Savitribai Phule Pune University

T.Y. B.C.A (Science)

Semester – V

C.B.C.S 2019 Pattern

BCA366

DSE IV Lab

(Android Programming)

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

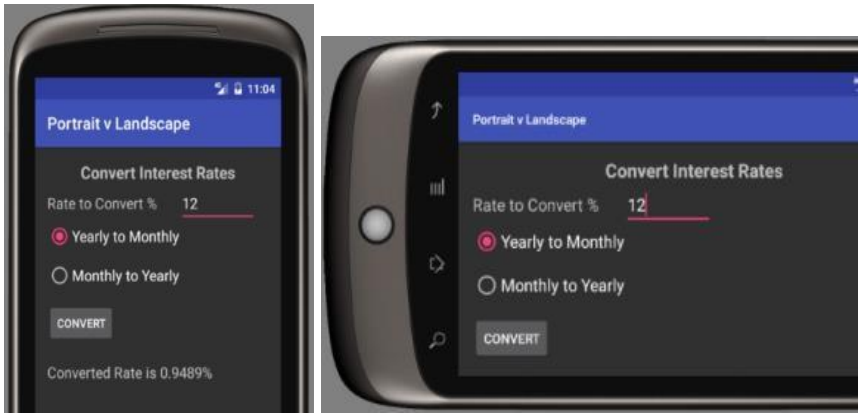
Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create a Simple Application which shows the Life Cycle of Activity. [10 Marks]

Q2. Create an Android application to demonstrate Progress Bar. [20 Marks]

OR

Q2. Design an Android Portrait and Landscape Screen Layout example. [20 Marks]



Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

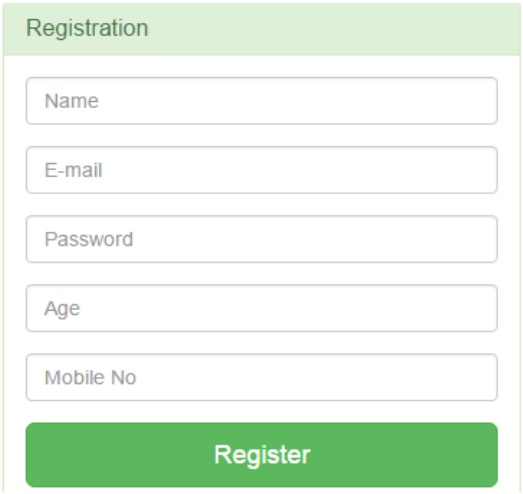
T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create a Simple Application, which reads a number from the user and check whether it is even or odd. [10 Marks]

Q2 Create registration form given below. Also perform appropriate validation and display the message using dialog fragment. [20 Marks]



OR

Q2. Create First Activity to accept information like Teacher having First Name, Middle Name, Last Name, Date of birth, Address, Mobile No. Specialization and display all information on Second Activity when user click on Submit button. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create an Android Application that Demonstrate Check Box. [10 Marks]

Q2. Create an Android Application to find the factorial of a number and Display the Result on Alert Box. [20 Marks]

OR

Q2. Create an Android App, it reads the Students Details (Name, Surname, Class, Gender, Hobbies, Marks) and display the all information in another activity on click of Submit button. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

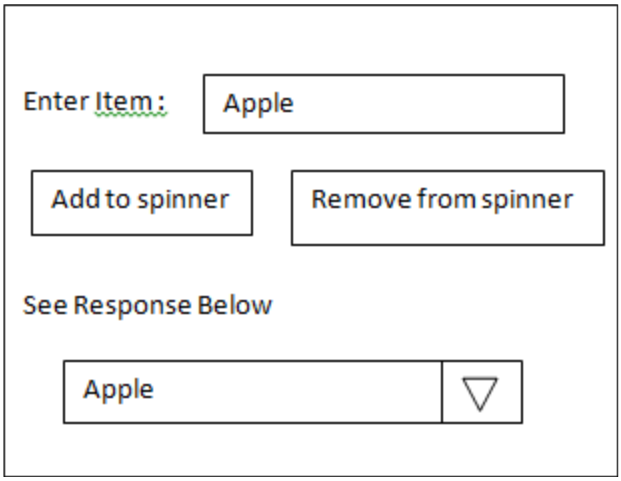
T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create a Simple Application, which reads a number from the user and check whether it is even or odd. [10 Marks]

Q2. By using Spinner, Buttons. Write a program to draw following GUI. [20 Marks]



OR

Q2. Create an android Application for performing the following operation on the table Customer (id, name, address, phno). (use SQLite database) [20 Marks]

i) Insert New Customer Details.

ii) Show All the Customer Details on Toast Message.

