THAMIRABHARANI ENGINEERING COLLEGE
Thatchanallur – 627358

POLICY ON ADVANCED AND SLOW LEARNERS

THAMIRABHARANI ENGINEERING COLLEGE
Thatchanallur – 627358

2.2.1 The institution assesses the learning levels of the students and organizes special Programmes for advanced learners and slow learners

POLICY ON ADVANCED AND SLOW LEARNERS

This policy paper is recognized as the "Policy on Advanced and Slow Learners" of the Thamirabharani Engineering College, Thatcahanallur. Through this policy the college pronounces its assurance to the vital facilitation and prop up to the advanced learners to be excellent achievers and slow learners to be better performing and achieving students in the academic and personal life. The policy also persuades the teaching Departments to develop significant strategies and scientific implementations to benefit both the advanced learners and slow learners in the University education system without forgetting the average performers.

Policy Guidelines for Advanced learners

1. Advanced learners are motivated to strive for higher goals. They are provided with additional inputs for better career planning and growth through offering special coaching for higher level competitive examinations

2. Motivating them to involve in research projects to inculcate research orientation and higher studies aspirations

3. Helping them to participate in group discussions, technical quizzes to develop analytical and problem solving abilities in them and thereby, to improve their presentation skills. Encouraging them to participate in National International Conferences and also to make presentations

4. They are given special prizes and special facilities like digital library laptops and special scholarships for making their ideas become visible.

5. The mentors give higher goals and also make the advanced learners get higher levels of personality development and stress management trainings.

6. They are made the supporters to the average and the slow learners.

Policy Guidelines for Slow learners

1. The slow learners are not labeled as poor achievers or problem students in the class or department so that their motivation and their interest are not negatively affected. This can also make them more stressed, and introvert in the class.

2. They should be treated as any other student in the class but they can be provided extra classes for improvement and achievement.

3. The Department and individual teachers help the slow learners by giving proper guidance and support to them.

4. Organize bridge classes and remedial programmes for them.

5. Conduct extra classes for the difficult subjects (based on the previous university results) in the curriculum.

6. Special attention is given to the students in the tutorial classes, who are identified as the slow learners.

7. Slow learners are specially advised and counseled by a teacher guardian and the subject expert.

8. Corrective classes are conducted for the weaker students based on the results of class tests.

9. The students are given with training on communication skills, personality development, time management and motivational sessions.

10. Design special coaching sessions or tutorial sessions to bridge the gap between the slow learners and advanced learners are provided.

11. Academic and personal counseling are given to the slow learners by the tutor, mentor and the counseling cell.

Strategies for the advanced learners:

- The institution organizes Orientation programmes/Induction programmes for freshers in the start of every academic year both at the college level as well as the department level. Bridge Courses are conducted at the department level to lift the students to the standard of higher education.

- The Department of Computer Science of our college selected and focused two specific areas in conducting the Bridge Course - Basics of Computers and Advances in Computer Science.

- The English Department of TEC organizes Orientation / Bridge Course in Basic English Grammar to enable Tamil medium students to cope with the course.

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- The Department of Mathematics organizes Bridge Course to all the first year students are admitted to cope up with the knowledge requirement of the course opted by the student.

- Coaching classes are conducted for Advanced Learners to face competitive exams. Students are encouraged to enroll in NPTEL Courses – Swayam.

- Coaching is also given in Skill Development Programme like Communicative English, Aptitude and Placement.

- Students are encouraged to have an internship with their relevant discipline of studies to learn and analyse the current needs of industrial aspects. Based on the industrial needs the following core courses and inter-disciplinary courses are conducted to encourage our students to learn as advanced learner programme in every semester after the working hours.

Strategies adopted for slow learners:

- The institution assesses the learning levels of the students in means of two things- students enrolled in various disciplines are identified as slow and advanced learners based on their performance in Internal Assessment Test and University Examination.

- All the departments draw up the schedule for organising remedial classes for slow learners. This exercise is done in a discreet manner and slow learners are encouraged and stimulated to recognize their shortcomings and register on their own without compulsion.

- Teachers are able to give one to one attention in remedial classes and focus on individual problems in a better manner when compared to a regular classroom.

- Group Study System is also encouraged with the help of the advanced learners. Academic and personal counselling is given to the slow learners by mentor. Provision of simple and standard lecture notes/course materials will enable them to perform even better in their academic performance.

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Thamirabharani Engineering College

Department of Civil Engineering

List of Courses

Special Programmes for Advanced Learners (Academic Year: 2020-2021)

S.No	Name of the Course	Course Competency	Semester	Year	Staff In charge
1	Computational Fluid Dynamics	Inter-Disciplinary	3	2	Mr. M. Muthuganesh, AP/Civil
2	Advanced Reinforced Concrete Design	Core	4		Mr. S. Rajamuniasamy, AP/Civil
3	Basics of Finite Element Methods	Inter-Disciplinary	5	3	Mr. M. Harris Simon, AP/Mech
4	Total Quality Management	Inter-Disciplinary	6		Mrs. M. Sameem Suha, AP/Civil
5	Advanced Strength of Materials	Inter-Disciplinary	7	4	Mr.V. Antony, AP/Mech
6	Basic Program in STAAD.Pro for RCC Structures	Core	8		Mr. V. C. Suntar Raajan, AP/Civil

ADVANCED LEARNER COURSE

TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

THAMIRABHARANI ENGINEERING COLLEGE

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Chathirampudukulam, Chidambaranagar - Vepemkulam Road
Thatchanallur, Tirunelveli 627 358, Tamil Nadu.

TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

Course curriculum prepared by   : Mr. V. C. Suntar Raajan, AP /Civil

Approved by (Head of the Department)   :

Approved by the Civil Department Advisory committee meeting held on:

Approved by the (No.) IQAC meeting held on:

Approved by the (No.) Governing Council meeting conducted on:

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ADVANCED LEARNER COURSE

TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

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Thatchanallur, Tirunelveli - 627 358.

CIRCULAR

Ref:TEC/CIVIL/2020-21/ODD/ALC/08

Date: 12.03.2021

In order to make the student industry ready engineers and to provide advanced quality training to the advanced learners of final year of civil engineering department, the course on "**TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES**" by Mr. V. C. Suntar Raajan, AP/Civil is being offered to enhance employability of the students, technical skills and make them more competitive. Course commences from 15.03.2021 to 16.04.2021. Students are instructed to make use of the opportunity. Advanced learners of final year of civil engineering department are eligible for this course.

Course Instructor

HoD/CE

To be read in

S. No	Class	Sign
1	IV CIVIL	

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ADVANCED LEARNER COURSE
TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

SYLLABUS

OBJECTIVE

To make the students be familiar with the node and element creation, Properties, supports and load assigning, analysis and design of structural elements using STAAD.Pro.V8i.

UNIT I INTRODUCTION AND MODEL CREATION

Introduction to structural engineering, Introduction to STAAD.Pro.V8i, Getting familiar with STAAD window, Model generation using STAAD editor, Introduction to Snap Node/Beam Editor, Model generation using Node/Beam Editor, Introduction to Translational Repeat, Model generation using Translational Repeat.

UNIT II ANALYSIS AND DESIGN

Assigning Properties, Assigning Supports, Assigning Loads, Structure Analysis, Simply Supported Beam, Analysis of Framed Structure, Applying Floor Loads, Wind Analysis, Seismic Analysis, Creating Load Combinations, Dynamic Analysis, Response Spectrum Analysis, Introduction to FEM, Analysis of Framed Structure Including Slabs

UNIT III ELEMENT DESIGN

Column & Beam Design, Reinforced Concrete Design, Slab Design, Circular Water Tank Design, Rectangular Water Tank Design, Moving Loads.

OUTCOME

On completion of this course the students will have the confidence to complete object-oriented instinctive 2D/3D graphic model generation and to design concrete beams/columns/slabs/footings as per all major international codes.

THEORY:30 PERIODS
ASSESSMENT:2 PERIODS
TOTAL:32 PERIODS

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ADVANCED LEARNER COURSE

TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

Lesson Plan & Schedule

S.NO	DATE	TOPIC	No. of Hours
1.	15.03.2021	Introduction to structural engineering - Introduction to STAAD.Pro.V8i	2
2.	16.03.2021	Getting familiar with STAAD window, Model generation using STAAD editor	2
3.	17.03.2021	Introduction to Snap Node/Beam Editor	2
4.	18.03.2021	Model generation using Node/Beam Editor	2
5.	19.03.2021	Introduction to Translational Repeat, Model generation using Translational Repeat	3
6.	20.03.2021	Structure Analysis, Simply Supported Beam, Analysis of Framed Structure, Applying Floor Loads	5
7.	23.03.2021	Assigning Properties, Assigning Supports, Assigning Loads	2
8.	24.03.2021	Wind Analysis, Seismic Analysis	2
9.	25.03.2021	Creating Load Combinations, Dynamic Analysis	4
10.	26.03.2021	Response Spectrum Analysis, Introduction to FEM, Analysis of Framed Structure Including Slabs	3
11.	01.04.2021	Column & Beam Design, Reinforced Concrete Design	2
12.	05.04.2021	Slab Design, Circular Water Tank Design	2
13.	07.04.2021	Rectangular Water Tank Design, Moving Loads	2
14.	16.04.2021	Assessment	1
		Total Hours	34

Course Instructor 12/03/2021

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HoD/CE

ADVANCED LEARNER COURSE

TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

COURSE EVALUATION

The assessment of the students shall be based on the following parameters.

Evaluation Parameter	Weightage (in %)
Attendance	50
Assessment	50

The minimum passing requirement for the completion of course is 60%

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ADVANCED LEARNER COURSE

TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

NAME LIST

S. No.	Reg. No.	Student Name	Signature
1	953117103002	ANITHA.M	
2	953117103004	INDHIRA. M	
3	953117103007	SAUMYA. G . K	
4	953117103008	SELCIYA. T	
5	953117103009	SELVA MAHESWARI. B	
6	953117103010	SORNAMMAL. S	
7	953117103011	SOUNDARYA. P	
8	953117103301	SUDHA. M	

12/03/2022

Course Instructor

HoD/CE

ADVANCED LEARNER COURSE

TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

ATTENDANCE SHEET

S. No	Roll No.	Student Name	Day 1 15.03.2021	Day 2 16.03.2021	Day 3 17.03.2021	Day 4 18.03.2021	Day 5 19.03.2021	Day 6 22.03.2021	Day 7 23.03.2021	Day 8 24.03.2021	Day 9 25.03.2021	Day 10 26.03.2021	Day 11 01.04.2021	Day 12 05.04.2021	Day 13 07.04.2021	Day 14 16.04.2021	Sign
1	953117103002	ANITHA.M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	Anitha
2	953117103004	INDHIRA. M	/	/	/	/	/	/	a	/	a	/	/	/	/	/	M. Indhira
3	953117103007	SAUMYA. G . K	/	/	/	/	/	/	/	/	/	/	/	/	/	/	G. k Say.
4	953117103008	SELCIYA. T	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
5	953117103009	SELVA MAHESWARI. B	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
6	953117103010	SORNAMMAL. S	/	a	/	/	/	/	/	/	/	/	/	/	/	/	Selva
7	953117103011	SOUNDARYA. P	/	/	/	/	/	/	/	/	/	/	/	a	/	/	P.Soundarya
8	953117103301	SUDHA. M	/	/	/	/	/	/	/	/	/	/	/	a	/	/	M.

Photos

Fig. 1. Content Delivery

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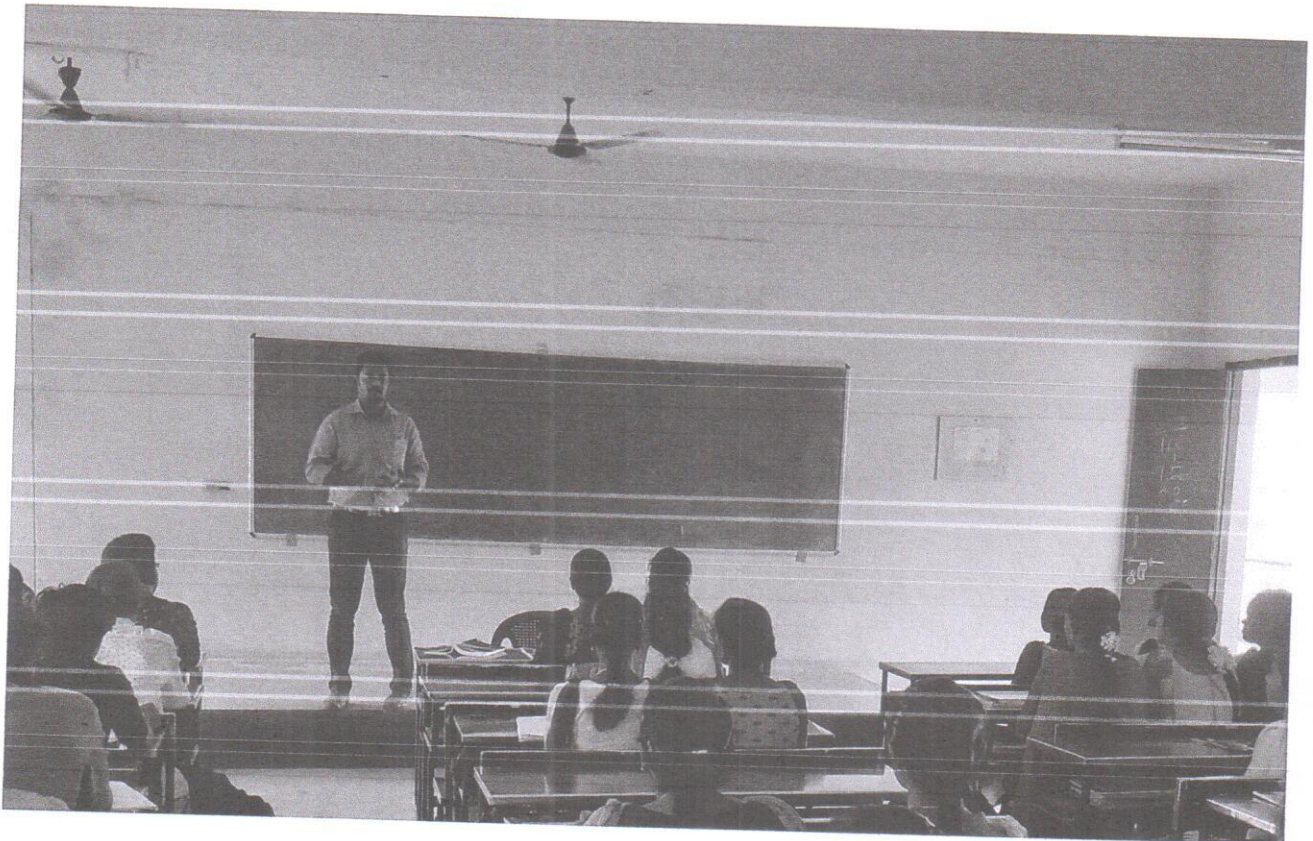Thatchanallur, Tirunelveli 627 358, Tamil Nadu.

ADVANCED LEARNER COURSE
TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES
ASSESSMENT

COURSE CODE & NAME :

DEPARTMENT :

NAME OF THE STUDENT :

REG. NO. :

YEAR :

ACADEMIC YEAR :

SEM :

Total Marks: 50

Part- A (10*1= 10)

1. One of the biggest reasons that BIM has had more growth in the _____ sector is competition.
   a. residential
   b. commercial
   c. civil
   d. structural steel

2. In a typical CADD workflow, _____ drawings are created to represent the building.
   a. 4D
   b. 2D
   c. 3D
   d. Isometric

3. All views are stored in a(n) _____ file, eliminating the need to create and manage separate 2D drawing files.
   a. off-site
   b. local
   c. regional
   d. central

4. One of the first steps in implementing BIM is to appoint a _____.
   a. chief drafter
   b. job captain
   c. BIM manager
   d. lead architect

5. The virtual building model in a BIM project, called a BIM model, serves as the foundation of the project.
   a. True
   b. False

6. Detailing is the process of using 3D geometry to represent non-modeled features in views.
   a. True
   b. False

7. Construction stimulation is an animation that illustrates construction processes in any order.
   a. True
   b. False

8. View range defines the range of visibility for objects in a plan view.
   a. True
   b. False

9. Detailed components are view-specific lines that only appear in the view in which they are created.
   a. True
   b. False

10. A file configured with predefined setting, model content, and views that can be applied to a new project.
    a. View template
    b. Project template
    c. BIM model
    d. Construction simulation

Part- B (20*2= 40)

1. By default, Response Reduction Factor Value for Special RC Moment Resisting Frame is?
   a) 1
   b) 3
   c) 6
   d) 5

2. STAAD.Pro Perform Analysis is:
   a) Taking into consideration the Displacement of Nodes
   b) Taking into consideration the Stiffness Corection
   c) Multi- Iteration Analysis
   d) None of the Above

3. In track parameter, we have which of the following values?
   a) 2,3,4
   b) 0,1,2
   c) 1,0,2
   d) 1,2,3

4. In floor load, Y is the :
   a) Affective height
   b) Floor height
   c) Building height
   d) All of the Above

5. In Concentrated Load, P is :
   a) All of the above
   b) Force Direction
   c) Perpendicular distance from the member

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   d) Value of Load

6. How many types of Models are available in the Structure Wizard?
   a) 5
   b) 8
   c) 7
   d) 6

7. Dead loads are self-weights of material, equipment, or components that are relatively constant throughout the structure's life.
   a) true
   b) false

8. In concrete design parameter, by default, value for clt (Clear Cover top) is:
   a) 25mm
   b) 12mm
   c) 30mm
   d) 20mm

9. How many types of meshing we have in STAAD.Pro?
   a) 1
   b) 2
   c) 5
   d) 4

10. You can also edit the parameters in structure wizards models
    a) True
    b) false

11. The _____ group allows you to change the display of load arrows.
    a) Modeling Scale
    b) Loading Scale
    c) Displacement
    d) Result Scales

12. Pinned Support will have _____ reactions.
    a) 2
    b) 6
    c) 4
    d) 3

13. With the help of which of the following functions, you can duplicate Nodes, Beams, and Plates, in the direction of X,Y,Z?
    a) Circular Repeat
    b) Mirror
    c) Translational Repeat
    d) Insert Nodes

14. For Plates, Which one of the following is true?
    a) In order to release a Plate you can release the Beams holding the plate
    b) You can release the Nodes of the Plates.
    c) You can release more than one Nodes of the Plates.
    d) Options B & C.

