Indra Ganesan
COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Accredited by NAAC with 'B+' Grade, 2(f) & 12B Status Institution by UGC
IG Valley, Madurai Main Road, Manikandam, Tiruchirappalli - 620012

NAAC DOCUMENTS

QUALITY INDICATOR FRAME WORK

CRITERION – 1

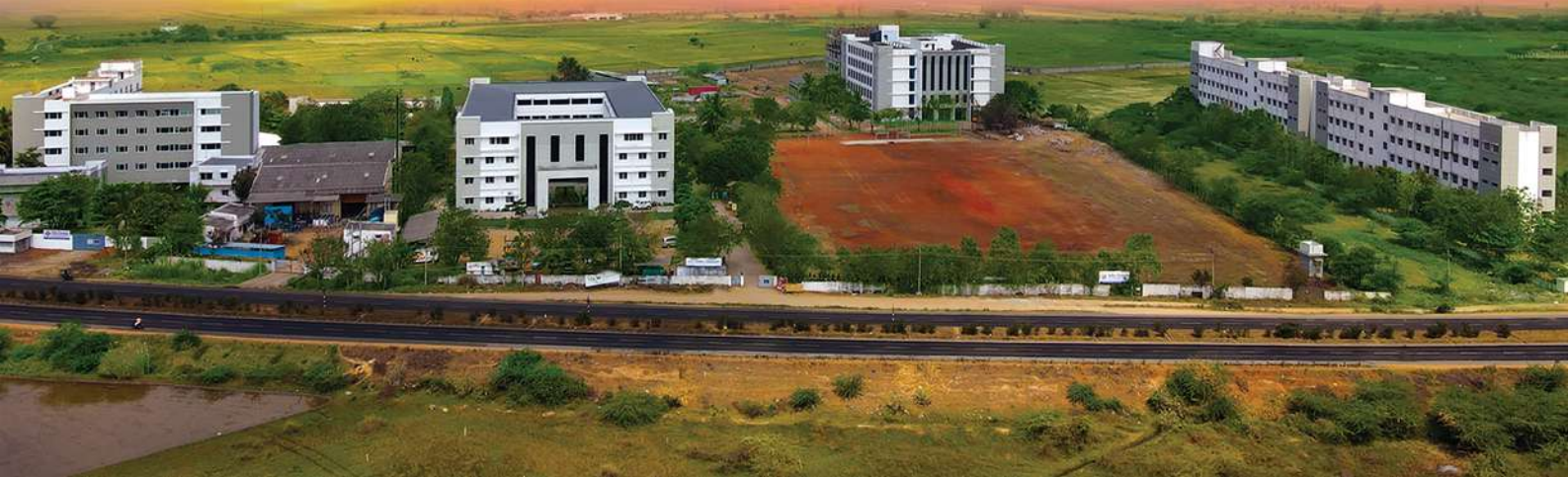
CURRICULAR ASPECTS

SUBMITTED BY

IQAC

INTERNAL QUALITY ASSURANCE CELL

INDRA GANESAN COLLEGE OF ENGINEERING



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2019-20 EVEN / ODD SEMESTER

1.2 Academic Flexibility (30)

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

AND

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

VAC Title:	**External Aerodynamics**				
Resource Person:	**Mr.Suresh &Mr.Jayakumar Trainer CADD center Trichy**				
Date of conduct from:	**01.06.2019**	**To:**	**05.06.2019**	**Duration:**	**30 Hours**
Organized Department:	**MECHANICAL ENGINEERING**				
Participant Year:	**Mech II,III Year**	**Semester:**	**EVEN**	**No. of Students Registered:**	**65**
Venue:	**Mechanical Seminar Hall**				

Table of Content

Indra Ganesan
COLLEGE OF ENGINEERING
Madurai Main Road (NH-45B),Manikandam,Tiruchirapalli- 620 012
Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennai

Department of Mechanical Engineering

Academic Year 2019-2020 – Even Semester

Date: 28.05.2019

DEPARTMENT CIRCULAR

Department of Mechanical Engineering of IGCE in association with **"NIT Siemens, Trichy"** is going to organize Value Added Course for all II and III,IV year students on **"External Aerodynamics Simulations"** from 01.06.2019 to 05.06.2019. Certificates will be issued to the eligible participants at the end of the Course. This training is to be provided in our campus.