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create an Android Application to accept two numbers and find power and Average. [10 Marks]

Q2. Display 15 images in 2-Dimensional scrolling grid. Information of image selected with position will be displayed using Toast message. [20 Marks]

OR

Q2. Create application to demonstrate file explorer (Use ListView). [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create a Simple Application Which Send ―Hello! message from one activity to another withhelp of Button (Use Intent). [10 Marks]

Q2. Create an Android Application that Demonstrates ListView and Onclick of List Display the Toast. [20 Marks]

OR

Q2. Create an Android application to perform following operations on table Student (Sid ,Sname,phno). Use autoincrement for Sid and Perform following Operations.

i) Insert New Student Details.

ii) Show All the Student Details. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create an Android Application that Demonstrate Radio Button. [10 Marks]

Q2.Create an Android application to demonstrate phone call using Implicit Intent. [20 Marks]

OR

Q2. . Display a list of bank names in a spinner and whenever you select an item the value will be displayed using toast on Mobile screen. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

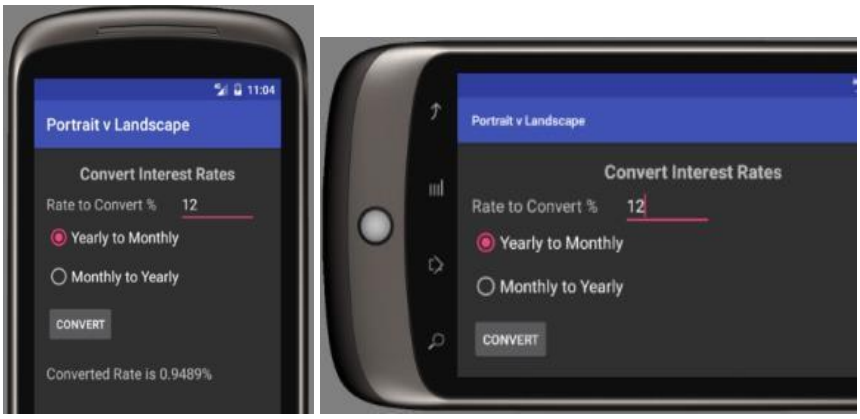
T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create a Simple Application Which Send ―Hi‖ message from one activity to another with help of Button (Use Intent). [10 Marks]

Q2. Design an Android Portrait and Landscape Screen Layout example [20 Marks]



OR

Q2. Construct an application to accept a number and calculate Factorial and cube of a number using Menu. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Write an Android application to accept two numbers from the user, and display them, but reject input if both numbers are greater than 10 and asks for two new numbers. [10 Marks]

Q2. Construct an application to accept a number and calculate Factorial and sum of Digits of a number using options Menu. [20 Marks]

OR

Q2. Create table Company (id, name, address, phno). Create Application for Performing the following operation on the table. [20 Marks]

a) Insert New Company details.
b) Show All Company details

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

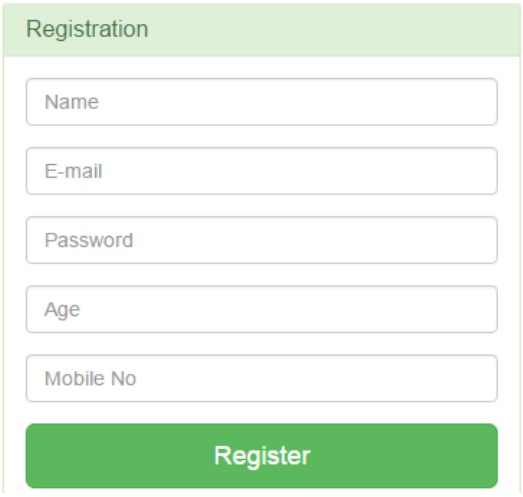
T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create an Android Application that Demonstrate Switch and Toggle Button. [10 Marks]

