38
10	1SG19EC012	39
11	1SG19EC013	40
12	1SG19EC014	39
13	1SG19EC015	38
14	1SG19EC016	39
15	1SG19EC017	38
16	1SG19EC018	38
17	1SG19EC019	40
18	1SG19EC020	23
19	1SG19EC022	27
20	1SG19EC023	30
21	1SG19EC024	37
22	1SG19EC025	39
23	1SG19EC026	37
24	1SG19EC027	35
25	1SG19EC028	37
26	1SG19EC029	37
27	1SG19EC030	37
28	1SG19EC031	38
29	1SG19EC032	26
30	1SG19EC033	31
31	1SG19EC034	34
32	1SG19EC035	34
33	1SG19EC037	35
34	1SG19EC038	30
35	1SG19EC039	30
36	1SG19EC040	36

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37	1SG19EC041	40
38	1SG19EC042	40
39	1SG19EC043	34
40	1SG19EC044	40
41	1SG19EC045	35
42	1SG19EC046	31
43	1SG19EC048	25
44	1SG19EC049	31
45	1SG19EC050	40
46	1SG19EC051	37
47	1SG19EC052	39
48	1SG19EC053	38
49	1SG19EC054	38
50	1SG19EC055	40
51	1SG19EC056	39
52	1SG19EC057	38
53	1SG19EC058	40
54	1SG19EC059	39
55	1SG19EC060	39
56	1SG19EC061	37
57	1SG19EC062	40
58	1SG19EC063	40
59	1SG19EC064	24
60	1SG19EC065	28
61	1SG19EC066	38
62	1SG19EC067	27
63	1SG19EC069	22
64	1SG19EC070	24
65	1SG19EC071	29
66	1SG19EC072	32
67	1SG19EC073	26
68	1SG19EC074	23
69	1SG19EC075	25
70	1SG19EC076	31
71	1SG19EC077	31
72	1SG19EC078	27
73	1SG19EC079	27
74	1SG19EC080	21
75	1SG19EC081	25

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76	1SG19EC082	32
77	1SG19EC083	32
78	1SG19EC084	28
79	1SG19EC085	31
80	1SG19EC086	30
81	1SG19EC087	38
82	1SG19EC088	25
83	1SG19EC089	22
84	1SG19EC090	33
85	1SG19EC091	36
86	1SG19EC092	22
87	1SG19EC093	37
88	1SG19EC094	31
89	1SG19EC095	31
90	1SG19EC096	24
91	1SG19EC097	29
92	1SG19EC098	26
93	1SG19EC099	37
94	1SG19EC100	27
95	1SG19EC101	31
96	1SG19EC102	25
97	1SG19EC103	33
98	1SG19EC104	33
99	1SG19EC105	30
100	1SG19EC106	28
101	1SG19EC107	32
102	1SG19EC108	22
103	1SG19EC109	31
104	1SG19EC110	38
105	1SG19EC111	33
106	1SG19EC112	38
107	1SG19EC113	29
108	1SG19EC114	27
109	1SG19EC115	38
110	1SG19EC116	30
111	1SG19EC117	32
112	1SG19EC118	27
113	1SG19EC120	31
114	1SG20EC400	24

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Sl NO.	USN	18EC646
115	1SG20EC401	29
116	1SG20EC402	28
117	1SG20EC403	25
118	1SG20EC404	28
119	1SG20EC405	35
120	1SG20EC406	30
121	1SG20EC407	29
122	1SG20EC408	36
123	1SG20EC409	27
124	1SG20EC410	31
125	1SG20EC411	32
126	1SG20EC412	24

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#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru – 560057
Phone:080-28372800/1/2 www.sapthagiri.edu.in Fax: 080-28372797

Department of Electronics & Communication Engineering

CO, PO & PSO ATTAINMENT

Subject Name: Python Application Programming

Subject Code:18EC646

Course Coordinator Name: Shobha S.

