## SRI BHARATHI

 ENGINEERING COLLEGE FOR WOMEN Kaikkurichi, Pudukkottai -622 303www.sbec.edu.in
NAAC DOCUMENTS


Quality Indicator Frame Work
Criterion - 1
CURRICULAR AspECTS
Submitted by
IQAC Internal Quality Assurance Cell

Sri Bharathi Engineering College for Women

## SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
KAIKKURUCHI, PUDUKOTTAI - 622303

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

## ACADEMIC YEAR 2019-2020 / ODD SEMESTER

### 1.2 Academic Flexibility (30)

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

AND
1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

| VAC Title: | PCB MANUFACTURING AND DESIGNING OF BASIC CIRCUITS |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Resource Person: |  | Er.V.Veerapandiyan, PCB Developer, Galwin Technology, Trichy-620 002. |  |  |  |  |  |  |  |  |
| Date of conduct from : |  |  | 24.06.2019 |  | To: | 28.06.2019 |  | Duration: | 30 Hours |  |
| Organized Department : |  |  | ELECTRONICS AND COMMUNICATION ENGINEERING |  |  |  |  |  |  |  |
| Participant Year: |  | 2/3/4 |  | Semester: |  | D | No. | ents Registe | ed : | 46 |
| Venue: Seminar Hall, ,Ground Floor, SBECW |  |  |  |  |  |  |  |  |  |  |

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# SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN 

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Kaikkurichi, Pudukkottai, Tamil Nadu - 622 303, India

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

## ACADEMIC YEAR 2019-2020/ODD SEMESTER

## DEPARTMENT CIRCULAR

This is to inform that Value Added Course offered by the Department of ECE will be conducted for Second, Third and Final year students on "PCB Manufacturing and Designing of Basic Circuits" in association with Galwin Technology from 24.06 .2019 to 28.06 .2019 . Certificates will be issued to the eligible participants at the end of the course.

| S.No | Name of the Course | Resource Person |
| :---: | :---: | :---: |
|  |  | Er.V.VEERAPANDIYAN, |
|  | PCB Developer, |  |
| 1 | PCB Manufacturing and | Designing of Basic |
|  | Circuits | 12A, Periyasamy Towers, 3rd floor, |
|  |  | Chathiram Bus Stand, Trichy- 620 002. |
|  | Tamil Nadu. |  |
|  | Mail.Id: info@galwintech.in |  |

Cc:

- Principal's Office
- IQAC Coordinator
- Class In charges- II ,III \&IV Year
- II ,III \& IV Year ECE Students
- Notice Board

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING ACADEMIC YEAR 2019-2020/ODD SEMESTER

## Value Added Course on "PCB Manufacturing And Designing of Basic Circuits"

SYLLABUS

| S.NO | TOPIC COVERED | DURATION <br> (in hours) | DATE |
| :---: | :--- | :---: | :---: |
| 1 | Introduction to Printed circuit board\& Design rules <br> for PCB | 3 | 24.6 .2019 |
| 2 | Understand the electrical parameters \& Creating the <br> schematic. | 3 | 24.6 .2019 |
| 3 | Electronic design automation(EDA) tools for PCB <br> designing | 3 | 25.6 .2019 |
| 4 | Component Introduction and their categories | 3 | 25.6 .2019 |
| 5 | Detailed Description about labels and identifiers | 3 | 26.6 .2019 |
| 6 | Creations of PCB layout \& Designing of PCB <br> stackup | 3 | 26.6 .2019 |
| 7 | PCB design for EMI/EMC | 3 | 27.6 .2019 |
| 8 | High-Density Interconnection (HDI) Technology | 3 | 27.6 .2019 |
| 9 | PCB Technology Trends \& concepts of Packaging | 3 | 28.6 .2019 |
| 10 | Advance techniques, skills and modern tools for <br> designing and fabrication of PCBs | 3 | 28.6 .2019 |
|  | Total Hours | $\mathbf{3 0}$ |  |