Q2. Create registration form given below. Also perform appropriate validation and display the message using dialog fragment. [20 Marks]



OR

Q2. Demonstrate Array Adapter using List View to display list of fruits. [20 Marks]

Q3.Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

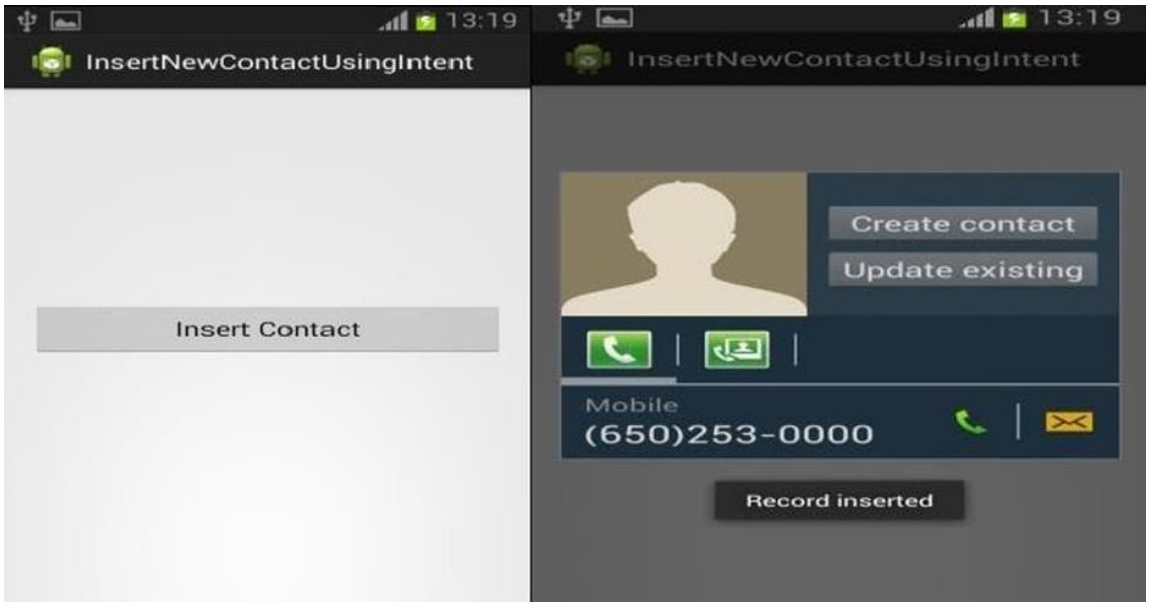
Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create android application to change Font Size, Color and Font Family of String. [10 Marks]

Q2. Create First Activity to accept information like Student First Name, Middle Name, Last Name,Date of birth, Address, Email ID and display all information on Second Activity when user click onthe Submit button. [20 Marks]

OR

Q.2 Create new contact for designing following layout. [20 Marks]



Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

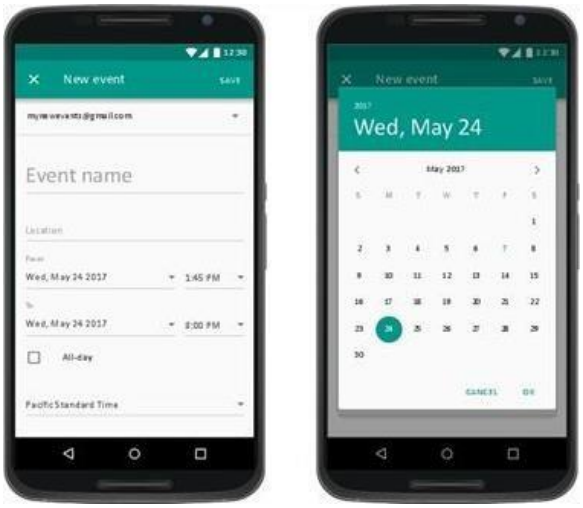
Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create a Simple Application Which Send ―Hi‖ message from one activity to another with help of Button (Use Intent). [10 Marks]