Resource Person Details	1. **Mr. Mr. Suresh** **Trainer** **NIT Siemens** **Trichy** 2. **Mr. Jaya Kumar** **Trainer** **NIT Siemens** **Trichy**
Venue	**Mechanical Seminar Hall,IGCE**

HoD/MECH

PRINCIPAL

Cc:

- Principal office
- Class In charges - II, III & IV Year
- Class Rooms-II,III,IV Year
- Office File.
- Notice Board.

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

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Value Added Course

"External Aerodynamics Simulations"

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE
1	Introduction to the subject of engineering and design working in the automotive field	3	01.06.2020
2	Illustrated explanations of the physical principles involved	3	01.06.2020
3	Vehicle Aerodynamics, through its coupling to energy efficiency, is important in the creation of a sustainable society.	3	02.06.2020
4	Fundamental theories of Fluid Dynamics	3	02.06.2020
5	Vehicle Aerodynamic applications.	3	03.06.2020
6	Aerodynamic design of passenger- and commercial vehicles.	3	03.06.2020
7	Different tools used to optimize and evaluate Aerodynamic performance.	3	04.06.2020
8	Aerodynamic properties of a vehicle, by analysing wind tunnel and CFD results	3	04.06.2020
9	Suggest Aerodynamic improvements to an existing design.	3	05.06.2020
10	Thermal Management, Aeroacoustics, Contamination, and Climate Comfort.	3	05.06.2020
11	Exam	1	05.06.2020
	Total Hours Excluding Assessment	30	-

VAC Coordinator

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
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HoD/MECH

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Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

Value Added Course

"External Aerodynamics Simulations"

STUDENTS PARTICIPATION LIST

S.No.	Reg.No	Student's Name	Year/ Branch
1	811218114001	Abinash P	II/MECH
2	811218114002	Ajith Kumar M	II/MECH
3	811218114003	Arun Pandian M R	II/MECH
4	811218114004	Alaguraja M	II/MECH
5	811218114005	Balasubramani K	II/MECH
6	811218114006	Dineshkumar K	II/MECH
7	811218114007	Ganesapandy K	II/MECH
8	811218114009	Karthikeyan R	II/MECH
9	811218114010	Murugappan P	II/MECH
10	811218114011	Prasanth R	II/MECH
11	811218114012	Praveen A	II/MECH
12	811218114013	Rabin Singh X	II/MECH
13	811218114014	Ramesh.M	II/MECH
14	811218114015	Renish Bharathi S	II/MECH
15	811218114016	Santhosh K	II/MECH
16	811218114017	Sathish Selva A	II/MECH
17	811218114019	Vasanth D	II/MECH
18	811218114020	Vikram S	II/MECH
19	811218114021	Vishnu B	II/MECH
20	811218114022	Yogavishuvabarathi G	II/MECH
21	811218114023	Vigneshwaran C	II/MECH
22	811218114301	Dharmaseelan M	II/MECH
23	811218114302	Mahamuni R	II/MECH
24	811218114303	Naveen Kumar T	II/MECH
25	811218114304	Ramakrishnan M	II/MECH
26	811218114306	Subeekshiseeth Prasana D	II/MECH
27	811217114001	S.Abdul Yasin	III/MECH
28	811217114002	R.Ajithkumar	III/MECH
29	811217114003	S.Anandha Kumar	III/MECH
30	811217114004	M.Ananth	III/MECH
31	811217114005	R.Chellaiah	III/MECH