15. In how many ways can we assign support to Nodes?
    a) 1
    b) 4
    c) 2

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d) 5

16. The minimum and maximum limits of number of divisions of each side are 1 to 100.
    a) **true**
    b) false

17. In Meshing Parametric dialog box, by default, bias value is ___ and divi value is ___.
    a) Bias is 1 Divi is 15
    b) Bias is 1 Divi is 11
    c) Bias is 2 Divi is 10
    d) **Bias is 1 Divi is 10**

18. B.E.A.V.A supports :
    a) **UK BS 5400**
    b) IRC chapter 2
    c) IS 456
    d) All of the Above

19. Which of the following sub-pages are in Foundation Plan Pages?
    a) Linear Grid Setting
    b) **Radial Grid Setup**
    c) Column Positioning
    d) Column Dimension and width

20. Indian Standard Criteria for Earthquake Resistant design of Structure is?
    a) Is 1893-2003
    b) **Is 1893-2002**
    c) Is 1892-2005
    d) Is 1892-2003

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ADVANCED LEARNER COURSE
TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES
ASSESSMENT

COURSE CODE & NAME : TECALC008 & BASIC PROGRAM IN STAAD.PRO FOR R.C.C STRUCTURES

DEPARTMENT : CIVIL ENGINEERING

NAME OF THE STUDENT : SELVA MAHESWARI Y

REG. NO. : 953117103009   ACADEMIC YEAR : 2020 -2021

YEAR : IV   SEM : VIII :

Total Marks: 50

Part- A (10*1= 10)

1. One of the biggest reasons that BIM has had more growth in the _____ sector is competition.
   a. residential
   b. commercial
   c. civil
   d. structural steel

2. In a typical CADD workflow, _____ drawings are created to represent the building.
   a. 4D
   b. 2D
   c. 3D
   d. Isometric

3. All views are stored in a(n) _____ file, eliminating the need to create and manage separate 2D drawing files.
   a. off-site
   b. local
   c. regional
   d. central

4. One of the first steps in implementing BIM is to appoint a _____.
   a. chief drafter
   b. job captain
   c. BIM manager
   d. lead architect

5. The virtual building model in a BIM project, called a BIM model, serves as the foundation of the project.
   a. True
   b. False

6. Detailing is the process of using 3D geometry to represent non-modeled features in views.
   a. True
   b. False

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7. Construction stimulation is an animation that illustrates construction processes in any order.
   a. True
   b. False

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10. A file configured with predefined setting, model content, and views that can be applied to a new project.
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Part- B (20*2= 40)

1. By default, Response Reduction Factor Value for Special RC Moment Resisting Frame is?
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   d) 5

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   b) 2
   c) 5
   d) 4

10. You can also edit the parameters in structure wizards models
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    b) Loading Scale
    c) Displacement
    d) Result Scales

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    b) 6
    c) 4
    d) 3

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15. In how many ways can we assign support to Nodes?
    a) 1
    b) 4

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c) 2
d) 5

16. The minimum and maximum limits of number of divisions of each side are 1 to 100.
    a) true
    b) false

17. In Meshing Parametric dialog box, by default, bias value is ___ and divi value is ___.
    a) Bias is 1 Divi is 15
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ADVANCED LEARNER COURSE
TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES
ASSESSMENT

COURSE CODE & NAME : TECALC008- BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

DEPARTMENT : CIVIL

NAME OF THE STUDENT : T. SELCIYA

REG. NO. : 953117103008

YEAR : IV

ACADEMIC YEAR : 20-21

SEM : VIII

Total Marks: 50

Part- A (10*1= 10)

1. One of the biggest reasons that BIM has had more growth in the _____ sector is competition.
   a. residential
   b. commercial
   c. civil ✓
   d. structural steel

2. In a typical CADD workflow, _____ drawings are created to represent the building.
   a. 4D
   b. 2D
   c. 3D
   d. Isometric ✓

3. All views are stored in a(n) _____ file, eliminating the need to create and manage separate 2D drawing files.
   a. off-site
   b. local
   c. regional
   d. central ✓

4. One of the first steps in implementing BIM is to appoint a _____.
   a. chief drafter
   b. job captain
   c. BIM manager
   d. lead architect ✗

5. The virtual building model in a BIM project, called a BIM model, serves as the foundation of the project.
   a. True ✓
   b. False

6. Detailing is the process of using 3D geometry to represent non-modeled features in views.
   a. True
   b. False ✓

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7. Construction stimulation is an animation that illustrates construction processes in any order.
   a. True
   b. False

8. View range defines the range of visibility for objects in a plan view.
   a. True
   b. False

9. Detailed components are view-specific lines that only appear in the view in which they are created.
   a. True
   b. False

10. A file configured with predefined setting, model content, and views that can be applied to a new project.
    a. View template
    b. Project template
    c. BIM model
    d. Construction simulation

Part- B (20*2= 40)

1. By default, Response Reduction Factor Value for Special RC Moment Resisting Frame is?
   a) 1
   b) 3
   c) 6
   d) 5

2. STAAD.Pro Perform Analysis is:
   a) Taking into consideration the Displacement of Nodes
   b) Taking into consideration the Stiffness Corection
   c) Multi- Iteration Analysis
   d) None of the Above

3. In track parameter, we have which of the following values?
   a) 2,3,4
   b) 0,1,2
   c) 1,0,2
   d) 1,2,3

4. In floor load, Y is the :
   a) Affective height
   b) Floor height
   c) Building height
   d) All of the Above

5. In Concentrated Load, P is :
   a) All of the above
   b) Force Direction

c) Perpendicular distance from the member

d) Value of Load

6. How many types of Models are available in the Structure Wizard?
   a) 5
   b) 8
   c) 7
   d) 6

7. Dead loads are self-weights of material, equipment, or components that are relatively constant throughout the structure's life.
   a) true
   b) false

8. In concrete design parameter, by default, value for clt (Clear Cover top) is:
   a) 25mm
   b) 12mm
   c) 30mm
   d) 20mm

9. How many types of meshing we have in STAAD.Pro?
   a) 1
   b) 2
   c) 5
   d) 4

10. You can also edit the parameters in structure wizards models
    a) True
    b) false

11. The _____ group allows you to change the display of load arrows.
    a) Modeling Scale
    b) Loading Scale
    c) Displacement
    d) Result Scales

12. Pinned Support will have _____ reactions.
    a) 2
    b) 6
    c) 4
    d) 3

13. With the help of which of the following functions, you can duplicate Nodes, Beams, and Plates, in the direction of X,Y,Z?
    a) Circular Repeat
    b) Mirror
    c) Translational Repeat
    d) Insert Nodes

14. For Plates, Which one of the following is true?
    a) In order to release a Plate you can release the Beams holding the plate
    b) You can release the Nodes of the Plates.
    c) You can release more than one Nodes of the Plates.
    d) Options B & C.

15. In how many ways can we assign support to Nodes?
    a) 1
    b) 4

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c) 2

d) 5

16. The minimum and maximum limits of number of divisions of each side are 1 to 100.
    a) true
    b) false

17. In Meshing Parametric dialog box, by default, bias value is ___ and divi value is ___.
    a) Bias is 1 Divi is 15
    b) Bias is 1 Divi is 11
    c) Bias is 2 Divi is 10
    d) Bias is 1 Divi is 10

18. B.E.A.V.A supports :
    a) UK BS 5400
    b) IRC chapter 2
    c) IS 456
    d) All of the Above

19. Which of the following sub-pages are in Foundation Plan Pages?
    a) Linear Grid Setting
    b) Radial Grid Setup
    c) Column Positioning
    d) Column Dimension and width

20. Indian Standard Criteria for Earthquake Resistant design of Structure is?
    a) Is 1893-2003
    b) Is 1893-2002
    c) Is 1892-2005
    d) Is 1892-2003

45/50

ADVANCED LEARNERS COURSE

TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

ASSESMENT MARKS

S.No	Roll No.	Student Name	Assessment (50)	Total (100)
1	953117103002	ANITHA.M	42	84
2	953117103004	INDHIRA. M	43	86
3	953117103007	SAUMYA. G . K	42	84
4	953117103008	SELCIYA. T	45	90
5	953117103009	SELVA MAHESWARI. B	45	90
6	953117103010	SORNAMMAL. S	44	88
7	953117103011	SOUNDARYA. P	46	92
8	953117103301	SUDHA. M	42	84

19/04/2021

Course Instructor

HoD/CE

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ADVANCED LEARNERS COURSE
TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

FEEDBACK FORM

COURSE CODE & NAME : TECALC008- BASIC PROGRAM in STAAD-PRO FOR
the structures

DEPARTMENT : CIVIL

NAME OF THE STUDENT : J·SELLIYA

REGISTER NUMBER : 95J11310308

YEAR : IV   ACADEMIC YEAR : 20-21

SEM : VIII

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you?   Yes / No

B. The course contents met with your expectations
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

C. The lecture sequence was well planned
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

D. The level of the course was
   1. Too Low   2. Low   3. Moderate   4. High   5. Very high

E. The course exposed you to new knowledge, practices and meets the current industrial needs
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

THE CONDUCT OF COURSE

A. The lectures were clear and easy to understand
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

B. The teaching aids were effectively used
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

C. The course assessment conducted was adequate
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

D. The instructors encouraged interaction and were helpful
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

E. Were objectives of the course realized? Yes / No

SIGNATURE OF THE STUDENT

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ADVANCED LEARNERS COURSE
TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

FEEDBACK FORM

COURSE CODE & NAME : TECALC008 & BASIC PROGRAM IN STADD PRO FOR RCC STRUCTURES

DEPARTMENT : CIVIL ENGINEERING

NAME OF THE STUDENT : SELVA MAHESWARI .V

REGISTER NUMBER : 953117103009   **ACADEMIC YEAR** : 2020-21

YEAR : IV   **SEM** : VII

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you?   Yes / No

B. The course contents met with your expectations
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

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THE CONDUCT OF COURSE

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D. The instructors encouraged interaction and were helpful
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

E. Were objectives of the course realized? Yes / No

SIGNATURE OF THE STUDENT

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REPORT

1	Program name	TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES
2	Date of program duration	15.03.2021 to 16.04.2021
3	Resource person	Mr V. C. Suntar Raajan, AP /Civil/TEC
4	Participants	16
5	Objective of program	The main objective of this program is to inculcate the advanced knowledge to the advanced learning students of civil engineering department and to make the students to complete object-oriented instinctive 2D/3D graphic model generation and achieve user-specified design parameters to customize a design.
6	Program description	STAAD.Pro is one of the popular software that is used for analysing & designing structures like – buildings, towers, bridges, industrial, transportation and utility structures. Designs may include any building structures like tunnels, culverts, bridges, piles, petrochemical plants; and building materials like timber, concrete, steel, cold-formed steel, and aluminium. STAAD.Pro v8i, the latest version, allows civil engineering individuals to analyse structural designs in terms of factors like force, load, displacements etc. Participants are equipped with various software functionalities like model generation and editing; loading analysis and concrete designing. This course also offers proficiency in using the seismology report

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		generation, and steel and foundation design features. After completing the STAAD.Pro v8i training, individuals can work as Structure Designers, Project Managers, Building Analysts, Quality Analysts and Bridge Designers
7	**Outcome of this program**	On completion of this course the students will introduce one to STAAD Pro's state of the art user interface, prevailing analysis and design engines with a sophisticated finite element (FEM), visualization tools, and dynamic analysis capabilities.

Vch—⊕i̅19/04/2021

COURSE INSTRUCTOR

HOD/CE

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COURSE SUMMARY

Course Name	Course Instructor	No. Of Hours	Course Period	Total No. Of Registered Students	Total No. Of Attended Students
TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES	Mr V. C. Suntar Raajan, AP /Civil/TEC	34	15.03.2021 to 16.04.2021	08	08

19/04/2021

Course Instructor

HoD/CE

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Thamirabharani Engineering College

Department of Computer Science and Engineering

List of Courses

Special Programmes for Advanced Learners (Academic Year: 2020-2021)

S.No	Name of the Course	Course Competency	Semester	Year	Staff In charge
1	Linux - Learning Commands and Shell Scripting	Core	3	2	Mrs. G. Durga Devi, AP / CSE
2	Block Chaining – Understanding it's uses and Applications	Core	4		Mr. M. Ramnath, AP/ CSE
3	Scilab Integrated Development Environment	Inter-Disciplinary	5	3	Mr. E. Subramanian AP/ EEE
4	Web Development using ASP.NET	Inter-Disciplinary	6		Mr. R. Jeeva, AP/ CSE
5	Android Development using Java	Inter-Disciplinary	7	4	Mrs. M. Suganthi, AP / CSE
6	MATLAB and its Applications in Engineering	Inter-Disciplinary	8		Mrs. P. Saravanaselvi, AP/ ECE

ADVANCED LEARNER COURSE

TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS

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TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS

Course curriculum prepared by : Mr. M. Ramnath, AP / CSE

Approved by (Head of the Department) :

Approved by the CSE Department Advisory committee meeting held on:

Approved by the (No.) IQAC meeting held on:

Approved by the (No.) Governing Council meeting conducted on:

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ADVANCED LEARNER COURSE

TECALC004 – BLOCK CHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS

INDEX

CIRCULAR

Ref: TEC/CSE/2020-21/EVEN/ALC/04

Date: 12.03.2021

In order to make the student industry ready engineers and to provide advanced quality training to the advanced learners of Second year of Computer Science and Engineering department, the course on "TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS" by Mr. M. Ramnath, AP/CSE is being offered to enhance employability of the students, technical skills and make them more competitive. Course commences from 15.03.2021 to 16.04.2021. Students are instructed to make use of the opportunity. Advanced learners of final year of civil engineering department are eligible for this course.

Course Instructor

HoD/CSE

To be read in

S. No	Class	Sign
1	II CSE	

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ADVANCED LEARNER COURSE
TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS

SYLLABUS

OBJECTIVE

1. Enhance the understanding of essential blockchain terms, characteristics and concepts
2. Autonomously explain the basic concepts of blockchain technology within a given scenario
3. Give an account of the advantages and disadvantages of the features of a specific blockchain application

Introduction to Blockchain

Introduction to Blockchain - Basics of Blockchain-Distributed Ledgers-Cryptography-Transparency-Immutability-Smart Contracts-Blockchain Security-Public and Permissioned Blockchains-Blockchain Flow-Consensus and Fault Tolerance-Governance and Blockchain-Identity and Anonymity on Blockchain-Trust and Trustless

Governance and Consensus

Standard vs. Blockchain Governance – Consensus - Governance with Autonomy - Governance for Enterprise.

Blockchain Problem Solving

Immutability – Transparency – Autonomy - Multi-Party Transactions - Double Spend

Blockchain Use Cases

Blockchain Use Cases – Healthcare – Voting - Identity Management - Land Records and Government - Blockchain with Supply Chain - Future of Blockchain.

OUTCOME

Students will be able to:
1. Understand how blockchain systems (mainly Bitcoin and Ethereum) work
2. To securely interact with them
3. Design, build, and deploy smart contracts and distributed applications
4. Integrate ideas from blockchain technology into their own projects.

THEORY: 30 PERIODS
ASSESSMENT: 2 PERIODS
TOTAL: 32 PERIODS

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ADVANCED LEARNER COURSE

TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
Lesson Plan & Schedule

S.NO	DATE	TOPIC	No. of Hours
1.	15.03.2021	Introduction to Blockchain, Basics of Blockchain, Distributed Ledgers	2
2.	16.03.2021	Cryptography, Transparency, Blockchain Security	2
3.	17.03.2021	Public and Permissioned Blockchains, Blockchain Flow, Consensus and Fault Tolerance	2
4.	18.03.2021	Governance and Blockchain, Identity and Anonymity on Blockchain, Trust and Trustless	2
5.	19.03.2021	Standard vs. Blockchain Governance, Consensus, Blockchain Security	3
6.	20.03.2021	Rectangular Water Tank Design, Moving Loads,	5
7.	23.03.2021	Governance with Autonomy, Governance for Enterprise, Immutability	2
8.	24.03.2021	Transparency, Autonomy, Multi-Party Transactions	2
9.	25.03.2021	Double Spend, Blockchain Use Cases,	2
10.	26.03.2021	Healthcare, Voting,	2
11.	01.04.2021	Identity Management, Land Records and Government	2
12.	05.04.2021	Blockchain with Supply Chain, Future of Blockchain	2
13.	07.04.2021	Future of Blockchain	2
14.	16.04.2021	Assessment	2
		Total Hours	32

Course Instructor

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ADVANCED LEARNER COURSE

TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS

COURSE EVALUATION

The assessment of the students shall be based on the following parameters.