Q2. Create a custom "Contact" layout to hold multiple pieces of information, including: Photo, Name, Contact Number, E-mail id. [20 Marks]

OR

Q2. Create an application to demonstrate date and time picker. [20 Marks]



Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

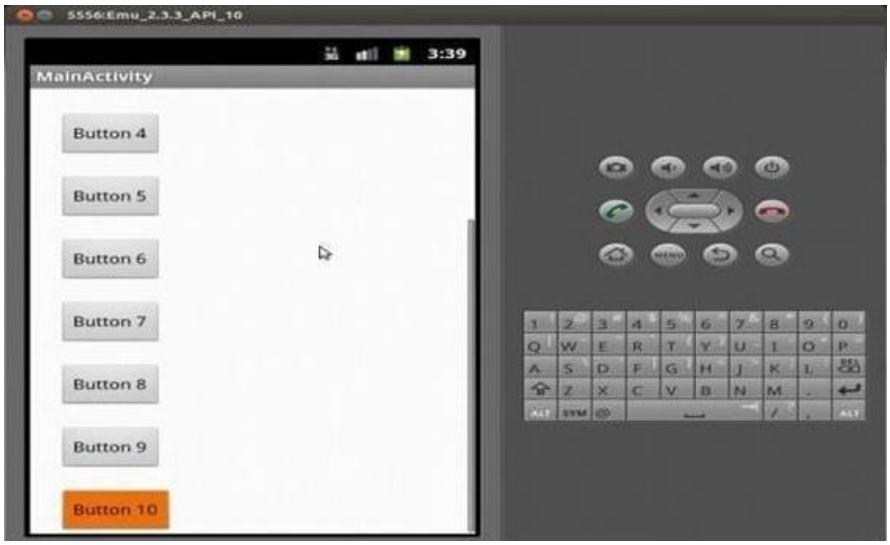
Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create following Vertical Scroll View Creation in Android. [10 Marks]



Q2. Create First Activity to accept information like Teacher having First Name, Middle Name, Last Name, Date of birth, Address, Mobile No. Specialization and display all information on Second Activity when user click on Submit button. [20 Marks]

OR

Q2. Create an Android application to demonstrate Progress Bar. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create a Simple Application which shows Life Cycle of Activity. [10 Marks]

Q2. Create an application to accept Movie details like Name, Release Year, Collection and display the same information on the next activity [20 Marks]

OR

Q2. Create an Android Application to accept two numbers and find power and Average. Displaythe result on the next activity using Context Menu. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create a Simple Application Which Send ―Hi‖ message from one activity to another with help of Button (Use Intent). [10 Marks]

Q2. Create simple application with Login Screen. On successful login, gives message go to next Activity (Without Using Database). [20 Marks]

OR

Q2. Create First Activity to accept information like Employee First Name, Middle Name, Last Name,Salary, Address, Email ID and display all information on Second Activity when user click on Submitbutton. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Create following Vertical Scroll View Creation in Android. [10 Marks]

2. Create an Android Application that Demonstrate TimePicker and display Selected Time on TextView. [20 Marks]

OR

Q2. Create a Simple calculator. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 366: DSE IV Lab (Android Programming)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. Write an android code to make phone call using Implicit Intent. [10 Marks]

Q2. Display a list of bank names in a spinner and whenever you select an item the value will be displayed using toast on Mobile screen [20 Marks]

OR

Q2. Construct an Android Application to accept a number and calculate Factorial and cube of a given number using Context Menu. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A (Science)

Semester – VI

C.B.C.S 2019 Pattern

BCA367

DSE V Lab

(Programming in GO and IoT)

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to accept user choice and print answers using arithmetic operators. [20 Marks]

OR

B) Write a program in GO language to accept n student details like roll_no, stud_name, mark1,mark2, mark3. Calculate the total and average of marks using structure. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)
b. WAP in python/C++ language to blink LED.
c. Write down the observations on Input and Output
d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to print Fibonacci series of n terms. [20 Marks]

OR

B) Write a program in GO language to print file information. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)
b. WAP in python/C++ language to turn ON/OFF buzzer.
c. Write down the observations on Input and Output
d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in the GO language using function to check whether accepts number is palindrome or not. [20 Marks]