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S.No.	Reg.No	Student's Name	Year/ Branch
32	811217114006	C.Devarajan	III/MECH
33	811217114007	S.Dhamotharan	III/MECH
34	811217114008	A.Dhanussh	III/MECH
35	811217114009	C.Dharanidharan	III/MECH
36	811217114010	N.Dharman	III/MECH
37	811217114013	M.Hariharasudhan	III/MECH
38	811217114014	A.Jawagar	III/MECH
39	811217114015	Karthick S	III/MECH
40	811217114016	D.Madhan	III/MECH
41	811217114018	M.Mohammed Faizal	III/MECH
42	811217114019	S.Mohanraj	III/MECH
43	811217114020	R.Munishwaran	III/MECH
44	811217114021	P.Murugan	III/MECH
45	811217114022	P.Ponnar	III/MECH
46	811217114023	M.Prakash	III/MECH
47	811217114025	M.Rajamuni	III/MECH
48	811217114026	La.Ramanathan	III/MECH
49	811217114027	G.Sairam	III/MECH
50	811217114028	R.Sankaralingam	III/MECH
51	811217114030	M.Selvakumar	III/MECH
52	811217114031	A.Shameer	III/MECH
53	811217114032	D.Sivakumar	III/MECH
54	811217114033	A.Sriram	III/MECH
55	811217114034	S.Thirumurugan	III/MECH
56	811217114035	A.Vengatesh	III/MECH
57	811217114036	M.Venkatesh	III/MECH
58	811217114037	P.Vinayagamoorthy	III/MECH
59	811217114038	B.Vinothraja	III/MECH
60	811217114039	D.Yugesh	III/MECH
61	811217114301	K.Arun	III/MECH
62	811217114302	K.Santhosh Kumar	III/MECH
63	811217114303	R.Thirumoorthi	III/MECH
64	811217114012	R.Hariharan	III/MECH
65	811217114029	C.Sarathkumar	III/MECH

VAC Coordinator

HoD/MECH

Dr. G. Balakrishnan, M.E., Ph.D.,
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Report on Value Added Course

Title:	External Aerodynamics Simulations				
Resource Person:	Mr. Suresh, Trainer NIT Siemens, Trichy		Mr. Vijay Trainer NIT Siemens, Trichy		
Date of conduct from :	**01.06.2020**	To:	**05.06.2020**	Duration:	**30 Hours**
Organized Department :	MECHANICAL ENGINEERING				
Participant Year:	**2,3**	No. of Students Registered :	**65**		
Venue:	**Mechanical Seminar hall**				

Outcome of Value Added Course (VAC): At the end of the Course, Students can able to

- Know to explain the design working in the automotive field.
- Know how to illustrated explanations of the physical principles involved
- Students are expected to learn and practice the Vehicle Aerodynamic applications.
- Know to recall Aerodynamic improvements to an existing design.
- They receive required training on Thermal Management, Aeroacoustics, Contamination, and Climate Comfort.

Assessment Process

- Students, who are securing **more than 70% on total score** and secured more than 75% in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score = (0.5 *Attendance in VAC out of 100 percentage + 0.5 *Test mark in VAC out of 100 marks)

VAC Coordinator **HoD/MECH** **Principal**

Dr. S. Balakrishnan, M.E., Ph.D.,
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Sample Photos of Value Added Course

Title:	External Aerodynamics Simulations				
Resource Person:	Mr. Suresh, Trainer NIT Siemens, Trichy		Mr. Vijay Trainer NIT Siemens, Trichy		
Date of conduct from :	**01.06.2019**	To:	**05.06.2019**	Duration:	**30 Hours**
Organized Department :	MECHANICAL ENGINEERING				
Participant Year:	**2,3**		No. of Students Registered :		**65**
Venue:	**Mechanical Seminar hall**				

Sample Photo

VAC Coordinator **HoD/MECH** **Principal**

Dr. G. Balakrishnan, M.E., Ph.D.,
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Department of Mechanical Engineering

Academic Year 2019-2020 – Even Semester

STUDENTS ATTENDANCE LIST

Value Added Course

"External Aerodynamics Simulations"

