MALLA REDDY ENGINEERING COLLEGE
(UGC Autonomous Institution, Approved by AICTE, New Delhi &Affiliated to JNTUH, Hyderabad). Accredited by NAAC with 'A++' Grade (Cycle III), Maisammaguda (H), Medchal-Malkajgiri District, Secunderabad, Telangana State – 500100, www.mrec.ac.in

Department of Mechanical Engineering

CIRCULAR

Date: 13/02/2023

All the students are hereby informed that Value Added Course on **"Numerical Analysis of Fluid flow using FLUENT Software"** on date **20/02/2023 to 27/03/2023**, is being organized by the mechanical engineering department. The resource person for the course is "Dr. Pola venkata gopal krishna,Y.Gajalappa".

Students are advised to register their names to the programme coordinator "**Mr.D.S Chandramouli**", on or before 16/03/2023 and utilize this opportunity to enhance their skills by attending the programme.

The detailed schedule of the programme will be displayed in the notice board.

Head of the Department
HEAD OF THE DEPARTMENT
MECHANICAL ENGINEERING
MALLA REDDY ENGINEERING COLLEGE
Maisamma Guda-500 100.

Copy to:

1) Circulation in Students classroom
2) All HOD's
3) Notice Boards
4) PA to principal for filing.

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Principal
Malla Reddy Engineering College
Maisammaguda, Dhulapally,
(Post Via Kompally), Sec-bad-500100.

About the Institution

Malla Reddy Engineering College (Autonomous) is one of the reputed engineering colleges in Hyderabad, Telangana. **MREC (A)** is part of Malla Reddy Group of Institutions (MRGI), founded by Sri. Ch. Malla Reddy, currently Hon'ble Minister,Labor and Employment, Factories, Women and Child Welfare and Skill Development, Govt. of Telangana State. The college is situated in a serene,lushgreenenvironmentinMaisammaguda, Gundlapochampally,Medchal(M),Medchal-Malkajgiri District Telangana– 500100.

The college was established in 2002 and is an autonomous institution approved by UGC and affiliated to JNTUH. The college is re-accredited by NAAC with 'A' Grade (II Cycle) and was conferred autonomous status by JNTUH in 2011 and by UGC in 2014 for a period of 6 years. Our eligible UG and PG programs received NBA accreditation and some of them received reaccreditation too. The college caters to wide ranging aspirations and goals of student communities by offering new courses in UG provides PG courses and MBA along with programs in various streams of Engineering & Technology and Management. It boasts of world-class infrastructure and well-equipped laboratories in all departments and is skillfully and smartly guided by **Dr. A. Ramaswami Reddy, , Principal, MREC (A)** who have a rich teaching and industrial experience. Mr.

Advisory Committee

Chief Patrons: **Sri. Ch. Malla Reddy, Minister-Telangana State-India.**
Founder Chairman
Malla Reddy Group of Institutions

Patrons: **Sri.Ch. Mahender Reddy**
Secretary, MRGI
Dr.Ch.Bhadra Reddy
President, MRGI

Co-Patrons: **Dr.A.RamaSwami Reddy**
Principal, MREC (A)

Convener: **Dr.A.Raveendra**
HOD ME

Coordinator: **Mr.D.S.Chandramouli**
Asst. Professor, ME

Resource Person 1:Dr Nithin Kumar
Assistant professor
2:Dr. Siva Prasad D
Associate professor

Organizing Committee

Dr.Halesh Koti, Professor, ME.
Dr.Shaik Hussain, Professor., ME
M.V.VaralakshmiAssoc.Prof.,ME.
Dr. S. Udaya Bhaskar Assoc.Prof.,ME
Dr. M. Vijay Kumar Assoc. Prof., ME
Mr. BharadwajaKAssoc. Prof., ME
Dr.Manish Sharma. Assistant Prof., ME
Mr. K.SrinivasaRaoAssoc. Prof., ME.
Mr. D.S Chandramouli. Asst. Prof., ME
Dr. I.S.N.V.R Prasanth, Assoc. Prof., ME.
Dr.T.Venkata Deepthi, Professor, ME.
Mr.P. Balaji Krushna., Asst.Prof., ME
Mr.CH.Ashok Kumar,Asst.Prof.,ME

A One-Month Skill development Course (Value added Course)
On

"NUMERICAL ANALYSIS OF FLUID FLOW USING FLUENT SOFTWARE"

(20thFEB to 27thMAR, 2023)

Organizedby
Department of
Mechanical Engineering
MALLA REDDY ENGINEERING COLLEGE
(AUTONOMOUS) MAIN CAMPUS
An UGC Autonomous Institution, Approved by AICTE & Affiliated to JNTUH-Hyderabad
ReaccreditedbyNAACwith'A++'Grade (III Cycle)
Maisammaguda(H), Gundlapochampally (V), Medchal (M), Medchal - Malkajgiri District Telangana - 500100, India.

Malla Reddy Engineering College
Maisammaguda, Dhulapally,
(Post Via Kompally), Secunderabad-500100.

