Criterion 5	**Faculty Information and Contributions**	**200**

For the Year 2019-20

Name of the Faculty Member	Qualification			Association with the Institute	Designation	Date of Joining	Department	Specialization	Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development	
	Degree	University	Year with Graduation						Research Paper Publications	PhD. D. Guidance	Faculty Receiving Ph. D.			
Prof. Aijaz Ahmad	Ph.D	IIT Delhi	1999	35 Years	Professor	01/10/1985	Electrical Engineering Department	Power Systems	6	6	-	-	-	
Prof. Mairaj -ud-Din Mufti	Ph.D	IIT Delhi	1998	34 Years	Professor	01/09/1986	Electrical Engineering Department	Power Systems	4	9	-	-	-	
Prof. Shameem Ahmad Lone	Ph.D	NIT Srinagar	2007	26 Years	Professor	01/03/1994	Electrical Engineering Department	Power Systems	2	7				
Prof. Abdul Hamid Bhat	Ph.D	IIT Roorkee	2008	24 Years	Professor	16/01/1996	Electrical Engineering Department	Power Electronics	8	8				
Dr. Sheikh Javed Iqbal	Ph.D	NIT Srinagar	2015	24 Years	Associate Professor	14/3/1996	Electrical Engineering Department	Power Systems	1	7				
Dr. Mohammad Abid Bazaz	Ph.D	IIT Delhi	2013	20 Years	Associate Professor	23/03/2000	Electrical Engineering Department	Control Systems	16	6		1		
Dr. Obbu Chandra Sekhar	Ph.D	JNTU Hyderabad	2014	I year 09 months	Associate Professor	29/10/2018	Electrical Engineering Department	Power Electronics	12	2		1		
Dr. Asadur Rahman	Ph.D	NIT Silchar	2016	I year 09 months	Assistant Professor	30/10/2018	Electrical Engineering Department	Power & Energy Systems	4	2	0			
Dr. Neeraj Gupta	Ph.D	IIT Roorkee	2015	I year 09 months	Assistant Professor	29/10/2018	Electrical Engineering Department	Power system	4	3	0			
Dr. Farhad Ilahi Bakhsh	Ph.D	IIT Roorkee	2017	I year 09 months	Assistant Professor	01/11/2018	Electrical Engineering Department	Renewable Energy Systems	15	2	0	1		
Dr. Kushal M Jagtap	Ph.D	IIT Roorkee	2017	I year 09 months	Assistant Professor	26/10/2018	Electrical Engineering Department	Electrical and Power Engineering	1	0	0	1		

Dr. Ravi Bhushan	Ph.D	IIT (ISM) Dhanbad	2018	I year 09 months	Assistant Professor	29/10/2018	Electrical Engineering Department	Power and Energy System	1	3	0			
Dr. Chilaka Ranga	Ph.D	NIT Hamirpur	2018	I year 09 months	Assistant Professor	23/10/2018	Electrical Engineering Department	Power Systems (Electrical Machines)	4	1	0			
Ms. Tabish Nazir Mir	B.Tech	NIT Srinagar	2014	4 Years	Assistant Professor	08/01/2016	Electrical Engineering Department	Power Electronics	5	0	Y			
Mr. Aaqib Ali Abbas	M.Tech	NIT Srinagar	2018	1 year 03 months	Assistant Professor	22/03/2019 to 31/10/2020	Electrical Engineering Department	Power Systems	--	-	-			
Dr. Shufali Ashraf Wani	Ph.D.	JamiaMilliaIslamia	2019	08 months	Assistant Professor	30/10/2019 to 31/12/2020	Electrical Engineering Department	Instrumentation	6	0	0			
Mr. MuneebUl Bashir	M.Tech	JamiaMilliaIslamia	2019	08 months	Assistant Professor	30/10/2019 to 31/12/2020	Electrical Engineering Department	Power Systems	--	-	-			

