CRITERION 5	Faculty Information and Contributions	200

For the year 2017—2018 (Total 31 Faculties)

For the year 2017—2018 (Total 22 Faculties)

Table B.5a

Name of the Faculty member	Qualification			Year of Graduation	Designations	Date of Joining the Institution		Specialization	Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development
	Degree									Ph.D. Guidance	Faculty Receiving Ph.D. during the assessment Years		
Dr R K Dutta	Ph D	IIT Kharagpur	BE 1981 M Tech 1984 PhD 2001	1989	Professor	05.12.1989	Mechanical	Manufacturing	1 Int. Journal paper	Guiding 1			
Dr D K Mahanta	Ph D	Jadavpur University	Integrated MSc Engg 1981 PhD 2001	1982	Professor	21.08.1982	Do	Energy, Thermal Engg		Guiding 3, 1 submitted Thesis			

Dr S K Deb	Ph D	IIT Kharagpur	BE 1983 M Tech 1987 PhD 2002	1983	Professor	03.06.1983	Do	Industrial Engg and management	1 Int. Journal paper and 1 National Conference paper	Guiding 3, 1 Defence awaited			
Prof A J Borthakur	M Tech	IIT Kanpur	BE 1983 M Tech 1988	1983	Associate Professor	03.06.1983	Do	Fluid Mechanics					
Dr Kalyan Kalita	Ph D	IIT Guwahati	BE 1986 M Tech 1991 PhD 2002	1988	Professor	19.11.1988	Do	Computational Fluid dynamics		Guiding 3, co-guiding 3			
Dr Plabon Kakati	Ph D	Tezpur University	BE 1986 M Tech 1992 PhD 2006	2016	Associate Professor	01.02.2016	Do	Quality Engg					

Dr Niharendu Saha	PhD	IIT Kharagpur	BE 1986 M Tech 1992 PhD 2003	1987	Associate Professor	08.01.1987	Do	Tribology, Machine Design		Guiding 5			
Dr Anil Borah	PhD	IIT Guwahati	BE 1988 M Tech 1993 PhD 2007	1988	Associate Professor	25.11.1988	Do	Advanced Manufacturing		Guiding 2			
Dr Manjuri Hazarika	PhD	IIT Guwahati	BE 1990 M Tech 1996 PhD 2011	1993	Associate Professor	01.11.1993	Do	Computer Integrated Manufacturing	1 Book Chapter, 1 National Conference paper	Guiding 1			
Dr Dilip Borah	PhD	IIT Delhi	BE 1989 M Tech 2000 PhD 2009	2015	Associate Professor	08.01.2015	Do	Renewable energy, IC engine		Guiding 4, co-guiding 3			

Dr Kalyan Kr Das	PhD	IIT Kharagpur	BE 1993 M Tech 1996, 99 PhD 2012	1996	Associate Professor	03.04.1996	Do	Applied Mechanics, Aerospace Engg	1 Int. Journal and 8 national conference papers	Guiding 6			
Mr B I Borbhuyan	M Tech (pursuing PhD)	IIT Kharagpur	BE 1993 M Tech 2002	1997	Associate Professor	07.05.1997	Do	Thermal Engineering					
Mr Kamal Kr Brahma	ME (Thesis submitted)	Guwahati University	BE 1996 M E 2010	1999	Assistant Professor	01.02.1999	Do	Renewable Energy					
Mr P K Choudhury	ME (pursuing PhD)	Guwahati University	BE 1996 ME 2011	2007	Assistant Professor	03.10.2007	Do	Mech Engg					

Ms Mousumi Gogoi	ME	Guwahati University	BE 1999 ME 2013	2007	Assistant Professor	03.10.2007	Do	Manufacturing					
Mr Basab J Phukan	ME (pursuing PhD)	Guwahati University	BE 2003 M E 2012	2007	Assistant Professor	03.10.2007	Do	Thermal Engineering	1 Int. Journal paper and 1 National Conference paper				
Mr Jitul Baruah	ME (pursuing PhD)	Guwahati University	BE 2003 M E 2013	2010	Assistant Professor	28.09.2010	Do	Thermal Engineering					
Dr Pradip Baisya	PhD	Guwahati University	BE 2002 M E 2006 PhD 2017	2007	Assistant Professor	03.10.2007	Do	Solid Waste Management					

Mr Manash Hazarika	ME (PhD thesis submitted)	RGPV Bhopal	BE 1999 ME 2003	2007	Assistant Professor	03.10.2007	Do	Advanced Production Systems					
Mr Madhurjya Baruah	BE (Pursuing ME)	Guwahati University	BE 2009	2011	Assistant Professor	03.03.2011	Do	Machine Design					
Mr Manash Bhuyan	ME (Pursuing PhD)	Dibrugarh University	BE 2010 ME 2014	2010	Assistant Professor (Guest faculty)	01.08.2010	Do	Manufacturing & Material Science	2 Int. Journal papers				
Mr Monoj Baruah	ME (Pursuing PhD)	Assam Down Town University	BE 2007 ME 2016	2012	Assistant Professor (Guest faculty)	01.08.2012	Do	Energy system+ Manufacturing & Materials Science	4 National Conference papers				

For the year 2017—2018 (Total 09 TEQIP III Faculties)

Table B.5b

Name of the Faculty member	Qualification				Designations	Date of Joining the Institution	Department	Specialization	Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development
	Degree (Highest degree)	University	Year of Graduation							Ph.D. Guidance	Faculty Receiving Ph.D. during		
Mr.Subhransu Sekhar Mallick				2018	Assistant Professor (TEQIP)	05.01.2018	Do	Fluid and Thermal Engineering	2 Int Conference papers				
Dr Mayuri Baruah	PhD	IITGuwahati	BE 2010 PhD 2016	2018	Assistant Professor (TEQIP)	05.01.2018	Do	Manufacturing	8 Int. Journal,3 Int Conference paper, 1 Book Chapter				

Mr Piyush Singh	M. Tech	IIT (ISM) Dhanbad	BE 2009 M. Tech 2014	2018	Assistant Professor (TEQIP)	04.01.2018	Do	Manufacturing	2 Int. Journal, 4 Int. conference papers, 1 Book Chapter				
Mr Jyothis A	M Tech	IITGuwahati	BTech 2013 MTech 2016	2018	Assistant Professor (TEQIP)	05.01.2018	Do	Fluid and Thermal Engineering					
Mr Mohammed Rafi	M Tech	IITGuwahati	BTech 2013 MTech 2017	2018	Assistant Professor (TEQIP)	05.01.2018	Do	Fluid and Thermal Engineering					
Mr Anirban Saha	M Tech	IITGuwahati	BE 2014 MTech 2017	2017	Assistant Professor (TEQIP)	29.12.2017	Do	Computer Assisted Manufacturing					

Mr Juan Chowdhury	M Tech	IITGuwahati	BE 2014 MTech 2017	2018	Assistant Professor (TEQIP)	03.01.2018	Do	Computer Assisted Manufacturing	1 national conference paper, 2 patents filed				
Mr Devarshi Kashyap	M Tech. (Pursuing PhD	NIT Trichy	BTech (2010) MTech (2013)	2018	Assistant Professor (TEQIP)5454	05.01.2018	Do	Manufacturing Technology	2 Book Chapter, 3 Int conference, 1 national conference papers				
Dr Abhimanyu Kar	PhD	IIT Kharagpur	B. M. E (2007) M. Tech (2009) PhD (2018)	2018	Assistant Professor (TEQIP)	03.01.2018	Do	Thermofluids	1 Int. Journal paper, Patent : 1 (published)				

For the year 2016—2017 (Total 22 Faculties)

Table B.5c

Name of the Faculty member	Qualification			Association with the Institution	Designations	Date of Joining the Institution	Department	Specialization	Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development
	Degree (Highest degree)	University	Year of Graduation						Research Paper Publications	Ph. D. Guidance	Faculty Receiving Ph. D. during the assessment Years		
Dr R K Dutta	PhD	IIT Kharagpur	BE 1981 M Tech 1984 PhD 2001	1989	Professor	05.12.1989	Mechanical	Manufacturing	1 Int. Conference and 1 Int. Journal paper	Guiding 1			

Dr D K Mahanta	Ph D	Jadavpur University	Integrated MSc Engg 1981 Ph D 2001	1982	Professor	21.08.1982	Do	Energy, Thermal Engg	4 National Conference papers	Awarded 3, Guiding 4	One		
Dr S K Deb	Ph D	IIT Kharagpur	BE 1983 M Tech 1987 Ph D 2002	1983	Professor	03.06.1983	Do	Industrial Engg and management	4 National Conference papers	Guiding 4			
Prof A J Borthakur	M Tech	IITKanpur	BE 1983 M Tech 1988	1983	Associate Professor	03.06.1983	Do	Fluid Mechanics					

Dr Kalyan Kalita	PhD	IITGuwahati	BE 1986 M Tech 1991 PhD 2002	1988	Professor	19.11.1988	Do	Computational Fluid dynamics	1 National Conference, 2 Int. Journal papers	Awarded 1, Guiding 3, co-guiding 3			
Dr Plabon Kakati	PhD	Tezpur University	BE 1986 M Tech 1992 PhD 2006	2016	Associate Professor	01.02.2016	Do	Quality Engg	2 National Conference papers				
Dr Nihar endu Saha	PhD	IIT Kharagpur	BE 1986 M Tech 1992 PhD 2003	1987	Associate Professor	08.01.1987	Do	Tribology, Machine Design		Guiding 5			