Evaluation Parameter	Weightage (in %)
Attendance	50
Assessment	50

The minimum passing requirement for the completion of course is 60%

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ADVANCED LEARNER COURSE

TECALC004 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES

NAME LIST

S. No.	Reg. No.	Student Name	Signature
1	953119104002	ARUNA R	
2	953119104003	ARUN KUMAR A	
3	953119104004	ARUN MOZHI N	
4	953119104005	BANU PRIYA S	
5	953119104007	DIVYA BHARATHI J	
6	953119104009	ESAKKIAMMAL M	
7	953119104011	GOMATHI N	
8	953119104012	HARI PRASATH S	
9	953119104014	INDHUMATHI E	
10	953119104015	JEYASRI T	
11	953119104019	KAVITHA A	
12	953119104020	KAVITHA B	
13	953119104021	KAVITHA V	
14	953119104024	MAHALAKSHMI E	
15	953119104032	MUTHUMARI C	
16	953119104033	NAVINA N	
17	953119104034	PORSELVI H	
18	953119104035	RAJALAKSHMI R	
19	953119104036	RAJESWARI R	
20	953119104038	SANTHANA MEENA R	
21	953119104039	SELVA PRIYA M	
22	953119104041	SIVAKAMI M	

Course Instructor

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ADVANCED LEARNER COURSE

TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
ATTENDANCE SHEET

S. No.	Reg. No.	Student Name	15/3/21	16/3/21	17/3/21	18/3/21	19/3/21	20/3/21	23/3/21	24/3/21	25/3/21
1	953119104002	ARUNA R	P	P	P	P	P	AB	P	P	P
2	953119104003	ARUN KUMAR A	P	P	P	P	P	P	P	P	P
3	953119104004	ARUN MOZHI N	P	P	AB	P	P	P	P	P	P
4	953119104005	BANU PRIYA S	P	P	P	P	P	P	P	P	P
5	953119104007	DIVYA BHARATHI J	P	P	AB	P	P	P	P	P	P
6	953119104009	ESAKKIAMMAL M	P	P	AB	P	P	P	P	P	P
7	953119104011	GOMATHI N	P	AB	P	P	P	P	P	P	P
8	953119104012	HARI PRASATH S	P	P	P	P	P	P	P	P	P
9	953119104014	INDHUMATHI E	P	P	P	P	P	P	P	P	P
10	953119104015	JEYASRI T	P	P	P	P	P	P	P	P	P
11	953119104019	KAVITHA A	P	P	P	P	P	P	P	P	P
12	953119104020	KAVITHA B	P	P	P	P	P	P	P	P	P
13	953119104021	KAVITHA V	P	P	P	AB	P	P	P	P	P
14	953119104024	MAHALAKSHMI E	P	P	P	P	P	P	P	P	P
15	953119104032	MUTHUMARI C	P	P	P	P	P	AB	P	P	P
16	953119104033	NAVINA N	P	P	P	P	P	P	P	P	P
17	953119104034	PORSELVI H	P	P	P	P	P	P	P	P	P
18	953119104035	RAJALAKSHMI R	P	P	P	P	AB	P	P	P	P
19	953119104036	RAJESWARI R	P	P	P	P	P	P	AB	P	P
20	953119104038	SANTHANA MEENA R	P	P	P	P	P	P	P	P	AB
21	953119104039	SELVA PRIYA M	AB	P	P	P	P	P	P	P	P
22	953119104041	SIVAKAMI M	P	P	P	AB	P	P	P	P	P

Course Instructor

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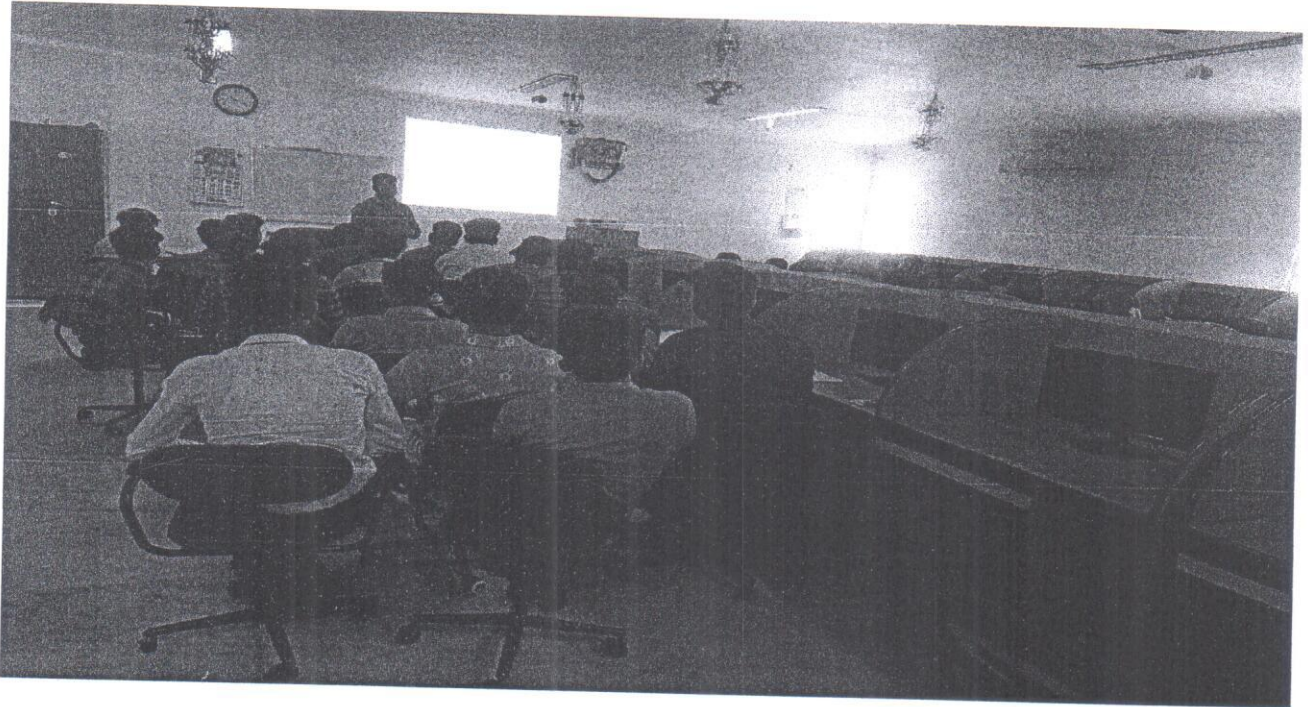Thatchanallur, Tirunelveli 627 358, Tamil Nadu.

ADVANCED LEARNER COURSE

TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
ATTENDANCE SHEET

S. No.	Reg. No.	Student Name	26/3/21	1/4/21	5/4/21	7/4/21	16/4/21				
1	953119104002	ARUNA R	P	P	P	P	P				
2	953119104003	ARUN KUMAR A	P	P	AB	P	P				
3	953119104004	ARUN MOZHI N	P	P	P	P	P				
4	953119104005	BANU PRIYA S	P	P	P	P	P				
5	953119104007	DIVYA BHARATHI J	AB	P	P	P	P				
6	953119104009	ESAKKIAMMAL M	P	P	P	P	P				
7	953119104011	GOMATHI N	P	P	P	P	P				
8	953119104012	HARI PRASATH S	P	AB	P	P	P				
9	953119104014	INDHUMATHI E	P	P	P	P	P				
10	953119104015	JEYASRI T	P	P	P	P	P				
11	953119104019	KAVITHA A	P	P	P	P	P				
12	953119104020	KAVITHA B	P	AB	P	P	P				
13	953119104021	KAVITHA V	P	P	P	P	P				
14	953119104024	MAHALAKSHMI E	P	P	AB	P	P				
15	953119104032	MUTHUMARI C	AB	P	P	P	P				
16	953119104033	NAVINA N	P	P	P	P	P				
17	953119104034	PORSELVI H	P	P	P	P	P				
18	953119104035	RAJALAKSHMI R	P	AB	P	P	P				
19	953119104036	RAJESWARI R	P	P	P	P	P				
20	953119104038	SANTHANA MEENA R	AB	P	P	P	P				
21	953119104039	SELVA PRIYA M	P	P	P	P	P				
22	953119104041	SIVAKAMI M	P	P	P	P	P				

Course Instructor

HoD/CSE

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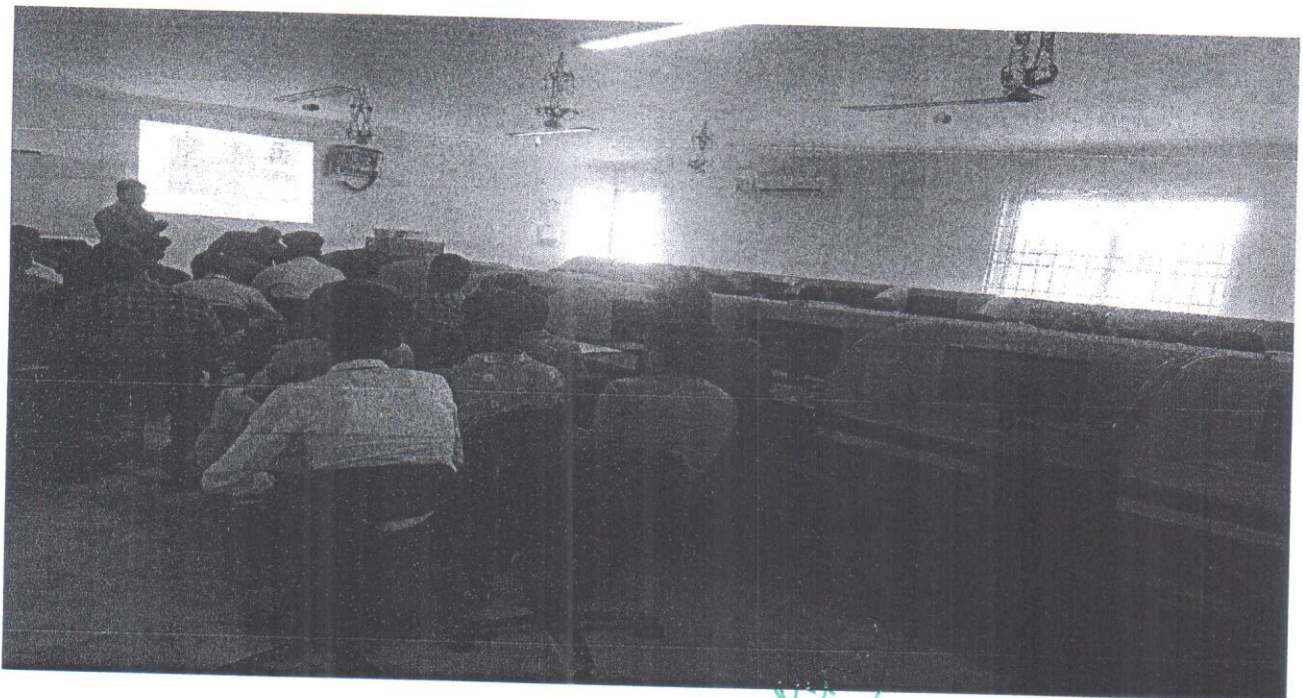
Photos

Fig. 1. Content Delivery

Fig. 2. Content Delivery

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ADVANCED LEARNER COURSE
TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
ASSESSMENT

COURSE CODE & NAME   :

DEPARTMENT   :

NAME OF THE STUDENT   :

REG. NO.   :   ACADEMIC YEAR :

YEAR   :   SEM   :

Total Marks: 50

Part- A (10*1= 10)

1. What does P2P stand for?
   A. Password to Password
   B. Peer to Peer
   C. Product to Product
   D. Private Key to Public Key

2. What is a node?
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3. Who created Bitcoin?
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4. What are the different types of token?
   A. Platform
   B. privacy
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   D. All of the above

5. Where is the LEAST SAFE place to keep your cyprtocurreny?
   A. In your pocket
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   D. At your work desk

6. What is the impact of information leak for an organization?
   A. Loss in profit
   B. Loss of trust in costumers
   C. Cut down the reputation of the organization
   D. All of these

7. What is the initial application for which Blockchain was designed?
A. Peer-to-peer finance application
B. Research Project
C. Open source finance software to connect Banks
D. None of these

8. Where is the bitcoin central server located?
A. Washington DC
B. Undisclosed Location
C. London
D. None of these

9. First step of Blockchain project implementation is?
A. Requirement identification
B. Feasible study on the security
C. Controlling and monitoring the project
D. Screen idea consideration.

10. How often does Bitcoin ledger reconcile?
A. Every day
B. Every 3 months
C. Every 3 Minutes
D. Every 10 Minutes

Part- B (20*2 = 40)

11. What is UTXO?
A. United Transaction Office
B. United Texan Xerox Organization
C. Unspent Transaction Output
D. Union of Texas Operations

12. Who invented Merkle Trees?
A. Ralph Merkle
B. Ralph Wiggum
C. Nick Szabo
D. Vitalik Buterin

13. What is a hash function?
A. fork
B. UTXO
C. Takes an input of any length and returns a fixed-length string of numbers and letters
D. Gas

14. What does IPFS stand for?
A. Interplanetary File System
B. Inter Filing System
C. Internet Play Store
D. Internet Platform for Storage

15. What is a Dash Master node?
A. Two nodes sharing resources
B. A single node that runs the whole network
C. A node that provides additional supervisory network services
D. Master of all Dash nodes

16. What characteristic makes blockchain tamper-proof?
A. VPN
B. Immutability
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17. What is the name of the research paper that brought Bitcoin to the world?
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A. True
B. False

22. When a record is on a blockchain, who can access it?
A. Multiple people simultaneously.
B. One person at a time.
C. Only the people involved in the transaction.
D. None of the above

23. Once records are submitted on a blockchain, can they be altered?
A. Yes – the parties can go back in and alter them at any time.
B. Yes – but only within a certain time frame.
C. No – they cannot be altered.
D. None of the above

24. Is it possible to program a blockchain to record transactions automatically?
A. Yes
B. No

25. When did bitcoin's creator publish a whitepaper introducing the digital currency?
A. 2007
B. 2008
C. 2009
D. 2010

26. What is the maximum number of bitcoin's that can be created?
A. 16 million
B. 21 million
C. 100 million
D. There is no maximum

27. Which of the following is a now-defunct Bitcoin exchange?
A. Bit Box
B. Mt Fox
C. Mt Gox
D. Ft Nox

28. What is the process of creating new bitcoin's popularly known as?
A. Finding
B. Panning
C. Sourcing
D. Mining

29. Which of the following is popularly used for storing bitcoin's?
A. Pocket
B. Wallet
C. Box
D. Stack

30. Which site run by Ross Ulbricht was closed by the FBI for letting people buy drugs with Bitcoin?
A. Silk Road
B. Lace Place
C. Silk Street
D. Dark Alley

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ADVANCED LEARNER COURSE

TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS

ASSESSMENT

COURSE CODE & NAME : TECALC004 – BLOCKCHAIN : UNDERSTANDING ITS USES AND IMPLICATIONS

DEPARTMENT : CSE

NAME OF THE STUDENT : M. SIVAKAMI

REG. NO. : 953119104041

ACADEMIC YEAR : 2020-21 (even sem

YEAR : II

SEM : IV

Total Marks: 50

Part- A (10*1= 10)

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6. What is the impact of information leak for an organization?
   A. Loss in profit
   B. Loss of trust in costumers
   C. Cut down the reputation of the organization

44
50

16

C. Internet Play Store
D. Internet Platform for Storage

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ADVANCED LEARNER COURSE
TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
ASSESSMENT

COURSE CODE & NAME : TECAL C004 – BLOCKCHAIN: UNDERSTANDINGITS USES AND IMPLICATIONS. #

DEPARTMENT : CSE

NAME OF THE STUDENT : M. ESAKKIAMMAL

REG. NO. : 953119104009

ACADEMIC YEAR : 2020 – 2021 (even)

YEAR : II

SEM : 4

Total Marks: 50

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18

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ADVANCED LEARNER COURSE
TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
ASSESSMENT

COURSE CODE & NAME	:	TECAL004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATION
DEPARTMENT	:	CSE
NAME OF THE STUDENT	:	R. SANTHANA MEENA
REG. NO.	:	953119104038 ACADEMIC YEAR : 2020-21 / even sem
YEAR	:	II SEM : IV

Total Marks: 50

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46/50

20

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ADVANCED LEARNERS COURSE
TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
ASSESMENT MARKS

S. NO.	REGISTER NO.	STUDENT NAME	ASSESSMENT (50)	TOTAL (100)
1	953119104002	ARUNA R	42	84
2	953119104003	ARUN KUMAR A	46	92
3	953119104004	ARUN MOZHI N	44	88
4	953119104005	BANU PRIYA S	40	80
5	953119104007	DIVYA BHARATHI J	39	78
6	953119104009	ESAKKIAMMAL M	47	94
7	953119104011	GOMATHI N	40	80
8	953119104012	HARI PRASATH S	42	84
9	953119104014	INDHUMATHI E	43	86
10	953119104015	JEYASRI T	41	82
11	953119104019	KAVITHA A	40	80
12	953119104020	KAVITHA B	39	78
13	953119104021	KAVITHA V	43	86
14	953119104024	MAHALAKSHMI E	44	88
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18	953119104035	RAJALAKSHMI R	40	80
19	953119104036	RAJESWARI R	43	86
20	953119104038	SANTHANA MEENA R	46	92
21	953119104039	SELVA PRIYA M	45	90
22	953119104041	SIVAKAMI M	44	88

Course instructor

HoD/CSE

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ADVANCED LEARNERS COURSE
TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
FEEDBACK FORM

COURSE CODE & NAME : TECALC004 - BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS

DEPARTMENT : COMPUTER SCIENCE AND ENGINEERING

NAME OF THE STUDENT : J. DIVYA BHARATHI

REGISTER NUMBER : 953119104007   **ACADEMIC YEAR** : 2020-21 even

YEAR : II   **SEM** : 4

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you? **Yes** / No

B. The course contents met with your expectations
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree **5. Strongly agree**

C. The lecture sequence was well planned
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree **4. Agree** 5. Strongly agree

D. The level of the course was
   1. Too Low   2. Low   3. Moderate   4. High   **5. Very high**

E. The course exposed you to new knowledge, practices and meets the current industrial needs
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THE CONDUCT OF COURSE

A. The lectures were clear and easy to understand
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B. The teaching aids were effectively used
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree **4. Agree** 5. Strongly agree

C. The course assessment conducted was adequate
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree **4. Agree** 5. Strongly agree

D. The instructors encouraged interaction and were helpful
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree **5. Strongly agree**

E. Were objectives of the course realized? **Yes** / No

J. Divya Bharathi

SIGNATURE OF THE STUDENT

23

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ADVANCED LEARNERS COURSE
TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
FEEDBACK FORM

COURSE CODE & NAME : TECALC004- BLOCKCHAIN: UNDERSTANDING ITS USES AND APPLICATI

DEPARTMENT : COMPUTER SCIENCE AND ENGINEERING

NAME OF THE STUDENT : A· ARUNKUMAR

REGISTER NUMBER : 953119104003   ACADEMIC YEAR : 2020 - 21 (EVEN)

YEAR : II   SEM : IV

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ADVANCED LEARNERS COURSE
TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
FEEDBACK FORM

COURSE CODE & NAME : TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS

DEPARTMENT : CSE

NAME OF THE STUDENT : E·MAHALAKSHMI

REGISTER NUMBER : 953119104024   **ACADEMIC YEAR** : 2020-2021

YEAR : II   **SEM** : 4 (Even)

THE DESIGN OF THE COURSE

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ADVANCED LEARNERS COURSE

TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS

FEEDBACK FORM

COURSE CODE & NAME	: TECAL 004 - BLOCKCHAIN: UNDESTANDING ITS USES ANI IMPLICATIONS	
DEPARTMENT	: CSE	
NAME OF THE STUDENT	: R·SANTHANA MEENA	
REGISTER NUMBER	: 953119104038	**ACADEMIC YEAR** : IV 2020-21 evens
YEAR	: II	**SEM** : IV

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R. santhana meena

SIGNATURE OF THE STUDENT

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REPORT

1	Program name	TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS
2	Date of program duration	15.03.2021 to 16.04.2021
3	Resource person	Mr. M. Ramnath, AP /CSE/TEC
4	Participants	22
5	Objective of program	The main objective of this program is to inculcate the advanced knowledge to the advanced learning students of Computer Science and Engineering department and to make the students to understand Blockchain: Understanding its Uses and Implications. .
6	Program description	Decentralized blockchain-based systems, such as Bitcoin and Ethereum, are successful beyond all expectations. Although still in their infancy, they promise to revolutionize how we think of financial, information, and other infrastructures. This course covers the technical aspects of public distributed ledgers, blockchain systems, cryptocurrencies, and smart contracts. Students will learn how these systems are built, how to interact with them, how to design and build secure distributed applications. The course period was from 15.03.2021 to 16.04.2021 conducted for 34 hours. 22 students have enrolled in this course and 22 students have successfully completed the course. After successful completion certificates are provided.
7	Outcome of this program	On completion of this course the students will Design, build, and deploy smart contracts and distributed applications and Integrate ideas from blockchain technology into their own projects.

