Candiates are required to give their answer in their own words as far as practicable.
The figures in the margin indicate full marks.

(Android Programming)

Group - A

Answer any *one* question :   1 × 10 = 10

1. What are the five basic components of Android architecture? Describe them.

2. Write a short note on SQLite database in Android.

Group - B

Answer any *one* question :   1 × 15 = 15

1. (a)   Explain Android activity life cycle in brief.

(b) Describe the following layouts :

    (i) Table layout

    (ii) Frame layout   7+(4+4)

2. (a) Write the proper steps to create a new Android Virtual Device.

   (b) Describe several types of resources available in Android.   7+8

3. (a) What is a Adapter? Explain different types of native Adapters with example.

   (b) Why Linkify class is used in Android? Give an example.   (2+8)+5

Paper - SEC 1-P

Software Lab Based on Android Programming

(Practical)

Answer any *one* question :   1 × 15 = 15

1. Create a program to display "Hello World" at the middle of the screen in the emulator.

2. Create an application to display a login page having a username and a password field. Also display an error message if the username or password entered by the user is invalid.

3. Create an application to display a list of all coursed offered by your college. If the user click on any course, the application should display the name of the HOD of the course at the bottom of the screen.

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Paper - SEC 1-T

(Programming in MATLAB)

Group - A

Answer any *one* question :   1 × 10 = 10

1. (i)   What is MATLAB programming? What are the difference interfaces available at the runtime of MATLAB programming?

    (ii) What are the types of loops does MATLAB provides?   (2+3)+5

2. (i)   What do you mean by M-file in MATLAB? Create a function to add three numbers in MATLAB.

    (ii) Create a MATLAB array (one dimensional) and print it.   (2+4)+4

Group - B

Answer any *one* question :   1 × 15 = 15

1. (i)   State the general format of 2-D plot in MATLAB and explains in brief.

    (ii)   Explain if-end structure in MATLAB.

    (iii) Write the basic syntax to create vector in MATLAB.   6+4+5

2. (i)   What are the different MATLAB windows?

    (ii)   What are the different array arithmetic operations available? Discuss any three.

    (iii) How does break and continue works in MATLAB?   5+6+4

3. (i)   Describe the following function :

           (a) Char   (b) num 2 str   (c) cell 2 mat   (d) mat 2 cell   (e) bin 2 dec

    (ii)   Write a user-defined MATLAB functions to convert temperature in degrees Fahrenheit (°F) to degrees Centigrade (°C).

           Formulae : $C = \frac{5}{9} * (F - 32)$ 10+5

Paper - SEC 1-P

Software Lab Based on MATLAB

(Practical)

Answer any *one* question : $1 \times 15 = 15$

1. Write a program to assign the following expressions to a variable A and then to print out the value of A

    (a) $(0.005 + 1.23 \times 10^{-2}) \times 0.4567 \times 10^{-3}$

    (b) $\sqrt{2}\, \pi^2$

2. Write a program that converts a temperature given in Celsius to its equivalent temperature in Fahrenheit. [Hint : C/5 = (F–32)/9]

3. Draw a graph that joins the points (0,2), (5, 4), (3, 0) and (6, –3).

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