OR

B) Write a Program in GO language to accept n records of employee information (eno,ename,salary) and display record of employees having maximum salary. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to blink LED.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to print a recursive sum of digits of a given number. [20 Marks]

OR

B) Write a program in GO language to sort array elements in ascending order. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)
b. WAP in python/C++ language to toggle two LED's.
c. Write down the observations on Input and Output
d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language program to create Text file [20 Marks]

OR

B) Write a program in GO language to accept n records of employee information (eno,ename,salary) and display records of employees having minimum salary. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to blink LED.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to accept two matrices and display its multiplication [20 Marks]

OR

B) Write a program in GO language to copy all elements of one array into another using a method. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)
b. WAP in python/C++ language to toggle two LED's.
c. Write down the observations on Input and Output
d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to accept one matrix and display its transpose. [20 Marks]

OR

B) Write a program in GO language to create structure student. Writea method show() whose receiver is a pointer of struct student. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to turn ON/OFF buzzer.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to accept the book details such as BookID, Title, Author, Price. Read and display the details of 'n' number of books [20 Marks]

OR

B) Write a program in GO language to create an interface shape that includes area and perimeter. Implements these methods in circle and rectangle type. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to blink LED.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language using a function to check whether the accepted number is palindrome or not. [20 Marks]

OR

B) Write a program in GO language to create an interface shape that includes area and volume. Implements these methods in square and rectangle type. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to blink LED.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to create an interface and display its values with the help of type assertion. [20 Marks]

OR

B) Write a program in GO language to read and write Fibonacci series to the using channel. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to turn ON/OFF buzzer.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to check whether the accepted number is two digit or not. [20 Marks]

OR

B) Write a program in GO language to create a buffered channel, store few values in it and find channel capacity and length. Read values from channel and find modified length of a channel [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to turn ON/OFF buzzer.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to swap two numbers using call by reference concept [20 Marks]

OR

B) Write a program in GO language that creates a slice of integers, checks numbers from the slice are even or odd and further sent to respective go routines through channel and display values received by goroutines. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to toggle two LED's.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to print sum of all even and odd numbers separately between 1 to 100. [20 Marks]

OR

B) Write a function in GO language to find the square of a number and write a benchmark for it. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to toggle two LED's.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to demonstrate working of slices (like append, remove, copy etc.) [20 Marks]

OR

B) Write a program in GO language using go routine and channel that will print the sum of the squares and cubes of the individual digits of a number. Example if number is 123 then
squares = (1 * 1) + (2 * 2) + (3 * 3)
cubes = (1 * 1 * 1) + (2 * 2 * 2) + (3 * 3 * 3). [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera.
(Internal Examiner assign any one option for board and interface device and respective interface programming option) [10 Marks]

b. WAP in python/C++ language to turn ON/OFF buzzer.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to demonstrate function return multiple values. [20 Marks]

OR

B) Write a program in GO language to read XML file into structure and display structure [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)
b. WAP in python/C++ language to toggle two LED's.
c. Write down the observations on Input and Output
d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to create a user defined package to find out the area of a rectangle. [20 Marks]

OR

B) Write a program in GO language that prints out the numbers from 0 to 10, waiting between 0 and 250 ms after each one using the delay function. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to blink LED.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to illustrate the concept of returning multiple values from a function. (Add, Subtract, Multiply, Divide) [20 Marks]

OR

B) Write a program in GO language to add or append content at the end of a text file [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to toggle two LED's.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to print a multiplication table of number using function. [20 Marks]

OR

B) Write a program in GO language using a user defined package calculator that performs one calculator operation as per the user's choice. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to turn ON/OFF buzzer.

c. Write down the observations on Input and Output

d. Write down the Result and Conclusion

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in GO language to illustrate the function returning multiple values(add, subtract). [20 Marks]

OR

B) Write a program in the GO language program to open a file in READ only mode. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to turn ON/OFF buzzer.

c. Write down the observations on Input and Output.

d. Write down the Result and Conclusion.