Course Instructor

HoD/CSE

THAMIRABHARANI ENGINEERING COLLEGE

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Chathirampudukulam, Chidambaranagar - Vepemkulam Road
Thatchanallur, Tirunelveli 627 358, Tamil Nadu.

ADVANCED LEARNERS COURSE
TECALC008 – BASIC PROGRAM IN STAAD.PRO FOR RCC STRUCTURES
COURSE SUMMARY

Course Name	Course Instructor	No. of Hours	Course Period	Total No. of Registered Students	Total No. of Attended Students
TECALC004 – BLOCKCHAIN: UNDERSTANDING ITS USES AND IMPLICATIONS	Mr. M. Ramnath, AP/CSE-TEC	32	15.03.2021 to 16.04.2021	22	22

Course Instructor

HoD/CSE

PRINCIPAL
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Thamirabharani Engineering College

Department of Electronics and Communication Engineering

List of Courses

Special Programmes for Advanced Learners (Academic Year: 2020-2021)

S.No	Name of the Course	Course Competency	Semester	Year	Staff In charge
1	Proteus Design Suite Software	Core	3	2	Mr. S. R. Sam Kingsley, AP/ ECE
2	The Arduino Platform and C Programming	Core	4		Mr. A. Niyas Ahamed, AP/ ECE
3	Scilab Integrated Development Environment	Inter-Disciplinary	5	3	Mr. E. Subramanian AP/ EEE
4	Web Development using ASP.NET	Inter-Disciplinary	6		Mr. R. Jeeva, AP/ CSE
5	Android Development using Java	Inter-Disciplinary	7	4	Mrs. M. Suganthi, AP / CSE
6	MATLAB and its Applications in Engineering	Inter-Disciplinary	8		Mrs. P. Saravanaselvi, AP/ ECE

ADVANCED LEARNER COURSE

TEC ECAL007- PROTEUS DESIGN SUITE SOFTWARE

(Electronics & Communication Engineering)

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TEC ECAL007- PROTEUS DESIGN SUITE SOFTWARE

Course curriculum prepared by   : Mr. S. R. SAM KINGSLEY, AP/ECE

Approved by (Head of the Department)   :

Approved by the Civil Department Advisory committee meeting held on:

Approved by the (No.) IQAC meeting held on:

Approved by the (No.) Governing Council meeting conducted on:

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ADVANCED LEARNER COURSE

TEC ECAL007- PROTEUS DESIGN SUITE SOFTWARE

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CIRCULAR

Ref:TEC/ECE/2020-21/EVEN/ALC/01   Date:01.02.2021

In order to make the student industry ready engineers and to provide advanced quality training to the advanced learners of second, third & final year of Electronics & Communication Engineering department, the course on **"TECECAL007- PROTEUS DESIGN SUITE SOFTWARE"** by Mr. S. R. Sam kingsley, AP/ECE is being offered to enhance employability of the students, technical skills and make them more competitive. Course commences from 05.02.2021 to 03.03.2021. Students are instructed to make use of the opportunity. Advanced learners of second, third & final year of Electronics & Communication Engineering are eligible for this course.

Course Instructor

HoD/ECE

To be read in

S. No	Class	Sign
1	II ECE	
2	III ECE	
3	IV ECE	

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ADVANCED LEARNER COURSE

TECECAL007- PROTEUS DESIGN SUITE SOFTWARE

OBJECTIVE

To make the students be familiar with a printed circuit board design software tool for electronic automation.

SYLLABUS

INTRODUCTION

Creating a New Project - Panning - Visual Aids to Design - Display Options - Design Overview - General Description - Circuit Description

PCB LAYOUT

Overview of the Layout Editor - The Main Window - Visual Aids to Design - Display Options - Graphics Mode - Auto-Pan Animation - Highlight Animation The Board Edge - Layer Stack up and Drill Spans - Work Area-Placing Components and the Rats nest - Mounting Holes and Pad Styles

DESIGN & ROUTING

Design Rules - Placing a Route Manually - Panning and Zooming - Placing Anchors - Making Connections - Editing a Route - Layer Pairs and Manual Routing - Basic Auto-Routing - Length Matching Routes - The Selection Filter - Advanced Auto-Routing - Annotation - Schematic to PCB - PCB to Schematic

OUTCOME

On completion of this course the students will have the confidence to design various electronic printed circuits boards in automation.

THEORY: 30 PERIODS

ASSESSMENT: 2 PERIODS

TOTAL: 32 PERIODS

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ADVANCED LEARNER COURSE

TECECAL007- PROTEUS DESIGN SUITE SOFTWARE
Lesson Plan & Schedule

S.NO	DATE	TOPIC	No. of Hours
1.	05.02.2021	Creating a New Project, Panning & Visual Aids to Design	1
2.	06.02.2021	Design Overview, General Description, Circuit Description	3
3.	08.02.2021	Overview of the Layout Editor , The Main Window	2
4.	10.02.2021	Visual Aids to Design , Display Options, Graphics Mode	2
5.	11.02.2021	Auto-Pan Animation, Highlight Animation The Board Edge Stack up and Drill Spans	3
6.	13.02.2021	Work Area-Placing Components and the Rats nest - Mounting Holes and Pad Styles	3
7.	15.02.2021	Design Rules - Placing a Route Manually	2
8.	16.02.2021	Panning and Zooming - Placing Anchors - Making Connections	3
9.	20.02.2021	Editing a Route - Layer Pairs and Manual Routing	3
10.	23.02.2021	Basic Auto-Routing	2
11.	25.02.2021	Length Matching Routes	2
12.	27.02.2021	The Selection Filter - Advanced Auto-Routing, Annotation - Schematic to PCB - PCB to Schematic	3
13.	03.03.2021	Assessment	1
		Total Hours	30

Course Instructor

HoD/ECE

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ADVANCED LEARNER COURSE
TECECAL007- PROTEUS DESIGN SUITE SOFTWARE
ATTENDANCE SHEET

S.No.	Roll No.	Student Name	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Sign.
			05/2	06/2	08/2	10/2	11/2	13/2	15/2	16/2	20/2	23/2	25/2	27/2	03/3	
1	953119106001	Daniel Durai J	/	/	/	/	/	/	/	/	/	/	/	/	/	J.Dan.Du
2	953119106003	Johnson S	/	/	/			/	/	/	/	/	/	/	/	S.Bhwar
3	953119106006	Kiruba Esther K	/		/	/	/	/	/	/	/	/	/	/	/	K.Kiuba Esthe
4	953119106017	Parameshwari M	/	/	/	/	/	/	/	/	/	/	/	/	/	M Paramen wari
5	953119106018	Parvathy Priya M	/	/	/	/	/	/	/	/	/	/	/	/	/	M. Parvathi Priy
6	953119106024	Raja Lakshmi S	/		/	/		/	/	/	/	/	/	/	/	S.Rajalaksh
7	953119106029	Sam Willbert S	/	/		/	/	/	/	/	/	/	/	/	/	Sawks
8	953119106035	SindhuAbirami S	/	/	/	/	/	/	/	/	/	/	/	/	/	Sindhu
9	953119106037	Siva Sankari	/		/	/	/	/	/	/	/	/	/	/	/	M.Siva. sankari
10	953119106039	Subitha P	/	/	/	/	/	/	/	a	/	/	/	/	/	Subith
11	953119106042	Vaishanavi V	/	/	/	/	/	/	/	/	/	/	/	/	/	Vaishnav
12	953119106303	Maharajan	/	a	/	/	/	/	/	/	/	/	/	/	/	P.Qr
13	953119106305	Muthuraj	/	/	/	/	/	/	/	/	/	/	/	/	/	Rey
14	953118106002	Ambika A	/	/	/	/	/	/	/	/	/	/	/	/	/	A.Amb
15	953118106003	Dharani M	/	/	/	/	/	/	/	/	/	/	/	/	/	Dha
16	953118106007	Madathi M	/	/	/	/	/	/	/	/	/	/	/	/	/	Matth
17	953118106009	Mamtha M	/	/	/	/	/	/	/	/	/	/	/	/	/	Mamtha M
18	953118106010	Maruthappan M	/	/	/	/	/	/	/	/	/	/	/	/	/	Maty
19	953118106012	Nagalakshmi M	/	/	/	/	/		/	/	/	/	/	/	/	Naya
20	953118106017	Sivaranjani M	/	/	/	/		/	/	/	/	/	/	/	/	M.Siva

21	953118106019	SriramaSelvan P	/	/	/	/	/	/	/	/	a	/	/	/	/	Sri...
22	953117106002	DhanaLakshmi M	/	/	/	/	/	/	/	/	/	/	/	/	/	Dhan
23	953117106003	Divya A	/	/	/	/	/	/	/	/	/	/	/	/	/	Divy
24	953117106010	NuzrathBanu H	/	/	/	/	/	/	/	/	/	/	/	/	/	Nuz
25	953117106013	PirammaSakthi A	/	/	/	/	/	/	/	/	/	/	/	/	/	Sakthi
26	953117106015	SankaraGomathi M	/	/	/	/	/	/	/	/	/	/	/	/	/	Sank
27	953117106018	Thinishya S	/	/	/	/	/	/	/	/	/	/	/	/	/	Thinishya
28	953117106301	Rajathi C	/	/	/	/	/	/	/	/	/	/	/	/	/	R

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Photos

Content delivery

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ADVANCED LEARNER COURSE
TECECAL007- PROTEUS DESIGN SUITE SOFTWARE
ASSESSMENT

COURSE CODE & NAME   :

DEPARTMENT   :

NAME OF THE STUDENT   :

REG. NO.   :   ACADEMIC YEAR :

YEAR   :   SEM   :

Total Marks: 50

Part- A (10*1= 10)

1. Select the answer that is true: Mechanical layers _____

   a. are unique to each project

   b. are only declared in the PCB editor during layout

   c. follow an IPC standard

   d. should be used in the footprint libraries for courtyards and assembly files

2. The use of 3D component models in the PCB layout can assist with

   a. Electrical clearance

   b. Component clearance

   c. All of the above

   d. None of the above

3. True or False – The solder mask has an impact on the trace impedance.

   a. True

   b. False

4. Proteus works by applying either a _____ or _____ to the microcontroller part on the schematic.
   a) hex file
   b) debug file
   c) none of above
   d) **Both the above**

5. PCBs should be fabricated with _____ layers.
   a. Odd Number of
   b. Even Number of
   c. Any Number of

6. Which of the following is not taken into consideration when calculating the characteristic impedance for each layer?

   a. Trace width

b. Trace height

c. Trace length

d. Distance of the trace to a plane

7. The declaration of Vias-In-Pads is determined in the

   a. Assembly Notes

   b. Fabrication Notes

   c. Fabrication Files

   d. Via stack up

8. Select the answer that is true: Mechanical layers

   a. are unique to each project

   b. are only declared in the PCB editor during layout

   c. follow an IPC standard

   d. should be used in the footprint libraries for courtyards and assembly files

9. The use of 3D component models in the PCB layout can assist with

   a. Electrical clearance

   b. Component clearance

   c. All of the above

   d. None of the above

10. Silk Screens

    a. Are not required for every component

    b. Are highly recommended for prototype boards

    c. Are not necessary for production boards

    d. All of the above

Part- B (20*2= 40)

11. The solder paste files are generally produced

    a. In the assembly file

    b. In the fabrication files

    c. Manually drawn

    d. As part of the bill of materials

12. When is the earliest time one should communicate the bill of materials:

   a. After fabrication has been started

   b. After the boards have been fabricated

   c. When the schematics are completed

   d. After the layout is complete

13. What is the best method to provide a unique number for each component in the library?

   a. Use the manufacturer's part number

   b. Use the vendor's part number

   c. Use a part number that is assign by the company you work for

   d. Use a part number that you make up as you go

14. During post assembly testing, it was found that a latch on one of the connectors cannot be fully extended due to other components located nearby. What would have prevented this situation from occurring?

   a. The use of a 3D component

   b. The use of a 3D component and component clearance rule

   c. The use of a courtyard

   d. The use of a courtyard and a component clearance rule

15. Though schematic tools do have to use a grid for pin connectivity, in theory, the grid used in a schematic is

   a. In metric (mm)

   b. In imperial (mils)

   c. Both A and B interchangeably

   d. Dimensionless

16. The grid used in a PCB layout tool should be

   a. In metric (mm)

   b. In imperial (mils)

   c. Both A and B interchangeably

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d. Either A or B

17. The biggest factor when it comes to impedance is
    a. Clock speed of the board crystal
    b. The integrity of the signal from the output buffer of the sending component
    c. The voltage level
    d. The physical aspects of the board

18. True or False: Microvias are the same as 1 layer blind or buried vias
    a. True
    b. False

19. Which of the following drill document(s) must be provided to the fabricator to program
    their drilling equipment?
    a. Drill Plot
    b. Drill Drawing
    c. NC Drill file
    d. All of the above

20. Which type of PCB requires minimum soldering on the 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

ADVANCED LEARNER COURSE
TECECAL007- PROTEUS DESIGN SUITE SOFTWARE
ASSESSMENT

COURSE CODE & NAME : TECAL007

DEPARTMENT : ECE

NAME OF THE STUDENT : Rajathi

REG. NO. : 95311710630

ACADEMIC YEAR : 2020- 21

YEAR : IV

SEM : 8

Total Marks: 50

(4)/50

Part- A (10*1= 10)

1. Select the answer that is true: Mechanical layers _____

   a. are unique to each project

   ✓b. are only declared in the PCB editor during layout

   c. follow an IPC standard

   d. should be used in the footprint libraries for courtyards and assembly files ✗

2. The use of 3D component models in the PCB layout can assist with

   a. Electrical clearance

   b. Component clearance

   c. All of the above ✗

   ✓d. None of the above

3. True or False – The solder mask has an impact on the trace impedance.

   a. True ✓

   b. False

4. Proteus works by applying either a _____ or _____ to the microcontroller part on the schematic.

   a) hex file

   ✓b) debug file

   c) none of above

   d) Both the above ✗

5. PCBs should be fabricated with _____ layers.

   a. Odd Number of

   ✓b. Even Number of

   c. Any Number of

6. Which of the following is not taken into consideration when calculating the characteristic impedance for each layer?

   a. Trace width

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12. When is the earliest time one should communicate the bill of materials:

    a. After fabrication has been started

    b. After the boards have been fabricated

    c. When the schematics are completed

    d. After the layout is complete

13. What is the best method to provide a unique number for each component in the library?

    a. Use the manufacturer's part number

    b. Use the vendor's part number

    c. Use a part number that is assign by the company you work for

    d. Use a part number that you make up as you go

14. During post assembly testing, it was found that a latch on one of the connectors cannot be fully extended due to other components located nearby. What would have prevented this situation from occurring?

    a. The use of a 3D component

    b. The use of a 3D component and component clearance rule

    c. The use of a courtyard

    d. The use of a courtyard and a component clearance rule

15. Though schematic tools do have to use a grid for pin connectivity, in theory, the grid used in a schematic is

    a. In metric (mm)

    b. In imperial (mils)

    c. Both A and B interchangeably

    d. Dimensionless

16. The grid used in a PCB layout tool should be

    a. In metric (mm)

    b. In imperial (mils)

    c. Both A and B interchangeably

ADVANCED LEARNER COURSE
TECECAL007- PROTEUS DESIGN SUITE SOFTWARE
ASSESSMENT

COURSE CODE & NAME : *TECECAL007*

DEPARTMENT : *ECE*

NAME OF THE STUDENT : *Subitha*

REG. NO. : *953119106039*   ACADEMIC YEAR : *2020-21*

YEAR : *II*   SEM : *4th*

Total Marks: 50

42/50

Part- A (10*1= 10)

1. Select the answer that is true: Mechanical layers _____

   a. are unique to each project

   b. are only declared in the PCB editor during layout

   c. follow an IPC standard

   ✓d. should be used in the footprint libraries for courtyards and assembly files

2. The use of 3D component models in the PCB layout can assist with

   a. Electrical clearance

   b. Component clearance

   ✓c. All of the above

   d. None of the above

3. True or False – The solder mask has an impact on the trace impedance.

   ✓a. True

   b. False

4. Proteus works by applying either a _____ or _____ to the microcontroller part on the schematic.

   a) hex file

   ✓b) debug file

   c) none of above

   d) Both the above

5. PCBs should be fabricated with _____ layers.

   a. Odd Number of

   ✓b. Even Number of

   c. Any Number of

6. Which of the following is not taken into consideration when calculating the characteristic impedance for each layer?

   a. Trace width

d. Either A or B

17. The biggest factor when it comes to impedance is
    a. Clock speed of the board crystal
    b. The integrity of the signal from the output buffer of the sending component
    c. The voltage level
    d. The physical aspects of the board