Registration Form:

Name of the Participant :----------

Branch&Year :----------

Name of Institution:----------

Address for Communication:----------

Mobile Number:----------

E-Mail ID:----------

DECLARATION:
The information furnished above is true to the best of my Knowledge.

Place:

Date:

Signature of Applicant

About the Department

The Department of Mechanical Engineering has been established since the inception of the institution in the year 2002. The Department has good infrastructure facilities and is equipped with full-fledged laboratories to fulfill the curriculum needs. The Department has well experienced faculty. Around one-third of the faculty members in the department are Doctorate. The department has good number of sanctioned projects, funded by different agencies/industries. The Department is intended to be allotted a Research Centre by JNTU Hyderabad.

Overview of the Programme:

The primary responsibility of faculty is not only to inspire students towards a higher vision but also create a strong sense of bonding between the institution and the students to nurture a stress-free holistic environment. To enhance the quality of life for the student members enabling them to introspect and learn techniques that imbibe ethics & morals and help prepare students for active and successful participation in a modern society, producing individuals of high character, probity and honor.

Develop the main approaches and techniques which constitute the basis of numerical fluid mechanics for engineers and applied scientists. New curricular materials are being developed for this course.

Objectives of the Programme

With the numerical implementation of these techniques and numerical schemes, so as provide them with the means to write their own codes and software, and so acquire the knowledge necessary for the skillful utilization of CFD packages or other more complex software.

Topics to be covered

- Study of fluid flows
- Numerical analysis on fluid flow
- Fundamentals of finite element method
- User interface of Ansys Fluent
- Solver Basis
- Turbulence Modeling
- Boundary and cell zone conditions

Certificate:

After successful completion of the course the certificates shall be issued to the participants.

Outcome of the Program

After completing the Course, Evaluate the numerical analysis of fluid flow using finite element methods with interface of ANSYS FLUENT.

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Maisammaguda (H), Medchal-Malkajgiri District, Secunderabad,
Telangana State – 500100, www.mrec.ac.in

Numerical Analysis of Fluid flow using FLUENT Software

Course code: VACM004 **Duration of the course: 31(hrs)**

Objective of the course:

With the numerical implementation of these techniques and numerical schemes, so as provide them with the means to write their own codes and software, and so acquire the knowledge necessary for the skillful utilization of CFD packages or other more complex software.

Syllabus

Unit-1 **Total hrs:6**

What is CFD? Applications of CFD & Uses of CFD, The Mathematics of CFD, Fundamentals of Fluid Mechanics equation of state, CFD Methodology, Introduction to ANSYS Fluent, Planning Your CFD Analysis with Fluent

Graphical User Interface (GUI), Menu Bar & Toolbars, The Navigation Pane, Task Pages, The Console, Boundary Conditions, Fluent in Workbench, Solid Modeling Fundamentals, Creating a Fluent Fluid Flow Analysis System in ANSYS Workbench,

Unit-2 **Total hrs:6**

Creating the Geometry in ANSYS Design Modeler, Meshing the Geometry in the ANSYS Meshing Application, Setting Up the CFD Simulation in ANSYS Fluent, Displaying Results in ANSYS Fluent and CFD-Post.

Duplicating the Fluent-Based Fluid Flow Analysis System, Changing the Geometry in ANSYS Design Modeler, Updating the Mesh in the ANSYS Meshing Application,

Unit-3 **Total hrs:6**

Calculating a New Solution in ANSYS Fluent, Comparing the Results of Both Systems in CFD-Post, Transonic Flow–Externally Compressible, Problem Description, Turbulence Models

Mesh & General Settings, Models & Materials, Boundary Conditions, Operating Conditions, Solution & Post processing, Simulation Physics & Boundary Conditions, Set Boundary Conditions, Set Operating Conditions, Set Solution Methods, Turbulence Model in Fluent, Problem Specification.

Unit-4 **Total hrs:7**

Preliminary Analysis Geometry Mesh Mesh Refinement, Physics Setup Numerical Solution Numerical Results Verification & Validation

Modeling Periodic Flow and Heat Transfer, Introduction Problem Description Mesh General Settings, Models Materials Cell Zone Conditions Periodic Conditions Boundary Conditions Solution Post processing, Modeling Radiation and Natural Convectio

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Unit-5

Total hrs:6

Introduction Problem Description, Reading and Checking the Mesh Specifying Solver and Analysis Type Specifying the Models, Defining the Materials Specifying Boundary Conditions Obtaining the Solution Post processing, Comparing the Contour Plots after Varying Radiating Surfaces S2S Definition, Solution, and Post processing with Partial enclosure.

Turbulent Flow in a Compact Heat Exchanger, introduction Prerequisites Problem Description Setup and Solution

Outcome of the course:

After completing the Course, Evaluate the numerical analysis of fluid flow using finite element methods with interface of ANSYS FLUENT.

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(Post Via Kompally), Sec-bad-500100.