Dr Anil Borah	PhD	IITGuwahati	BE 1988 M Tech 1993 PhD 2007	1988	Associate Professor	25.11.1988	Do	Advanced Manufacturing		Guiding 2			
Dr Manjuri Hazarika	PhD	IITGuwahati	BE 1990 M Tech 1996 PhD 2011	1993	Associate Professor	01.11.1993	Do	Computer Integrated Manufacturing	1 Book, 2 National Conference papers	Guiding 1			
Dr Dilip Borah	PhD	IIT Delhi	BE 1989 M Tech 2000 PhD 2009	2015	Associate Professor	08.01.2015	Do	Renewable energy, IC engine	1 National Conference, 1 Int. Journal papers	Guiding 4, co-guiding 3			

Dr Kalyan Kr Das	Ph D	IIT Kharagpur	BE 1993 M Tech 1996, 99 Ph D 2012	1996	Associate Professor	03.04.1996	Do	Applied Mechanics, Aerospace Engg	2 Int. Journal papers	Guiding 6			
Mr B I Borbhuyan	M Tech (pursuing Ph D)	IIT Kharagpur	BE 1993 M Tech 2002	1997	Associate Professor	07.05.1997	Do	Thermal Engineering					
Mr Kamal Kr Brahma	ME (Thesis submitted)	Guwahati University	BE 1996 M E 2010	1999	Assistant Professor	01.02.1999	Do	Renewable Energy	2 Int. Journal papers				

Mr P K Choudhury	ME (pursuing PhD)	Guwahati University	BE 1996 ME 2011	2007	Assistant Professor	03.10.2007	Do	Mech Engg	2 Int. Conference, 1 Int. Journal papers				
Ms Mousumi Gogoi	ME	Guwahati University	BE 1999 ME 2013	2007	Assistant Professor	03.10.2007	Do	Manufacturing					
Mr Basab J Phukan	ME (pursuing PhD)	Guwahati University	BE 2003 M E 2012	2007	Assistant Professor	03.10.2007	Do	Thermal Engineering	2 National Conference papers				
Mr Jitul Baruah	ME (pursuing PhD)	Guwahati University	BE 2003 M E 2013	2010	Assistant Professor	28.09.2010	Do	Thermal Engineering	1 Int. Journal paper				

Dr Pradip Baisya	Ph D	Guwahati University	BE 2002 M E 2006 Ph D 2017	2007	Assistant Professor	03.10.2007	Do	Solid Waste Management	1 National Conference paper				
Mr Manash Hazarika	M E (Ph D thesis submitted)	RGPV Bhopal	BE 1999 ME 2003	2007	Assistant Professor	03.10.2007	Do	Advanced Production Systems	3 Int. Conference, 2 Int. Journal papers				
Mr Madhurjya Baruah	BE (Pursuing ME)	Guwahati University	BE 2009	2011	Assistant Professor	03.03.2011	Do	Machine Design					
Mr Manash Bhuyan	ME (Pursuing Ph D)	Dibrugarh University	BE 2010 ME 2014	2010	Assistant Professor (Guest faculty)	01.08.2010	Do	IPE.+ Manufacturing & Materials Science	1 national conference paper				

Mr Monoj Baruah	ME (Pursuing PhD)	Assam Down Town University	BE 2007 ME 2016	2012	Assistant Professor (Guest faculty)	01.08.2012	Do	Energy system + Manufacturing & Materials Science					

For the year 2015—2016 (Total 25 Faculties)

Table B.5d

Name of the Faculty member	Qualification			Association with the Institution	Designations	Date of Joining the Institution	Department	Specialization	Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development
	Degree (Highest degree)	University	Year of Graduation						Research Paper Publications	Ph. D. Guidance	Faculty Receiving Ph. D. during the assessment Years		

Dr R K Dutta	PhD	IIT Kharagpur	BE 1981 M Tech 1984 PhD 2001	1989	Professor	05.12.1989	Mechanical	Manufacturing		Guiding 1			
Dr D K Mahanta	PhD	Jadavpur University	Integrated MSc Engg 1981 PhD 2001	1982	Professor	21.08.1982	Do	Energy, Thermal Engg	1 Int. Journal paper	Guiding 3	One		
Dr S K Deb	PhD	IIT Kharagpur	BE 1983 M Tech 1987 PhD 2002	1983	Professor	03.06.1983	Do	Industrial Engg and management	1 Int. Journal paper	Guiding 4			

Prof A J Borthakur	M Tech	IIT Kanpur	BE 1983 M Tech 1988	1983	Associate Professor	03.06.1983	Do	Fluid Mechanics					
Dr P K Mahanta	PhD	REC Rourkela	BSc Engg 1983 ME 1989 PhD 2002	1985	AssociatePro fessor	27.03.1985	Do	Mechanical System Design	1 Int. Conference, 4 national conf, 3 national journal	Guiding 2			
Dr Kalyan Kalita	PhD	IIT Guwahati	BE 1986 M Tech 1991 PhD 2002	1988	AssociatePro fessor	19.11.1988	Do	Computational Fluid dynamics		Guiding 3, co-guiding 3			

Dr Plabon Kakati	PhD	Tezpur University	BE 1986 M Tech 1992 PhD 2006	2016	Associate Professor	01.02.2016	Do	Quality Engg	2 National Conference papers				
Dr Niharendu Saha	PhD	IIT Kharagpur	BE 1986 M Tech 1992 PhD 2003	1987	Associate Professor	08.01.1987	Do	Tribology, Machine Design	1 Int conference papers	Guiding 5			
Dr Anil Borah	PhD	IIT Guwahati	BE 1988 M Tech 1993 PhD 2007	1988	Associate Professor	25.11.1988	Do	Advanced Manufacturing	1 Int. Conference, 2 National Conference papers	Guiding 2			

Dr Satyajit paul	PhD	IIT Roorkee	BE 1986 M Tech 1996 PhD 2008	1989	Associate Professor	10.08.1989	Do	Advanced Manufacturing					
Dr Rupanjali Nath	PhD	IIT Delhi	BE 1989 M Tech 1998 PhD 2011	2014	Associate Professor	14.05.2014	Do	Technology Initiated Change Management					
Dr Manjuri Hazarika	PhD	IIT Guwahati	BE 1990 M Tech 1996 PhD 2011	1993	Associate Professor	01.11.1993	Do	Computer Integrated Manufacturing	1 National Conference, 1 Int. Journal papers	Guiding 1			

Dr Dilip Borah	PhD	IIT Delhi	BE 1989 M Tech 2000 PhD 2009	2015	Associate Professor	08.01.2015	Do	Renewable energy, IC engine		Guiding 4, co-guiding 3			
Dr Kalyan Kr Das	PhD	IIT Kharagpur	BE 1993 M Tech 1996, 99 PhD 2012	1996	Associate Professor	03.04.1996	Do	Applied Mechanics, Aerospace Engg	2 Int. Journal, 3 Int. and 8 National Conference papers	Guiding 6			
Mr B I Borbhuyan	M Tech (pursuing PhD)	IIT Kharagpur	BE 1993 M Tech 2002	1997	Associate Professor	07.05.1997	Do	Thermal Engineering					

Mr Kamal Kr Brahma	ME (Thesis submitted)	Guwahati University	BE 1996 M E 2010	1999	Assistant Professor	01.02.1999	Do	Renewable Energy					
Mr P K Choudhury	ME (pursuing PhD)	Guwahati University	BE 1996 ME 2011	2007	Assistant Professor	03.10.2007	Do	Mech Engg	1 National Conference, 1 Int. Journal papers				
Ms Mousumi Gogoi	ME	Guwahati University	BE 1999 ME 2013	2007	Assistant Professor	03.10.2007	Do	Manufacturing					
Mr Basab J Phukan	ME (pursuing PhD)	Guwahati University	BE 2003 M E 2012	2007	Assistant Professor	03.10.2007	Do	Thermal Engineering					

Mr Jitul Baruah	ME (pursuing PhD)	Guwahati University	BE 2003 M E 2013	2010	Assistant Professor	28.09.2010	Do	Thermal Engineering					
Dr Pradip Baisya	PhD	Guwahati University	BE 2002 M E 2006 PhD 2017	2007	Assistant Professor	03.10.2007	Do	Solid Waste Management	1 Int. Journal, 3 Int. and 4 National Conference papers				
Mr Manash Hazarika	ME (PhD thesis submitted)	RGPV Bhopal	BE 1999 ME 2003	2007	Assistant Professor	03.10.2007	Do	Advanced Production Systems	1 Int. Journal paper				

Mr Madhurjya Baruah	BE (Pursuing ME)	Guwahati University	BE 2009	2011	Assistant Professor	03.03.2011	Do	Machine Design					
Mr Manash Bhuyan	ME (Pursuing PhD)	Dibrugarh University	BE 2010 ME 2014	2010	Assistant Professor (Guest faculty)	01.08.2010	Do	IPE.+ Manufacturing & Materials Science					
Mr Monoj Baruah	ME (Pursuing PhD)	Assam Down Town University	BE 2007 ME 2016	2012	Assistant Professor (Guest faculty)	01.08.2012	Do	Energy system + Manufacturing & Materials Science					

5.1 Student-Faculty Ratio (SFR) (20)

(To be calculated at Department Level)

No. of UG Programs in the Department (n): 2
No. of PG Programs in the Department (m): 1
No. of Students in UG (Mech) 2nd Year = u1.1
No. of Students in UG (Mech) 3rd Year = u1.2
No. of Students in UG 4th (Mech) Year = u1.3
No. of Students in UG (IPE) 2nd Year = u2.1
No. of Students in UG (IPE) 3rd Year = u2.2
No. of Students in UG 4th (IPE) 4th Year = u2.3
No. of Students in PG 1st Year = p1.1
No. of Students in PG 2nd Year = p1.2
No of Students = Sanctioned Intake + Actual admitted lateral entry students
S = Number of students in the Department = UG1+UG2+...+UGn+PG1+.....+PGn
F = Total number of Faculty Members in the Department (Excluding first year faculty)

Student Teacher Ratio (STR) = S/F

Table B.5.1

Year	CAY (2017–2018)	CAY*m*1(2016–2017)	CAY*m*2(2015–2016)
u1.1	72	76	67
u1.2	76	67	65
u1.3	67	65	70
UG1	u1.1+ u1.2+ u1.3=215	u1.1+ u1.2+ u1.3=208	u1.1+ u1.2+ u1.3=202
u2.1	22	22	22
u2.2	22	22	22
u2.3	22	22	22
UG2	u2.1+ u2.2+ u2.3=66	u2.1+ u2.2+ u2.3=66	u2.1+ u2.2+ u2.3=66
p1.1	18	18	18
p1.2	18	18	18
PG1	p1.1+p1.2=36	p1.1+p1.2=36	p1.1+p1.2=36
Total No. of Students in the Department (S)	UG1+UG2+PG1=317	UG1+UG2+PG1=310	UG1+UG2+PG1=304
No. of Faculty in the Department (F)	31-3=28	22-3=19	25-3=22
Student Faculty Ratio (SFR)	11.32	16.32	13.82
Average SFR	**SFR=(SFR1+SFR2+SFR3)/3 = 13.82**		

Note: 3 numbers of faculties are excluded as they teach theory and laboratory classes in 1st year. For 2nd, 3rd and 4th years, 7 faculties from mechanical engineering teach in other departments and 6 faculties from other departments come to teach in mechanical engineering. Therefore fractional loss is -0.25 which is neglected.