18. True or False: Microvias are the same as 1 layer blind or buried vias
    a. True
    b. False

19. Which of the following drill document(s) must be provided to the fabricator to program their drilling equipment?
    a. Drill Plot
    b. Drill Drawing
    c. NC Drill file
    d. All of the above

20. Which type of PCB requires minimum soldering on the 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

ADVANCED LEARNER COURSE
TECECAL007- PROTEUS DESIGN SUITE SOFTWARE
ASSESSMENT

COURSE CODE & NAME   : TECECAL007

DEPARTMENT   : ELECTRONICS AND COMMUNICATION ENGINEERING

NAME OF THE STUDENT   : SANKARAGOMATHI. M

REG. NO.   : 953117106015   ACADEMIC YEAR : 2021

YEAR   : IV   SEM   : 8

Total Marks: 50

43/50

Part- A (10*1= 10)

1. Select the answer that is true: Mechanical layers _____

   a. are unique to each project

   b. are only declared in the PCB editor during layout

   c. follow an IPC standard

   d. should be used in the footprint libraries for courtyards and assembly files

2. The use of 3D component models in the PCB layout can assist with

   a. Electrical clearance

   b. Component clearance

   c. All of the above

   d. None of the above

3. True or False – The solder mask has an impact on the trace impedance.

   a. True

   b. False

4. Proteus works by applying either a _____ or _____ to the microcontroller part on the schematic.
   a) hex file
   b) debug file
   c) none of above
   d) Both the above

5. PCBs should be fabricated with _____ layers.
   a. Odd Number of
   b. Even Number of
   c. Any Number of

6. Which of the following is not taken into consideration when calculating the characteristic impedance for each layer?

   a. Trace width

d. Either A or B

17. The biggest factor when it comes to impedance is

    a. Clock speed of the board crystal

    b. The integrity of the signal from the output buffer of the sending component

    c. The voltage level

    d. The physical aspects of the board

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    a. True

    b. False

19. Which of the following drill document(s) must be provided to the fabricator to program their drilling equipment?

    a. Drill Plot

    b. Drill Drawing

    c. NC Drill file

    d. All of the above

20. Which type of PCB requires minimum soldering on the 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

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ADVANCED LEARNERS COURSE
TECECAL007- PROTEUS DESIGN SUITE SOFTWARE
FEEDBACK FORM

COURSE CODE & NAME : TECECAL007

DEPARTMENT : ELECTRONICS AND COMMUNICATION ENGINEERING

NAME OF THE STUDENT : DIVYA .A

REGISTER NUMBER : 953117106003   **ACADEMIC YEAR** : 2020 - 2021

YEAR : IV   **SEM** : 8

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you? Yes ✓/ No

B. The course contents met with your expectations
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

C. The lecture sequence was well planned
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.✓Strongly agree

D. The level of the course was
   1. Too Low   2. Low   3. Moderate   4.✓ High   5. Very high

E. The course exposed you to new knowledge, practices and meets the current industrial needs
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

THE CONDUCT OF COURSE

A. The lectures were clear and easy to understand
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.✓Strongly agree

B. The teaching aids were effectively used
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

C. The course assessment conducted was adequate
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

D. The instructors encouraged interaction and were helpful
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.✓Strongly agree

E. Were objectives of the course realized? Yes ✓/ No

PRINCIPAL   A.Divya
THAMIRABHARANI ENGINEERING COLLEGE   **SIGNATURE OF THE STUDENT**
Chathirampudukulam Village,
Chidambaranagar - Vepemkulam Road,
Thatchanallur, Tirunelveli - 627

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ADVANCED LEARNERS COURSE
TECECAL007- PROTEUS DESIGN SUITE SOFTWARE
FEEDBACK FORM

COURSE CODE & NAME : *TECECAL007*

DEPARTMENT : ECE

NAME OF THE STUDENT : S.Rajalakshmi

REGISTER NUMBER : 953119106024   ACADEMIC YEAR : 2020-2021

YEAR : SEM : 04

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you? ✓Yes / No

B. The course contents met with your expectations
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree ✓4. Agree 5.Strongly agree

C. The lecture sequence was well planned
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree ✓5.Strongly agree

D. The level of the course was
   1. Too Low   2. Low   3. Moderate   ✓High   5. Very high

E. The course exposed you to new knowledge, practices and meets the current industrial needs
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree ✓4.Agree 5.Strongly agree

THE CONDUCT OF COURSE

A. The lectures were clear and easy to understand
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree ✓4.Agree 5.Strongly agree

B. The teaching aids were effectively used
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree ✓5.Strongly agree

C. The course assessment conducted was adequate
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree ✓4.Agree 5.Strongly agree

D. The instructors encouraged interaction and were helpful
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree ✓5.Strongly agree

E. Were objectives of the course realized? ✓Yes / No

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S.Rajalakshmi
SIGNATURE OF THE STUDENT

ADVANCED LEARNERS COURSE
TECECAL007- PROTEUS DESIGN SUITE SOFTWARE
FEEDBACK FORM

COURSE CODE & NAME   : *TECECAL007*

DEPARTMENT   : *Electronics and Communication Engineering*

NAME OF THE STUDENT   : *Ambika . A*

REGISTER NUMBER   : *953118106 002*   ACADEMIC YEAR *2020-2021*

YEAR   : *III*   SEM   : *6*

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you?   Yes✓ / No

B. The course contents met with your expectations
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

C. The lecture sequence was well planned
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.✓Strongly agree

D. The level of the course was
   1. Too Low   2. Low   3. Moderate   4. High   5.✓ Very high

E. The course exposed you to new knowledge, practices and meets the current industrial needs
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

THE CONDUCT OF COURSE

A. The lectures were clear and easy to understand
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

B. The teaching aids were effectively used
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.✓Strongly agree

C. The course assessment conducted was adequate
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.✓Strongly agree

D. The instructors encouraged interaction and were helpful
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

E. Were objectives of the course realized? Yes✓ / No

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Chidambaranagar ... .'ulam Road,
Thatchanallur, i.. .. ·· 627 358.

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ADVANCED LEARNERS COURSE
ASSESSMENT
TEC ECAL007- PROTEUS DESIGN SUITE SOFTWARE

S. NO.	REGISTER NO.	STUDENT NAME	ASSESSMENT (50)	TOTAL (100)
1	953119106001	Daniel Durai J	35	85
2	953119106003	Johnson S	39	89
3	953119106006	Kiruba Esther K	40	90
4	953119106017	Parameshwari M	45	95
5	953119106018	Parvathy Priya M	38	88
6	953119106024	Raja Lakshmi S	40	90
7	953119106029	Sam Willbert S	39	89
8	953119106035	Sindhu Abirami S	44	94
9	953119106037	Siva Sankari	42	92
10	953119106039	Subitha P	42	86
11	953119106042	Vaishanavi V	40	90
12	953119106303	Maharajan	38	81
13	953119106305	Muthuraj	36	86
14	953118106002	Ambika A	40	90
15	953118106003	Dharani M	34	84
16	953118106007	Madathi M	36	86
17	953118106009	Mamtha M	36	86
18	953118106010	Maruthappan M	39	89
19	953118106012	Nagalakshmi M	43	93
20	953118106017	Sivaranjani M	40	90
21	953118106019	Srirama Selvan P	36	86
22	953117106002	Dhana Lakshmi M	43	93
23	953117106003	Divya A	40	90
24	953117106010	Nuzrath Banu H	44	94
25	953117106013	Piramma Sakthi A	39	89
26	953117106015	Sankara Gomathi M	43	93
27	953117106018	Thinishya S	38	88
28	953117106301	Rajathi C	41	91

COURSE INSTRUCTOR

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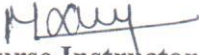
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	REPORT	
1	Program name	**TECECAL007- PROTEUS DESIGN SUITE SOFTWARE**
2	Date of program duration	05.02.2021 to 03.03.2021
3	Resource person	Mr. S. R. SAM KINGSLEY, AP/ECE
4	Participants	28
5	Objective of program	The main objective of this program is to inculcate the advanced knowledge to the advanced learning students of Electronics & Communication Engineering department and to make the students be familiar with a printed circuit board design software tool for electronic automation.
6	Program description	In this course the following key design elements are explained and their designing methodology is explained. The Proteus Design Suite is an embedded system development and simulation software developed by Lab center. The software is used mainly by electronic design engineers and technicians to create schematics and electronic prints for manufacturing printed circuit boards.
7	Outcome of this program	On completion of this course the students will have the confidence to design various Printed Circuit Boards in the auto routing manner.

COURSE INSTRUCTOR

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Thamirabharani Engineering College

Department of Electrical and Electronics Engineering

List of Courses

Special Programmes for Advanced Learners (Academic Year: 2020-2021)

S.No	Name of the Course	Course Competency	Semester	Year	Staff In charge
1	8085 in Electrical Industrial Applications	Core	3	2	Mr. M. Marikannan, AP/ EEE
2	Programming Logic Control	Core	4		Mrs. S. Nazrin Salma, AP/ EEE
3	Scilab Integrated Development Environment	Inter-Disciplinary	5	3	Mr. E. Subramanian AP/ EEE
4	Web Development using ASP.NET	Inter-Disciplinary	6		Mr. R. Jeeva, AP/ CSE
5	Android Development using Java	Inter-Disciplinary	7	4	Mrs. M. Suganthi, AP / CSE
6	MATLAB and its Applications in Engineering	Inter-Disciplinary	8		Mrs. P. Saravanaselvi, AP/ ECE

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ADVANCED LEARNER COURSE

TECALC003 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS

TECALC003 - 8085 IN ELECTRICAL INDUSTRIAL

APPLICATIONS

Course curriculum prepared by   : Mr. M. Marikannan, AP /EEE

Approved by (Head of the Department)   :

Approved by the Civil Department Advisory committee meeting held on:

Approved by the (No.) IQAC meeting held on:

Approved by the (No.) Governing Council meeting conducted on:

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ADVANCED LEARNER COURSE

TECALC003 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS

INDEX

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6	Attendance Sheet	
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8	Assessment	
9	Assessment Marks	
10	Feedback	
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CIRCULAR

Ref:TEC/EEE/2021-22/ODD/ALC/003   Date: 11.10.2021

In order to make the student industry ready engineers and to provide advanced quality training to the advanced learners of second year of Electrical and Electronics Engineering department, the course on "**TECAL003 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS** " by Mr. M. Marikannan, AP /EEE is being offered to enhance employability of the students, technical skills and make them more competitive. Course commences from 17.01.2022 to 21.01.2022. Students are instructed to make use of the opportunity. Advanced learners of second year of Electrical and Electronics Engineering department are eligible for this course.

Course Instructor   **HoD/EEE**

To be read in

S. No	Class	Sign
1	II EEE	

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ADVANCED LEARNER COURSE
TECALC003 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS

OBJECTIVE

- To understand the basics of 8085 Microprocessors and its applications.
- To explain the system architecture of 8085 Microprocessors.
- To explain the features of 8085 Microprocessors
- To understand the concepts of 8085 Microprocessors in industrial Applications.

SYLLABUS

UNIT I Introduction to Microprocessor
Evolution of Microprocessor, Organization of Microprocessors (Preliminary concepts), basic concepts of programming of microprocessors. Review of concepts.

UNIT II Logic Function
Data word representation. Basic elements of control systems 8085A processor architecture terminology such as CPU, memory and address, ALU, assembler data registers.

UNIT III Organization of Microprocessors
Introduction to organization of INTEL 8085-Data and Address buses, fetch cycle, write cycle, state, bus, interrupts. Micro Controllers. Difference between microprocessor and micro controllers.

UNIT IV Central Processing Unit of Microprocessors
Introduction, timing and control unit basic concepts, Instruction and data flow, system timing, examples of INTEL 8085 organization.

UNIT V Programming of 8085 Microprocessor
Instruction -format and addressing modes – Assembly language format – Data transfer, data manipulation& control instructions – Programming.

OUTCOME

- Understand the system architecture of 8085 Microprocessors.
- Understand different functional blocks of 8085 Microprocessors.
- understand the concepts of 8085 Microprocessors in industrial Applications.
- Analyse the features of 8085 Microprocessors.

THEORY: 30 PERIODS
ASSESSMENT: 2 PERIODS
TOTAL: 32 PERIODS

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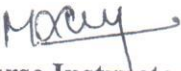Chidambaranagar - Vepemkulam Road,
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ADVANCED LEARNER COURSE
TECALC003 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS
Lesson Plan & Schedule

S.NO	DATE	TOPIC	No. of Hours
1.	17-01-2022	Evolution of Microprocessor.	1
2.	17-01-2022	Organization of Microprocessors (Preliminary concepts)	1
3.	17-01-2022	Basic concepts of programming of microprocessors, Review of concepts	2
4.	17-01-2022	Data word representation.	1
5.	17-01-2022	Basic elements of control systems 8085A processor architecture terminology such as CPU	2
6.	17-01-2022	Memory and address	1
7.	19-01-2022	ALU, assembler data registers	1
8.	19-01-2022	Introduction to organization of INTEL 8085.	2
9.	19-01-2022	Data and Address buses	1
10.	19-01-2022	Fetch cycle, write cycle, state	2
11.	19-01-2022	Bus, interrupts	1
12.	19-01-2022	Microcontrollers. Difference between microprocessor and micro controllers.	1
13.	20-01-2022	Introduction, timing and control unit basic concepts.	2
14.	20-01-2022	Instruction and data flow	2
15.	20-01-2022	System timing	1
16.	20-01-2022	Examples of INTEL 8085 organization.	1
17.	20-01-2022	Instruction.	1
18.	20-01-2022	Format and addressing modes	1

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19.	21-01-2022	Assembly language format	2
20.	21-01-2022	Data transfer, data manipulation& control instructions	2
21.	21-01-2022	Programming.	2
22.	21-01-2022	ASSESSMENT TEST	2
			32

Course Instructor

HoD/EEE

ADVANCED LEARNER COURSE

TECALC003 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS

The assessment of the students shall be based on the following parameters.

Evaluation Parameter	Weightage (in %)
Attendance	50
Assessment	50

The minimum passing requirement for certificate is 60%.

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ADVANCED LEARNER COURSE
TECALC003 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS
NAME LIST

S. NO.	REGISTER NO.	STUDENT NAME	SIGNATURE
1	953120105005	ANUSIAH R	
2	953120105009	ESSAKI PRIYA M	
3	953120105016	MADHUMITHA M	
4	953120105017	MANIKANDAN L	
5	953120105018	MANJULADEVI M	
6	953120105021	PETCHIAMMAL A	
7	953120105025	SHENBAGA ARASI S	
8	953120105026	THANGARAM V	N·A
9	953120105027	THANGESHWARI R	
10	953120105031	VISHAPREETHI A	
11	953120105302	RAJNARAYANAN	
12	953120105301	PONARAVIND KIRUBAKARAN	
13	953120105303	SELVAGANESH	