Dr. C. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

S.No.	Reg.No	Student's Name	Year/ Branch	DATE: 01.06.20		DATE: 02.06.20		DATE: 03.06.20		DATE: 04.06.20		DATE: 05.06.20		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	811218114001	Abinash P	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
2	811218114002	Ajith Kumar M	II/MECH	✓	✓	✓	✓	a	a	✓	✓	✓	✓	08	
3	811218114003	Arun Pandian M R	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
4	811218114004	Alaguraja M	II/MECH	✓	✓	✓	✓	✓	✓	✓	a	✓	✓	09	
5	811218114005	Balasubramani K	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
6	811218114006	Dineshkumar K	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
7	811218114007	Ganesapandy K	II/MECH	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	09	
8	811218114009	Karthikeyan R	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
9	811218114010	Murugappan P	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
10	811218114011	Prasanth R	II/MECH	✓	✓	✓	✓	✓	a	✓	✓	✓	a	08	

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				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
11	811218114012	Praveen A	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
12	811218114013	Rabin Singh X	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
13	811218114014	Ramesh.M	II/MECH	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	09	
14	811218114015	Renish Bharathi S	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
15	811218114016	Santhosh K	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
16	811218114017	Sathish Selva A	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
17	811218114019	Vasanth D	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
18	811218114020	Vikram S	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
19	811218114021	Vishnu B	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
20	811218114022	Yogavishuvabarathi G	II/MECH	✓	✓	✓	✓	✓	✓	a	a	✓	✓	08	
21	811218114023	Vigneshwaran C	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
22	811218114301	Dharmaseelan M	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
23	811218114302	Mahamuni R	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
24	811218114303	Naveen Kumar T	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	a	09	
25	811218114304	Ramakrishnan M	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
26	811218114306	Subeekshiseeth Prasana D	II/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
27	811217114001	S.Abdul Yasin	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	

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				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
28	811217114002	R.Ajithkumar	III/MECH	P	P	P	P	A	A	P	P	P	P	08	
29	811217114003	S.Anandha Kumar	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
30	811217114004	M.Ananth	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
31	811217114005	R.Chellaiah	III/MECH	P	P	P	P	P	P	P	P	P	A	09	
32	811217114006	C.Devarajan	III/MECH	P	P	P	A	P	P	P	P	P	P	09	
33	811217114007	S.Dhamotharan	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
34	811217114008	A.Dhanussh	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
35	811217114009	C.Dharanidharan	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
36	811217114010	N.Dharman	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
37	811217114013	M.Hariharasudhan	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
38	811217114014	A.Jawagar	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
39	811217114015	Karthick S	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
40	811217114016	D.Madhan	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
41	811217114018	M.Mohammed Faizal	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
42	811217114019	S.Mohanraj	III/MECH	P	A	P	P	P	P	P	P	P	P	09	
43	811217114020	R.Munishwaran	III/MECH	P	P	P	P	P	P	P	P	P	P	10	
44	811217114021	P.Murugan	III/MECH	P	P	P	P	P	P	P	P	P	P	10	

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				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
45	811217114022	P.Ponnar	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
46	811217114023	M.Prakash	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
47	811217114025	M.Rajamuni	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
48	811217114026	La.Ramanathan	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
49	811217114027	G.Sairam	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
50	811217114028	R.Sankaralingam	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
51	811217114030	M.Selvakumar	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
52	811217114031	A.Shameer	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
53	811217114032	D.Sivakumar	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
54	811217114033	A.Sriram	III/MECH	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	09	
55	811217114034	S.Thirumurugan	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
56	811217114035	A.Vengatesh	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
57	811217114036	M.Venkatesh	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
58	811217114037	P.Vinayagamoorthy	III/MECH	✓	a	✓	✓	✓	✓	✓	✓	✓	✓	09	
59	811217114038	B.Vinothraja	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
60	811217114039	D.Yugesh	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
61	811217114301	K.Arun	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	

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				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
62	811217114302	K.Santhosh Kumar	III/MECH	✓	a	✓	✓	✓	✓	✓	✓	✓	✓	09	
63	811217114303	R.Thirumoorthi	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
64	811217114012	R.Hariharan	III/MECH	✓	✓	✓	✓	✓	✓	a	a	✓	✓	08	
65	811217114029	C.Sarathkumar	III/MECH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	

VAC Coordinator

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Name of the Student: **Year/Sem:**

AU Register Number:

Value Added Course

"External Aerodynamics Simulations"

MCQ QUESTIONS (25X4 = 100 Marks)

1. For which of these Mach numbers is flow considered to be hypersonic?
   a) M < 1
   c) M = 1
   b) M > 5
   d) 1 < M < 5

2. How is the shock layer in case of hypersonic flow?
   a) Thick
   c) Non existent
   b) Thin.
   d) Increases with increasing Mach number

3. In hypersonic flow, the shock waves often merge with the viscous boundary layer.
   a) True
   c) False
   b) Sketches.
   d) Origin.