CAY=Current Assessment Year
CAY*m*1=Current Assessment Year minus 1
CAY*m*2=Current Assessment Year minus 2

5.2 Faculty Cadre Proportion (25)

The reference Faculty cadre proportion is 1(F1): 2 (F2): 6 (F3)

F1: Number of Professors required = 1/9 × Number of Faculty required to comply with 15:1 Student-Faculty ratio based on number of students (S) as per 5.1

F2: Number of Associate Professors required = 2/9 × Number of Faculty required to comply with 15:1 Student-Faculty ratio based on number of students (S) as per 5.1

F3: Number of Assistant Professors required = 6/9 × Number of Faculty required to comply with 15:1 Student-Faculty ratio based on number of students (S) as per 5.1
Here,

Number of Faculty required to comply with 15:1 Student-Faculty ratio based on number of students (N) as per 5.1 = F = $\frac{317}{15} = 21.13 \approx 22$

Therefore, F1= 1/9 × 22 = 2.44 ≈ 3, F2= 2/9 × 22 = 4.89 ≈ 5, F3= 6/9 × 22 = 14.66 ≈ 15

Table B.5.2

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY (2017–2018)	3	4	5	8	15	19
CAY*m*1(2016–2017)	3	4	5	8	15	10
CAY*m*2(2015–2016)	3	3	5	12	15	10
Average Numbers	RF1=3	AF1=3.67	RF2=5	AF2=9.33	RF3=15	AF3=13

Cadre Ratio Marks = $\left[\left(\frac{AF1}{RF1}\right)+\left(\frac{AF2\times0.6}{RF2}\right)+\left(\frac{AF3\times0.4}{RF3}\right)\right]\times 12.5$

$= \left[\left(\frac{3.67}{3}\right)+\left(\frac{9.33\times0.6}{5}\right)+\left(\frac{13\times0.4}{15}\right)\right]\times 12.5$

$= \mathbf{33.63}$

5.3 Faculty Qualification (25)

FQ = 2.5 × [(10X + 4Y)/F)], where

X is number of regular Faculty with PhD

Y is number of regular Faculty with M Tech

F is number of regular Faculty required to comply with 1:15 Faculty-Student ratio (no. of faculty and no. of students required are to be calculated as per 5.1).

Table B.5.3

Year	X	Y	F	FQ = 2.5 × [(10X + 4Y)/F)]
CAY (2017–2018)	13	14	22	21.14
CAY*m*1(2016–2017)	11	7	22	15.68
CAY*m*2(2015–2016)	13	8	22	18.41
Average Assessment				**18.41**

5.4 Faculty Retention (25)

No. of regular faculty members retained in **CAY (2017–2018) = 20**
No. of regular faculty members retained in **CAY*m*1 (2016–2017) = 20**
No. of regular faculty members retained in **CAY*m*2 (2015–2016) = 23**

During 2017, 3 regular faculty members are transferred with promotion to Jorhat Engineering College and all others are retained during the period of three academic years keeping CAY*m*3 (2015) as base year.

Table B.5.4

Item (% of faculty retained during the period of three academic years keeping CAY*m*3 as base year)	**Marks**
>= 90% of required Faculty members retained during the period of assessment keeping CAY*m*2 as base year	25
>= 75% of required Faculty members retained during the period of assessment keeping CAY*m*2 as base year	20
>= 60% of required Faculty members retained during the period of assessment keeping CAY*m*2 as base year	15

>= 50% of required Faculty members retained during the period of assessment keeping CAY*m*2 as base year	10
< 50% of required Faculty members retained during the period of assessment keeping CAY*m*2 as base year	0

5.5 Innovation by the Faculty in Teaching and Learning (20)

Innovations by the Faculty in teaching and learning shall be summarized as per the following description.

Contributions to teaching and learning are activities that contribute to the improvement of student learning. These activities may include innovations not limited to, use of ICT, instruction delivery, instructional methods, assessment, evaluation and inclusive class rooms that lead to effective, efficient and engaging instruction. Any contributions to teaching and learning should satisfy the following criteria:

- *The work must be made available on Institute website*
- *The work must be available for peer review and critique*
- *The work must be reproducible and developed further by other scholars*

The department/institution may set up appropriate processes for making the contributions available to the public, getting them reviewed and for rewarding. These may typically include statement of clear goals, adequate preparation, use of appropriate methods, and significance of results, effective presentation and reflective critique.

A. Availability of information on the institute website

i. All the innovations and best practices in teaching and learning that are developed and practiced by the faculty members are discussed and made available on the Institute website for the benefit of teaching fraternity and students.

ii. Faculty members are also informed about innovations in teaching learning.

B. Availability for peer review and critique

Innovations in teaching learning are documented and made accessible to all the faculty members for their comments, feedback/suggestions/critique, etc.

C. Reproducibility and further development

It is expected to adopt the innovations in teaching learning and best practices by other faculty members and improve upon it.

D. Use of ICT and other appropriate methods

In addition to traditional teaching learning methodologies, the faculty members adopt group discussions, relevant videos, seminars, mini projects, case studies, PPTs, real time

examples, simulations, quizzes, depending on the course and the situation to create the best learning environment for the students.

E. Formulation of Rubrics for assessment

Following rubrics were formulated for assessment and guidelines:

1. Rubric for B E Project [both for 7th and 8th Semester]
2. Rubric for Practical Training
3. Rubric for General Proficiency [Report & Presentation]
4. Rubric for General Proficiency [Group Discussion]
5. Rubric for Selection of Best B. E. Project
6. Rubric for Assignment assessment.
7. Rubric for Industrial visit assessment.

Rubrics developed have been included in the website and can be access through the link www.aec.ac.in/assessment-method-mechanical-engineering-department

Sample rubrics are given hereunder.

1. Rubrics for B E Project (both for 7th and 8th Semester)

Rubrics for Phase I

Project Phase I: Project work determination	**Students have to defend/prove**			
	Engineering Knowledge	**Novelty of idea**	**Social/ Engineering impact**	**Communication skill**
(1)Project proposal (in short to reflect tentative title of project)				
(2) Problem statement(in details of text/ graphics/ flow chart: Maximum one page)				

(3) Detail work plan (% allocation for Phase II and Phase III)					
Judgement Criteria for Panellists	**Excellent (90≥mark≤100)**	**Very Good (80 ≥mark≤90)**	**Good (70≥ mark≤80)**	**Average (60≥ mark≤70)**	**Fair (40≥ mark≤60)**

Rubrics for Phase II

Criteria	**Marks given by Panel**				
	Excellent (90≥mark≤100)	**Very good (80 ≥mark≤90)**	**Good (70≥ mark≤80)**	**Average (60≥ mark≤70)**	**Fair (40≥ mark≤60)**
(1) Test work done against work promised					
(2) Communication skill of individual student					

Rubrics for Phase III

Scale of assessment

Excellent (90≥mark≤100)	**Very good**	**Good**	**Average**	**Fair**

	(80 ≥mark≤90)	(70≥ mark≤80)	(60≥ mark≤70)	(40≥ mark≤60)

Criteria									
Work plan completed from promised	Appropriateness of final title	Quality of literature Collected	Theoretical deduction if any, If not available, theoretical engineering basis available?	Experimental plan/ Methodology used (Is it systematic & scientific?)	Summary of findings (Statements available?)	Societal value	Environmental impact	Future scope	Report completeness

To be collected from student

Sample of Work plan (students' promise to do work)	**Phase**
(1) Literature survey	**Phase II**
(2) Theoretical work	
(3) Material collection	
(4) Fabrication work	**Phase III**
(5) Testing of model and data collection	
(6) Data analysis	
(7) Presentation of results	
(8) Summary/ conclusions on findings	

For Supervisor

Criteria	**Participation in team**	**Novelty in idea suggestion**	**Punctuality and Discipline**
(1) Preparation of title/ objective/ problem statement			
(2) Literature survey			
(3) Theoretical analysis/ Practical work/ computation work			
(4) Data analysis/ Presentation			
(5) Report writing/ formatting			

2. Rubric for Practical Training

Practical Training Marking guidelines [Total Marks=50]					
Criteria [total marks allotted]	**(0-25%)**	**(25-50%)**	**(50-75%)**	**(75-100%)**	**Total**
Report quality ** [writing format **refer to Annx.1(b)**] [15]	Average	Good	Very good	Excellent	
	Indicate one grade (from average to excellent)				
Domain knowledge tested in viva** [15]	Average	Good	Very good	Excellent	
	Indicate one grade (from average to excellent)				
Knowledge of Technical &	Average	Good	Very good	Excellent	
	Indicate one grade (from average to excellent)				