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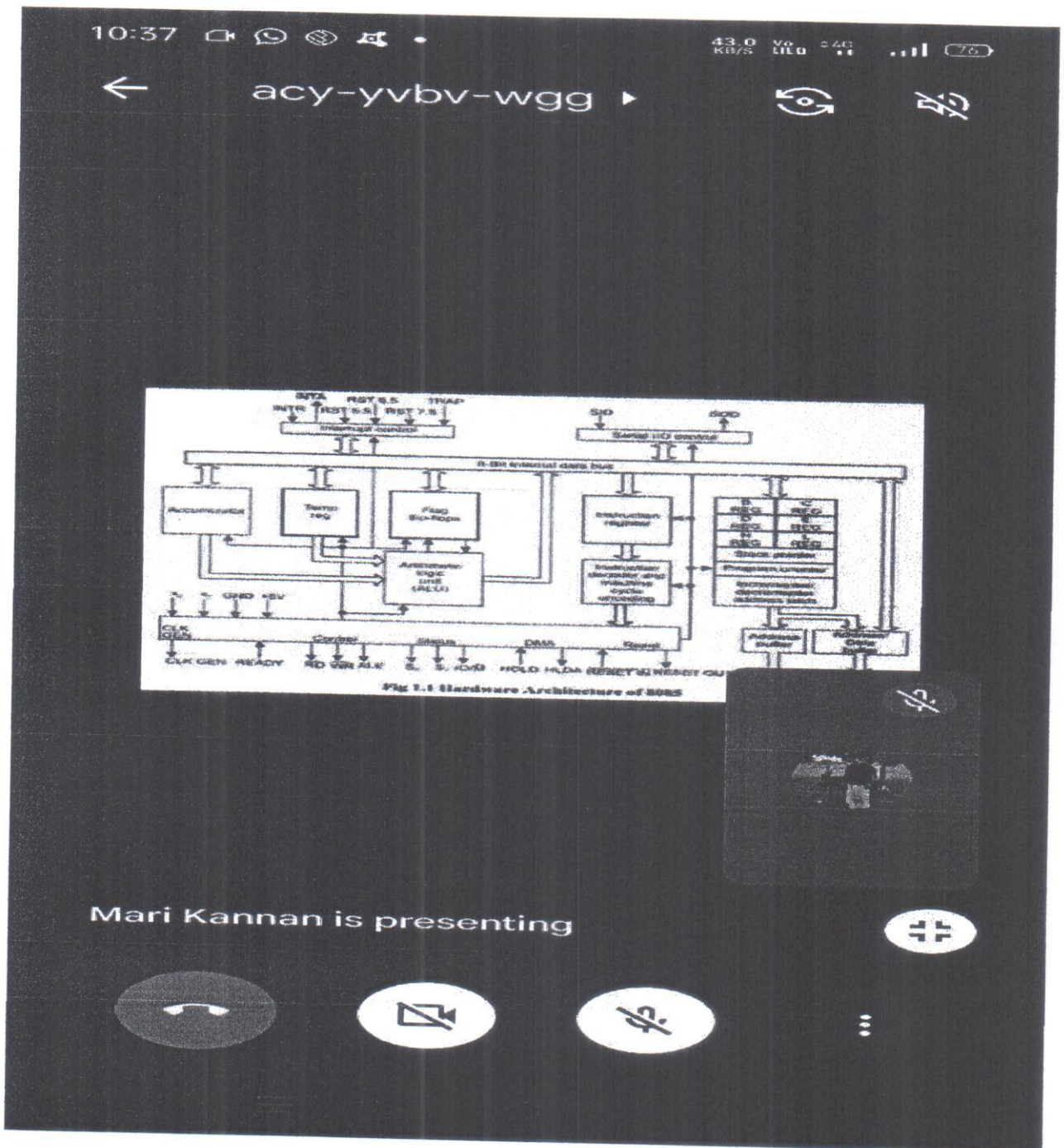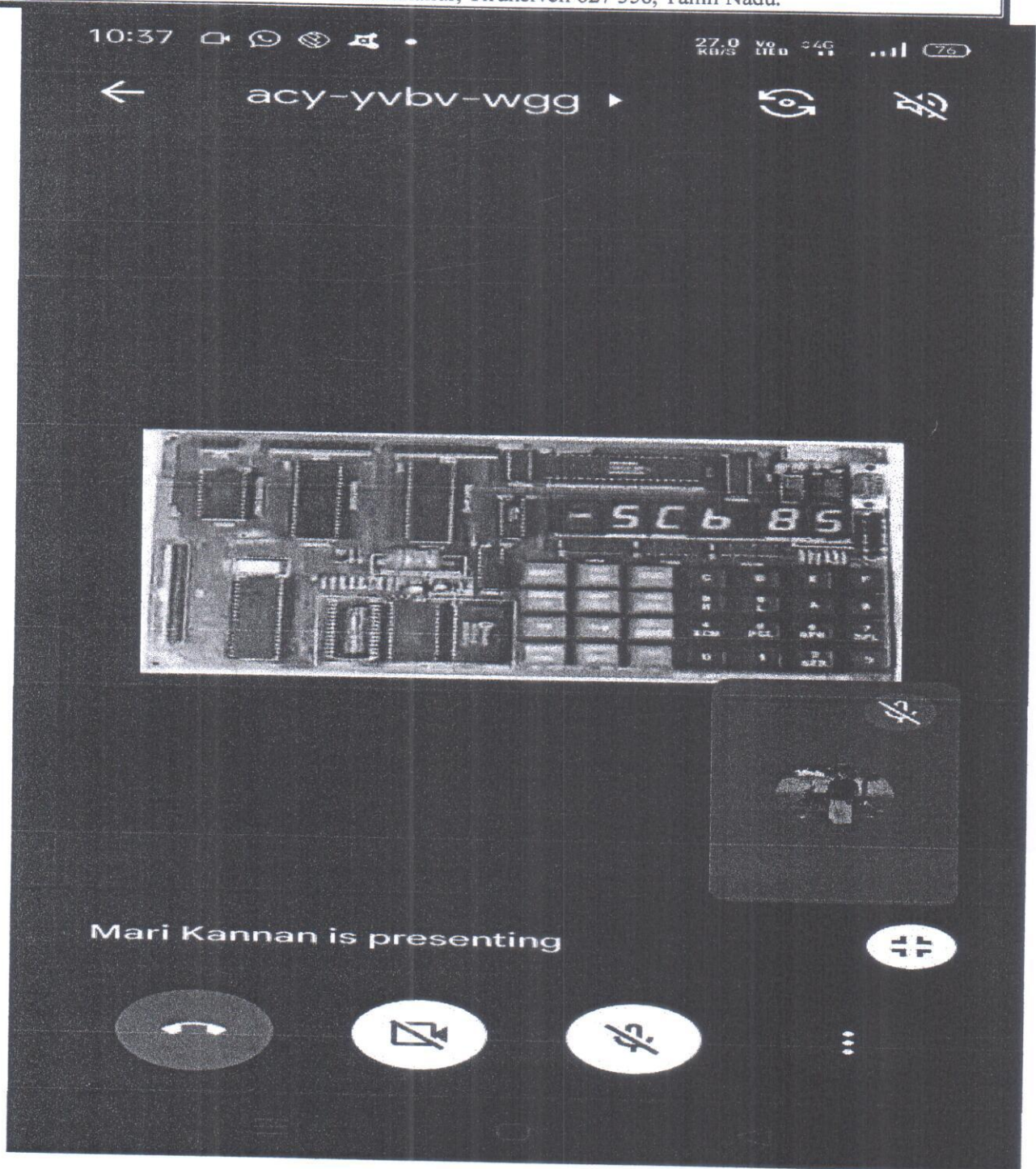## ADVANCED LEARNER COURSE

TEC EEALC001 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS

ATTENDANCE SHEET

THAMIRABHARANI ENGINEERING COLLEGE

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADVANCED LEARNERS COURSE ATTENDENCE

ACADAMIC YEAR: 2021-2022   SEMESTER: ODD

Sl.No	Reg.No	Name of the Student	17-01-2022 (2)	17-01-2022 (2)	17-01-2022 (2)	17-01-2022 (2)	19-01-2022 (2)	19-01-2022 (2)	19-01-2022 (2)	19-01-2022 (2)	20-01-2022 (2)	20-01-2022 (2)	20-01-2022 (2)	20-01-2022 (2)	21-01-2022 (2)	21-01-2022 (2)	21-01-2022 (2)	21-01-2022 (2)	TOTAL NO.OF PERODS PRESENT	NO.OF PERIODS ABSENT
1	953120105005	ANUSIAH R	P	P	P	P	P	P	P	AB	P	P	P	P	P	P	P	P	30	2
2	953120105009	ESSAKI PRIYA M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32	0
3	953120105016	MADHUMITHA M	P	P	P	P	P	P	P	P	P	P	AB	AB	P	P	P	P	28	4
4	953120105017	MANIKANDAN L	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32	0
5	953120105018	MANJULADEVI M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32	0
6	953120105021	PETCHIAMMAL A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32	0
7	953120105025	SHENBAGA ARASI S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32	0
8	953120105026	THANGARAM V	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32	0
9	953120105027	THANGESHWARI R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32	0
10	953120105031	VISHAPREETHI A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32	0
11	953120105302	RAJNARAYANAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32	0
12	953120105301	PONARAVIND KIRUBAKARAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32	0
13	953120105303	SELVAGANESH	P	P	P	AB	P	P	P	P	P	P	P	P	AB	P	P	P	28	4

COURSE INSTRUCTOR

HOD

Photos

Fig. 1. Content delivery

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Fig. 2. Content delivery

ADVANCED LEARNER COURSE
TEC EEALC003 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS
ASSESSMENT

COURSE CODE & NAME   :

DEPARTMENT   :

NAME OF THE STUDENT   :

REG. NO.   :   ACADEMIC YEAR :

YEAR   :   SEM   :

Total Marks: 50

Part- A (10*1= 10)

1. What is Microprocessor?

   a) A multipurpose PLD that accepts binary data as input
   b) A multipurpose PLD that accepts an integer as input
   c) A multipurpose PLD that accepts whole numbers as input
   d) A multipurpose PLD that accepts prime numbers as input

2. Which of the following is correct about 8086 microprocessors?

   a) **Intel's first x86 processor**
   b) Motrola's first x86 processor
   c) STMICROELECTRONICS's first x86 processor
   d) NanoXplore x86 processor

3. Which of the following is a type of microprocessor?

   a) CISC
   b) RISC
   c) EPIC
   d) **All of the above**

4. The microprocessor of a computer can operate on any information if it is present in _____ only.

   a) Program Counter
   b) Flag
   c) **Main Memory**
   d) Secondary Memory

5. Which of the following technology was used by Intel to design its first 8-bit microprocessor?

   a) NMOS
   b) HMOS
   c) PMOS
   d) TTL

6. Which of the following addressing method does the instruction, MOV AX,[BX] represent?

   a) **register indirect addressing mode**
   b) direct addressing mode

c) register addressing mode

d) register relative addressing mode

7. What is the word length of an 8-bit microprocessor?

   a) 8-bits – 64 bits

   b) 4-bits – 32 bits

   c) 8-bits – 16 bits

   d) 8-bits – 32 bits

8. In 8-bit microprocessor, how many opcodes are present?

   a) 246

   b) 278

   c) 250

   d) 256

9. Which of the following is not true about the address bus?

   a) It consists of control PIN 21 to 28

   b) It is a bidirectional bus

   c) It is 16 bits in length

   d) Lower address bus lines ($AD_0 – AD_7$) are called "Line number"

10. Which of the following is true about microprocessors?

    a) It has an internal memory

    b) It has interfacing circuits

    c) It contains ALU, CU, and registers

    d) It uses Harvard architecture

Part- B (20*2= 40)

11. Which of the following is the correct sequence of operations in a microprocessor?

    a) Opcode fetch, memory read, memory write, I/O read, I/O write

    b) Opcode fetch, memory write, memory read, I/O read, I/O write

    c) I/O read, opcode fetch, memory read, memory write, I/O write

    d) I/O read, opcode fetch, memory write, memory read, I/O write

12. The _____ directive instructs the assembler to begin memory allocation for a segment/block/code from the stated address.

    a) GROUP

    b) OFFSET

    c) ORG

    d) LABEL

13. Which of the following is not a microprocessor?

    a) Z8000

    b) Motorola 6809

    c) Zilog Z8

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d) PIC1x

14. Which of the following is not a property of TRAP interrupt in microprocessor?
a) It is a non-maskable interrupt
b) It is of highest priority
c) It uses edge-triggered signal
d) It is a vectored interrupt

15. Which of the following is a property of RST 7.5 interrupt?
a) It is a non-maskable interrupt
b) It has 3rd highest priority
c) It uses level-triggered signal
d) Its vectored address is 0034H

16. Which of the following flag is used to mask INTR interrupt?
a) zero flag
b) auxiliary carry flag flag
c) interrupt flag
d) sign flag

17. Which of the following is a special-purpose register of microprocessor?
a) Program counter
b) Instruction register
c) Accumulator
d) Temporary register

18. Which of the following circuit is used as a special signal to demultiplex the address bus and data bus?
a) Priority Encoder
b) Decoder
c) Address Latch Enable
d) Demultiplexer

19. How many flip-flops are there in a flag register of 8085 microprocessor?
a) 4
b) 5
c) 7
d) 10

20. Which of the following flag condition is used for BCD arithmetic operations in microprocessor?
a) Sign flag
b) Auxiliary carry flag
c) Parity flag
d) Zero flag

21. Whenever a non-maskable interrupt occurs in 8085 microprocessors, which of the following data line contains the data?
a) 2C H

b) 3C H
c) 36 H
d) 24 H

22. What does a microprocessor understand after decoding opcode?
a) Perform ALU operation
b) Go to memory
c) Length of the instruction and number of operations
d) Go to the output device

23. How many address lines are present in 8086 microprocessors?
a) 16
b) 20
c) 32
d) 40

24. Which of the following is not a status flag in microprocessor?
a) Overflow flag
b) Direction flag
c) Interrupt flag
d) Index flag

25. Which of the following is not a condition flag?
a) Trap flag
b) Auxiliary carry flag
c) Parity flag
d) Zero flag

26. Which of the following register is not used in opcode fetch operations?
a) Program counter
b) Memory address register
c) Memory data register
d) Flag register

27. A memory connected to a microprocessor has 20 address lines and 16 data lines. What will be the memory capacity?
a) 8 KB
b) 2 MB
c) 16 MB
d) 64 KB

28. What is the word length of the Pentium-II microprocessor?
a) 8-bit
b) 32-bit
c) 64-bit
d) 16-bit

29. Which of the following is not true about 8085 microprocessors?
a) It is an 8-bit microprocessor
b) It is a 40 pin DIP chip
c) It is manufactured using PMOS technology
d) It has 16 address lines

30. Which of the following is a non-vectored input?
a) TRAP
b) RST-7.5
c) RST-6.5
d) INTR

ADVANCED LEARNER COURSE

TEC EEALC001 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS

NAME OF THE STUDENT *

M.selvaganesh

REGISTER NUMBER *

953120105303

EMAIL- ID *

selvaganesh200112@gmail.com

YEAR/ SEM *

2 year /3sem

PART-A

10*1=10 Marks

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Chathirampudukulam Village,
Chidambaranagar - Vepemkulam Road,
Thatchanallur, Tirunelveli - 627 358.

1. What is Microprocessor? *

1 point

○ a) A multipurpose PLD that accepts binary data as input *(selected)*

○ b) A multipurpose PLD that accepts an integer as input

○ c) A multipurpose PLD that accepts whole numbers as input

○ d) A multipurpose PLD that accepts prime numbers as input

2. Which of the following is correct about 8086 microprocessors? *

1 point

○ a) Intel's first x86 processor *(selected)*

○ b) Motrola's first x86 processor

○ c) STMICROELECTRONICS's first x86 processor

○ d) NanoXplore x86 processor

3. Which of the following is a type of microprocessor? *

1 point

○ a) CISC

○ b) RISC

○ c) EPIC

○ d) All of the above *(selected)*

4 . The microprocessor of a computer can operate on any information if it is present   1 point
in _____ only. *

○ a) Program Counter

○ b) Flag

◉ c) Main Memory

○ d) Secondary Memory

5. Which of the following technology was used by Intel to design its first 8-bit   1 point
microprocessor? *

○ a) NMOS

○ b) HMOS

○ c) PMOS

◉ d) TTL

6. Which of the following addressing method does the instruction, MOV AX,[BX]   1 point
represent? *

◉ a) register indirect addressing mode

○ b) direct addressing mode

○ c) register addressing mode

○ d) register relative addressing mode

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7. What is the word length of an 8-bit microprocessor? *

1 point

○ (●) a) 8-bits – 64 bits

○ b) 4-bits – 32 bits

○ c) 8-bits – 16 bits

○ d) 8-bits – 32 bits

8. In 8-bit microprocessor, how many opcodes are present? *

1 point

○ (●) a) 246

○ b) 278

○ c) 250

○ d) 256

9. Which of the following is not true about the address bus?

1 point

○ a) It consists of control PIN 21 to 28

○ (●) b) It is a bidirectional bus

○ c) It is 16 bits in length

○ d) Lower address bus lines (AD0 – AD7) are called "Line number"

10. Which of the following is true about microprocessors?

1 point

○ a) It has an internal memory

○ b) It has interfacing circuits

◉ c) It contains ALU, CU, and registers

○ d) It uses Harvard architecture

PART-B

20*2=20 Marks

11. Which of the following is the correct sequence of operations in a microprocessor? *

2 points

◉ a) Opcode fetch, memory read, memory write, I/O read, I/O write

○ b) Opcode fetch, memory write, memory read, I/O read, I/O write

○ c) I/O read, opcode fetch, memory read, memory write, I/O write

○ d) I/O read, opcode fetch, memory write, memory read, I/O write

12. The _____ directive instructs the assembler to begin memory allocation for a segment/block/code from the stated address. *

2 points

○ a) GROUP

○ b) OFFSET

◉ c) ORG

○ d) LABEL

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13. Which of the following is not a microprocessor? *

2 points

○ a) Z8000

○ b) Motorola 6809

○ c) Zilog Z8

● d) PIC1x

14. Which of the following is not a property of TRAP interrupt in microprocessor? *

2 points

○ a) It is a non-maskable interrupt

○ b) It is of highest priority

● c) It uses edge-triggered signal

○ d) It is a vectored interrupt

15. Which of the following is a property of RST 7.5 interrupt? *

2 points

○ a) It is a non-maskable interrupt

○ b) It has 3rd highest priority

○ c) It uses level-triggered signal

● d) Its vectored address is 0034H

16. Which of the following flag is used to mask INTR interrupt? *

2 points

○ a) zero flag

○ b) auxiliary carry flag flag

⦿ c) interrupt flag

○ d) sign flag

17. Which of the following is a special-purpose register of microprocessor? *

2 points

⦿ a) Program counter

○ b) Instruction register

○ c) Accumulator

○ d) Temporary register

18. Which of the following circuit is used as a special signal to demultiplex the address bus and data bus? *

2 points

○ a) Priority Encoder

⦿ b) Decoder

○ c) Address Latch Enable

○ d) Demultiplexer

19. How many flip-flops are there in a flag register of 8085 microprocessor? *   2 points

○ a) 4

◉ b) 5

○ c) 7

○ d) 10

20. Which of the following flag condition is used for BCD arithmetic operations in microprocessor? *   2 points

○ a) Sign flag

◉ b) Auxiliary carry flag

○ c) Parity flag

○ d) Zero flag

21. Whenever a non-maskable interrupt occurs in 8085 microprocessors, which of the following data line contains the data? *   2 points

○ a) 2C H

○ b) 3C H

○ c) 36 H

◉ d) 24 H

22. What does a microprocessor understand after decoding opcode? *   2 points

○ a) Perform ALU operation

○ b) Go to memory

◉ c) Length of the instruction and number of operations

○ d) Go to the output device

23. How many address lines are present in 8086 microprocessors? *   2 points

○ a) 16

◉ b) 20

○ c) 32

○ d) 40

24. Which of the following is not a status flag in microprocessor?   2 points

○ a) Overflow flag

○ b) Direction flag

○ c) Interrupt flag

◉ d) Index flag

25. Which of the following is not a condition flag? *

2 points

- ◉ a) Trap flag
- ○ b) Auxiliary carry flag
- ○ c) Parity flag
- ○ d) Zero flag

26. Which of the following register is not used in opcode fetch operations? *

2 points

- ○ a) Program counter
- ◉ b) Memory address register
- ○ c) Memory data register
- ○ d) Flag register