CO Attainment

CO Attainment	CO1	CO2	CO3	CO4	CO5	CO6
	0.60	1.56	2.04	2.04	0.60	NA

PO Attainment:

PO Attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	1.60	1.47	0.93	-	-	-	-	-	0.53	0.53	-	1.07

PSO Attainment

PSO Attainment	PSO1	PSO2
	-	0.53

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Course Coordinator

HOD

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SAPTHAGIRI COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
VTU Exam Result Analysis Aug-Sep 2022-**BRV** [EVEN Semester 2021-22] Date 06/10/2022

SEM: 6th **SECTION: 'A'** **PASS -70%**

SL NO.	SUBJECT CODE	SUBJECT	FACULTY	STUDENTS [61]											% of Pass
				APPEARED	PASSED	FAILED	ABS	S+	S	A	B	C	D	E	
1	18EC61	DIGITAL COMMUNICATION	prof Shilpa V	63	55	8	0	0	9	18	16	12	0	0	87
2	18EC62	EMBEDDED SYSTEMS	Prof Kalavathi S	63	60	3	0	2	9	26	19	4	0	0	95
3	18EC63	MICROWAVE & ANTENNA	Prof.Sugnyani Patil	63	57	6	0	0	4	7	15	24	6	1	90
4	18EC646	PROF ELECTIVE	Prof. Sateesh kumar H C	63	54	9	0	0	4	18	17	13	2	0	86
5	18EC653	OPTIONAL ELECTIVE	BT/IS/CS/ME	63	52	11	0	2	9	14	20	7	0	0	83
6	18ECL66	EMBEDDED SYSTEMS LAB	AP, SS, KS	63	63	0	0	41	17	4	1	0	0	0	100
7	18ECL67	ADV COMM LAB	SP,MMG	63	63	0	0	31	20	11	1	0	0	0	100
8	18ECMP 68	MINI PROJECT	Prof. Nagaraj A M, Prof Girish	63	63	0	0	2	33	22	5	1	0	0	100

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SEM: 6th

SECTION: 'B'

PASS -79%

SL NO.	SUBJECT CODE	SUBJECT	FACULTY	STUDENTS [67]											% of Pass
				APPEARED	PASSED	FAILED	ABS	S+	S	A	B	C	D	E	
1	18EC61	DIGITAL COMMUNICATION	prof Shilpa V	63	57	6	0	1	6	19	16	12	3	0	90
2	18EC62	EMBEDDED SYSTEMS	Prof Kalavathi S	63	62	1	0	1	9	25	19	8	0	0	98
3	18EC63	MICROWAVE & ANTENNA	Prof.Shobha H	63	57	6	0	1	2	11	13	22	4	4	90
4	18EC646	PROF ELECTIVE	Prof. Shobha S	63	58	5	0	0	2	7	18	20	9	2	92
5	18EC653	OPTIONAL ELECTIVE	BT/IS/CS/ME	63	60	3	0	3	5	14	24	12	1	1	95
6	18ECL66	EMBEDDED SYSTEMS LAB	AP, SS, KS	63	63	0	0	46	14	3	0	0	0	0	100
7	18ECL67	ADV COMM LAB	SP,MMG	63	62	1	0	41	16	11	4	0	0	0	98
8	18ECMP 68	MINI PROJECT	Prof. Nagaraj A M, Prof Girish	63	63	0	0	15	27	18	3	0	0	0	100

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SEM: 6th

SECTION: 'A & B' (OVERALL)

PASS —74%

SL. No	Sub Code	Subject	Faculty	STUDENTS [128]											% of Pass
				APPEARED	PASSED	FAILED	ABS	S+	S	A	B	C	D	E	
1	18EC61	DIGITAL COMMUNICATION	prof Shilpa V	126	112	14	0	1	15	37	32	24	3	0	89
2	18EC62	EMBEDDED SYSTEMS	Prof Kalavathi S	126	122	4	0	3	18	51	38	12	0	0	97
3	18EC63	MICROWAVE & ANTENNA	Prof.Shobha H/Sugnyani Patil	126	114	12	0	1	6	18	28	46	10	5	90
4	18EC646	PROF ELECTIVE	Prof. Shobha S/Sateesh kumar H C	126	112	14	0	0	6	25	35	33	11	2	89
5	18EC653	OPTIONAL ELECTIVE	BT/IS/CS/ME	126	112	14	0	5	14	28	44	19	1	1	89
	18ECL66	EMBEDDED SYSTEMS LAB	AP, SS, KS	126	126	0	0	87	31	7	1	0	0	0	100
	18ECL67	ADV COMM LAB	SP,MMG	126	125	1	0	62	36	22	5	0	0	0	99
	18ECMP 68	MINI PROJECT	Prof. Nagaraj A M, Prof Girish	126	126	0	0	17	60	40	8	1	0	0	100