Malla Reddy Engg. College (W)
500 100
Hyderabad

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(UGC Autonomous Institution, Affiliated to JNTUH, Accredited 3rd time by NAAC with 'A++' Grade Maisammaguda (H), Medchal-Malkajgiri District, Telangana State – 500100

Department of Mechanical Engineering

Sl. No	Name of the Student	Roll No	Details of Value Added Course	Duration	
				Start date	End date
1	20J41A0301	ANKAMALLA AKASH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
2	20J41A0302	A VAIBHAV KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
3	20J41A0303	ANUGU ADARSH REDDY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
4	20J41A0304	AZMEERA RAMPRASAD	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
5	20J41A0305	BANOTHU GANESH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
6	20J41A0306	BEGARI SHARATH KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
7	20J41A0307	BHUKYA KRUSHI NAIK	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
8	20J41A0308	BHUKYA UMESH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
9	20J41A0309	BOKKA SATVIK REDDY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
10	20J41A0310	BOLLU SNEHITH KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
11	20J41A0311	CHERIYALA THARUN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
12	20J41A0312	DAKURI PAUL SUGANDHAR REDDY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
13	20J41A0313	DAIVALA VINAY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
14	20J41A0314	DAMERA LIVING STONE	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
15	20J41A0315	DOLUKA MANOHER	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
16	20J41A0316	DUDEKULA KAMAL	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
17	20J41A0317	DUNNA SAI KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
18	20J41A0318	DUPPADAPUDI HEMANTH KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
19	20J41A0319	ELURI THARUN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
20	20J41A0320	GADDAM SRIKANTH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
21	20J41A0321	GOGULA PRUDHVI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
22	20J41A0322	HIMAKAR SAI NIDUMOLU	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
23	20J41A0323	JARPULA GOWTHAM NAYAK	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
24	20J41A0324	JATOTHU KUMAR NAIK	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
25	20J41A0325	KALAKONDA NAVEEN KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
26	20J41A0326	KASALA AJAY REDDY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
27	20J41A0327	VIVEK REDDY KATIPALLY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
28	20J41A0328	KHAMMAMPATI THRIMURTHY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
29	20J41A0329	KOTA ADITHYA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023

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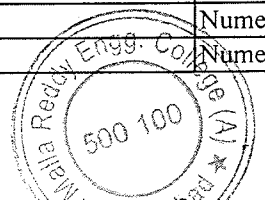
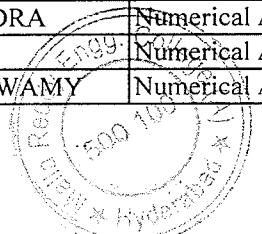
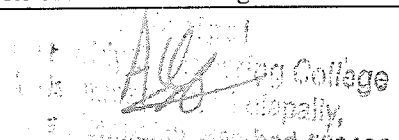
30	20J41A0330	MEDABOINA NAGARAJU	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
31	20J41A0332	MOHAMMED MOHSIN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
32	20J41A0333	MOHAMMED MOIZUDDIN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
33	20J41A0334	MUSKE SANTHOSH KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
34	20J41A0335	NAGABHUSHI SAI SHARAN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
35	20J41A0336	NALLA DINESH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
36	20J41A0337	P SAI TEJA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
37	20J41A0338	PRATHIPATI NAGA SAI SREEKAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
38	20J41A0339	PODICHANPALLY ADARSH GOUD	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
39	20J41A0340	PRATIKASH CHOUDHARY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
40	20J41A0341	PUJA VAMSHI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
41	20J41A0342	PULI SRI SHANTH REDDY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
42	20J41A0343	RAYUDU ARUN KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
43	20J41A0344	S SAMPATH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
44	20J41A0345	SANIKOMMU RAMA KRISHNA REDDY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
45	20J41A0346	SINDE BADRINATH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
46	20J41A0347	SONGA VIJAY KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
47	20J41A0348	SUBHAJIT MAHARANA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
48	20J41A0349	UNGARALA BHAVANI PRASAD	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
49	20J41A0350	VOGGU RAJINIKANTH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
50	21J45A0301	BAKKAMOLLA VISHNU VARDHAN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
51	21J45A0302	BETHI SANEETH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
52	21J45A0303	BOLLI BHANU TEJA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
53	21J45A0304	EGGAM GAYATHRI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
54	21J45A0305	ENJAMURI SREE VAISHNAVI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
55	21J45A0306	GOKAM DINESH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
56	21J45A0307	K MAHESH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
57	21J45A0308	KALAVENA SAKETH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
58	21J45A0309	KANUGANTI NARESH CHARY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
59	21J45A0310	KUTCHERLAPATI SATYANARAYANA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
60	21J45A0311	M BHAGYA LAXMI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
61	21J45A0312	MACHA KUMAR RAJA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
62	21J45A0330	REVALLA VAMSHI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
63	21J45A0334	B DEEPAK	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
64	20J41A0351	ARKALA ANISH YADAV	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
65	20J41A0352	BANDARU RAVI KIRAN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
66	20J41A0353	BANOTH JAGDISH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023