27. A memory connected to a microprocessor has 20 address lines and 16 data lines. What will be the memory capacity? *

2 points

- ○ a) 8 KB
- ◉ b) 2 MB
- ○ c) 16 MB
- ○ d) 64 KB

28. What is the word length of the Pentium-II microprocessor? *

2 points

○ a) 8-bit

○ b) 32-bit

◉ c) 64-bit

○ d) 16-bit

29. Which of the following is not true about 8085 microprocessors? *

2 points

○ a) It is an 8-bit microprocessor

○ b) It is a 40 pin DIP chip

◉ c) It is manufactured using PMOS technology

○ d) It has 16 address lines

30. Which of the following is a non-vectored input? *

2 points

○ a) TRAP

○ b) RST-7.5

○ c) RST-6.5

◉ d) INTR

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ADVANCED LEARNER COURSE

TEC EEALC001 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS

NAME OF THE STUDENT *

Raj narayanan B

REGISTER NUMBER *

953120105302

EMAIL- ID *

narayananraj32@gmail.com

YEAR/ SEM *

2/3

PART-A

10*1=10 Marks

1. What is Microprocessor? *

1 point

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3. Which of the following is a type of microprocessor? *

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- ◯ a) CISC
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- ⦿ a) 246
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- ○ d) 64 KB

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THAMIRABHARANI ENGINEERING COLLEGE

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADVANCED LEARNERS COURSE

TECALC001 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS

STUDENTS ASSESSMENT

ACADAMIC YEAR: 2021-2022

SEMESTER: ODD

Sl.No.	Reg. No.	Name of the Student	Out of 50	Out of 100	Total marks(100)
1	953120105005	ANUSIAH R	44	88	88
2	953120105009	ESSAKI PRIYA M	44	88	88
3	953120105016	MADHUMITHA M	42	84	84
4	953120105017	MANIKANDAN L	44	88	88
5	953120105018	MANJULADEVI M	44	88	88
6	953120105021	PETCHIAMMAL A	46	92	92
7	953120105025	SHENBAGA ARASI S	44	88	88
8	953120105026	THANGARAM V	44	88	88
9	953120105027	THANGESHWARI R	42	84	84
10	953120105031	VISHAPREETHI A	44	88	88
11	953120105302	RAJNARAYANAN	45	90	90
12	953120105301	PONARAVIND KIRUBAKARAN	44	88	88
13	953120105303	SELVAGANESH	43	86	86

COURSE INSTRUCTOR

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ADVANCED LEARNERS COURSE
TECALC003 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS
FEEDBACK FORM

COURSE CODE & NAME : TECALC003 - 8085 IN Electrical Industrial Application

DEPARTMENT : EEE

NAME OF THE STUDENT : Shenbagaarasi.S

REGISTER NUMBER : 953120105025   ACADEMIC YEAR : 2021-2022

YEAR : I   SEM : III

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you?   Yes ✓ / No

B. The course contents met with your expectations
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree ✓

C. The lecture sequence was well planned
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree ✓ 5. Strongly agree

D. The level of the course was
   1. Too Low   2. Low   3. Moderate   4. High   5. Very high ✓

E. The course exposed you to new knowledge, practices and meets the current industrial needs
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree ✓

THE CONDUCT OF COURSE

A. The lectures were clear and easy to understand
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree ✓

B. The teaching aids were effectively used
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree ✓

C. The course assessment conducted was adequate
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree ✓ 5. Strongly agree

D. The instructors encouraged interaction and were helpful
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree ✓

E. Were objectives of the course realized? Yes ✓ / No

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SIGNATURE OF THE STUDENT

THAMIRABHARANI ENGINEERING COLLEGE

ADVANCED LEARNERS COURSE
TEC EEALC001 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS
FEEDBACK FORM

COURSE CODE & NAME : TECALCOOB- 8085 in Electrical Industrial Application

DEPARTMENT : EEE

NAME OF THE STUDENT : M. Sssaripriya.

REGISTER NUMBER : 953120105009 **ACADEMIC YEAR** : 2021-22

YEAR : II **SEM** : III

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you? **Yes** / No

B. The course contents met with your expectations
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree **5. Strongly agree**

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   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree **4. Agree** 5. Strongly agree

E. Were objectives of the course realized? **Yes** / No

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M. Sumya.
SIGNATURE OF THE STUDENT

THAMIRABHARANI ENGINEERING COLLEGE

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Thatchanallur, Tirunelveli 627 358, Tamil Nadu.

	REPORT	
1	Program name	TECALC003 - 8085 IN ELECTRICAL INDUSTRIAL APPLICATIONS
2	Date of program duration	17.01.2022 to 21.01.2022
3	Resource person	Mr. M. Marikannan, AP /EEE/ TEC
4	Participants	13
5	Objective of program	The main objective of this program is to inculcate the advanced knowledge to the advanced learning students of Electrical and Electronics Engineering department and to make the students be familiar to understand the basics of 8085 Microprocessors and its applications.
6	Program description	In this course the following key elements are explained system architecture of 8085 Microprocessor, different functional blocks of 8085 Microprocessors, concepts of 8085 Microprocessors in industrial Applications and features of Microprocessors.
7	Outcome of this program	On completion of this course the students will have understand the concepts of 8085 Microprocessors in industrial Applications

COURSE INSTRUCTOR

HOD/EEE

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Thatchanallur, Tirunelveli 627 358, Tamil Nadu.

COURSE SUMMARY

COURSE NAME	COURSE INSTRUCTOR	NO. OF HOURS	COURSE PERIOD	TOTAL NO. OF REGISTERED STUDENTS	TOTAL NO. OF ATTENDED STUDENTS
8085 in Electrical Industrial Applications	Mr. M. Marikannan, AP/EEE	32	17-01-2022 to 21-01-2022	13	13

COURSE INSTRUCTOR

HOD

Thamirabharani Engineering College

Department of Mechanical Engineering

List of Courses

Special Programmes for Advanced Learners (Academic Year: 2020-2021)

S.No	Name of the Course	Course Competency	Semester	Year	Staff In charge
1	Computational Fluid Dynamics	Inter-Disciplinary	3	2	Mr. M. Muthuganesh, AP/Civil
2	Advanced Mechanisms Design and Simulation	Core	4		Mr.R.Saravanakumar, AP/Mech
3	Basics of Finite Element Methods	Inter-Disciplinary	5	3	Mr. M. Harris Simon, AP/Mech
4	Total Quality Management	Inter-Disciplinary	6		Mrs. M. Sameem Suha, AP/Civil
5	Advanced Strength of Materials	Inter-Disciplinary	7	4	Mr.V. Antony, AP/Mech
6	Advanced Manufacturing and Tooling	Core	8		Mr.R.Saravanakumar, AP/Mech

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ADVANCED LEARNER COURSE

TECALC0803– ADVANCED STRENGTH OF MATERIALS

(Common for Civil and Mechanical Engineering)

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TECALC003– ADVANCED STRENGTH OF MATERIALS

Course curriculum prepared by   : Mr. V. Antony, AP /Mechanical

Approved by (Head of the Department)   :

Approved by the Mechanical Department Advisory committee meeting held on:

Approved by the (No.) IQAC meeting held on:

Approved by the (No.) Governing Council meeting conducted on:

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CIRCULAR

Ref:TEC/CIVIL/2021-22/ODD/ALC/05   **Date:** 11.10.2021
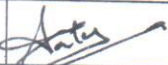
In order to make the student industry ready engineers and to provide advanced quality training to the advanced learners of third year of civil and mechanical engineering department, the course on **"TECALC005–ADVANCED STRENGTH OF MATERIALS** "by Mr.V.Antony, AP /Mechanical is being offered to enhance employability of the students, technical skills and make them more competitive. Course commences from 13.10.2021 to 18.12.2021. Students are instructed to make use of the opportunity. Advanced learners of third year of civil and mechanical engineering are eligible for this course.

Course Instructor   **HoD/ME**

To be read in

S. No	Class	Sign
1	III CIVIL	
2	III MECH	

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THAMIRABHARANI ENGINEERING COLLEGE
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ADVANCED LEARNER COURSE

TECALC002 – ADVANCED STRENGTH OF MATERIALS
(Common for Civil and Mechanical Engineering)

OBJECTIVE

> ➢ To analyse the stresses and deformations through advanced mathematical models.
> ➢ To estimate the design strength of various industrial equipment's.

SYLLABUS

UNIT I ANALYSIS OF PLATES
Mathematical modeling of plates with normal loads – Point and Distributed Loads – Support conditions – Rectangular plates - Stresses along coordinate axes – Plate deformations – Axi- symmetric plates – Radial and tangential stresses – plate deflections.

UNIT II THICK CYLINDERS AND SPHERES
Equilibrium and compatibility conditions - Lame's Theorem .– Boundary conditions – distribution of radial and tangential stresses – compound cylinders – Interference fits - Stresses due to temperature distributions.

UNIT III ROTATING DISCS
Lame-Clayperon Theorem – radial and tangential stresses in discs due to centrifugal effects – boundary conditions – solid and hollow discs – Interference fit on shafts –Strengthening of the hub – residual stresses – Autofrettege – Discs of variable thickness – Disc profile for uniform strength.

OUTCOME

> ➢ Apply mathematical knowledge to calculate the deformation behavior of simple structures.
>
> ➢ Critically analyse problem and solve the problems related to mechanical elements and analyse the deformation behavior for different types of loads.

THEORY: 30 PERIODS

ASSESSMENT: 2 PERIODS

TOTAL: 32 PERIODS

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ADVANCED LEARNER COURSE

TECALC005 – ADVANCED STRENGTH OF MATERIALS

Lesson Plan & Schedule

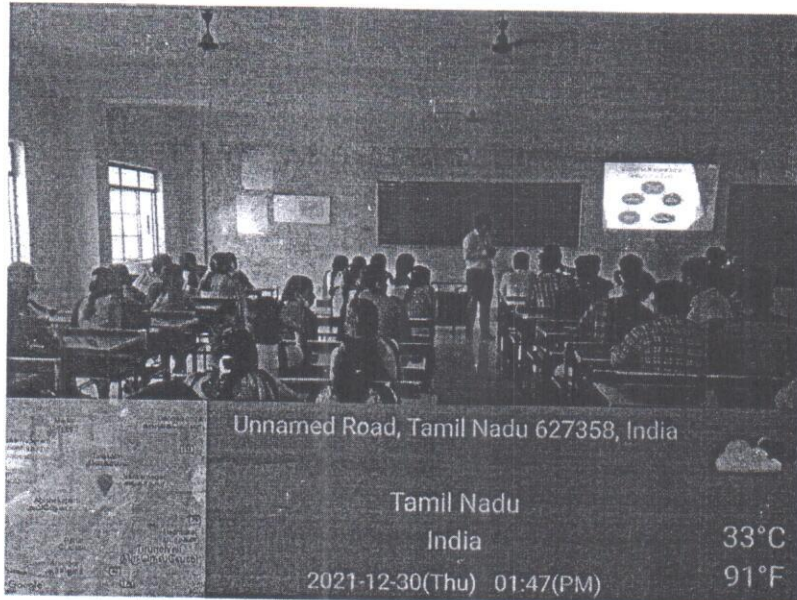| S.NO	DATE	TOPIC	No. of Hours
1.	13.10.21	Mathematical modeling of plates with normal loads – Point and Distributed Loads – Support conditions	1
2.	14.10.21 to 15.10.21	Rectangular plates - Stresses along coordinate axes – Plate deformations	2
3.	18.10.21 to 19.10.21	Axi- symmetric plates – Radial and tangential stresses – plate deflections.	2
4.	20.10.21 to 21.10.21	Equilibrium and compatibility conditions - Lame's Theorem – Boundary conditions	2
5.	12.10.21 to 25.10.21	distribution of radial and tangential stresses – compound cylinders	3
6.	26.10.21 to 27.10.21	Interference fits – Stresses due to temperature distributions	2
7.	08.11.21 to 12.11.21	Lame-Clayperon Theorem – radial and tangential stresses in discs due to centrifugal effects	5
8.	16.11.21 to 19.11.21	boundary conditions – solid and hollow discs	4
9.	22.11.21 to 23.11.21	Interference fit on shafts –Strengthening of the hub	2
10.	01.12.21 to 02.12.21, 06.12.21	residual stresses – Autofrettege	3
11.	08.12.21, 13.12.21	Discs of variable thickness	2
12.	15.12.21	Disc profile for uniform strength	1
13.	18.12.21	Assessment	1
		Total Hours	30

Course Instructor

HoD/CE

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ADVANCED LEARNER COURSE

TECALC0 03 – ADVANCED STRENGTH OF MATERIALS

(Common for Civil and Mechanical Engineering)

ATTENDANCE SHEET FOR CIVIL ENGINEERING

S. No	Roll No.	Student Name	20/12/21	21/12/21	22/12/21	23/12/21	27/12/21	28/12/21	29/12/21	30/12/21	31/12/21	3/1/22	4/1/22	5/1/22	6/1/22	Signature
			3	2	2	3	2	2	3	3	2	2	2	2	1	
1	953120103001	AASHIKA J	/	/	/	/	/	/	/	/	/	/	/	/	/	Aashg.
2	953120103010	KANMANI T	a	/	/	/	/	/	/	/	/	/	/	/	/	Kanmani
3	953120103009	JEYALKSHMI V	/	/	/	/	/	/	/	/	/	/	/	/	/	Jeyalat.
4	953120103012	KIRUTHIKA S	/	/	/	/	/	/	/	/	/	/	/	/	/	Kiran
5	953120103014	MAHAPRIYA M	/	/	/	/	/	/	/	/	/	/	/	/	/	Maharom
6	953120103015	MALINI M	/	/	/	/	/	/	/	/	/	/	/	/	/	Malini
7	953120103016	MARISELVI S	/	/	/	/	/	/	/	a	/	/	/	/	/	M ariselvi
8	953120103017	MATHUBALA S	/	/	/	/	/	/	/	/	/	/	/	/	/	Mathubas.
9	953120103020	RAMALAKSHMI R	/	/	/	/	/	/	/	/	/	/	/	/	/	Ramalaks.
10	953120103028	SURUTHIGA R	/	/	a	/	/	/	/	/	/	/	/	/	/	Suruthig.

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ADVANCED LEARNER COURSE

TECALC003 – ADVANCED STRENGTH OF MATERIALS

(Common for Civil and Mechanical Engineering)

ATTENDANCE SHEET FOR MECHANICAL ENGINEERING

S. No	Roll No.	Student Name	20/12/21	21/12/21	22/12/21	23/12/21	27/12/21	28/12/21	29/12/21	30/12/21	31/12/21	31/1/22	4/1/22	5/1/22	6/1/22	Signature
			3	2	2	2	3	2	3	3	2	3	2	2	1	
1	953120114004	BALAJI SHRIRAM V	/	/	/	/	/	/	/	/	/	/	/	/	/	Balaji sriram
2	953120114009	IVARAJAKANI G	/	/	/	/	/	/	/	/	/	/	/	/	/	Iva
3	953120114018	MALATHI V	/		/	/	/	/	/	/	/	/	/	/	/	Malga
4	953120114020	MUTHU SELVAM V	/	/	/	/	/	/	/	/	/	/	/	/	/	MSv
5	953120114023	RAJESH T	/	/	/	/	/	a	/	/	/	/	/	/	/	T.Rajesh
6	953120114024	SANKARAN S	/	/	/	/	/	/	/	/	/	/	/	/	/	Sankary.
7	953120114027	SARAVANAN V	/	/	/	/	/	/	/	/	/	/	/	/	/	Saravanv
8	953120114034	VARATHARAJ P	/	/	/	/	/	/	/	/	/	/	/	/	/	Varathe
9	953120114036	VENKADESHWARAN M	/	a	/	/	/	/	/	/	/	/	/	/	/	Venkadee
10	953120114305	KEVIN S	/	/	/	/	/	/	/	/	/	/	/	/	/	kevin.
11	953120114309	MUKIL ARASAN A B	/	/	/	/	/	/	/	/	/	/	/	/	/	Mukil
12	953120114315	SATHTHISHWARAN B	/	/	/	/	/	/	/	/	/	a	/	/	/	Sathva.
13	953120114317	SIVAKUMAR P	/	/	/	/	/	/	/	/	/	/	/	/	/	Shakia
14	953120114318	SORIMUTHU S	/	/	/	/	/	/	/	/	/	/	/	/	/	Sorimu.
15	953120114321	THIVAHAR P	/	/	a	/	/	/	/	/	/	/	/	/	/	Thiva

SIGNATURE

Photos

CONTENT DELIVERY

APPLICATION OF SOM

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Content delivery

ADVANCED LEARNER COURSE
TECALC003 – ADVANCED STRENGTH OF MATERIALS
ASSESSMENT

COURSE CODE & NAME	:	
DEPARTMENT	:	
NAME OF THE STUDENT	:	
REG. NO.	:	**ACADEMIC YEAR :**
YEAR	:	**SEM** :

Total Marks: 50

Part- A (10*1= 10)
PART-A

1. Torsional Modulus Is _____ To Torsional Strength.
A) Inversely Proportional
B) Directly Proportional
C) Equal
D) Unequal

2. _____ torque produces the maximum shear stress due to combined bending.
a) Seasonal
b) **Equipment**
c) Composite
d) Series

3. In aqueduct, the nominal flow of velocity be _____
a) 0.5 m/s
b) **0.9 m/s**
c) 0.6 m/s
d) 0.8 m/s

4. _____ coincides with the water surface in a canal or open channel.
a) **HGL**
b) TEL
c) TWL
d) HTL

5. Pressure conduits are also known as _____
a) **Pipe conduits**
b) Gravity conduits
c) Artesian conduits
d) Surface conduits

6. What is the flow of velocity in the pressure conduit?
a) 0.5 to 0.6 m/s
b) 0.6 to 0.7 m/s
c) **0.6 to 0.8 m/s**
d) 0.8 to 1 m/s

7. Which of the following conduits possess low resistance to acid nature?
a) RCC pipes
b) PVC pipes
c) **Steel pipes**
d) PSC pipes

8. Expand HDPE?
a) High Density Polyvinyl Pipe
b) **High Density Polyethylene Pipe**
c) High Deformed Polyvinyl Pipe
d) High Deformed Polyethene Pipe

9. Calculate the hoop stress at the bottom of penstock, if a steel penstock of 1 m and 10 mm thick is subjected to 100m head of water. Take w = 9.81 kN/m^3.
a) **49 N/mm^2**
b) 47 N/mm^2
c) 45 N/mm^2
d) 43 N/mm^2

10. Maximum daily demand = _____ × Average daily demand.
a) 2.5
b) 3.5
c) **1.5**
d) 4

PART-B

11. Which of the following is not a short term estimate in population forecast?
a) **Graphical comparison**
b) Geometrical increase method
c) Arithmetical increase method
d) Graphical extension method

12. $P_n = P[1+r/100]^n$ is a formula used in _____
a) Arithmetical increase method
b) Incremental increase method
c) **Geometrical increase method**
d) Graphical extension method

13. According to Freeman, estimate of fire demand can be made from the formula?
a) Q = 3175 P
b) Q = 2125 P
c) **Q = 1136.5 (P/5 +10)**
d) Q = 2715 (P/5 + 10)

14. The upward deflection caused by the prop is _____
a) $Pl^3/2EI$
b) $Pl^2/3EI$
c) **$Pl^3/3EI$**
d) $Pl^4/3EI$

15. Stiffness of the propped cantilever is _____
a) **4EI/l**
b) 6EI/l
c) 8EI/I
d) 5EI/l

16. The major losses of energy due to friction are calculated by using

_____
a) Ingli's formulae
b) Emperical notations
c) **Chezy's Equation**
d) Lacey's Theory

17. Determine the velocity of flow in a pipe if the discharge capacity is 270 litres per second and cross sectional area is 5 cm^2.
a) 4.5 m/s
b) **5.4 m/s**
c) 3.4 m/s
d) 2.5 m/s

18. Calculate the reaction at prop of cantilever, if the span of beam is 5m and load is 20 kN.
a) 4.25 kN
b) 5 kN
c) **6.25 kN**
d) 8 kN

19. The width of broad gauge is _____
a) 1.445m
b) **1.676m**
c) 1 m
d) 0.61 m

20. About 90% railway tracks lay with _____ rails in the world.
a) DH rails
b) BH rails
c) **FF rails**
d) GH rails

ADVANCED LEARNER COURSE

TECALC003 – ADVANCED STRENGTH OF MATERIALS

ASSESSMENT

COURSE CODE & NAME : TECALC001 - ADVANCED STRENGTH OF MATERIALS

DEPARTMENT : MECHANICAL ENGINEERING

NAME OF THE STUDENT : SIVAKUMAR P

REG. NO. : 953120111437   ACADEMIC YEAR : 2021- 2022

YEAR : II   SEM : III

Total Marks: 50

Part- A (10*1= 10)
PART-A

1. Torsional Modulus Is _____ To Torsional Strength.

A) Inversely Proportional

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2. _____ torque produces the maximum shear stress due to combined bending.