Behavioural Standards [10]					
Communication Skill[**] [10]	Average	Good	Very good	Excellent	
	Indicate one grade (from average to excellent)				

3. Rubric for General Proficiency [Report & Presentation]

		General Proficiency [Report & Presentation] Marking guidelines [Total Marks=50]					
Criteria [Maximum marks allotted]		**(0-20%)**	**(20-40%)**	**(40-60%)**	**(60-80%)**	**(80-100%)**	**Total**
Topic of study relevance with [*] [10]	a. Technical	Contains "anyone"	Contains "any two"	Contains "any three"	Contains "any four"	Contains "all five"	
	b. Social						
	c. Environmental						
	d. Ethical	Indicate relevance found from (a, b, c, d, e):					
	e. Creative and non conventional idea						
Literature survey/Field study [*] [evaluate if sources have done quality work] [10]		Fair	Average	Good	V. Good	Excellent	
		Indicate one grade (from fair to excellent)					
		(a) Already published	(b) Published work	(c) Published but study	(d) Published but study	(e)	

Ethical report preparation* [10]	work copied	taken as reference and modified the work by own idea	carried out by taking future scope as reference and no own idea given	carried out by taking future scope as reference and own idea and solution given	Original & new work	
	Indicate one among (a) to (e)					
Report quality *** [writing format **refer to annx.1(a)**] [8]	Fair	Average	Good	Very Good	Excellent	
	Indicate one grade (from fair to excellent)					
Presentation & Communication skill ** [8]	Fair	Average	Good	Very Good	Excellent	
	Indicate one grade (from fair to excellent)					
Domain knowledge tested in viva** [4]	Fair	Average	Good	Very Good	Excellent	
	Indicate one grade (from fair to excellent)					

4. Rubric for General Proficiency [Group Discussion]

Rubrics - General Proficiency [Group Discussion]					
Criteria [Maximum marks]	**Needs Work (0-25%)**	**Developing (25-50%)**	**Competent (50-75%)**	**Strong (75-100%)**	**Total (50)**

Presentation skill/communication skill/ participation [20]	***Remarks:***				
Domain knowledge [10]					
	Remarks:				
Team work / individual work/initiation [10]					
	Remarks:				
Social / Environmental issues referred to [2]					
	Remarks:				
Ethics [2]					
	Remarks:				
Leadership skill [3]					
	Remarks:				
Conclusion/ Summary [3]					
	Remarks:				

5. Rubrics for Selection of Best B E Project

Criteria	Disagree	Poor	Below average	Average	Good	Excellent	Total

	(0)	(1-2)	(3-4)	(5-6)	(7-8)	(9-10)	
Novelty of the project							
	Remarks:						
Literature survey							
	Remarks:						
Results and Future scope							
	Remarks:						
Utility/feasibility of practical application							
	Remarks:						
Impact on Society and the Environment							
	Remarks:						
Academic contributions							
	Remarks:						

Some other tools and methods used by the faculties in Teaching and Learning Process are Smart class rooms with the facility of Multimedia Learning Process with LCD projector, Power point presentation, e-learning materials, NPTEL resources. These aids help in interactive teaching and learning and illustrate ideas and concepts of actual operations and processes in a better way.

Moreover, laboratory work, seminars, projects and industry visits are arranged for enhancing learning process of the students.

5.6 Faculty as participants in Faculty development/training activities/STTPs (15)

- *A Faculty scores maximum five points for participation*
- *Participation in 2 to 5 days Faculty development program: 3 points*
- *Participation > 5 days Faculty development program: 5 points*

Table B.5.6

Name of Faculty	Max. 5 per Faculty		
	CAY'2018	CAY*m*1'2017	CAY*m*2'2016
Dr R K Dutta		3	
Dr D K Mahanta		3	3
Dr S K Deb		3	
Dr K Kalita		3	
Dr N Saha			3
Dr P Kakati		5	5
Dr A Borah		5	5
Dr M Hazarika		5	5
Dr D Borah			
Dr K K Das		5	5
Mr K K Brahma			3
Mr P K Choudhury		5	5
Dr P Baisya		5	5
Ms M Gogoi		5	3
Mr Jitul Baruah		3	5
Mr B J Phukan		3	5
Mr M Baruah		3	3
Mr Manash Bhuyan		3	3
Mr Monoj Baruah		3	3

Subhransu Sekhar Mallick	3		
Dr Mayuri Baruah	3		
Piyush Singh	3		
Jyothis A	3		
Mohammed Rafi	3		
Anirban Saha	3		
Juan Chowdhury	3		
Devarshi Kashyap	3		
Dr Abhimanyu Kar	3		
Sum	27	62	61
RF = Number of Faculty required to comply with 15:1 Student-Faculty ratio as per 5.1	22	22	22
Assessment = 3×(Sum/0.5RF)	7.36	16.91	16.64
Average Assessment over three years (Marks limited to 15) = **13.64**			

5.7 Research and Development (30)

5.7.1 Academic Research (10)

Academic Research includes research paper publications, Ph.D. guidance and faculty receiving Ph.D. during the assessment period.

- No. of quality publications in refereed/SCI journals, citations, Books/Book Chapters, etc. (6)

  Publications by the faculties during assessment year 2017–2018

  4 Book chapters, 9 International journal papers, 3 International conference papers, 15 National conference papers.

  Publications by the faculties during assessment year 2016–2017

  1 Book, 1 Book chapter, 16 International journal papers, 8 International conference papers, 18 National conference papers, 2 patents filed.

  Publications by the faculties during assessment year 2015–2016

  13 International journal papers, 15 International conference papers, 19 National conference papers, 1 patent filed.

- **PhD guided/ PhD awarded during the assessment period while working in the institute (4)**

  *PhD awarded during the assessment period= **4***
  *PhD guidance continuing = **33***

Table B.5.7.1: Number of Publications and PhD Guidance

Name of Faculty	Publications			PhD guided/awarded
	CAY'2018	CAY*m*1'2017	CAY*m*2'2016	
Dr R K Dutta	1 Int. Journal paper	1 Int. Conference and 1 Int. Journal paper		Guiding 1 scholar
Dr D K Mahanta		4 National Conference papers	1 Int. Journal paper	PhD awarded 3. . Guiding 3 scholars.
Dr S K Deb	1 Int. Journal paper and 1 National Conference paper	4 National Conference papers	1 Int. Journal paper	Guiding 3 scholars.
Dr K Kalita		1 National Conference, 2 Int. Journal papers		PhD awarded 1. . Guiding 3 scholars. Co-guiding 3 scholars.
Dr N Saha			1 Int. Conference	Guiding 5 scholars.
Dr P Kakati		2 National Conference papers	2 National Conference papers	
Dr A Borah			1 Int. Conference, 2 National Conference papers	Guiding 2 scholars.

Dr M Hazarika	1 Book Chapter, 1 National Conference paper	1 Book, 2 National Conference papers	1 National Conference, 1 Int. Journal papers	Guiding 1 scholar
Dr D Borah		1 National Conference, 1 Int. Journal papers		Guiding 4 scholars. Co-guiding 3 scholars.
Dr K K Das	1 Int. Journal and 8 national conference papers	2 Int. Journal papers	2 Int. Journal, 3 Int. and 8 National Conference papers	Guiding 6 scholars.
Mr K K Brahma		2 Int. Journal papers		
Mr P K Choudhury		2 Int. Conference, 1 Int. Journal papers	1 National Conference, 1 Int. Journal papers	
Mr M Hazarika		3 Int. Conference, 2 Int. Journal papers	1 Int. Journal paper	
Mr P Baisya		1 National Conference paper	1 Int. Journal, 3 Int. and 4 National Conference papers	
Mr Jitul Baruah		1 Int. Journal paper		
Mr B J Phukan	1 Int. Journal paper and 1 National Conference paper	2 National Conference papers		

Mr Manash Bhuyan	2 Int. Journal papers	1 national conference paper		
Mr Monoj Baruah	4 National conference papers			
Subhransu Sekhar Mallick	2 International conference papers			
Dr Mayuri Baruah	2 Int. Journal paper, 1 Book Chapter	3 Int. Journal paper	3 Int. Journal, 3 Int. conference papers	
Piyush Singh	1 Int. Journal, 1Int. conference papers, Book Chapter: 1	1 Int. conference paper	1 Int. Journal, 2 Int. conference papers	
Juan Chowdhury		1 national conference paper		
Devarshi Kashyap	1 Book Chapter	1 Int. conference paper, 1 Book chapter	2 Int.,1 national conference papers	
Dr Abhimanyu Kar			1 Int. Journal paper, Patent : 1 (published)	

Guide	Co-Guide	Research Scholars Enrolled in	
		2016-2017 (CAYm1)	2017 -2018(CAY)
Dr. R K Dutta			MENON J KALITA
Dr. D K Mahanta		NEELAM GOSWAMI, SHARMI DEV SHARMA	ZUNAID AHMED

Dr. K Kalita			UDITYA BORAH, BHARGAV KALITA
Dr. P K Mahanta [Transfered to JEC]	Dr D K Mahanta	RAJIB LOCHAN BIKASH ROY	
Dr. A Borah		MANASH BHUYAN, MONOJ BARUAH	
Dr. N Saha		MANASH J BORAH, RAJIB BHOWMIK, NABAJIT DEV CHOUDURY	NASIM RAJ AHMED, AKASHDEEP GOSWAMI
Dr. D Borah			RAKESH NATH
Dr. M Hazarika		PALASH SAIKA	

Detail of Publications for the assessment years 2016–2017–2018

Dr R K Dutta

1. A Pathak, P K Choudhury, **R K Dutta**, "Taguchi-grey relational based multi-objective optimization of process parameters on the emission and fuel consumption characteristics of a VCR petrol engine", 7th international conference on materials processing and characterization (ICMPC) 17-19 March 2017.
2. Apurba Pathak, P K Choudhury, **R K Dutta**, "Taguchi-Grey Relational Based Multi-Objective Optimization Of Process Parameters On The Emission And Fuel Consumption Characteristics Of A VCR Petrol Engine", Materials Today: Proceedings, Elsevier, Article reference MATPR4355 (In Press dated 11.12.2017).
3. Tribeny Roy and **R K Dutta**, "Integrated Fuzzy AHP and Fuzzy TOPSIS methods for multi-objective optimization of Electro Discharge Machining process", Accepted for publication in Soft Computing (Springer), Ref: Ms. No. SOCO-D-18-00139R2, 2018.

