2018

CBCS

3rd Semester

COMPUTER SCIENCE

PAPER—SEC1T

(Honours)

Full Marks : 25

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Android Programming

A. Answer any *three* questions :   3×2

(1) What does Dalvik Virtual Machine generate ?

(2) List out any two perspective provided by the Android SDK.

(Turn Over)

(3) Where can we define the icon for our Activity ? What is spinner ?

1+1.

(4) Why Main Activity is inheriting from App Compat Activity ?

(5) What is intent and Activity in Android ? 1+1

B. Answer any *two* questions : 2×5

(1) How do you provide database connection using SQ Lite database ?

(2) What is manifest ? Write the applications of manifest.

2+3

(3) What is an APK format ? Write the procedure to call another activity in android. 2+3

C. Answer any *one* question : 1×9

(1) Explain Android System Architecture. Write about Widgets.

6+3

(2) List out different types of layouts in Android. Explain any two layouts among them. 2+7

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Programming in MATLAB

Group—A

A. Answer any *three* questions : 3×2

(1) What are keywords ? How will you check whether a given name does exist as variable name or function name ?

(2) What command do you use to convert an Octal number into Binary number and a Hexadecimal number into a Decimal number ?

(3) Define "Whos" keyword of MATLAB. Write a MATLAB command to calculate matrix inverse.

(4) For the two vectors x = [1, 2, 3, 4, 5] and y = [2, 7, –4, 8, –3] find the elementwise multiplication.

(5) Write a MATLAB command to plot the function y = $2x^5 + x^4 - 9x^2 + 17$ for $1.15 \leq x \leq 6.7$.

Group—B

B. Answer any *two* questions :   2×5

(1) (a) Given x = [5, 2, 6, 7, 3, 4, 8] and y = [3, 7, 6, 2, 4, 9]. Find out the value of

(i) set union of x and y.

(ii) set difference of x from y and y from x.

(iii) set XOR of x and y.

(b) What is Anonymous function in MATLAB ?

3+2

(2) (a) Write a function for the function

$$f(x) = \frac{\left(x\sqrt[5]{4x+9}\right)}{\left(x^2+2\right)^2}.$$

Use this function to calculate the value of f(x)

(i) f(x) at x = 6,

(ii) f(x) for x = 1, 3, 5, 7, 9, 11.

(b) Why we use linspace( ) in MATLAB ?   3+2

(3) How we create a file in MATLAB? Write the code for writing a matrix as a binary file.

Group—C

C. Answer any *one* question :   1×9

(1) (a) Define for-end loop.

   (b) Write a script file to check a number is palindrome or not.

   (c) What are the main differences between xor and bit xor operations ?   3+4+2

(2) (a) What is inline function in MATLAB ?

   (b) What command we use to find roots of the equation :
   $$x^2 - 3x + 2 = 0 ?$$

   (c) How we create a vector from known list of numbers ?

(d) Given x = [2, 7, 4, 8, 6, 7, 10]. What will be the values of y for the following relations :

    (i) y = x > 5

    (ii) y = x < 5

    (iii) y = x(find (x < 5))

    (iv) y = length (find (x < 5)).   2+2+2+3

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