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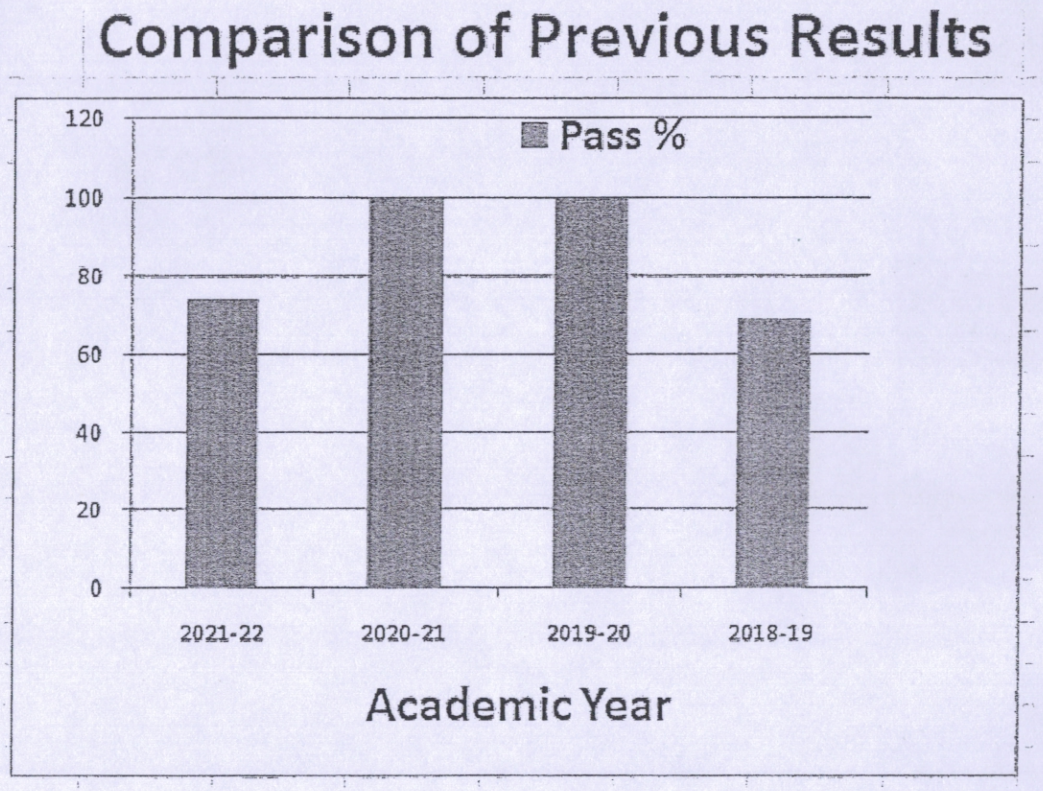
Comparison of Previous Year Results				
Academic Year	2021-22	2020-21	2019-20	2018-19
Student appeared	126	129	96	142
Passed	94	129	96	98
Failed	32	0	0	44
Absent	0	0	0	0
Overall pass BRV %	74%	100 *	100 *	69.01



*Covid Batch

FCD=76
FC=18
SC=0

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Fast Learners (Toppers)			
Sl No	USN	Name	Total Marks
1	1SG19EC062	PRASHANTH K B	719
2	1SG19EC015	BHOOMIKA N	694
3	1SG19EC110	VAISHNAVI U S	690
4	1SG19EC024	DARSHAN PATEL	685
5	1SG19EC041	INCHARA V	682
6	1SG19EC031	GAGANA KUMARI N	681
7	1SG19EC056	MONICA VALENTINA M	671
8	1SG19EC054	MOHAMMED MAAZ HAMEED	669
9	1SG19EC014	BHAVANA P S	661
10	1SG19EC112	VARSHA M	659

Slow Learners			
Sl No	USN	Name	Total Marks
1	1SG19EC003	ADARSHA GOWDA K R	379
2	1SG19EC080	ROHITH DG	418
3	1SG19EC069	PURUSHOTHAM R	421
4	1SG19EC032	GIRISH REDDY S	449
5	1SG19EC050	MANISH SHAH R	459
6	1SG19EC020	CHANDAN D	460
7	1SG20EC408	PUSHPALATHA K R	468
8	1SG20EC410	SANDEEP O	469
9	1SG19EC088	SHASHANK R	475
10	1SG20EC404	MEGHANA H P	482