67	20J41A0356	BATHULA MAHESH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
68	20J41A0357	CHILUKA SAI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
69	20J41A0358	DHARAMSOTH ASHOK	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
70	20J41A0359	DHARAVATH RAMU	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
71	20J41A0360	DONTHI BALAJI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
72	20J41A0361	EDLA SAKETH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
73	20J41A0362	ELLAMLA VENKATESH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
74	20J41A0363	GANGULA VENKAT NARAYANA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
75	20J41A0364	GEAUPALLY AKASH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
76	20J41A0365	GUGULOTH VENKATESHWARLU	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
77	20J41A0366	GUNDEPAKA SIDDU	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
78	20J41A0367	HANUMANTHUGARI SAI KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
79	20J41A0369	KARUNA SREE	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
80	20J41A0370	KETHAVATH PAVAN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
81	20J41A0373	M BHARAT BALAJI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
82	20J41A0374	MANDA SAI VARUN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
83	20J41A0375	MODUGULA SRAVAN KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
84	20J41A0376	MOHD ISMAIL	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
85	20J41A0377	MOLUGURI ANURUTH CHANDRA SAI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
86	20J41A0378	NAKAM DHANUNJAI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
87	20J41A0379	NALLA PRAVEEN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
88	20J41A0380	NELLI ARUN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
89	20J41A0382	PAWAR PRASAD	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
90	20J41A0383	PINREDDY LOKESH REDDY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
91	20J41A0384	POLICE PRAVEEN KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
92	20J41A0386	RASURI RAVI SAI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
93	20J41A0387	RAVI SAIRAM CHOWDARY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
94	20J41A0388	RAYALA VISHNU	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
95	20J41A0389	S HARENEETH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
96	20J41A0390	SAISREEKAR REDDY THALKONDA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
97	20J41A0391	SAMALA RAMGANESH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
98	20J41A0392	SRIRAM SOWMITH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
99	20J41A0393	SURA KARTHIK REDDY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
100	20J41A0394	THANAMCHINTALA KARTHIK	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
101	20J41A0395	THUMULA SUBHASH CHANDRA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
102	20J41A0396	UPPATHALA UDAY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
103	21J45A0313	MATTAM KEDARANATHA SWAMY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023





104	21J45A0314	MIDDELA AJAY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
105	21J45A0315	MUCHERLA VIJAY KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
106	21J45A0316	NAGASARAM VIKAS	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
107	21J45A0317	NALLALA VIKAS	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
108	21J45A0318	NYALAKONDA VARUN KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
109	21J45A0319	P HARSHAVARDHAN REDDY	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
110	21J45A0320	PADALA KIRITI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
111	21J45A0321	PAGOLU KUSHWANTH KIRAN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
112	21J45A0322	PREMNANDU GANTAPAKA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
113	21J45A0323	PULICHARLA GIRIDHAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
114	21J45A0324	RATHOD LAXMI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
115	21J45A0325	SANGOJU RAKESH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
116	21J45A0326	SARA SHIVA KRISHNA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
117	21J45A0327	SRUJAN KUMAR NADELLA	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
118	21J45A0328	TEKI HARSHA VARDHAN	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
119	21J45A0329	P VENKAT KOUSHIK	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
120	21J45A0331	T VAMSI	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
121	21J45A0332	MADDA RAJA SHEKAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
122	21J45A0333	T N DHANSHIK	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
123	18J41A03P5	VANGURI SATHISH KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023
124	19J41A0327	KARE SUMITH	Numerical Analysis of Fluid flow using FLUENT Software	20/02/2023	27/03/2023

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Department of Mechancial Engineering

Sl. No	Name of the Student	Roll No	Details of Value Added Course	Course Completion
1	20J41A0301	ANKAMALLA AKASH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
2	20J41A0302	A VAIBHAV KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
3	20J41A0303	ANUGU ADARSH REDDY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
4	20J41A0304	AZMEERA RAMPRASAD	Numerical Analysis of Fluid flow using FLUENT Software	Yes
5	20J41A0305	BANOTHU GANESH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
6	20J41A0306	BEGARI SHARATH KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
7	20J41A0307	BHUKYA KRUSHI NAIK	Numerical Analysis of Fluid flow using FLUENT Software	Yes
8	20J41A0308	BHUKYA UMESH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
9	20J41A0309	BOKKA SATVIK REDDY	Numerical Analysis of Fluid flow using FLUENT Software	No
10	20J41A0310	BOLLU SNEHITH KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
11	20J41A0311	CHERIYALA THARUN	Numerical Analysis of Fluid flow using FLUENT Software	Yes
12	20J41A0312	DAKURI PAUL SUGANDHAR REDDY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
13	20J41A0313	DAIVALA VINAY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
14	20J41A0314	DAMERA LIVING STONE	Numerical Analysis of Fluid flow using FLUENT Software	Yes
15	20J41A0315	DOLUKA MANOHER	Numerical Analysis of Fluid flow using FLUENT Software	Yes
16	20J41A0316	DUDEKULA KAMAL	Numerical Analysis of Fluid flow using FLUENT Software	Yes
17	20J41A0317	DUNNA SAI KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
18	20J41A0318	DUPPADAPUDI HEMANTH KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
19	20J41A0319	ELURI THARUN	Numerical Analysis of Fluid flow using FLUENT Software	No
20	20J41A0320	GADDAM SRIKANTH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
21	20J41A0321	GOGULA PRUDHVI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
22	20J41A0322	HIMAKAR SAI NIDUMOLU	Numerical Analysis of Fluid flow using FLUENT Software	Yes
23	20J41A0323	JARPULA GOWTHAM NAYAK	Numerical Analysis of Fluid flow using FLUENT Software	Yes
24	20J41A0324	JATOTHU KUMAR NAIK	Numerical Analysis of Fluid flow using FLUENT Software	Yes
25	20J41A0325	KALAKONDA NAVEEN KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes

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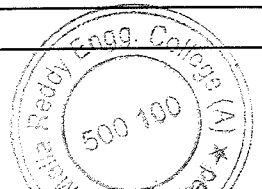
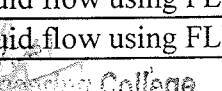
26	20J41A0326	KASALA AJAY REDDY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
27	20J41A0327	VIVEK REDDY KATIPALLY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
28	20J41A0328	KHAMMAMPATI THRIMURTHY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
29	20J41A0329	KOTA ADITHYA	Numerical Analysis of Fluid flow using FLUENT Software	Yes
30	20J41A0330	MEDABOINA NAGARAJU	Numerical Analysis of Fluid flow using FLUENT Software	Yes
31	20J41A0332	MOHAMMED MOHSIN	Numerical Analysis of Fluid flow using FLUENT Software	Yes
32	20J41A0333	MOHAMMED MOIZUDDIN	Numerical Analysis of Fluid flow using FLUENT Software	Yes
33	20J41A0334	MUSKE SANTHOSH KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
34	20J41A0335	NAGABHUSHI SAI SHARAN	Numerical Analysis of Fluid flow using FLUENT Software	Yes
35	20J41A0336	NALLA DINESH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
36	20J41A0337	P SAI TEJA	Numerical Analysis of Fluid flow using FLUENT Software	Yes
37	20J41A0338	PRATHIPATI NAGA SAI SREEKAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
38	20J41A0339	PODICHANPALLY ADARSH GOUD	Numerical Analysis of Fluid flow using FLUENT Software	Yes
39	20J41A0340	PRATIKASH CHOUDHARY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
40	20J41A0341	PUJA VAMSHI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
41	20J41A0342	PULI SRI SHANTH REDDY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
42	20J41A0343	RAYUDU ARUN KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	No
43	20J41A0344	S SAMPATH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
44	20J41A0345	SANIKOMMU RAMA KRISHNA REDDY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
45	20J41A0346	SINDE BADRINATH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
46	20J41A0347	SONGA VIJAY KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
47	20J41A0348	SUBHAJIT MAHARANA	Numerical Analysis of Fluid flow using FLUENT Software	Yes
48	20J41A0349	UNGARALA BHAVANI PRASAD	Numerical Analysis of Fluid flow using FLUENT Software	No
49	20J41A0350	VOGGU RAJINIKANTH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
50	21J45A0301	BAKKAMOLLA VISHNU VARDHAN	Numerical Analysis of Fluid flow using FLUENT Software	Yes
51	21J45A0302	BETHI SANEETH	Numerical Analysis of Fluid flow using FLUENT Software	No
52	21J45A0303	BOLLI BHANU TEJA	Numerical Analysis of Fluid flow using FLUENT Software	Yes
53	21J45A0304	EGGAM GAYATHRI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
54	21J45A0305	ENJAMURI SREE VAISHNAVI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
55	21J45A0306	GOKAM DINESH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
56	21J45A0307	K MAHESH	Numerical Analysis of Fluid flow using FLUENT Software	Yes



57	21J45A0308	KALAVENA SAKETH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
58	21J45A0309	KANUGANTI NARESH CHARY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
59	21J45A0310	KUTCHERLAPATI SATYANARAYANA RAJU	Numerical Analysis of Fluid flow using FLUENT Software	Yes
60	21J45A0311	M BHAGYA LAXMI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
61	21J45A0312	MACHA KUMAR RAJA	Numerical Analysis of Fluid flow using FLUENT Software	Yes
62	21J45A0330	REVALLA VAMSHI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
63	21J45A0334	B DEEPAK	Numerical Analysis of Fluid flow using FLUENT Software	No
64	20J41A0351	ARKALA ANISH YADAV	Numerical Analysis of Fluid flow using FLUENT Software	Yes
65	20J41A0352	BANDARU RAVI KIRAN	Numerical Analysis of Fluid flow using FLUENT Software	Yes
66	20J41A0353	BANOTH JAGDISH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
67	20J41A0356	BATHULA MAHESH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
68	20J41A0357	CHILUKA SAI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
69	20J41A0358	DHARAMSOTH ASHOK	Numerical Analysis of Fluid flow using FLUENT Software	Yes
70	20J41A0359	DHARAVATH RAMU	Numerical Analysis of Fluid flow using FLUENT Software	No
71	20J41A0360	DONTHI BALAJI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
72	20J41A0361	EDLA SAKETH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
73	20J41A0362	ELLAMLA VENKATESH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
74	20J41A0363	GANGULA VENKAT NARAYANA	Numerical Analysis of Fluid flow using FLUENT Software	Yes
75	20J41A0364	GEAUPALLY AKASH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
76	20J41A0365	GUGULOTH VENKATESHWARLU	Numerical Analysis of Fluid flow using FLUENT Software	Yes
77	20J41A0366	GUNDEPAKA SIDDU	Numerical Analysis of Fluid flow using FLUENT Software	Yes
78	20J41A0367	HANUMANTHUGARI SAI KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
79	20J41A0369	KARUNA SREE	Numerical Analysis of Fluid flow using FLUENT Software	Yes
80	20J41A0370	KETHAVATH PAVAN	Numerical Analysis of Fluid flow using FLUENT Software	No
81	20J41A0373	M BHARAT BALAJI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
82	20J41A0374	MANDA SAI VARUN	Numerical Analysis of Fluid flow using FLUENT Software	Yes
83	20J41A0375	MODUGULA SRAVAN KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
84	20J41A0376	MOHD ISMAIL	Numerical Analysis of Fluid flow using FLUENT Software	Yes
85	20J41A0377	MOLUGURI ANURUTH CHANDRA SAI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
86	20J41A0378	NAKAM DHANUNJAI	Numerical Analysis of Fluid flow using FLUENT Software	No