## DEPARTMENT OF ELECTRONICS AN COMMUNICATIONENGINEERING ACADEMIC YEAR ODD SEMESTER (2019-2020)

STUDENT PARTICIPATION LIST FOR VALUE ADDED PROGRAM
PCB Manufacturing and Designing of Basic Circuits

| S.NO | REG.NO | NAME | YEAR \& BRANCH |
| :---: | :---: | :---: | :---: |
| 1 | 912618106001 | ANUSHAA.S | II \& ECE |
| 2 | 912618106002 | ARIVARASI .A | II \& ECE |
| 3 | 912618106003 | ASMATH HAZEENA.N | II \& ECE |
| 4 | 912618106004 | ATCHAYA. R | II \& ECE |
| 5 | 912618106005 | JAYAPRIYA.T | II \& ECE |
| 6 | 912618106006 | JAYASRI. M | II \& ECE |
| 7 | 912618106007 | NAGALAKSHMI. P | II \& ECE |
| 8 | 912618106008 | NAVITHRA. D | II \& ECE |
| 9 | 912618106009 | ROHINI. K | II \& ECE |
| 10 | 912618106010 | SOUNTHARYA. P | II \& ECE |
| 11 | 912618106012 | THAIYAL NAYAGI .K | II \& ECE |
| 12 | 912618106701 | JANANI.R | II \& ECE |
| 13 | 912617106001 | ABIRAMI .S | III \& ECE |
| 14 | 912617106002 | ABISHEKA.S | III \& ECE |
| 15 | 912617106003 | ATSHAYA .R | III \& ECE |
| 16 | 912617106004 | BAVADHARANI. A | III \& ECE |
| 17 | 912617106005 | BHUVANESHWARI. B | III \& ECE |
| 18 | 912617106006 | DHIVYA .L | III \& ECE |
| 19 | 912617106007 | GOWSALYA .D | III \& ECE |
| 20 | 912617106009 | INDHUMATHI. S | III \& ECE |
| 21 | 912617106010 | KANIMOZHI. D | III \& ECE |
| 22 | 912617106011 | KAVYA .C | III \& ECE |
| 23 | 912617106012 | KEERTHANA .G | III \& ECE |
| 24 | 912617106013 | MAHESHKARI. G | III \& ECE |


| S.NO | REG.NO | NAME | YEAR \& BRANCH |
| :---: | :---: | :---: | :---: |
| 25 | 912617106014 | MANOHARI .M | III \& ECE |
| 26 | 912617106015 | MARAGATHALAKSHMI. S | III \& ECE |
| 27 | 912617106017 | SAFRIN NISHA. S | III \& ECE |
| 28 | 912617106018 | SUBASHINI .M | III \& ECE |
| 29 | 912617106019 | SUBASHINI. T | III \& ECE |
| 30 | 912617106020 | VINTHIYA. R | III \& ECE |
| 31 | 912616106001 | ABINAYA. R | IV \& ECE |
| 32 | 912616106002 | AGALYA.A | IV \& ECE |
| 33 | 912616106003 | ATCHAYA. G | IV \& ECE |
| 34 | 912616106004 | DEEPA .N | IV \& ECE |
| 35 | 912616106005 | DHARANIYA. A | IV \& ECE |
| 36 | 912616106006 | JEEVITHA .U | IV \& ECE |
| 37 | 912616106007 | MAHESWARI.V | IV \& ECE |
| 38 | 912616106008 | PAZHANIYAMMAL .R | IV \& ECE |
| 39 | 912616106009 | PRIYANKA. E | IV \& ECE |
| 40 | 912616106010 | ROJA .A | IV \& ECE |
| 41 | 912616106011 | SHANMUGAPRIYA. R | IV \& ECE |
| 42 | 912616106012 | SHIYAMALA. E | IV \& ECE |
| 43 | 912616106013 | SIVABHARATHI .P | IV \& ECE |
| 44 | 912616106014 | SIVARUBINI. S | IV \& ECE |
| 45 | 912616106016 | VINCY .A | IV \& ECE |
| 46 | 912616106302 | SANKAVI .M | IV \& ECE |

HOD / ECE


Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi 622 303, Pudukkotiai Dt.