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Result analysis coordinator

HOD

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
VTU Exam Result Analysis Feb-March 2022-**BRV** [ODD Semester 2021-22] Date 16/5/2022

SEM: 5th **SECTION: 'A'** **PASS– 83%**

SL NO.	SUBJECT CODE	SUBJECT	FACULTY	STUDENTS [64]											% of Pass
				APPEARED	PASSED	FAILED	ABS	S+	S	A	B	C	D	E	
1	18ES51	TECHNOLOGICAL INNOVATION MANAGEMENT AND ENTREPRENEURSHIP	Dr.Nagaraja A M	64	63	1	0	0	10	26	20	4	2	1	98.4
2	18EC52	DIGITAL SIGNAL PROCESSING	Prof Suma C	64	62	2	0	3	12	13	11	14	6	3	96.9
3	18EC53	PRINCIPLES OF COMMUNICATION	Prof.Ravishankar M N	64	58	6	0	0	4	10	14	16	10	4	90.6
4	18EC54	INFORMATION THEORY & CODING	Prof.Prathibha P	64	62	2	0	6	9	14	9	16	5	3	96.9
5	18EC55	ELECTROMAGENTIC WAVES	Prof.Kavitha R J	64	53	11	0	0	2	8	12	13	12	6	82.8
6	18EC56	VERILOG-HDL	Prof.Agalya P	62	60	2	2	1	14	15	12	13	4	1	96.8
7	18ECL57	DSP LAB	SS,SC,MHM,MMG	64	62	2	0	33	13	4	10	2	0	0	96.9
8	18ECL58	HDL LAB	PTS,GJR,VN,KS,	63	61	2	0 1(NE)	19	13	11	17	1	0	0	96.8
9	18CIV59	ENVIRONMENTAL STUDIES	Prof.Anantha	64	64	0	0	8	24	20	7	5	0	0	100

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SEM: 5th SECTION: 'B' PASS – 81.3%

SL NO	SUBJECT CODE	SUBJECT	FACULTY	STUDENTS [64]											% of Pass
				APPEARED	PASSED	FAILED	ABS	S+	S	A	B	C	D	E	
1	18ES51	TECHNOLOGICAL INNOVATION MANAGEMENT AND ENTREPRENEURSHIP	Dr.Nagaraja A M	63	63	0	0 1(NE)	2	7	17	23	11	2	1	100
2	18EC52	DIGITAL SIGNAL PROCESSING	Prof Suma C	64	61	3	0	0	10	14	16	18	2	1	95.3
3	18EC53	PRINCIPLES OF COMMUNICATION	Prof.Ravishankar M N	64	58	6	0	0	2	14	13	17	9	3	90.6
4	18EC54	INFORMATION THEORY & CODING	Prof.Prathibha P	64	61	3	0	1	14	12	10	10	9	5	95.3
5	18EC55	ELECTROMAGENTIC WAVES	Prof.Kavitha R J	64	56	8	0	0	0	6	15	20	6	9	87.5
6	18EC56	VERILOG-HDL	Prof.Agalya P	63	61	2	1	2	12	15	14	13	4	1	96.8
7	18ECL57	DSP LAB	SS,SC,MHM,MMG	64	64	0	0	32	11	9	9	3	0	0	100
8	18ECL58	HDL LAB	PTS,GJR,VN,KS,	62	62	0	0 2(NE)	26	14	10	11	1	0	0	100
9	18CIV59	ENVIRONMENTAL STUDIES	Prof.Anantha	64	64	0	0	5	27	27	5	0	0	0	100

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SEM: 5th

SECTION: 'A & B' (OVERALL)

PASS – 82%

SL. No	Sub Code	Subject	Faculty	STUDENTS [128]											% of Pass
				APPEARED	PASSED	FAILED	ABS	S+	S	A	B	C	D	E	
1	18ES51	TECHNOLOGICAL INNOVATION MANAGEMENT AND ENTREPRENEURSHIP	Dr.Nagaraja A M	127	126	0	0 1(NE)	2	17	43	43	15	4	2	99.2
2	18EC52	DIGITAL SIGNAL PROCESSING	Prof Suma C	128	123	5	0	3	22	27	27	32	8	4	96
3	18EC53	PRINCIPLES OF COMMUNICATION	Prof.Ravishankar M N	128	116	12	0	0	6	24	27	33	19	7	90.6
4	18EC54	INFORMATION THEORY & CODING	Prof.Prathibha P	128	123	5	0	7	23	26	19	26	14	8	96
5	18EC55	ELECTROMAGENTIC WAVES	Prof.Kavitha R J	128	109	19	0	0	2	14	27	33	18	15	85.1
6	18EC56	VERILOG-HDL	Prof.Agalya P	125	121	4	3	3	26	30	26	26	8	2	96.8
7	18ECL57	DSP LAB	SS,SC,MHM,MMG	128	126	2	0	65	24	13	19	5	0	0	98.4
8	18ECL58	HDL LAB	PTS,GJR,VN,KS,	125	123	2	0 3(NE)	45	27	21	28	2	0	0	96
9	18CIV59	ENVIRONMENTAL STUDIES	Prof.Anantha	128	128	0	0	13	51	47	12	5	0	0	100