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PART-B

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b) 1.676m
c) 1 m
d) 0.61 m

20. About 90% railway tracks lay with _____ rails in the world.
a) DH rails
b) BH rails
c) FF rails
d) GH rails

The following three Principal stress exist

1) The radical Pressure (σ_r)
2) The hoop stress (or) circumferening stress σ_c
3) The Longitdinal (σ_L)

Longidinal Strain $l_i = \dfrac{\sigma_L}{E} - \dfrac{\sigma_c}{m \times E} + \dfrac{\sigma_r}{m \times E} = $ constant

$$\sigma_c - \sigma_r = \text{constant}$$

$$\sigma_c - \sigma_r = 2 \times a$$

$$\sigma_c = 2a \times \sigma_r$$

$$\sigma_r + 2a = -\sigma_r - r \dfrac{d\sigma_r}{dr}$$

$$\dfrac{d\sigma_r}{dr} = -2 \times \left(\dfrac{\sigma_r + a}{r}\right) \quad \text{or} \quad \dfrac{d\sigma_r}{\sigma_r + a} = \dfrac{-2 \times dr}{r}$$

Intergreating both wee get

$$\log_e (\sigma_r + a) = -2 \times \log_e r + \log_e^b$$

$$\log_e (\sigma_r + a) = \log_e \dfrac{b}{r^2}$$

$$\sigma_r + a = \dfrac{b}{r^2}$$

$$\boxed{\sigma_r = \dfrac{b}{r^2} - a} \longrightarrow \text{Lames eqation}$$

$$\sigma_c - \sigma_r = 2a$$

$$\sigma_c - \dfrac{b}{r^2} + a = 2a$$

$$\sigma_c = 2a - a + \dfrac{b}{r^2}$$

$$\boxed{\sigma_c = \dfrac{b}{r^2} + a} \longrightarrow \text{Lames equation}$$

$\boxed{\dfrac{14}{20}}$

Sisn

$$\text{Longitudinal} = \frac{\text{Force acting on the end due to tend}}{\text{Area of cross section of the Cylinder}}$$

$$\sigma_L = \frac{\pi \times r_1^2 \times P}{\pi \times (r_2^2 - r_1^2)}$$

$$\sigma_c = \left[\frac{r_1^2}{r_2^2 - r_1^2} \right] \times P$$

Shear Stress

The maximum shear Stress

$$T_{max} = \left[\frac{(\sigma_c) - (\sigma_r)}{2} \right]$$

$$= \frac{1}{2} \left[\left(\frac{b}{r^2} + a \right) - \left(a - \frac{b}{r^2} \right) \right]$$

$$T_{max} = \frac{1}{2} \times \frac{b}{r^2} + a - a + \frac{b}{r^2}$$

$$\boxed{T_{max} = \frac{b}{r^2}}$$

ADVANCED LEARNERS COURSE
TECALC003 – ADVANCED STRENGTH OF MATERIALS
FEEDBACK FORM

COURSE CODE & NAME : TECALC001 – ADVANCED STRENGTH OF MATERIAL

DEPARTMENT : Mechanical Engineering

NAME OF THE STUDENT : Sivakumar . P

REGISTER NUMBER : 959120114317   **ACADEMIC YEAR :** 2021-22

YEAR : II   **SEM** : (I)

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you?   Yes ✓ / No

B. The course contents met with your expectations
   1. ✓ Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

C. The lecture sequence was well planned
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

D. The level of the course was
   1. Too Low   2. Low   3. Moderate   4.✓ High   5. Very high

E. The course exposed you to new knowledge, practices and meets the current industrial needs
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

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THE CONDUCT OF COURSE

A. The lectures were clear and easy to understand
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

B. The teaching aids were effectively used
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

C. The course assessment conducted was adequate
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

D. The instructors encouraged interaction and were helpful
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.✓ Agree 5.Strongly agree

E. Were objectives of the course realized?   Yes / No

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SIGNATURE OF THE STUDENT

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ADVANCED LEARNERS COURSE
TECALC003– ADVANCED STRENGTH OF MATERIALS

FEEDBACK FORM

COURSE CODE & NAME   :

DEPARTMENT   :

NAME OF THE STUDENT   :

REGISTER NUMBER   :   ACADEMIC YEAR :

YEAR   :   SEM   :

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you?   Yes / No

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D. The instructors encouraged interaction and were helpful
    1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree

E. Were objectives of the course realized? Yes / No

SIGNATURE OF THE STUDENT

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ADVANCED LEARNER COURSE
TECALC019 – ADVANCED STRENGTH OF MATERIALS
ASSESSMENT

COURSE CODE & NAME   :

DEPARTMENT   :

NAME OF THE STUDENT   :

REG. NO.   :   ACADEMIC YEAR :

YEAR   :   SEM   :

Total Marks: 50

Part- A (10*1= 10)
PART-A

1. Torsional Modulus Is _____ To Torsional Strength.
A) Inversely Proportional
B) **Directly Proportional**
C) Equal
D) Unequal

2. _____ torque produces the maximum shear stress due to combined bending.
a) Seasonal
b) **Equipment**
c) Composite
d) Series

3. In aqueduct, the nominal flow of velocity be _____
a) 0.5 m/s
b) **0.9 m/s**
c) 0.6 m/s
d) 0.8 m/s

4. _____ coincides with the water surface in a canal or open channel.
a) **HGL**
b) TEL
c) TWL
d) HTL

ADVANCED LEARNER COURSE

TECALC003 – ADVANCED STRENGTH OF MATERIALS

ASSESSMENT

COURSE CODE & NAME : TECALC001 - ADVANCED STRENGTH OF MATERIALS

DEPARTMENT : CIVIL ENGINEERING

NAME OF THE STUDENT : MALINI.M

REG. NO. : 95320103015

ACADEMIC YEAR : 2021-2022

YEAR : II

SEM : III

Total Marks: 50

Part- A (10*1= 10)

PART-A

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7. Which of the following conduits possess low resistance to acid nature?
a) RCC pipes
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a) 49 N/mm^2
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c) 45 N/mm^2
d) 43 N/mm^2

10. Maximum daily demand = _____ × Average daily demand.
a) 2.5
b) 3.5
c) 1.5
d) 4

PART-B

11. Which of the following is not a short term estimate in population forecast?
a) Graphical comparison
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12. $P_n = P[1+r/100]^n$ is a formula used in _____
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13. According to Freeman, estimate of fire demand can be made from the formula?
a) $Q = 3175 P$
b) $Q = 2125 P$
c) $Q = 1136.5 (P/5 +10)$
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14. The upward deflection caused by the prop is _____
a) $Pl^3/2EI$
b) $Pl^2/3EI$
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15. Stiffness of the propped cantilever is _____
a) $4EI/l$
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16. The major losses of energy due to friction are calculated by using
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a) Ingli's formulae
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17. Determine the velocity of flow in a pipe if the discharge capacity is 270 litres per second and cross sectional area is 5 cm^2.

a) 4.5 m/s
b) 5.4 m/s
c) 3.4 m/s
d) 2.5 m/s

18. Calculate the reaction at prop of cantilever, if the span of beam is 5m and load is 20 kN.

a) 4.25 kN
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19. The width of broad gauge is _____

a) 1.445m
b) 1.676m
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20. About 90% railway tracks lay with _____ rails in the world.

a) DH rails
b) BH rails
c) FF rails
d) GH rails

26/30

stresses in thick cylinder.

Thick cylinder subjected to internal and external radial pressure.

$r_1 \rightarrow$ Internal radius of thick cylinder

$r_2 \rightarrow$ External radius of thick cylinder.

Bursting force $= (\sigma_r \times 2 \times r \times l) - [(\sigma_r + d\sigma_r) \times (2(r+dr)l)]$

$$= 2l [-\sigma_r \times dr - r \times d\sigma_r - dr \cdot d\sigma_r]$$

$$= -2l (\sigma_r \cdot dr + r \cdot d\sigma_r)$$

Resisting force $= 2 \times \sigma_c \times l \times dr$.

Equating resisting force to bursting force.

$$2 \times \sigma_c \times l \times dr = -2 \times l (\sigma_r \times dr + r \cdot d\sigma_r)$$

$$\sigma_c = -\sigma_r - r \cdot \frac{d\sigma_r}{dr}.$$

$$= \sigma_r \times 2 \times r \times l - [(\sigma_r + d\sigma_r) \times 2l (r+dr)]$$

$$= \sigma_r \times 2 \times r \times l - [(\sigma_r + d\sigma_r) \times (2lr + 2ldr)]$$

$$= \sigma_r \times 2 \times r \times l - r \times 2 \times l \times \sigma_r - \sigma_r \times 2 \times l \times dr - 2 \times r \times l \times d\sigma_r$$
$$- 2 \times l \times dr \times d\sigma_r$$

The longitudinal stress

$$\sigma_l = \frac{P_r \times \pi \times r_1^2}{\pi \times (r_2^2 - r_1^2)} = \frac{P_r \times r_1^2}{(r_2^2 - r_1^2)}$$

Longitudinal stress $\sigma_L = \dfrac{\text{Force acting on the end Cover due to internal pressure}}{\text{Area of Cross section of the Cylinder}}$

$$\sigma_L = \frac{\pi \times r_1^2 \times P}{\pi \times (r_2^2 - r_1^2)}$$

$$\sigma_L = \left[\frac{r_1^2}{r_2^2 - r_1^2}\right] \times P$$

shear stress

The maximum shear stress

$$T_{max} = \left[\frac{\sigma_C - (\sigma_r)}{2}\right]$$

$$= \frac{1}{2}\left[\left(\frac{b}{r^2} + a\right) - \left(a - \frac{b}{r^2}\right)\right]$$

$$T_{max} = \frac{1}{2} \times \left[\frac{b}{r^2} + a - a + \frac{b}{r^2}\right]$$

$$T_{max} = \frac{1}{2} \times \left[2 \times \frac{b}{r^2}\right]$$

$$\boxed{T_{max} = \frac{b}{r^2}}$$

$\dfrac{9}{20}$

THAMIRABHARANI ENGINEERING COLLEGE

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Thatchanallur, Tirunelveli 627 358, Tamil Nadu.

ADVANCED LEARNERS COURSE
TECALC003 – ADVANCED STRENGTH OF MATERIALS

FEEDBACK FORM

COURSE CODE & NAME : TECALC001 ADVANCED STRENGTH OF MATERIALS

DEPARTMENT : CIVIL

NAME OF THE STUDENT : MALINI

REGISTER NUMBER : 953120103015   ACADEMIC YEAR : 2021-2022

YEAR : II   SEM : III

THE DESIGN OF THE COURSE

A. Were objectives of the course clear to you?   Yes / No

B. The course contents met with your expectations
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

C. The lecture sequence was well planned
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

D. The level of the course was
   1. Too Low   2. Low   3. Moderate   4. High   5.Very high

E. The course exposed you to new knowledge, practices and meets the current industrial needs
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

THE CONDUCT OF COURSE

A. The lectures were clear and easy to understand
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

B. The teaching aids were effectively used
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C. The course assessment conducted was adequate
   1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5.Strongly agree

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E. Were objectives of the course realized? Yes / No

SIGNATURE OF THE STUDENT

PRINCIPAL
THAMIRABHARANI ENGINEERING COLLEGE
Chathirampudukulam Village,
Chidambaranagar - Vepemkulam Road,
Thatchanallur, Tirunelveli - 627 358.

ADVANCED LEARNER COURSE
TECALC003 – ADVANCED STRENGTH OF MATERIALS

ASSESSMENT

COURSE CODE & NAME : TECALC001 ADVANCED STRENGTH OF MATERIALS
DEPARTMENT : Mechanical engineering
NAME OF THE STUDENT : Venkadeshwaran M
REG. NO. : 953120140306   ACADEMIC YEAR : 2021-22
YEAR : IV   SEM : III
Total Marks: 50

Part- A (10*1= 10)
PART-A

47/50

1. Torsional Modulus Is _____ To Torsional Strength.
A) Inversely Proportional
B) Directly Proportional
C) Equal
D) Unequal

2. _____ torque produces the maximum shear stress due to combined bending.
a) Seasonal
b) Equipment
c) Composite
d) Series

3. In aqueduct, the nominal flow of velocity be _____
a) 0.5 m/s
b) 0.9 m/s
c) 0.6 m/s
d) 0.8 m/s

4. _____ coincides with the water surface in a canal or open channel.
a) HGL
b) TEL
c) TWL
d) HTL

5. Pressure conduits are also known as _____
a) Pipe conduits
b) Gravity conduits
c) Artesian conduits
d) Surface conduits

6. What is the flow of velocity in the pressure conduit?
a) 0.5 to 0.6 m/s
b) 0.6 to 0.7 m/s
c) 0.6 to 0.8 m/s
d) 0.8 to 1 m/s

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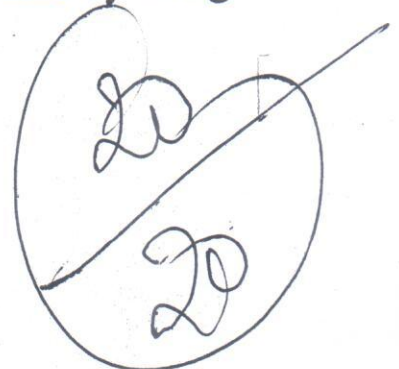
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$= 2\sigma_r \times 2 \times r \times l - r \times 2 \times l \times \sigma_r - \sigma_r \times 2 \times l \times dr$

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$\dfrac{17}{20}$

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ADVANCED LEARNERS COURSE
TECALC001 – ADVANCED STRENGTH OF MATERIALS
FEEDBACK FORM

COURSE CODE & NAME   : TECALC001 - ADVANCED STRENGTH OF MATERIALS

DEPARTMENT   : Mechanical Engineering

NAME OF THE STUDENT   : Venkadeshwaran M

REGISTER NUMBER   : 953120114 0306   ACADEMIC YEAR : 2021-22

YEAR   : II   SEM   : III

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REPORT

1	Program name	**TECALC005 – ADVANCED STRENGTH OF MATERIALS**
2	Date of program duration	13.10.2021 to 18.12.2021
3	Resource person	Mr. V. Antony, AP /Mechanical/ TEC
4	Participants	16
5	Objective of program	The main objective of this program is to inculcate the advanced knowledge to the advanced learning students of mechanical & civil engineering department and to make the students be familiar with the Apply the strain energy concept to structural elements, Apply theories of failure in structural elements, Analyse curved elements & Analyze different stresses in thin walled sections, thick shells and rotating elements.
6	Program description	In this course This course teaches the fundamentals for the analysis of materials and structures in engineering with a specific focus on aircraft and space structures. The lectures are split into two parallel modules: Solid Mechanics and Materials. The Solid Mechanics module covers general material relating to the analysis of stresses, strains, deformation, and strength in solid materials and simple components. Specific topics include stress and strain tensors, elasticity, plasticity, elementary solutions of theories of elasticity and plasticity, principles of minimum potential energy, and finite element modelling. The second module, Materials is focused on the application of materials in design of aerospace components and structures.
7	Outcome of this program	On completion of this course the students will have the confidence to design various concrete structures and structural elements by limit state design and detail the same for ductility as per codal requirements.

COURSE INSTRUCTOR

HOD/CE

THAMIRABHARANI ENGINEERING COLLEGE

COURSE SUMMARY

COURSE NAME	COURSE INSTRUCTOR	NO. OF HOURS	COURSE PERIOD	TOTAL NO. OF REGISTERED STUDENTS	TOTAL NO. OF ATTENDED STUDENTS
TECALC003 ADVANCED STRENGTH OF MATERIALS	Mr.V.. Antony, AP/Mech	30	20.12.2021 to 06.01.2022	25	25

Course Instructor   HoD/ME   Principal

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