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING ACADEMIC YEAR ODD SEMESTER (2019-2020)

## ATTENDANCE SHEET FOR VALUE ADDED COURSE-PCB MANUFACTURING AND DESIGNING OF BASIC CIRCUITS

| $\begin{gathered} \text { S. } \\ \text { No } \end{gathered}$ | REG. NO | NAME | $\begin{aligned} & \text { YEAR/ } \\ & \text { BRANCH } \end{aligned}$ | 24.06.2019 |  | 25.06.2019 |  | 26.06.2019 |  | 27.06.2019 |  | 28.06.2019 |  | NO. OF SESSIONS ATTENDED | SIGN OF STUDENT |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | F.N | A.N | F.N | A.N | F.N | A.N | F.N | A.N | F.N | A.N |  |  |
| 1 | 912618106001 | ANUSHAA S | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | Amishe |
| 2 | 912618106002 | ARIVARASI A | II/ECE | $a$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9 | Arivarasi. A |
| 3 | 912618106003 | ASMATH HAZEENA N | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | ofinthin |
| 4 | 912618106004 | ATCHAYA R | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | $\prime$ | 1 | 1 | 1 | 10 | Otzhayar |
| 5 | 912618106005 | JAYAPRIYA T | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | Jeryaprize |
| 6 | 912618106006 | JAYASRI M | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | Jay a SRi |
| 7 | 912618106007 | NAGALAKSHMI P | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | nomle |
| 8 | 912618106008 | NAVITHRA D | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 |  |
| 9 | 912618106009 | ROHINI K | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | Peteni |
| 10 | 912618106010 | SOUNTHARYA P | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 1 | 10 | Porbis |
| 11 | 912618106012 | THAIYAL NAYAGI. K | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 |  | , |  |  | 19 | thuyl Nay |
| 12 | 912618106701 | JANANI.R | II/ECE | 1 | 1 | 1 | 1 | 1 | 1 | , | S.THI |  | PNH | E.,Ph.D., | fanari.R |


| 13 | 912617106001 | ABIRAMI S | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | S. Abirami |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 | 912617106002 | ABISHEKA S | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 |  |
| 15 | 912617106003 | ATSHAYA R | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | , | 1 | 1 | 1 | 10 | R.Atchers |
| 16 | 912617106004 | BAVADHARANI A | III /ECE | 1 | 1 | , | , | 1 | 1 | 1 | 1 | 1 | 1 | 10 | A. Bavadue |
| 17. | 912617106005 | BHUVANESHWARI B | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | / | 10 |  |
| 18 | 912617106006 | DHIVYA L | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | , | 1 | 1 | , | 10 | L.Di |
| 19 | 912617106007 | GOWSALYA D | III /ECE | $a$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9 | 2. Couced |
| 20 | 912617106009 | InDHUMATHI S | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | $5.8 n$ |
| 21 | 912617106010 | KANIMOZHI D | III /ECE | 1 | 1 | 1 | 1 | 1 | / | 1 | 1 | / | 1 | 10 |  |
| 22 | 912617106011 | KaVYa C | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | a | a | , | , | 8 |  |
| 23 | 912617106012 | KEERTHANA G | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | , | 10 | Grasobhen |
| 24 | 912617106013 | MAHESHWARI G | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | / | 10 | G. Moher Ti: |
| 25 | 912617106014 | MANOHARI M | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | M. Mun |
| 26 | 912617106015 | MARAGATHA <br> LAKSHMI. S | III /ECE | 1 | , | 1 | 1 | 1 | , | 1 | 1 | 1 | 1 | 10 | S. Megerasa |
| 27 | 912617106017 | SAFRIN NISHA S | III /ECE | 1 | 1 | a | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9 | S. Sa.firs |
| 28 | 912617106018 | SUBASHINI M | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | Tisulassin. |
| 29 | 912617106019 | SUBASHINI T | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | , | 10 | T. Subi |
| 30 | 912617106020 | VINTHIYA R | III /ECE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 人 |  | 10 | R.vinthige |
| 31 | 912616106001 | ABINAYA R | IV/ECE | 1 | 1 | 1 | 1 | 1 | 10 | 5,1 | LISER | YAT | 1 M. |  | R. Abinaya |
| 32 | 912616106002 | AGALYA A | IV/ECE | 1 | 1 | 1 | 1 | , | 1 | SRİ | $\begin{aligned} & A A A A \\ & \text { AR } \\ & \text { chi }-622 \end{aligned}$ |  | NEER OREN | $10$ | Ad Agolya |




Dr. S.THILAGAVATHI M.E.,Ph.D., PRINCIRAL SRI BHARATHI ENGINEERING COLLEGEFOR WOMEN Kaikkurchi-622 303, Pudukk6ttai Dt.