Dr D K Mahanta

1. Manoj Bardaloi, **D K Mahanta**, Production of pyrolysis oil from Areca tree using a fixed bed reactor; Journal of Engineering Research (Published by Academic Publication Council of Kuwait University); Yr 4, Vol 2; June 2016.
2. Sarmi Dev Sarma and **D K Mahanta**, Production and property study of bio-diesel from Olive oil, National Conference on Non- Conventional Energy: Harvesting Technology and Its Challenges, Nov 2017.
3. Neelam Goswami, **D K Mahanta**, Waste to Energy (WTE) in Assam: Scope and Challenges; National Conference on Non- Conventional Energy: Harvesting Technology and Its Challenges, Nov 2017.
4. Banashri Gagoi, **D K Mahanta**, Thermoeconomic analysis of a power plant, National Conference on Non- Conventional Energy: Harvesting Technology and Its Challenges, Nov 2017.
5. Kamal Brahma, **D K Mahanta**, National Conference on Non- Conventional Energy: Harvesting Technology and Its Challenges, Nov 2017.

Dr S K Deb

1. Sanchari Deb, **S.K.Deb**,"Comparative Analysis of Different Micro Energy Resources under Distributed Generation", Asian Journal of Electrical Sciences, ISSN: 2249 - 6297 Vol. 5 No. 1, pp.40-42, 2016.
2. Bashab J Phukan, **S.K.Deb**,"Assessment of Thermal Comfort and Indoor Air Quality in an Air Conditioned Room", National conference on Science, Technology & Environment: Prospects and Limitations in the 21st Century (NCSTEPL-2017), BBEC, Kokrajhar, 2017.
3. Manash Bhuyan, Jitul Baruah, **S.K.Deb**, "Renewable Energy Utilization in India- Issues and Challenges", National conference on Non-conventional Energy: Harvesting Technology and its Challenges, Assam Engineering College, Guwahati ,17-18 October, 2017.
4. Bashab J Phukan, **S.K.Deb**,"Reducing Energy Consumption through Evaporative Cooled Condenser under Air Conditioning System: A Review", National conference on Non-conventional Energy: Harvesting Technology and its Challenges, Assam Engineering College, Guwahati ,17-18 October, 2017.
5. S Choudhury, M J Das, M M Deb Sarma, **S K Deb**, "Design and Development of Efficient and Cost Effective Solar Cooker", National conference on Non-conventional Energy: Harvesting Technology and its Challenges, Assam Engineering College, Guwahati ,17-18 October, 2017.
6. Bashab J Phukan, **S K Deb**, " Performance improvement of Split Air conditioner using evaporative cooling method in the climatic condition of Guwahati" International Research Journal of Engineering and Technology, e-ISSN:2395-0056, p-ISSN:2395-0072
7. Bashab J Phukan, Animesh Goswami, **S K Deb**, " Assessment of Indoor air quality(IAQ) and thermal comfort with and without fresh air supply to a split air conditioner" National Conference on Recent Advances In Science and Technology(NCRAST-2018), March-2018

Dr Kalyan Kalita

1. Bichitra Bikash, Dilip Kumar Bora, **K. Kalita**, "Feasibility study of pumpkin seed oil as a viable feed stock for biodiesel production", National Seminar on Petroleum Biotechnology and Bioenergy, 3-4 March 2017, Tezpur University.
2. Bichitra Bikash, N. D. Choudhury, Dilip Kumar Bora, **K. Kalita**, "Physico-chemical assessment of pumpkin seed oil as a viable feed stock for biodiesel production", Springer Proceedings in Energy, ISBN: 978-981-10-6106-6, 2017.
3. S.Islam and **K. Kalita** (2017) "Assessment of Traffic Noise in Guwahati City, India", International Research Journal of Engineering and Technology, Issue 04, Vol. 04, April 2017.

Dr Plabon Kakoti

1. Hazarika D P, **Kakoti P**, Deb S K; "Energy Recovery from the Waste Air Available in the Withering Trough under Tea Manufacturing Process"; Souvenir Cum Technical Volume, All India Seminar on Recent Trends in Mechanical Engineering, Organised by The Institution of Engineers (India) Assam State Centre, 21-22 October, 2016, Page 66—69
2. Dutta A.K., **Kakoti P**, Deb S K; "Identifying Cost Factors of Black Tea Manufacturing using Pareto and Ishikawa Diagram" "; Souvenir Cum Technical Volume, All India Seminar on Recent Trends in Mechanical Engineering, Organised by The Institution of Engineers (India) Assam State Centre, 21-22 October, 2016, Page 95-100
3. **Kakoti P**, Barua P B, Deb S K; "Development of a Performance Index for the Energy Management (SPIENG) of Tea Gardens using System Dynamics Causal Model", Souvenir, National conference on Non-conventional Energy: Harvesting Technology and its Challenges, Assam Engineering College, Guwahati ,17-18 October, 2017; , Page 6—17.

4. Deb S K , **Kakoti P**; "Opportunities on Energy Research under Smart City Initiation", Souvenir, National conference on Non-conventional Energy: Harvesting Technology and its Challenges, Assam Engineering College, Guwahati ,17-18 October, 2017; , Page 18-21

Dr Niharendu Saha

i. Rejah, R. A., Baishya, P., **Saha, N**., Roy, R. L. B., "A comprehensive study on Domestic Source of municipal solid waste of Guwahati city in North East India : Generation trend and characterization" International Conference on Waste Management, IIT Guwahati, 1-2 April, 2016.

Dr Anil Bora

1. Author: S. K. Rajbongshi, K. Saikia, D. Baruah, P. Rajkhowa, S. Deka, **A. Borah**, Effect of welding parameters on mechanical properties in MIG Welding of 1050 grade aluminium alloys, Proceedings of the International Conference on Materials, Design and Manufacturing Process, ICMDM '16, February 17-19, 2016, College of Engineering, Guindy, Anna University, Chennai, INDIA. [Paper ID 4984], 2016.
2. Authors: A. Dhar, A, Saikia, M.K. Barman, N. Kashyap, **A. Borah**, A Comparative Study of CNC Milling of Aluminium using Flood Coolant and Air Cooled Machining, Proceedings AICTE Sponsored National Conference on Innovative Trends in Mechanical & Automobile Engineering [ITMAE-2016], 11–12 February, 2016, MVSR Engineering College, Hyderabad, Page 71—74, 2016.
3. Authors: Nilav J. Sarma, **Anil Borah**, U.S. Dixit, Analytical and Experimental Investigations on Temperature Distribution I Laser Line Heating, Souvenir Cum Technical Volume, All India Seminar on Recent Trends in Mechanical Engineering, Organised by The Institution of Engineers (India) Assam State Centre, 21-22 October, Page 1—8, 2016.

Dr Manjuri Hazarika

1. B. Sarma, K. Borah, B. Saikia, A. Dhar, **M. Hazarika**, 'An Experimental Study on Burr Formation in Miilling', All India Seminar on Recent Trends in Mechanical Engineering, pp. 22–26, The Institution of Engineers (India), Assam State Centre, Guwahati, 21–22 October, 2016.
2. N. Saha, D. Talukdar, K. Upadhaya, C. Barbhuiya, **M. Hazarika**, 'An Experimental Study on Burr Formation in Turning', International Journal of Innovative Research in Science, Engineering and Technology, Vol. 5, pp. 3215–3222, 2016.
3. U. S. Dixit, **Manjuri Hazarika** and J. P. Davim, 'A Brief History of Mechanical Engineering', Book, Series Title: Materials Forming, Machining and Tribology, Springer International Publishing AG, Cham, Switzerland, 2017.
4. A. Goswami, A. Phukan, A. Borah, **M. Hazarika**, "Solar Energy Utilization in Raj Bhawan and Bijulee Bhawan, Guwahati: A Case Study", National Exhibition & Conference on New and Renewable Energy, ADBU Journal of Engineering Technology (AJET), 6-7 October, 2017.
5. A. Goswami, **M. Hazarika**, "A Review of Rural Electrification in Assam Using Solar Energy Through Decentralized Distributed Generation (DDG)", National Conference on Non-conventional Energy: Harvesting Technology and its Challenges, Assam Engineering College, Guwahati ,17-18 October, 2017.

6. Uday S. Dixit, **Manjuri Hazarika** and J. Paulo Davim, "History of Production and Industrial Engineering through Contributions of Stalwarts", Book Chapter in 'Manufacturing Engineering Education', Elsevier, ISBN**:** 9780081012475, 2018.
7. Anubhav Goswami, Anamitra Phukan, Abhishek Goswami, **Manjuri Hazarika**,'' Prediction of Surface Roughness in Milling Using Regression Analysis'', Research Conclave'18, Students' Academic Board, I I T Guwahati, 8-11 March, 2018.

Dr Dilip Bora

1. Bichitra Bikash, **Dilip Kumar Bora**, K Kalita, "Feasibility study of pumpkin seed oil as a viable feed stock for biodiesel production", National Seminar on Petroleum Biotechnology and Bioenergy, 3-4 March 2017, Tezpur University.
2. Bichitra Bikash, N. D. Choudhury, **Dilip Kumar Bora**, K Kalita, "Physico-chemical assessment of pumpkin seed oil as a viable feed stock for biodiesel production", Springer Proceedings in Energy, ISBN: 978-981-10-6106-6, 2017.