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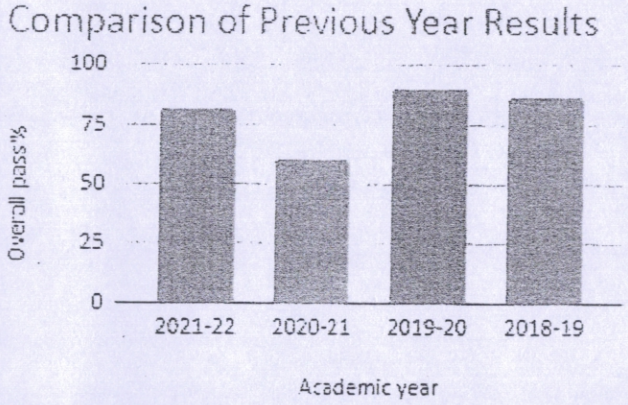
Comparison of previous results				
Academic year	2021-22	2020-21	2019-20	2018-19
Student appeared	128	129	97	123
Passed	105	78	87	106
Failed	23	51	10	17
Absent	0	0	0	0
Overall pass BRV %	82	60.46	89.6	86.17



FCD=59
FC=32
SC=13
TC=1

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Fast Learners			
SL.NO	USN	NAME	TOTAL
1	1SG19EC015	BHOOMIKA N	704
2	1SG19EC060	PAVAN K S	692
3	1SG19EC062	PRASHANTH K B	687
4	1SG19EC031	GAGANA KUMARI N	686
5	1SG19EC056	MONICA VALENTINA M	678
6	1SG19EC054	MOHAMMED MAAZ HAMEED	675
7	1SG19EC008	ANUSHA C	672
8	1SG19EC110	VAISHNAVI U S	672
9	1SG19EC120	YASHASWINI S	670
10	1SG19EC017	BINDHU H C	666

Slow Learners			
SL.NO	USN	NAME	TOTAL
1	1SG19EC047	KOUSHIK V	182
2	1SG19EC068	PRIYA	238
3	1SG19EC003	ADARSHA GOWDA K R	273
4	1SG19EC069	PURUSHOTHAM R	299
5	1SG19EC020	CHANDAN D	356
6	1SG19EC096	SM FARAZ HUSSAIN	373
7	1SG19EC050	MANISH SHAH R	375
8	1SG19EC080	ROHITH DG	380
9	1SG20EC408	PUSHPALATHA K R	388
10	1SG19EC038	HARSHITHA N	400

Madhu. HY

Result analysis coordinator

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Head of the Department
Electronics & Communication
Sapthagiri College of Engineering
Bangalore-560 057

Principal
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Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

SAPTHAGIRI COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERIN
VTU Exam Result Analysis Feb-March 2022-BRV [ODD Semester 2021-22] Date 26/4/2022

SEM: 7th SECTION: 'A' PASS –95%

SL NO.	SUBJECT CODE	SUBJECT	FACULTY	STUDENTS [61]											% of Pass
				APPEARED	PASSED	FAILED	ABS	S+	S	A	B	C	D	E	
1	18EC71	Computer Communicati on Networks	PADMAVATHI C	61	61	0	0	1	12	19	16	11	2	0	100
2	18EC72	VLSI Design	GIRISH J R	60	57	3	0	0	3	9	15	22	8	1	95
3	18EC732	Satellite Communication	SHOBHA H	61	61	0	0	2	11	24	17	4	3	0	100
4	18EC74X	Machine Learning/Multi media Communication	SHOBHA S/DR. PRAKASH JADHAV	61	61	0	0	2	7	19	17	13	2	1	100
5	18EC75X	Open Elective	VINDHYA G B	61	61	0	0	5	9	17	18	9	1	2	100
6	18ECL76	Computer Communication Networks Laboratory	PC,MMG	61	61	0	0	16	14	14	6	11	0	0	100
7	18ECL77	VLSI Design Laboratory	AP,SVS,SV	61	61	0	0	49	11	1	0	0	0	0	100
8	18ECP78	Project Phase-I	PJ,SMS,SS,AP	61	61	0	0	26	35	0	0	0	0	0	100