HoD/ ECE
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PUDUKKOTTAI-622303

| SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN <br> (Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) Kaikkurichi, Pudukkottai, Tamil Nadu - 622 303, India |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Report on Value Added Course |  |  |  |  |  |  |  |
| Title: $\quad$ PCB | PCB Manufacturing and Designing of Basic Circuits |  |  |  |  |  |  |
| Resource Person: | Er.V.VEERAPANDIYAN, PCB Developer, Galwin Technology, Trichy-620 002. |  |  |  |  |  |  |
| Date of conduct from : |  | 4.06.2019 | To: | 28.06.2019 | Duration: | 30 H | ours |
| Organized Department : Electronics and Communication Engineering |  |  |  |  |  |  |  |
| Participant Year: | 2/3/4 | Semester: | ODD | No. o | ents Registe | red : | 46 |
| Venue: $\quad$ Seminar Hall, ,Ground Floor,SBECW |  |  |  |  |  |  |  |
| Outcome of Value Added Course (VAC) : At the end of Course, Students can able to |  |  |  |  |  |  |  |
| - Understand basics of PCB designing. <br> - Design PCB layout of their design. <br> - Produce PCB of their own circuit. <br> - Apply advance techniques, skills and modern tools for designing and fabrication of PCBs. <br> - Apply the knowledge and techniques to fabricate Multilayer, SMT and HDI PCB. <br> - Understand concepts of Packaging. <br> - Recognize the technologies used in electronic industry through the practical experience gained in the course. |  |  |  |  |  |  |  |

## Assessment Process

- Students securing more than $\mathbf{6 0 \%}$ on total score and secured more than $\mathbf{7 5 \%}$ in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score $=(0.5 *$ Attendance in VAC out of 100 percentage $+0.5 *$ Test mark in VAC out of 100 marks $)$
SRIBHARATHIENOIMEERANG
COLLEGEFOR WOMEN
KUIKKURICHI,
PUDUKKOTTAI-622 303


# SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN (Approved by AICTE | Affiliated to Anna University) 

 KAIKKURICHI, PUDUKKOTTAI-622303

## Certificate of completion

## VALUE ADDED PROGRAM

This is to Certify that Mr/Ms.ASMATH HAZEENA.N of II ECE has successfully completed Value Added Course on "PCB Manufacturing and Designing of Basic Circuits" organized by the department of Electronics and Communication Engineering in association with Galwin Technology from 24.06 .2019 to 28.06 .2019 during the academic year 2019-2020.
 Galwin Technology


# SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN <br> (Approved by AICTE | Affiliated to Anna University) <br> KAIKKURICHI, PUDUKKOTTAI-622303 



## Certificate of completion

## VALUE ADDED PROGRAM

This is to Certify that Mr/Ms. ABISHEKA.S of III ECE has successfully completed Value Added Course on "PCB Manufacturing and Designing of Basic Circuits" organized by the department of Electronics and Communication Engineering in association with Galwin Technology from 24.06 .2019 to 28.06 .2019 during the academic year 2019-2020.


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KAIKKURICHI, PUDUKKOTTAI-622303


## Certificate of completion

## VALUE ADDED PROGRAM

This is to Certify that Mr/Ms. SHANMUGAPRIYA.R of IV ECE has successfully completed Value Added Course on "PCB Manufacturing and Designing of Basic Circuits" organized by the department of Electronics and Communication Engineering in association with Galwin Technology from 24.06.2019 to 28.06.2019 during the academic year 2019-2020.


Dr S.THILAGRTVAT:I M.E.,Ph.D.,

# SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN 

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai, Tamil Nadu - 622 303, India

Name of the Student :