4. How is the shock over a blunt body at hypersonic speed?
   a) Conical.
   c) Diamond.
   b) Curved
   d) Oblique.

5. What is the entropy gradient at the nose region of a slender body at hypersonic flow?
   a) Very high
   c) Negligible
   b) Very low
   d) None of the above.

6. What is viscous dissipation?
   a) Loss of kinetic energy due to viscous effect
   c) Increase in kinetic energy due to increase in temperature

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b) Loss of potential energy due to viscous effect

d) Frictional drag

7. How does viscous dissipation affect temperature inside the boundary layer?
   a) Increases
   c) No change
   b) Decreases
   d) First increases, then decreases

8. At which flow regime does aerodynamic quantities such as coefficient of pressure, lift become independent of Mach number?
   a) Subsonic
   c) Transonic
   b) Hypersonic
   d) Supersonic

9. Which boundary condition applied at the surface to non dimensionlize the governing equations?
   a) $V.n = 0$
   c) $V - n = 0$
   b) $V.(V \times n) = 0$
   d) $V \times (V \times n) = 0$

10. Boundary condition $V.n = 0$ is applied at the surface to non dimensionlize the governing equations when fluid is being transferred.
    a) True
    c) False
    b) Can't predict
    d) None of the above

11. Mach number independence for conical cylinder is achieved at a lower Mach number compared to the sphere.
    a) False
    c) True
    b) Can't predict
    d) None of the above

12. Which of these does not result in two or more flows being dynamically similar?
    a) Streamlines are geometrically similar
    c) The shape of the blunt body is same
    b) Length of the body is same
    d) Non dimensional parameters remain same

13. Why is hypersonic similarity parameter essential?

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13. Why is hypersonic similarity parameter essential?
    a) Supersonic flow over wedges
    c) Hypersonic flow over cone
    b) Hypersonic flow over flat plate
    d) Hypersonic flow over slender bodies

14. Two bodies holding hypersonic similarity at small angle of attack need the values of γ and $M\infty\tau$ to be same.
    a) $M\infty\tau$
    c) True.
    b) False
    d) $M\infty\gamma$

15. Hypersonic similarity is applicable for only irrotational flow?
    a) No change.
    c) False
    b) True.
    d) Dissimilar.

16. For which range of values is the hypersonic similarity rule valid for very slender bodies?
    a) $K = 0.5$ to infinity.
    c) $K > 1.5$.
    b) $0.5 < K < 1.5$.
    d) $2 < K < 1000$.

17. At higher temperatures, the assumption of a calorically perfect gas is valid.
    a) True
    c) False
    b) invalid
    d) No changes

18. What is specific heat a function of at high temperatures?
    a) Time.
    c) Entropy.
    b) Density.
    d) Temperature.

19. At high temperatures, what does dissociation of molecule mean?
    a) Atoms break away from molecular structure
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20. How many thermal degrees of freedom is there for a diatomic molecule having translation energy?
    a) 3
    c) 5.
    b) 4.
    d) 6.

21. How many degrees of freedom is there for a CO2 molecule with rotational kinetic energy?
    a) 5
    c) 3
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    d) 2

22. For a single atom what is the total energy a sum of?
    a) Translation and electronic energy
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    d) Rotational, electronic and translation energy.