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SEM: 7th SECTION: 'B' PASS –87%

SL NO.	SUBJECT CODE	SUBJECT	FACULTY	STUDENTS [67]											% of Pass
				APPEARED	PASSED	FAILED	ABS	S+	S	A	B	C	D	E	
1	18EC71	Computer Communication Networks	PADMAVATHI C	67	65	2	0	1	10	17	19	14	3	3	97
2	18EC72	VLSI Design	GIRISH J R	67	61	6	0	1	1	15	15	24	10	1	91
3	18EC732	Satellite Communication	SHOBHA H	67	67	0	0	2	8	26	18	9	2	2	100
4	18EC74X	Machine Learning/Multimedia Communication	SHOBHA S/DR. PRAKASH JADHAV	67	66	1	0	3	13	24	15	10	1	1	99
5	18EC75X	Open Elective	VINDHYA G B	67	67	0	0	4	9	26	15	11	2	0	100
6	18ECL76	Computer Communication Networks Laboratory	PC,MMG	67	67	0	0	18	15	22	11	1	0	0	100
7	18ECL77	VLSI Design Laboratory	AP,SVS,SV	67	67	0	0	42	22	1	2	0	0	0	100
8	18ECP78	Project Phase-I	PJ,SMS,SS,AP	67	67	0	0	16	51	0	0	0	0	0	100

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SEM: 7th

SECTION: 'A & B' (OVERALL)

PASS – 91%

SL. No	Sub Code	Subject	Faculty	STUDENTS [128]											% of Pass
				APPEARED	PASSED	FAILED	ABS	S+	S	A	B	C	D	E	
1	18EC71	Computer Communication Networks	PADMAVATHI C	128	126	2	0	2	22	36	35	25	5	3	99
2	18EC72	VLSI Design	GIRISH J R	127	118	9	0	1	4	24	30	46	18	2	93
3	18EC732	Satellite Communication	SHOBHA H	128	128	0	0	4	19	50	35	13	5	2	100
4	18EC74X	Machine Learning/Multimedia Communication	SHOBHA S/DR. PRAKASH JADHAV	128	127	1	0	5	20	43	32	23	3	2	100
5	18EC75X	Open Elective	VINDHYA G B	128	128	0	0	9	18	43	33	20	3	2	100
6	18ECL76	Computer Communication Networks Laboratory	PC,MMG	128	128	0	0	34	29	36	17	12	0	0	100
7	18ECL77	VLSIDesign Laboratory	AP,SVS,SV	128	128	0	0	91	33	2	2	0	0	0	100
8	18ECP78	Project Phase-I	PJ,SMS,SS,AP	128	128	0	0	42	35	0	0	0	0	0	100

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Fast Learners			
SL.NO	USN	NAME	TOTAL
1	1SG18EC023	DEEPA B	731
2	1SG18EC037	HARSHITHA V	730
3	1SG18EC083	RESHMA S HEGDE	725
4	1SG18EC113	VARUN L	720
5	1SG18EC096	SHILPASHREE S R	696
6	1SG18EC031	G MEGHASHREE	693
7	1SG18EC058	MEGHA S	692
8	1SG18EC033	GEETHA N P	689
9	1SG18EC042	JAYANTH R S	686
10	1SG18EC049	LAVANYA N	685

Slow Learners			
SL.NO	USN	NAME	TOTAL
1	1SG18EC026	DEVANKIT	411
2	1SG18EC066	PARVATHY R	446
3	1SG19EC400	AMULYA N D	458
4	1SG19EC418	YASHWANTH KUMAR M	459
5	1SG19EC415	RANGANATH M	460
6	1SG19EC409	IMDAD HUSSAIN	463
7	1SG19EC401	ASHA K R	483
8	1SG18EC067	PAVAN KUMAR G V	484
9	1SG19EC411	MEGHANA	503
10	1SG19EC413	PRATHAP B R	505

Madhu. HY

Result analysis coordinator

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