87	20J41A0379	NALLA PRAVEEN	Numerical Analysis of Fluid flow using FLUENT Software	Yes
88	20J41A0380	NELLI ARUN	Numerical Analysis of Fluid flow using FLUENT Software	Yes
89	20J41A0382	PAWAR PRASAD	Numerical Analysis of Fluid flow using FLUENT Software	Yes
90	20J41A0383	PINREDDY LOKESH REDDY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
91	20J41A0384	POLICE PRAVEEN KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
92	20J41A0386	RASURI RAVI SAI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
93	20J41A0387	RAVI SAIRAM CHOWDARY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
94	20J41A0388	RAYALA VISHNU	Numerical Analysis of Fluid flow using FLUENT Software	Yes
95	20J41A0389	S HARENEETH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
96	20J41A0390	SAISREEKAR REDDY THALKONDA	Numerical Analysis of Fluid flow using FLUENT Software	No
97	20J41A0391	SAMALA RAMGANESH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
98	20J41A0392	SRIRAM SOWMITH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
99	20J41A0393	SURA KARTHIK REDDY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
100	20J41A0394	THANAMCHINTALA KARTHIK VARMA	Numerical Analysis of Fluid flow using FLUENT Software	Yes
101	20J41A0395	THUMULA SUBHASH CHANDRA	Numerical Analysis of Fluid flow using FLUENT Software	Yes
102	20J41A0396	UPPATHALA UDAY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
103	21J45A0313	MATTAM KEDARANATHA SWAMY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
104	21J45A0314	MIDDELA AJAY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
105	21J45A0315	MUCHERLA VIJAY KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
106	21J45A0316	NAGASARAM VIKAS	Numerical Analysis of Fluid flow using FLUENT Software	Yes
107	21J45A0317	NALLALA VIKAS	Numerical Analysis of Fluid flow using FLUENT Software	Yes
108	21J45A0318	NYALAKONDA VARUN KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
109	21J45A0319	P HARSHAVARDHAN REDDY	Numerical Analysis of Fluid flow using FLUENT Software	Yes
110	21J45A0320	PADALA KIRITI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
111	21J45A0321	PAGOLU KUSHWANTH KIRAN	Numerical Analysis of Fluid flow using FLUENT Software	No
112	21J45A0322	PREMNANDU GANTAPAKA	Numerical Analysis of Fluid flow using FLUENT Software	Yes
113	21J45A0323	PULICHARLA GIRIDHAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
114	21J45A0324	RATHOD LAXMI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
115	21J45A0325	SANGOJU RAKESH	Numerical Analysis of Fluid flow using FLUENT Software	Yes
116	21J45A0326	SARA SHIVA KRISHNA	Numerical Analysis of Fluid flow using FLUENT Software	Yes
117	21J45A0327	SRUJAN KUMAR NADELLA	Numerical Analysis of Fluid flow using FLUENT Software	Yes

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118	21J45A0328	TEKI HARSHA VARDHAN	Numerical Analysis of Fluid flow using FLUENT Software	Yes
119	21J45A0329	P VENKAT KOUSHIK	Numerical Analysis of Fluid flow using FLUENT Software	Yes
120	21J45A0331	T VAMSI	Numerical Analysis of Fluid flow using FLUENT Software	Yes
121	21J45A0332	MADDA RAJA SHEKAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
122	21J45A0333	T N DHANSHIK	Numerical Analysis of Fluid flow using FLUENT Software	No
123	18J41A03P5	VANGURI SATHISH KUMAR	Numerical Analysis of Fluid flow using FLUENT Software	Yes
124	19J41A0327	KARE SUMITH	Numerical Analysis of Fluid flow using FLUENT Software	Yes

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Department of Mechanical Engineering

Value Added Course	**Numerical Analysis of fluid flow using FLUENT software**
Course Code	**VACM004**
Academic Year	**2022-2023**