## Year/Sem:

## AU Register Number:

## Value Added Course on "PCB Manufacturing and Designing of Basic Circuits"

## MCQ QUESTIONS ( 25X1 = 25 Marks)

1.High current circuits are purposely located or placed near the edge of PCB in accordance to the supply lines for $\qquad$
a) Removal of heat
c) Reduction of path length
b) Isolation of stray current
d) All of the above
2. Which among the below stated soldering methods is also renowned as 'High Frequency Resistance Soldering'?
a) Iron Soldering
c) Torch Soldering
b) Furnace Soldering
d) Electrical Soldering
3. Which among the below mentioned approaches belongs to the category of In-circuit Testing?
a) Impedance Testing
c) Apply Signal and check output
b) Component Testing
d) All of the above
4. Which among the below stated devices/equipments are preferred for elimination of ground and supply line noise especially in TTL/CMOS / ECL PCB designing?
a) Coupling capacitor
c) Snubber circuits
b) Decoupling capacitor
d) All of the above
5.Which terminology of PCB represents a thin photo-sensitive polymer by supporting photographic pattern of single traces or IC pads for etching?
a) Prepreg
c) Photo-resist
b) Etching
d) Solder mask
6. The actual cost of PCB can be evaluated on the basis of
a) PCB size \& material
c) Vias on PCB
b) Number of layers
d) All of the above
7. Which type of PCB requires minimum soldering on component side in order to avoid replacement oriented difficulties?
a) Single-sided PCB
c) Both a and b
b) Double-sided PCB
d) None of the above
8. Which among the below mentioned packages does not belong to the category of 'Small Outline Package'?
a) SO

c) SOT
b) SOP
9.The computer-based design process is both $\qquad$ than manual process.
a)Slower and Less accurate
c)Slower and more accurate
b)Faster and more accurate
d)Faster and less accurate
10.Computer-aided design provides an interface between the $\qquad$ and the computer.
a) Circuit Designer
c) PCB Manufacturer
b) Customer
d) PCB Designer
11.In a multi-layer board design, $\qquad$ CAD plays an important role in the design process.
a) Interactive
c) Auto
b) Mechanical
d) Basic
12. $\qquad$ provides the functional flow and graphical representation of an electronic circuit and consists of electrical connections (nets) and junctions.
a) Layout
c) Assembly
b) Schematic Diagram
d) Testing
13. In Schematic Capture, the project file is saved as an $\qquad$ file.
a) ASCII
c) Binary
b) Assembly language
d) Circuit
14. $\qquad$ Verification check is used to verify whether preferred pad and hole sizes are used.
a) Electrical
c) General
b) Physical
d).Mechanical
15. To determine whether single-sided; double-sided or multi-layer board, plated-through holes, $\qquad$ are used.
a) PCB Specifications
c) Electrical Specifications
b) Mechanical Specifications
d) Pattern Specifications
16. Wooden frame is not preferred for screen printing, due to
a) Rigidness
c) Absorption of water and bending tendency
b) Less weight
d) Stretchability
17. The basic function of the laminate is to provide $\qquad$ support for electronic components and to interconnect them electrically.
a) Electrical
c) Mechanical
b) General
d) Pattern

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18. Which of the following is an Etching Chemical?
a) Sodium chloride
c) Ferric chloride
b) Hydro chloride
d) Magnesium chloride
19. Volume Resistivity is given by $\qquad$ ( W cm )
a) $(\mathrm{R} x \mathrm{t}) / \mathrm{A}$
b) $R /(A t)$
c) $\mathrm{A} /(\mathrm{Rt})$
d) $(\mathrm{R} x \mathrm{~A}) / \mathrm{t}$
20. Which of the following is not a physical component of an electronic circuit?
a) Capacitor
c) Diode
b) Inductor
d) Temperature
21. What is the effect of temperature on the recombination rate of electrons in electronic circuits?
a) Recombination rate increases with increase in the temperature
b) Recombination rate decreases with increase in the temperature
c) Recombination rate is independent of temperature
d) Recombination of electrons doesn't occur in semiconductors
22. What is the first step in PCB design
a)Specification
c) Manufacturing file
b) Schematic
d) Simulation
23. Select best types of board
a) Single Sided
c) Throughhole
b)Multilayer
d) Surface mount
24. What is the first thing to consider when placing components Size Restrictions
a)Heat/Thermal
c) Track width
b) Top or Bottom side
d) Bottom side
25. What is the use of IC in PCB
a) stable and durable base for devices
c) Transfer Heat
b Reduce heat
d) All the above

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING ACADEMIC YEAR 2019-2020/ODD SEMESTER

Value Added Course on "PCB Manufacturing And Designing of Basic Circuits"

MCQ ANSWER KEY

| 1 | A | 6 | D | 11 | A | 16 | C | 21 | B |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | D | 7 | B | 12 | B | 17 | C | 22 | A |
| 3 | D | 8 | D | 13 | A | 18 | C | 23 | B |
| 4 | B | 9 | B | 14 | C | 19 | D | 24 | D |
| 5 | C | 10 | D | 15 | A | 20 | D | 25 | A |



Dr. S.THILAGAVATHIM.E.Ph.D.,
PRINCIPAL SRIBHARATHIENGINEERING COLLEGEFOR WOMEN Kaikkurchi-622 303, Pudukkoitai Dt.

# SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN <br> (Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) Kaikkurichi, Pudukkottai, Tamil Nadu - 622 303, India 

Name of the Student:ARIVARASI.A AU Register Number: 91261810600 L
Value Added Course on "PCB Manufacturing and Designing of Basic Circuits"

## MCQ QUESTIONS ( 25X1 = $\mathbf{2 5}$ Marks)

1. High current circuits are purposely located or placed near the edge of PCB in accordance to the supply lines for $\qquad$
(a) Removal of heat
b) Isolation of stray current
c) Reduction of path length
d) All of the above
2. Which among the below stated soldering methods is also renowned as 'High Frequency Resistance Soldering'?
a) Iron Soldering
c) Torch Soldering
b) Furnace Soldering
(d) Electrical Soldering
3. Which among the below mentioned approaches belongs to the category of In-circuit Testing?
a) Impedance Testing
b) Component Testing
c) Apply Signal and check output
(d) All of the above
4. Which among the below stated devices/equipments are preferred for elimination of ground and supply line noise especially in TTL/CMOS / ECL PCB designing?
a) Coupling capacitor
c) Snubber circuits
(b) Decoupling capacitor
d) All of the above
5. Which terminology of PCB represents a thin photo-sensitive polymer by supporting photographic pattern of single traces or IC pads for etching?
a) Prepreg
b) Etching
(c) Photo-resist
d) Solder mask
6. The actual cost of PCB can be evaluated on the basis of
a) PCB size \& material
b) Number of layers
c) Vias on PCB
(d) All of the above
7. Which type of PCB requires minimum soldering on component side in order to avoid
replacement oriented difficulties?
(a) Single-sided PCB
b) Double-sided PCB
c) Both a and b
d) None of the above
8. Which among the below mentioned packages does not belong to the category of 'Small Outline Package'?
a) SO
b) SOP
c) SOT

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a)Slower and Less accurate
c)Slower and more accurate
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10.Computer-aided design provides an interface between the $\qquad$ and the computer.
a) Circuit Designer
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(a) Interactive
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d) Basic
12. $\qquad$ provides the functional flow and graphical representation of an electronic circuit and consists of electrical connections (nets) and junctions.
a) Layout
c) Assembly
(b) Schematic Diagram
d) Testing
13. Th Schematic Capture, the project file is saved as an $\qquad$ file.
(a) ASCII
c) Binary
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14. $\qquad$ Verification check is used to verify whether preferred pad and hole sizes are used.
a) Electrical
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d).Mechanical
15. To determine whether single-sided; double-sided or multi-layer board, plated-through holes, $\qquad$ are used.
(2) PCB Specifications
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16. Wooden frame is not preferred for screen printing, due to
a) Rigidness
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17. The basic function of the laminate is to provide $\qquad$ support for electronic components and to interconnect them electrically.
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18. Which of the following is an Etching Chemical?
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19. Volume Resistivity is given by $\qquad$ ( W cm )
a) $(\mathrm{R} x \mathrm{t}) / \mathrm{A}$
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20. Which of the following is not a physical component of an electronic circuit?
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25. What is the use of IC in PCB
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Dr. S.THILAGAVATHTM.E.PI:D., PRINCIPAL

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Name of the Student: Bhuvaneshweri. B
AU Register Number: 912617106005

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Name of the Student: Priyanka:E
AU Register Number: 912616106009


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DEPARTMENT OF ELECTRONICS AND COMMUNICATIONENGINEERING ACADEMIC YEAR ODD SEMESTER (2019-2020)