23. What is a ground state?
    a) Energy when gas is at absolute zero
    c) Energy when gas is at 273.15 K
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24. In a boson particle, how many elementary particles are present inside a molecule?
    a) Odd number
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25. What are the particles which obey Fermi – Dirac statistics called?
    a) Fermions.
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VAC Coordinator

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Value Added Course

"External Aerodynamics Simulations"

ANSWER KEY

1	d	6	a	11	a	16	a	21	d
2	b	7	a	12	b	17	c	22	a
3	a	8	b	13	d	18	d	23	a
4	b	9	a	14	b	19	a	24	c
5	a	10	c	15	c	20	a	25	a

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Name of the Student: BalaSubramani.K **Year/Sem:** II/mech

AU Register Number: 811218114005

18/25

Value Added Course

"External Aerodynamics Simulations"

MCQ QUESTIONS (25X4 = 100 Marks)

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b) Loss of potential energy due to viscous effect

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a) 5 c) 3

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Department of Mechanical Engineering

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Academic Year 2019-2020 – Even Semester

VALUE ADDED COURSE ASSESEMENT SHEET

"External Aerodynamics Simulations"

S.No.	Reg.No	Student's Name	Year/ Branch	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	811218114001	Abinash P	II/MECH	30	100	20	80	90
2	811218114002	Ajith Kumar M	II/MECH	24	80	22	88	84
3	811218114003	Arun Pandian M R	II/MECH	30	100	18	72	86
4	811218114004	Alaguraja M	II/MECH	27	90	22	88	89
5	811218114005	Balasubramani K	II/MECH	30	100	18	72	86
6	811218114006	Dineshkumar K	II/MECH	30	100	22	88	94
7	811218114007	Ganesapandy K	II/MECH	27	90	18	72	81
8	811218114009	Karthikeyan R	II/MECH	30	100	19	76	88
9	811218114010	Murugappan P	II/MECH	30	100	19	76	88
10	811218114011	Prasanth R	II/MECH	24	80	20	80	80

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S.No.	Reg.No	Student's Name	Year/ Branch	Attendance Details		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
11	811218114012	Praveen A	II/MECH	30	100	22	88	94
12	811218114013	Rabin Singh X	II/MECH	30	100	22	88	94
13	811218114014	Ramesh.M	II/MECH	27	90	18	72	81
14	811218114015	Renish Bharathi S	II/MECH	30	100	22	88	94
15	811218114016	Santhosh K	II/MECH	30	100	18	72	86
16	811218114017	Sathish Selva A	II/MECH	30	100	19	76	88
17	811218114019	Vasanth D	II/MECH	30	100	20	80	90
18	811218114020	Vikram S	II/MECH	30	100	22	88	94
19	811218114021	Vishnu B	II/MECH	24	80	18	72	76
20	811218114022	Yogavishuvabarathi G	II/MECH	30	100	22	88	94
21	811218114023	Vigneshwaran C	II/MECH	30	100	20	80	90
22	811218114301	Dharmaseelan M	II/MECH	30	100	22	88	94
23	811218114302	Mahamuni R	II/MECH	27	90	22	88	89
24	811218114303	Naveen Kumar T	II/MECH	30	100	18	72	86
25	811218114304	Ramakrishnan M	II/MECH	30	100	22	88	94
26	811218114306	Subeekshiseeth Prasana D	II/MECH	30	100	20	80	90

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				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
27	811217114001	S.Abdul Yasin	III/MECH	30	100	22	88	94
28	811217114002	R.Ajithkumar	III/MECH	24	80	18	72	76
29	811217114003	S.Anandha Kumar	III/MECH	30	100	22	88	94
30	811217114004	M.Ananth	III/MECH	30	100	18	72	86
31	811217114005	R.Chellaiah	III/MECH	27	90	22	88	89
32	811217114006	C.Devarajan	III/MECH	27	90	18	72	81
33	811217114007	S.Dhamotharan	III/MECH	30	100	19	76	88
34	811217114008	A.Dhanussh	III/MECH	30	100	19	76	88
35	811217114009	C.Dharanidharan	III/MECH	30	100	20	80	90
36	811217114010	N.Dharman	III/MECH	30	100	22	88	94
37	811217114013	M.Hariharasudhan	III/MECH	30	100	22	88	94
38	811217114014	A.Jawagar	III/MECH	30	100	18	72	86
39	811217114015	Karthick S	III/MECH	30	100	22	88	94
40	811217114016	D.Madhan	III/MECH	30	100	18	72	86
41	811217114018	M.Mohammed Faizal	III/MECH	30	100	19	76	88
42	811217114019	S.Mohanraj	III/MECH	27	90	20	80	85