Multiple Choice Question

S.NO	QUESTIONS	ANSWER
1.	Which among the following is a reason why we do not completely rely upon ground tests for analysing fluid dynamics? A)Three-dimensional flows cannot be analysed B)Facilities do not exist in all fight regimes C)The output generated is not as accurate as theoretical analysis D) Long run-time	[ ]
2.	Which one do you think is not possible with wind tunnels for testing trans-atmospheric vehicles? A) Continuously changing Mach number B) Transonic flows C)Simultaneously modelling high Mach numbers and high temperatures D) Hypersonic flows	[ ]
3.	CFD is the third approach for fluid flow analysis. What are the other two approaches? A) Theoretical and experimental B) Physical and Mathematical B) C) Numerical and experimental D) Experimental and physical	[ ]
4.	When were the foundations of experimental fluid dynamics laid? A)19th century B)18th century C)16th century D)17th century	[ ]
5.	The eighteenth and nineteenth centuries witnessed the development of theoretical fluid dynamics in ____ countries. A)Asian B) American C) Europea D)African	[ ]
6.	This invention of the 20th century and accurate numerical methods have revolutionized the way we analyse Fluid Dynamics. A) High-speed digital computers B) Personal computers C) Submarines D) Rocketry	[ ]

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7.	Which of the following is not true about CFD? A) There will be a need for theory and experiments B) CFD is an equal partner of theoretical and experimental analyses C) CFD will complement theoretical 'and experimental Fluid Dynamics D) CFD will replace the approaches of pure theory and pure experiments	[ ]
8.	The design of this experimental NASA aircraft was aided by CFD in early days. A)Northrop B) HiMAT C) Douglas D) Rockwell	[ ]
9.	CFD analyses Fluid Dynamics using this method. A) Analytical B)Physical C)Numerical D) Experimental	[ ]
10.	CFD provides results of _____ A) Continuous time varying results at discrete locations B)Discrete points of space and time C)Continuous spatial results at discrete time points D)Continuous in time and space	[ ]
11.	Computational fluid dynamic results are _____ wind tunnel results. A) Better than Analogous to B) More reliable than D)Energy consuming when compared to	[ ]
12.	Which of these characteristics does not apply for a CFD tool? A)Unwieldy B)Easy to carry around C) Can be remotely accessed D)Transportable	[ ]
13.	CFD can be used to _____ the experimental results. A)Improve B)Replace C) Interpret D)Convert	[ ]
14.	CFD carries out _____ experiments. A)Observational B) Analytical C) Field D) Numerical	[ ]
15.	_____ technique is used in a wind tunnel to find whether the flow is laminar or turbulent. A)Pressure sensitive paint B) Force measurement C)Flow visualization D)Quantitative	[ ]
16.	In the early days, CFD simulations were limited to two-dimensional analyses. Three-dimensional analyses could not be performed because of _____ 1. Complex mathematical models were not resolved 2. Governing equations were not developed for three-dimensions 3. Approximations for three-dimensions did not exist 4. The type of computers and algorithms that existed	[ ]

17.	Which of these problems does not require three-dimensional analysis? 1. Internal flow in SCRAM jet engines 2. Flow over an aircraft wing 3. Flow past gas turbine compressors 4.Flow over airfoils	[ ]
18.	The knowledge of pressure distribution is required for _____ engineers. A) Aerodynamic B) Thermal C) Structural D) Avionics	[ ]
19.	The knowledge of aerodynamic loads on an aircraft is needed for _____ engineers. A) Aerodynamic B) Thermal C) Structural D) Avionics	[ ]
20.	Aerodynamics engineers obtain the lift and pressure drag by integrating the _____ distribution over a surface. A)Velocity B)Pressure C)Temperature D)Viscosity	[ ]
21.	Which of these will not come under the three main elements of CFD packages? A) Pre-processor B) Post-processor C) Code creator D)Solver	[ ]
22.	The region of interest for analysis in CFD is called as _____ A) Cell B) Domain C) Mesh D) Grid	[ ]
23.	Over 50% of the time spent in the industry on a CFD project is devoted to the definition of the domain geometry and grid generation. Which one will be the reason for this? 1. More grids will give better results 2. Calculation time is directly proportional to the number of cells 3. To generate non-uniform grids 4. To generate an optimal grid which is a compromise between desired accuracy and solution cost	[ ]
24.	Which of these could be an optimal mesh? A) Non-uniform B)UniformC)Grids with increasing lengths D) Grids with decreasing lengths	[ ]
25.	The solution of a flow problem is defined at discrete points in the domain is called as _____ A) Elements B)Cells C)Grids D) Nodes	[ ]
26.	CFD packages solve the algebraic equations of flow using _____ method. A) Direct B)Iterative C) Analytical D)Trial and error	[ ]
27.	Validation of a CFD code requires information about _____ A)Boundary conditionsB) Domain **C)** Grids D)Cells	[ ]