MARK SHEET FOR VALUE ADDED COURSE- PCB Manufacturing and Designing of Basic Circuits

| S.NO | REGISTER <br> NUMBER | NAME | $\begin{gathered} \text { YEAR } \\ \text { \& } \\ \text { BRANCH } \end{gathered}$ | Attendance <br> (A) |  | VAC-MCQ TEST <br> (B) |  | OVERALL MARK(100) (50\% of A+ $50 \%$ of $B$ ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | No.of Sessions Attented | Marks (100) | No.of Correct <br> Answer | Marks (100) |  |
| 1 | 912618106001 | ANUSHAA S | II /ECE | 10 | 100 | 22 | 88 | 94 |
| 2 | 912618106002 | ARIVARASI A | II /ECE | 9 | 90 | 23 | 92 | 91 |
| 3 | 912618106003 | ASMATH HAZEENA N | II /ECE | 10 | 100 | 21 | 84 | 92 |
| 4 | 912618106004 | ATCHAYA R | II /ECE | 10 | 100 | 20 | 80 | 90 |
| 5 | 912618106005 | JAYAPRIYA T | II /ECE | 10 | 100 | 19 | 76 | 88 |
| 6 | 912618106006 | JAYASRI M | II /ECE | 10 | 100 | 20 | 80 | 95 |
| 7 | 912618106007 | NAGALAKSHMI P | II /ECE | 10 | 100 | 21 | 84 | 92 |
| 8 | 912618106008 | NAVITHRA D | II /ECE | 10 | 100 | 19 | 76 | 88 |
| 9 | 912618106009 | ROHINI K | II /ECE | 10 | 100 | 18 | 72 | 86 |
| 10 | 912618106010 | SOUNTHARYA P | II /ECE | 10 | 100 | 22 | 88 | 94 |
| 11 | 912618106012 | THAIYAL NAYAGI K | II /ECE | 9 |  | 20 | 80 | 85 |

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| 12 | 912618106701 | JANANI.R | II /ECE | 10 | 100 | 19 | 76 | 88 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 13 | 912617106001 | ABIRAMI S | III /ECE | 10 | 100 | 18 | 72 | 86 |
| 14 | 912617106002 | ABISHEKA S | III /ECE | 10 | 100 | 20 | 80 | 90 |
| 15 | 912617106003 | ATSHAYA R | III /ECE | 10 | 100 | 20 | 80 | 90 |
| 16 | 912617106004 | BAVADHARANI A | III /ECE | 10 | 100 | 18 | 72 | 86 |
| 17 | 912617106005 | BHUVANESHWARI B | III /ECE | 10 | 100 | 19 | 76 | 88 |
| 18 | 912617106006 | DHIVYA L | III /ECE | 10 | 100 | 22 | 88 | 94 |
| 19 | 912617106007 | GOWSALYA D | III /ECE | 9 | 90 | 19 | 76 | 83 |
| 20 | 912617106009 | INDHUMATHI S | III /ECE | 10 | 100 | 18 | 72 | 86 |
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| 22 | 912617106011 | KAVYA C | III /ECE | 8 | 80 | 22 | 88 | 84 |
| 23 | 912617106012 | KEERTHANA G | III /ECE | 10 | 100 | 18 | 72 | 91 |
| 24 | 912617106013 | MAHESHWARI G | III /ECE | 10 | 100 | 19 | 76 | 88 |
| 25 | 912617106014 | MANOHARI M | III /ECE | 10 | 100 | 21 | 84 | 92 |
| 26 | 912617106015 | MARAGATHALAKSHMI S | III /ECE | 10 | 100 | 23 | 92 | 96 |
| 27 | 912617106017 | SAFRIN NISHA S | III /ECE | 9 | 90 | 21 | 84 | 87 |
| 28 | 912617106018 | SUBASHINI M | III /ECE | 10 | 100 | 23 | 92 | 96 |
| 29 | 912617106019 | SUBASHINI T | III /ECE | 10 | 100 | 19 | 76 | 88 |
| 30 | 912617106020 | VINTHIYA R | III /ECE | 10 | 100 | 19 | 76 | 88 |

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| 31 | 912616106001 | ABINAYA R | IV/ECE | 10 | 100 | 18 | 72 | 86 |
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| 45 | 912616106016 | VINCY A | IV/ECE | 8 | 80 | 20 | 80 | 80 |
| 46 | 912616106302 | SANKAVI M | IV/ECE | 10 | 100 | 15 | 60 | 80 |




Dr S.THHLAGAVATHI M.E.,Ph!D.,

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