2018

CBCS

3rd Semester

ELECTRONICS

PAPER—SEC1T

(Honours)

Full Marks : 40

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.

Design and Fabrication of Printed Circuit Boards

Group—A

1. Answer any *five* questions :   5×2

    (a) What is a Gerber file ? How is it used while making a pCB ?   2

(Turn Over)

(b) What factors dictate the size of pads in a PCB ? 2

(c) What is line photography ? 2

(d) What is resin ? 2

(e) What is "Solder mask"? Give two reasons for its use. 2

(f) What àre vias in double sided PCB ? 2

(g) What do you understand by die term track-isolation ? 2

(h) When and how are photo-resist used in PCB fabrication ? 2

Group—B

2. Answer any *four* questions : 4×5

(a) Why realization of source and group conductor is of highest importance ? 5

(b) Write down the steps in film processing.   5

(c) How can you minimize the parasitic effect of capacitance ?   5

(d) (i) What is emulator material?

   (ii) Give names of two layers on the film master.

   3+2

(e) Name the mechanical operations of PCB.   5

(f) How PCB can be free from soils and dirt?   5

Group—C

3. Answer any *one* question :   1×10

(a) (i) What is etching and its different types ?

   (ii) What factors are to be considered for the choice of echants ?

(iii) How is ferric chloride used in etching process ?

(iv) Give the required equations to describe the chemical reaction. $\qquad$ 7+1+1+1

(b) (i) Explain plating, different techniques for plating.

(ii) Write notes on fillers and copper foil. $\qquad$ 6+4

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Mobile Application Programming

Group—A

1. Answer any *five* questions : $\qquad$ 5×2

(a) What are the components of UI tool kti ? $\qquad$ 2

(b) In what way gestures are preferred than touch events ? $\qquad$ 2

(Continued)

(c) What do you mean by android activities and views ?

2

(d) What is Persisting data in SQLite ?

2

(e) What do you mean by application deployment ?

2

(f) Define MapKit.

2

(g) What is Data Persistence ?

2

(h) Define Core Location.

2

Group—B

2. Answer any *four* questions :

4×5

(a) Briefly explain the Model view controller with a suitable diagram.

5

(b) What are the role of quality constraints in mobile applications ?

5

(c) Explain the creation of Android Virtual Device (AVD) to run the android programs on emulator. 5

(d) What are the type of menus supported by android? Describe how to add menu in an android application with an example. 1+4

(e) What is intent filter? Differentiate between implicit and explicit intents. 2+3

(f) Describe any one method to integrate social network with an android application. 5

Group—C

3. Answer any one question : 1×10

(a) With a suitable diagram, briefly describe the layered architecture of IOS. 10

(b) Write short notes (any two)   2×5

   (i) Event callback methods

   (ii) Security measures in android development

   (iii) XML

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