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				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
43	811217114020	R.Munishwaran	III/MECH	30	100	22	88	94
44	811217114021	P.Murugan	III/MECH	30	100	18	72	86
45	811217114022	P.Ponnar	III/MECH	30	100	22	88	94
46	811217114023	M.Prakash	III/MECH	30	100	20	80	90
47	811217114025	M.Rajamuni	III/MECH	30	100	22	88	94
48	811217114026	La.Ramanathan	III/MECH	30	100	22	88	94
49	811217114027	G.Sairam	III/MECH	30	100	18	72	86
50	811217114028	R.Sankaralingam	III/MECH	30	100	22	88	94
51	811217114030	M.Selvakumar	III/MECH	30	100	22	88	94
52	811217114031	A.Shameer	III/MECH	30	100	20	80	90
53	811217114032	D.Sivakumar	III/MECH	27	90	22	88	89
54	811217114033	A.Sriram	III/MECH	30	100	18	72	86
55	811217114034	S.Thirumurugan	III/MECH	30	100	22	88	94
56	811217114035	A.Vengatesh	III/MECH	30	100	18	72	86
57	811217114036	M.Venkatesh	III/MECH	27	90	22	88	89
58	811217114037	P.Vinayagamoorthy	III/MECH	30	100	18	72	86

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				No. of Session Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
59	811217114038	B.Vinothraja	III/MECH	30	100	19	76	88
60	811217114039	D.Yugesh	III/MECH	30	100	19	76	88
61	811217114301	K.Arun	III/MECH	30	100	20	80	90
62	811217114302	K.Santhosh Kumar	III/MECH	27	90	22	88	89
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HoD/MECH

NIT SIEMENS

Tanjore Main Road, NH67, near BHEL, Tiruchirappalli, Tamil Nadu 620015

CERTIFICATE OF PARTICIPATION

*This is to certify that **Mr.M.Venkatesh** of IV Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with NIT SIEMENS from 11 June 2019 to 15 June 2019 (5 days) during the Academic year 2019-2020.*

Dr. G. Balakrishnan, M.E., Ph.D.,
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Mr. Suresh
NIT SIEMENS

19-20/Even

NIT SIEMENS

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CERTIFICATE OF PARTICIPATION

This is to certify that ***Mr.D.Yugesh*** *of IV Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 1 June 2019 to 5 June 2019 (5 days) during the Academic year 2019-2020.*

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Mr. Suresh
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Mr. Suresh
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Mr. Suresh
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Mr. Suresh
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CERTIFICATE OF PARTICIPATION

This is to certify that ***Mr.R.Hariharan*** *of IV Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 11 June 2019 to 15 June 2019 (5 days) during the Academic year 2019-2020.*

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*This is to certify that **Mr.A.Sriram** of III Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.*

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This is to certify that ***Mr.G.Sairam*** *of III Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.*

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This is to certify that Mr.R.Munishwaran of III Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.

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*This is to certify that **Mr.A.Jawagar** of III Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.*

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This is to certify that ***Mr.M.Ananth*** *of III Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.*

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This is to certify that Mr.R.Ajith Kumar of III Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.

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This is to certify that ***Mr.C.Vigneshwaran*** *of II Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.*

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This is to certify that Mr.M.Ramakrishnan of II Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.

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*This is to certify that **Mr.B.Vishnu** of II Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.*

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This is to certify that Mr.A.Praveen of II Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.

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This is to certify that Mr.R.Prasanth of II Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.

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This is to certify that ***Mr.K.Dinesh Kumar*** *of II Year MECH has successfully completed the value added course on "External Aerodynamics Simulations" organized by Department of Mechanical Engineering and IQAC of our institution in association with CADD centre from 01 June 2019 to 05 June 2019 (5 days) during the Academic year 2019-2020.*

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