For the Year 2018-19

Name of the Faculty Member	Qualification			Association with the Institute	Designation	Date of Joining	Department	Specialization	Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development	
	Degree	University	Year with Graduation						Research Paper Publications	PhD. D. Guidance	Faculty Receiving Ph. D.			
Prof. Aijaz Ahmad	Ph.D	IIT Delhi	1999	34 Years	Professor	01/10/1985	Electrical Engineering Department	Power Systems	4	6	-			
Prof. Mairaj -ud-Din Mufti	Ph.D	IIT Delhi	1998	33 Years	Professor	01/09/1986	Electrical Engineering Department	Power Systems	8	9	-			
Prof. Shameem Ahmad Lone	Ph.D	NIT Srinagar	2007	25 Years	Professor	01/03/1994	Electrical Engineering Department	Power Systems	0	8	-			
Prof. Abdul Hamid Bhat	Ph.D	IIT Roorkee	2008	23 Years	Professor	16/01/1996	Electrical Engineering Department	Power Electronics	5	5	-			
Dr. Sheikh Javed Iqbal	Ph.D	NIT Srinagar	2015	23 Years	Associate Professor	14/3/1996	Electrical Engineering Department	Power Systems	0	6	-			
Dr. Mohammad Abid Bazaz	Ph.D	IIT Delhi	2013	19 Years	Associate Professor	23/03/2000	Electrical Engineering Department	Control Systems	14	6	-			
Dr. Obbu Chandra Sekhar	Ph.D	JNTU Hyderabad	2014	09 months	Associate Professor	29/10/2018	Electrical Engineering Department	Power Electronics	3	1	0			
Dr. Asadur Rahman	Ph.D	NIT Silchar	2016	09 months	Assistant Professor	30/10/2018	Electrical Engineering Department	Power & Energy Systems	0	2	0			
Dr. Neeraj Gupta	Ph.D	IIT Roorkee	2015	09 months	Assistant Professor	29/10/2018	Electrical Engineering Department	Power system	1	2	0			
Dr. Farhad Ilahi Bakhsh	Ph.D	IIT Roorkee	2017	09 months	Assistant Professor	01/11/2018	Electrical Engineering Department	Renewable Energy Systems	3	2	0			
Dr. Kushal M Jagtap	Ph.D	IIT Roorkee	2017	09 months	Assistant Professor	26/10/2018	Electrical Engineering Department	Electrical and Power Engineering	0	0	0			
Dr. Ravi Bhushan	Ph.D	IIT (ISM) Dhanbad	2018	09 months	Assistant Professor	29/10/2018	Electrical Engineering Department	Power and Energy System	3	2	0			
Dr. Chilaka Ranga	Ph.D	NIT Hamirpur	2018	09 months	Assistant Professor	23/10/2018	Electrical Engineering Department	Electrical Machines	2	1	0			

Ms. Tabish Nazir Mir	B.Tech	NIT Srinagar	2014	3 Years	Assistant Professor	08/01/2016	Electrical Engineering Department	Power Electronics	6	-	Y			
Mr. Aaqib Ali Abbas	M.Tech	NIT Srinagar	2018	1 year 03 months	Assistant Professor	22/03/2019 to 31/10/2020	Electrical Engineering Department	Power Systems	--	-	-			
Mr. Zahid Farooq	M.Tech	AL-Falah University	2016	2 Year 6 Months	Assistant Professor	03/04/2017 to 27/09/2018	Electrical Engineering Department	Power Systems	-	-	-			
Mr. Keshav Dutt	M.Tech	NIT Srinagar	2017	6 Months	Assistant Professor	05/09/2017 to 18/07/2018	Electrical Engineering Department	Power Systems	-	-	-			
Mr. Deep Agarwal	M.Tech	NIT Srinagar	2017	6 Months	Assistant Professor	05/09/2017 to 31/12/2018	Electrical Engineering Department	Power Systems	-	-	-			
Mr. Chandan Kumar	M.Tech	NIT Srinagar	2017	6 Months	Assistant Professor	05/09/2017 to 27/09/2018	Electrical Engineering Department	Power Systems	-	-	-			
Mr. Nasir Rehman	M.Tech	AL-Falah University	2016	6 Months	Assistant Professor	05/09/2017 to 27/09/2018	Electrical Engineering Department	Power Systems	-	-	-			