28.	Which of these will fall into the post-processing category? A)Definition of boundary conditions B) Gridgeneratio C)Flow visualization D) Discretization	[ ]
29.	The step-specification of boundary conditions – in CFD comes under _____ A)Post-processing B)Solving C) Discretizing D)Pre-processing	[ ]
30.	The knowledge of pressure distribution is required for _____ engineers. A) AerodynamicB) Thermal C) Structural D) Avionics	[ ]
31.	The knowledge of aerodynamic loads on an aircraft is needed for _____ engineers. A) AerodynamicB) Thermal C) Structural D) Avionics	[ ]
32.	Aerodynamics engineers obtain the lift and pressure drag by integrating the _____ distribution over a surface. A) Velocity B)Pressure c)Temperature D)Viscosity	[ ]
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36.	Which of these could be an optimal mesh? A) Non-uniform B)Uniform C)Grids with increasing lengths D) Grids with decreasing lengths	[ ]
37.	The solution of a flow problem is defined at discrete points in the domain is called as _____ A) Elements B)Cells C)Grids D) Nodes	[ ]
38.	CFD packages solve the algebraic equations of flow using _____ method. A) Direct B)Iterative C) Analytical D)Trial and error	[ ]
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DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR: 2022-23

A SUMMARY REPORT

Value added course name: Numerical Analysis of Fluid flow using FLUENT Software

Value added course Instructor: Dr. Nithin Kumar, Dr. Siva Prasad D

Course Summary:

On the first week of the sessions (i.e **20-02-2023)** Dr. Nithin Kumar,, delivered a lecture on the What is CFD? Applications of CFD & Uses of CFD, The Mathematics of CFD, Fundamentals of Fluid Mechanics equation of state, CFD Methodology, Introduction to ANSYS Fluent, Planning Your CFD Analysis with Fluent Graphical User Interface (GUI), Menu Bar & Toolbars, The Navigation Pane, Task Pages, The Console , Boundary Conditions , Fluent in Workbench , Solid Modeling Fundamentals.

During the second week of the sessions (i.e **27-02-2023)** Dr. Siva Prasad D, has introduced the Creating a Fluent Fluid Flow Analysis System in ANSYS Workbench, Creating the Geometry in ANSYS Design Modeler, Meshing the Geometry in the ANSYS Meshing Application, Setting Up the CFD Simulation in ANSYS Fluent, Displaying Results in ANSYS Fluent and CFD-Post.

During the third week of the sessions (i.e **4-03-2023)** Dr. Nithin Kumar, has explained and make practical sessions Transonic Flow–Externally Compressible, Problem Description, Turbulence Models Mesh & General Settings, Models & Materials, Boundary Conditions, Operating Conditions, Solution & Post processing, Simulation Physics & Boundary Conditions, Set Boundary Conditions, Set Operating Conditions, Set Solution Methods, Turbulence Model in Fluent, Problem Specification.

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During the fourth week of the sessions (i.e **11-03-2023**), Dr. D Siva Prasad has conducted the practical sessions in the laboratory related to the concepts of Preliminary Analysis Geometry Mesh Mesh Refinement, Physics Setup Numerical Solution Numerical Results Verification & Validation

During the fifth week of the sessions (i.e **18-03-2022**), Dr. Nithin Kumar has conducted the practical sessions in the laboratory, by explaining the concepts of applying Introduction Problem Description, Reading and Checking the Mesh Specifying Solver and Analysis Type Specifying the Models, Defining the Materials Specifying Boundary Conditions Obtaining the Solution.

During the sixth week of the sessions (i.e **24-03-2023**), Dr. D Siva Prasad has conducted the practical sessions in the laboratory, by explaining the concepts of inserting processing, Comparing the Contour Plots after Varying Radiating Surfaces S2S Definition, Solution, and Post processing with Partial enclosure.Turbulent Flow in a Compact Heat Exchanger, introduction Prerequisites Problem Description Setup and Solution.

Coordinator

HEAD OF THE **HOD** MENT
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Certificate of Completion

This is to certify that Mr./Ms. **BANOTH GANESH** bearing Roll No. **20J41A0305** has successfully completed Value Added Course in **Numerical Analysis of Fluid flow using FLUENT Software** conducted by the Department of Mechanical Engineering from **20-02-2023** to **27-03-2023**

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Certificate of Completion

This is to certify that Mr./Ms. VOGGU RAJINIKANTH bearing Roll No. 20J41A0350 has successfully completed Value Added Course in Numerical Analysis of Fluid flow using FLUENT Software conducted by the Department of Mechanical Engineering from 20-02-2023 to 27-03-2023

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Certificate of Completion

This is to certify that Mr./Ms. GANGULA VENKATA NARAYANA bearing Roll No. 20J41A0363 has successfully completed Value Added Course in Numerical Analysis of Fluid flow using FLUENT Software conducted by the Department of Mechanical Engineering from 20-02-2023 to 27-03-2023

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Certificate of Completion

This is to certify that Mr./Ms. CHERIYALA THARUN bearing Roll No. 20J41A0311 has successfully completed Value Added Course in Numerical Analysis of Fluid Flow using FLUENT Software conducted by the Department of Mechanical Engineering from 20-02-2023 to 27-03-2023

COORDINATOR

HOD

PRINCIPAL