Dr Kalyan Kumar Das

1. **Das K.K**. Das H.R, Ghosh A.K., Sinhamahapatra K.P, 2016, " Damage Potential of Extreme wind events – Downburst and Tornado", Journal of Aerospace Engineering and Technology (ISSN: 2348-7887), Vol:6, no.2,pp 28-46, 2016.
2. Gogoi A, **Das K K,** 2016, Investigation of a Possibly EF2 Tornado That had occurred in the city of Shillong (India) on the 5th of April 2016", Journal of Aerospace Engineering and Technology (ISSN: 2348-7887), Vol:6, no.2,Case study,2016.
3. Das H.R, **Das K.K**, S. Jain.2016 "Optimization of slope for sloped roofed buildings under downburst wind flow using ANSYS**",** International Conference on Recent Trends in Engineering and Material Sciences (17-19 March 2016), Jaipur National University, Jaipur, India
4. Das H.R, **Das K.K**, S.Jain. 2016, "Effect of Downburst Windon Buildings with various Geometrical Shapes" International NAFEMS Conference on Engineering Analysis, Modeling, Simulation and 3D-Printing (NAFEMS-3D) – 2016" at Bangalore during 29-31 August 2016. Awarded as the best paper of the conference.
5. **Das K.K**., 2016, "Investigation of Damage Potential of Extreme Winds", International Conference on Civil Engineering for sustainable Development –Opportunities and Challenges (CESDOC2016)", Assam Engineering College, Guwahati-781013 from 19-21 December 2016 (Accepted).
6. Gogoi A, **Das K.K.**, 2016, Wind related destructions in Eastern Part of India", Proceedings of the National Seminar of "Green Energy- Prospects and Challenges" organized by Assam Science and Technology University held on 26th -27th April 2016 (ISBN:978-93-83588-11-4).
7. Das H.R, **Das K.K**., Ghosh A.K, 2016, "A Numerical Study of Wind induced external and internal flow fields on Prismatic building with wall openings", Proceedings of the National Seminar of "Green Energy- Prospects and Challenges" organized by Assam Science and Technology University held on 26th -27th April 2016 (ISBN:978-93-83588-11-4).
8. Das H.R, **Das K.K.,** Ghosh A.K, Pathak J.,2016, "Effect of downburst wind on buildings and interference effect", Proceedings of the National Seminar of "Green Energy- Prospects and Challenges" organized by Assam Science and Technology University held on 26th -27th April 2016 (ISBN:978-93-83588-11-4).

9. Das H.R, **Das K.K.,** Ghosh A.K, Pathak J.,2016, "Comparison of downburst and synoptic wind effects on prismatic building", Proceedings of the National Seminar of "Green Energy- Prospects and Challenges" organized by Assam Science and Technology University held on 26th -27th April 2016 (ISBN:978-93-83588-11-4).
10. **Das K.K**. 2016, " Survey report on Ferry disaster accident due to HWE" ,Proceedings of the National Seminar of "Green Energy- Prospects and Challenges" organized by Assam Science and Technology University held on 26th -27th April 2016 (ISBN:978-93-83588-11-4).
11. **Das K.K.,** Das. N., 2016, " Field Study of Tornado disaster in Bangladesh" ,Proceedings of the National Seminar of "Green Energy- Prospects and Challenges" organized by Assam Science and Technology University held on 26th -27th April 2016 (ISBN:978-93-83588
12. Das H.R., **Das. K.K**., 2016, " A Numerical Study of wind induced internal and external fields on a low rise buildings with wall openings", National Conference on Emerging Trends in Engineering opportunities in North East, held on 28-29th April 2016 at Royal School of Engineering and Technology.
13. Das H.R., **Das. K.K.,** 2016, "Numerical Simulation of Downburst Wind", National Conference on Emerging Trends in Engineering opportunities in North East, held on 28-29th April 2016 at Royal School of Engineering and Technology, Guwahati.
14. Das H.R, **Das K.K**, Numerical investigation of the downburst wind on buildings with various geometrical shape", Journal of Aerospace Engineering and Technology (ISSN:2348-7887), Vol.7,no.2,pp34-41, 2017.
15. Deka R, **Das K.K**, Numerical investigation of unsteady incompressible viscous flow over flat plate having rectangular obstruction using vorticity stream function approach, International Journal of advance research in science and Technology(IJARSE)(ISSN:2319-8354, Vol.06,issue 11, 2017.
16. **Das Kalyan Kumar**, Das H.R, 2018, "Numerical investigation of macro flow dynamics of downburst wind over buildings and the interference effect" Journal of Aerospace Engineering and Technology (ISSN: 2348-7887) Vol-8,No1.
17. Das H.R, **Das K.K**, 2018, "Investigation of flow dynamics of downburst wind" in the proceedings of the Nation Seminar of Wind Engineering (NSWE2018) organized by PCPS Girls polytechnic, Guwahati and Indian society of Wind Engineering (ISWE) and sponsored by NEQIP program of AICTE on 8-9th February 2018 (ISBN: 978-93-83588-15-2)
18. H.R Das, **Das K.K**, Ghosh A.K,2018," A numerical study of wind induced external and internal flow field within wall openings" in the proceedings of the Nation Seminar of Wind Engineering (NSWE2018) organized by PCPS Girls polytechnic, Guwahati and Indian society of Wind Engineering (ISWE) and sponsored by NEQIP program of AICTE on 8-9th February 2018 (ISBN :978-93-83588-15-2)
19. **Das K.K**, Bhattacharyya H.K, 2018, " Wind related disaster in Assam" in the proceedings of the Nation Seminar of Wind Engineering (NSWE2018) organized by PCPS Girls polytechnic, Guwahati and Indian society of Wind Engineering (ISWE) and sponsored by NEQIP program of AICTE on 8-9th February 2018 (ISBN: 978-93-83588-15-2)
20. Bhattacharyya H.K, **Das K.K**, 2018 " Propeller design- a theoretical approach of HAWT blade design" in the proceedings of the Nation Seminar of Wind Engineering (NSWE2018) organized by PCPS Girls polytechnic, Guwahati and Indian society of Wind Engineering (ISWE) and sponsored by NEQIP program of AICTE on 8-9th February 2018 (ISBN :978-93-83588-15-2)

21. **Das K. K.,** Bhattacharyya H. K, 2018, " Damage potential of extreme wind" in the proceedings of the Nation Seminar of Wind Engineering (NSWE2018) organized by PCPS Girls polytechnic, Guwahati and Indian society of Wind Engineering (ISWE) and sponsored by NEQIP program of AICTE on 8-9th February 2018 (ISBN :978-93-83588-15-2)
22. **Das K.K.,** Ghosh A.K, 2018, " Numerical and experimental simulation of downburst wind" in the proceedings of the Nation Seminar of Wind Engineering (NSWE2018) organized by PCPS Girls polytechnic, Guwahati and Indian society of Wind Engineering (ISWE) and sponsored by NEQIP program of AICTE on 8-9th February 2018(ISBN: 978-93-83588-15-2)
23. Das P.P, **Das K.K,** 2018, " Numerical investigation of fluid flow inside a rectangular driven cavity" in the proceedings of the Nation Seminar of Wind Engineering (NSWE2018) organized by PCPS Girls polytechnic, Guwahati and Indian society of Wind Engineering (ISWE) and sponsored by NEQIP program of AICTE on 8-9th February 2018 (ISBN: 978-93-83588-15-2)
24. **Das K.K**, 2018, "CFD in building design" as invited speaker at the National Conference on Recent advances in Science and Technology (NCRAST 2018) organized by Assam Science and Technology University on 15-17th March 2018 at Guwahati under TEQIP-III.

Mr. Kamal Brahma

1. **Brahma K.K**., Mahanta D. K. Blending properties of petro-diesel and biodiesel from the seeds of pongamia pinnata Material Today: Proceeding (Elsevier) Accepted.
2. **Brahma K.K.**, Mahanta D. K. Performance analysis of CI engine using biodiesel from pongamia pinnata Int. Journal of Mech. Engg. and Technology, 8(1), 281-291, 2017, ISSN-0976-6359.

Mr Prasanta K Choudhury

1. Mazarbhuiya R.M., **Choudhury P. K**., Rahang M., "Taguchi Grey Relational based Multi Objective Optimization of Process Parameters in Electro Discharge Machining of Aluminium with Copper electrode", Journal of Basic and Applied Engineering Research (JBAER), Volume 3, Issue 13. October-December, 2016.
2. Sarmah. P., **Choudhury.P.K**., "Opimisationofoperating process parameters for minimization of pressure development in oil pipeline due to wax deposition using Taguchi method", Souvenir cum technical volume of All India seminar on recent trends in mechanical engineering, 21-22nd October, 2016.
3. Mazarbhuiya R. M., **Choudhury P. K**., Patowari P. K., "An Experimental Study onParametric Optimization for Material Removal Rate and Surface Roughness on EDM by using Taguchi Method",7th International Conference on Materials Processing and Characterization (ICMPC-2017), Materials Today Proceedings.(in press)
4. Mazarbhuiya R. M., **Choudhury P. K.,** "Multi-Objective Optimization of EDM Process Parameters using Taguchi Grey Relational Analysis for Aluminium Work Material with Copper Electrode", International Research Journal OF Engineering and Technology (IRJET),Volume 4, issue 9 September, 2017.
5. A.Pathak, **P.K. Choudhury** and R.K.Dutta (2017) "Taguchi-grey relational based multi-objective optimization of process parameters on the emission and fuel consumption characteristics of a VCR petrol engine", 7th International conference on Material Processing and characterization, ICMPC-2017, 17-19 March, 2017.