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-VI) Practical Examination

BCA 367: DSE V Lab (Programming in GO and IoT)

Duration: 3Hrs. **Max Marks: 35+15=50**

Q1. A) Write a program in Go language to add or append content at the end of a text file. [20 Marks]

OR

B) Write a program in Go language how to create a channel and illustrate how to close a channel using for range loop and close function. [20 Marks]

Q2. a. Draw block diagram /pin diagram of Raspberry-Pi/ Beagle board /Arduino Uno board interfacing with IR Sensor/Temperature Sensor/Camera. [10 Marks]
(Internal Examiner assign any one option for board and interface device and respective interface programming option)

b. WAP in python/C++ language to toggle two LED's.

c. Write down the observations on Input and Output.

d. Write down the Result and Conclusion.

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Savitribai Phule Pune University

T.Y. B.C.A (Science)

Semester – VI

C.B.C.S 2019 Pattern

BCA368

DSE VI

(Project Lab)

Savitribai Phule Pune University

T.Y.B.C.A. (Science) (Semester-VI) Project Examination

BCA 368: DSE VI Project Lab

Duration: 3Hrs. **Max Marks: 35+15=50**

Project Implementation Guidelines:

1. Students shall choose any topic for project work in consultation with project guide, project In-charge and head of the department.
2. The students shall work on a Project in a group of not more than three students.
3. Students are expected to work on the chosen project during the entire semester.
4. Students shall undertake application oriented/web-based/database-oriented/research basedwork.
5. Students shall successfully implement the chosen work. Only a hypothetical/theoretical study shall not be accepted.
6. Students shall choose any appropriate programming language/platform, computational techniques and tools in consultation with the guide, In-charge and the head of thedepartment.
7. The faculty members from affiliated college shall act as a project guide for each project group with equal distribution of groups amongst each eligible faculty.
8. The guide shall track and monitor the project progress on a weekly basis by considering the workload of 4 laboratory hours per week.
9. The project work shall be evaluated based on the novelty of the topic, scope of the work, relevance to computer science, adoption of emerging techniques/technologies and its real- world application etc.
10. Students shall prepare a project report with the following contents:
    a) Title Page
    b) Certificate
    c) Index Page detailing description of the following with their sub sections:-
    - Title: A suitable title giving the idea about what work is proposed.
    - Introduction: An introduction to the topic giving proper background of the topic.
    - Requirement Specification: Specify Software/hardware/data requirements.
    - System Design details: Methodology/Architecture/UML/DFD/Algorithms/ protocolsused (whichever is applicable)
    - System Implementation: Code implementation
    - Results: Test Cases/Tables/Figures/Graphs/Screen shots/Reports etc.
    - Conclusion and Future Scope: Specify the Final conclusion and future scope
    - References: Books, web links, research articles etc.
11. The Project report should be prepared in a spiral bound form with adequate number of copies. Copy shall be submitted to the guide and college for the records.
12. The Project work and report shall be certified by the concerned Project guide and Head of the department.
13. Students shall make a presentation of working project and will be evaluated as per the Project evaluation scheme as detailed below:

Assignments using Gantt Project tools

- Students are advised to carry out the following assignments w.r.t. their chosen project topics

1 Create Project Plan

- Specify project name and start and finish dates.
- Identify and define project tasks.
- Define duration for each project task.
- Define milestones in the plans
- Define dependency between tasks
- Define project calendar.
- Define project resources and specify resource type
- Assign resources against each task and baseline the project plan

2 Execute and Monitor Project Plan

- Update %Complete with current task status.
- Review the status of each task.
- Compare Planned vs Actual Status
- Review the status of Critical Path
- Review resources assignation status

3 Generate Dashboard and Reports

- **Dashboard**
  - Project Overview
  - Cost Overview
  - Upcoming Tasks
- **Resource Reports**
  - Over-allocated Resources
  - Resource Overview
- **Cost Reports**
  - Earned Value Report
  - Resource Cost Overview
  - Task-Cost Overview
- **Progress Reports**
  - Critical Tasks
  - Milestone Report
  - Slipping Tasks

Evaluation Scheme

I. Continuous Evaluation, Progress Report: 15 marks
II. End Semester Examination in the form of presentation/demonstration and viva: 35 marks

Description	Marks
Presentation & Project Report	15
Demonstration of the Project	15
Viva	05
Total	**35**

Note: Submission of Certified Project Report is mandatory for appearing the Practical Examination (Project).