Mr Bashab J Phukan

1. **Bashab J Phukan**, S.K.Deb,"Assessment of Thermal Comfort and Indoor Air Quality in an Air Conditioned Room", National conference on Science, Technology & Environment: Prospects and Limitations in the 21st Century (NCSTEPL-2017), BBEC, Kokrajhar, 2017.
2. **Bashab J Phukan**, S.K.Deb,"Reducing Energy Consumption through Evaporative Cooled Condenser under Air Conditioning System: A Review", National conference on Non-conventional Energy: Harvesting Technology and its Challenges, Assam Engineering College, Guwahati ,17-18 October, 2017.
3. **Bashab J Phukan**, S K Deb, " Performance improvement of Split Air conditioner using evaporative cooling method in the climatic condition of Guwahati" International Research Journal of Engineering and Technology, e-ISSN:2395-0056, p-ISSN:2395-0072
4. **Bashab J Phukan**, Animesh Goswami, S K Deb, " Assessment of Indoor air quality(IAQ) and thermal comfort with and without fresh air supply to a split air conditioner" National Conference on Recent Advances In Science and Technology(NCRAST-2018), March-2018.

Mr Jitul Baruah

1. Priyanka Nath, **Jitul Baruah**, "Feasibility Analysis of Regeneration of Silica Gel Used in Dehumidification Process of Air Conditioning by the Condenser Waste Heat of Air Conditioner", International Journal of Advanced Research in Science, Engineering and Technology, Vol. 4, Issue 8 , August 2017, ISSN: 2350-0328.

Dr. Pradip Baishya

1. Waste composting a sustainable practice. Published on International Journal for Innovative Research in Science & Technology. ISSN (online): 2349-6010 Volume 2 | Issue 11 | April 2016.
2. A Comprehensive Study on Domestic Source of Municipal Solid Waste (MSW) of Guwahati City in North-East India: Generation Trend and Characterization. Conference paper presented on International Conference on Waste Management (RECYCLE 2016) at IIT, Guwahati, India.
3. Modelling Affordable Waste Management Solutions for India. Conference paper presented on International Conference on Waste Management (RECYCLE 2016) at IIT, Guwahati, India.
4. Waste Segregation and Composting. Conference paper presented on National Seminar on Green Energy- Prospects and Challenges at Assam Science & Technology University, April, 2016. ISBN 9789383588-11-4.
5. Eco Design in Waste Management. Conference paper presented on National Conference on Emerging Trends in Engineering: Opportunities In North-east India at Royal Group of Institution, Guwahati, April, 2016.
6. Presented paper on Recycling of Waste Expanded Polystyrene (EPS) at the All India Seminar on "Recent Trends in Mechanical Engineering" on 21-22 October, 2016 at Institute of Engineers (India) Assam State Centre, Guwahati.
7. Presented paper on Solid Waste Management for Smart Cities at the All India Seminar on "Tackling Urban Environmental Concerns in Upcoming Smart Cities of our Country" on 25-26 October, 2016 at Institute of Engineers (India) Assam State Centre, Guwahati.
8. Source Segregation of Municipal Solid Waste. Paper presented on International Conference on Civil Engineering for Sustainable Development – Opportunities and Challenges, at Assam Engineering College held from 19th to 21st December 2016 in Guwahati, Assam, India.
9. Paper presented on Case Study of Critical Operational and Maintenance Problem of a Waste Heat Recovery Power Plant at National Conference on Non Conventional Energy: harvesting

Technology and Its Challenges from 17th -18th November, 2017 at Assam Engineering College, Assam, India.

Mr Manash Hazarika

1. **Manash Hazarika** and Dipak Laha. Machine-Part Cell Formation for Maximum Grouping Efficacy Based on Genetic Algorithm. IEEE, Workshop on Computational Intelligence: Theories, Applications and Future Directions (WCI) 2015. DOI: 10.1109/WCI.2015.7495521.
2. **Manash Hazarika** and Dipak Laha. A Heuristic approach for Machine Cell Formation problems with Alternative Routings. Procedia Computer Science 89: 228-242. December 2016.
3. Dipak Laha and **Manash Hazarika**. A heuristic approach based on Euclidean distance matrix for the machine-part cell formation problem. Materials today: proceedings 4(2): 1442-1451 · December 2017.
4. **Manash Hazarika** and Dipak Laha. Genetic Algorithm approach for Machine Cell Formation with Alternative Routings. Materials Today: Proceedings (in press).
5. Soumyabrata Bhattacharjee & **Manash Hazarika**. Formation of machine-part cells using assignment allocation algorithm. IEEE, International Conference on Advances in Mechanical, Industrial, Automation and Management Systems (AMIAMS-2017). DOI 10.1109/AMIAMS.2017.8069213.
6. **Manash Hazarika** and Dipak Laha. Application of Genetic Algorithm in Generalized Machine Cell Formation Problem. IEEE, International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS 2017) (in press).
7. Mustafa Ahmed, Manash Baishya, Sasanka Sharma and **Manash Hazarika**. Determination of accuracy of winding deformation method using kNN based classifier used for 3 MVA transformers. Journal of Materials and Environmental Science (in press).

Mr. Manash Bhuyan

1. **Manash Bhuyan**, "Computer Aided Analysis and Design of Facility Layout Using Ant Colony Optimization", The IUP Journal of Computer Sciences, Vol. X, Issue-4, pp.28-40, 2016, IUP Publication. Accepted in SSRN eLibrary, ELSEVIER copyright 2018.
2. **Manash Bhuyan**, et.al., "Renewable Energy Utilizations in India- Issues and Challenges", proc. of National Conference on Non Conventional Energy: Harvesting Technology and Its Challenges (NCEHTC-2017), jointly organized by Department of Chemical Engineering and Department of Mechanical Engineering, AEC, Guwahati-13 on 17-18 Nov/2017, sponsored by AICTE under NEQIP.
3. **Manash Bhuyan,** et.al., "A Typical Approach to Design and Analysis of Foldable Bicycle", The IUP Journal of Mechanical Engineering, Vol. XI, Issue-01, pp. 7-27, Feb/2018, IUP Publication.

Mr Monoj Baruah

1. **Monoj Baruah** , Manash Borah " Computational Investigation of Elliptical Pin Fin Heat Exchanger" National Conference On Recent Advances in Science and Technology, March 2018.
2. Bhupenjeet Deka, **Monoj Baruah** "A Thermal Behaviour Study on Tunnel Kiln and its Performance Analysis with its Energy Conservation Opportunities" National Conference On Recent Advances in Science and Technology, March 2018.

3. Pronuj Biswas, **Monoj Baruah**, Papul Changmai, Mrinal Krishna Chaudhury, Nabajit Dev Choudhary, "Partial Shading Analysis on Solar PV Module" National Conference On Recent Advances in Science and Technology, March 2018.
4. Basabi Goswami Hazarika, Ashwini Kumar Baruwa, **Monoj Baruah** "Design of a Biomass Gasification Plant for Electrification of Remote and Unelectrified Village Using Biomass as Raw material" National Conference On Recent Advances in Science and Technology, March 2018.

Dr Mayuri Baruah

1. **M. Baruah**, "Experimental Measurement of Residual stress of Ti6Al4V Alloys", Journal of Manufacturing and Materials Processing, 2018. (accepted).
2. **M. Baruah** and S. Bag: Influence of pulsation in thermo-mechanical analysis on laser microwelding of Ti6Al4V alloy, *Optics and Laser Technology*, 90, 40 - 51, 2017.
3. **M. Baruah** and S. Bag: Microstructural influence on mechanical properties in plasma microwelding of Ti6Al4V alloy, *Journal of Materials Engineering and Performance*, 25(11), 4718 - 4728, 2016.
4. **M. Baruah** and S. Bag: Influence of heat input in microwelding of titanium alloy by micro plasma arc, *Journal of Materials Processing Technology*, 231, 100 - 112, 2016.
5. **M. baruah** and S. Bag: Characteristics difference of thermo-mechanical behavior in plasma microwelding of steels, *Welding in the world*, 61(4), 857-871, 2017.
6. **M. Baruah** and S. Bag:Probing phase lag effect in ultra-short pulse laser heating of nano-film, *Manufacturing letters*, 13, 6-10, 2017.
7. T. Saikia**, M. Baruah** and S. Bag: On the effect of heat input in plasma microwelding of maraging steel, Proceedings of IMechE, Part b, Journal of Engineering Manufacture, in press.
8. S. Kumar, S. Bag and **M. Baruah**: Finite element model for femtosecond laser pulse heating using dual phase lag effect, *Journal of Laser Applications*, 28(3), 032008:1 - 14, 2016.
9. **M. Baruah** and S. Bag: Effect of peak power on joint characteristics of pulse laser welding of 0.5 mm Ti6Al4V sheets, AIMTDR 2016, 16th - 18th December, 2016, Pune.
10. **M. Baruah** and S. Bag: Analysis of temperature of microplasma arc welding of 0.5 mm Ti6Al4V sheets, 1rst International Conference on Materials, Manufacturing and Design Engineering (iCMMD 2016), 20 – 21th December, 2016, Vidyavihar, Raigad, Maharashtra, India.
11. **M. Baruah** and S. Bag: Influence of gap conductance in thermal analysis of laser transmission welding, Recent Trend in Mechanical Engineering, 21st – 22nd October, 2016, Institute of Engineers (India, Assam State Centre), Guwahati.
12. Laser welding of Titanium alloys, Application of Lasers in Manufacturing - Select Papers from AIMTDR 2016, edited by Prof. Dr. Uday S. Dixit, Prof. Dr. Shrikrishna N. Joshi, Prof. J. Paulo Davim (in press).

Dr Abhimanyu Kar

1. **Abhimanyu Kar** and Prasanta Kumar Das, "Entrainment Caused by a Single Bubble Passing Through Liquid-liquid Interface in Unconfined Space" 9th *International Conference of Multiphase Flow, Firenze, Italy, 2016*

Patent

1 Roshmi Sen, **Abhimanyu Kar** and Nishith Ranjan Mandal "Transformable bunk beds in twin bed and workspace configuration" Indian patent no. **973/KOL/2014,** published in 2016**,** pending for final grant.

Mr Piyush Singh

1. **Piyush Singh**, Pankaj Biswas, Sachin D Kore, Finite Element and Experimental Study of Self-Reacting Friction Stir Welding of Aluminium Alloy AA6061-T6, 6th International & 27th All India Manufacturing Technology, Design and Research Conference, 2016, Excel India, Vol. ISBN: 978-93-86256-27-0, pp 967-971.
2. **Piyush Singh**, Pankaj Biswas, Sachin D. Kore, A three-dimensional fully coupled thermo-mechanical model for Self-reacting Friction Stir Welding of Aluminium AA6061 sheets, 2016, *J. Phys.: Conf. Ser.,* 759, pp. 012047.
3. **Piyush Singh**, Pankaj Biswas, Sachin D. Kore, Finite Element Method and Experimental Study of Self-Reacting Friction Stir Welding of Aluminium Alloy AA6061-T6, "Simulations for Design and Manufacturing -Select Papers from AIMTDR 2016" (editors: U.S. Dixit and R. Kant), Springer. (accepted for publication).
4. Avinish Tiwari, **Piyush Singh**, Pankaj Biswas and S D Kore, Effect of Traverse Speed on Friction Stir Welding of AISI 1006 Low Carbon Steel, International Congress 2017 of the International Institute of Welding (IIW-IC 2017), 7-9 December 2017, Chennai, Paper no. C086, pp. 340-345.
5. A. Tiwari, **P. Singh**, P. Biswas, S.D. Kore, Friction Stir Welding of AISI 1006 Low Carbon Steel, INCOM18: Proceedings of the 1st International Conference on Mechanical Engineering Jadavpur University Kolkata India January 4 – 6, 2018 Paper No. INCOM18-211, pp. 530-533.
6. **Piyush Singh**, Pankaj Biswas, Sachin D. Kore, Influence of Traverse Speed in Self-Reacting FSW of AA6061-T6, Journal of Ship Production and Design (accepted for publication).

Mr Subhransu Sekhar Mallick

1. **S .S Mallick**, P Mahanta, A Mahapatro, "Studies on Total and Radiative heat transfer in Circulating Fluidized Beds", 11th International conference on Circulating Fluidized Bed Technology, Page. 447-453, May 14-17,2014, Beijing, China. (Scopus indexed).
2. A Mahapatro, P Mahanta, **S.S Mallick**, "Numerical Studies on Simulation of Gas-Solid flow in a pressurized circulating fluidized bed riser", 11th International conference on Circulating Fluidized Bed Technology, Page . 323-328,May 14-17, 2014, Beijing, China. Isbn no: 978-7-122-20169-0 (Scopus indexed).

Mr Juan Chowdhury

1. **Juan Chowdhury**, Gaurav Kumar, Karuna Kalita, Kari Tammi and Sashindra K Kakoty, Rakenteiden Mekaniikka, ''A review on linear switched reluctance motor", Journal of Structural Mechanics, Vol. 50, No3, 2017, pp. 261–270. https://rakenteidenmekaniikka.journal.fi/index https://doi.org/10.23998/rm.65121

Patents:

1. **Linear Switched Reluctance Actuator for Powerloom**
   Application Number: 201731045107
   Priority Date :15/12/2017
2. **High Force Density Quad Air Gap Switched Reluctance Motor**
   Application Number: 201731045006
   Priority Date :14/12/2017

Mr Devarshi Kashyap

1. **D. Kashyap** and S. Kanagaraj; Development of nano-barium sulfate filled shape memory polymer composite for endovascular embolization.; Indo-Australian conference on biomaterials, tissue engineering, drug delivery system and Regenerative medicine (BiTERM-2016), April 2016
2. **D.Kashyap** and S.Kanagaraj; Shape memory polymers for morphing wings; International Workshops, Conferences and Expo for Military and Marine Applications.; (IWCEM 2016), June 2016.
3. **D.Kashyap** and S. Kanagaraj; Radiopaque shape memory polymers for minimally invasive embolization.; National conference on Emerging Biomaterials (NCEB-2016), October 2016.(Awarded best oral presentation.)
4. **D. Kashyap** and S Kanagaraj; 3D printed Shape memory polyurethane foam for endovascular embolization; 6th Asian Biomaterials Congress (ABMC6), October 2017
5. **D. Kashyap** and S. Kanagaraj; Injectable biomaterials for endovascular applications in "Advances in Polymer Materials and Technologies"; edited by Prof. Sri Bandyopadhyay and S. Anandhan, CRC press. (ISBN 9781498718813)
6. **Devarshi Kashyap**, Charan Mukundan, S Kanagaraj; Manufacturing and characterization of shape memory polymer and composites.; Primary and Secondary Manufacturing of Polymer Matrix Composites. Edited by Kishore Debnath, Inderdeep Singh. CRC press. 5 October 2017. ISBN 978-1498799300.

5.7.2 Sponsored Research (5)

Funded research:
(Provide a list with Project Title, Funding Agency, Amount and Duration)

5.7.3 Development Activities (10)

Provide details:

- *Product development*
- *Research laboratories*
- *Instructional materials*
- *Working models/charts/monograms, etc.*

1. The HVAC Laboratory is established in the department during the assessment period with the following details.

Name of the Laboratory	Objective	Equipments/Software
HVAC Laboratory (Heating Ventilation & Air Conditioning Lab)	Research in PG and PhD level and laboratory for UG.	• Indoor air quality monitoring instrument • Clamp meter • Hygrometer • Air capture hood • Compressed air meter • TRANSYS Software

2. Several working models and products are developed under the guidance of faculties during project works as given below.

Sr. No	Name of faculty	Working model/Product	Year
1	Ms Mousumi Gogoi	Design and Fabrication of a Working Model of Geo-Fountain	2018
2	Dr Dilip Kr Borah	Design and Fabrication of a Multi-purpose Agricultural Equipment	2018
3	Dr Manjuri Hazarika	Design, Fabrication and Testing of a Package Transport Mechanism	2018
4	Mr Manash Bhuyan	Design and Fabrication of a Pedal Powered Pounding Machine (Going to apply for Patent)	2018
5	Mr Manash Bhuyan	Design and Fabrication of a Portable Folding Bicycle	2017
6	Dr D K Mahanta	Design, Construction and Experimentation of an Incubator	2017
7	Dr D K Mahanta	Automatic Parking System	2017
8	Dr S K Deb	Fabrication and Analysis of Poly Generative Solar Thermal System	2016
9	Dr Anil Borah	Design and Construction of Low Smoke Chula	2016
10	Mr P K Choudhury	Fabrication of Fixtures for Variable Welding Speed and Torch Height Adjustment in the Existing MIG Welding Setup	2016
11	Dr Kalyan Kr Das	Fabrication of an Aircraft with Vertical Landing & Vertical Take Off	2016

5.7.4 Consultancy (From Industry) (5)

(Provide a list with Project Title, Funding Agency, Amount and Duration)

5.8 Faculty Performance Appraisal and Development System (FPADS) (30)

The assessment is based on:

- *A well-defined system for faculty appraisal for all the assessment years (10)*
- *Its implementation and effectiveness (20)*

As Assam Engineering College is a government institution, performance is appraised by the Government of Assam. An annual self-assessment report is submitted to the Government of Assam (through the principal) by the faculties with a copy to the head of the department. The format of the self-assessment report is given by the Government of Assam which is given below.

Annual self-Assessment for the performance based appraisal system (PBAS)

Session/ Year

(To be completed and submitted at the end of each academic year)

PART-A
GENERAL INFORMATION

1. Name(Block letters) :
2. Father's/ Mother's name/ Husband's name :
3. Department :
4. Current designation and grade pay :
5. Date of last promotion :
6. Address for correspondence (With pin code) :

7. Permanent Address : (With pin code)
   Telephone no :
   E-mail :
8. Whether acquired any degrees of fresh academic qualifications during the year :
9. Academic staff college orientation/ Refresher course attended during the year :

Name of the course/summer school	Place	Duration	Sponsoring agency

10. Date of appointment in Govt. of Assam :
11. Date of joining:
12. For which position & AGP you are applying under CAS:
13. Date of eligibility for the position :
14. Education Qualification (Graduation onwards):

Examination	Name of the University	Year of passing	Marks Obtained (%)	Class/Grade
BE/B. Tech				
M. Tech/ME				
Other examination, if any				

15. Research Degree(s):

Degree	Name of the University	Date of Award	Title

Ph.D/D.Phil			
D.Sc/D.Lit			
Other examination, if any			

16. Details of Teaching/ Research/Academic Experience

Designation	Employer	Period of service From To	Scale of pay

I declare that the particulars given above are correct to the best of my knowledge and belief

Signature of the Candidate

All entries made above are checked and verified and found to be correct.

Signature of Principal

Date:

Seal

5.9 Visiting/Adjunct/Emeritus Faculty etc. (10)

1. **Dr. Pradip Baishya**, Assistant Professor, Mechanical Engineering Department visited University of Melbourne, Australia from 22.04.2017 to 20.06.2017 and developed three Courses for the proposed PG Programme on Construction Management to be started at Assam Engineering College as a part of AEC-University of Melbourne Collaborative Project.

2. **Dr Sudip Kumar Deb** visited University of Melbourne from 5.3.2018 to 27.4.2018 as a part of the collaborative research project on Smart Villages. He collaborated with researchers within the Faculty of Architecture, Building and Planning. The purpose of the visit was to develop expertise on key issues in Construction Management, Project Finance and Economics and Project Procurement and to help build collective capacity in construction management education and research across the State of Assam.