For the Year 2017-18

Name of the Faculty Member	Qualification			Association with the Institute	Designation	Date of Joining	Department	Specialization	Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development	
	Degree	University	Year with Graduation						Research Paper Publications	PhD. D. Guidance	Faculty Receiving Ph. D.			
Prof. Aijaz Ahmad	Ph.D	IIT Delhi	1999	33 Years	Professor	01/10/1985	Electrical Engineering Department	Power Systems	4	5	-			
Prof. Mairaj -ud-Din Mufti	Ph.D	IIT Delhi	1998	32 Years	Professor	01/09/1986	Electrical Engineering Department	Power Systems	4	6	-			
Prof. Shameem Ahmad Lone	Ph.D	NIT Srinagar	2007	24 Years	Professor	01/03/1994	Electrical Engineering Department	Power Systems	3	7	-			
Dr. Abdul Hamid Bhat	Ph.D	IIT Roorkee	2008	22 Years	Associate Professor	16/01/1996	Electrical Engineering Department	Power Electronics	14	5	-			
Dr. Sheikh Javed Iqbal	Ph.D	NIT Srinagar	2015	22 Years	Associate Professor	14/3/1996	Electrical Engineering Department	Power Systems	-	4	-			

Dr. Mohammad Abid Bazaz	Ph.D	IIT Delhi	2013	18 Years	Assistant Professor	23/03/2000	Electrical Engineering Department	Control Systems	7	5	-			
Ms. Tabish Nazir Mir	B.Tech	NIT Srinagar	2014	2 Years	Assistant Professor	08/01/2016	Electrical Engineering Department	Power Electronics	0	-	Y			
Mr. Zahid Farooq	M.Tech	AL-Falah University	2016	1 Year 6 Moths	Assistant Professor	03/04/2017 to 27/09/2018	Electrical Engineering Department	Power Systems	-	-	-			
Ms. Saima Ashraf	M.Tech	MRIU	2016	1 Year 6 Moths	Assistant Professor	03/04/2017 to 31/12/2018	Electrical Engineering Department	Power Systems	-	-	-			

5.1 Student-Faculty Ratio (SFR) (20)

No. of UG programs in the department (n) = 1
No. of PG programs in the department (m) = 1
u1: No. of students in UG 2nd year
u2: No. of students in UG 3rd year
u3: No. of students in UG 4th year
p1: No. of students in PG 1st year
p2: No. of students in PG 2nd year
F: No. of faculty members in department
No. of students = Sanctioned intake + Actual admitted lateral entry students
UG = u1 + u2 + u3
PG = p1 + p2
S = UG + PG
SFR = S / F

	2019-20	**2018-19**	**2017-18**
u1	84	77	77
u2	77	77	77
u3	77	77	77
UG	**238**	**231**	231
p1	31	26	26
p2	26	26	26
PG	**57**	**52**	52
S	**295**	**283**	**283**
F	17	13	09
SFR	17.35	21.76	31.44
Average SFR	**23.52**		
Assessment	**10**		

5.1.1 Total number of Regular and Contractual Faculty

Year	Total number of regular faculty in the department	Total number of contractual faculty in the department
2019-20	14	03
2018-19	07	06
2017-18	07	02

5.2 Faculty Cadre Proportion (20)

RF: No. of faculty required to comply with 20:1 Student-Faculty Ratio based on the number of students as per 5.1.

	No. of Students (S)	**No. of Faculty Required (RF)**
2019-20	295	15
2018-19	283	14
2017-18	283	14

The reference Faculty Cadre Proportion is RF1: RF2: RF3 = 1:2:6

RF1: No. of Professors required (=RF x 1/9)

RF2: No. of Associate Professors required (=RF x 2/9)

RF3: No. of Assistant Professors required (=RF x 6/9)

	Professors		**Associate Professors**		**Assistant Professors**	
	Required (RF1)	**Available (AF1)**	**Required (RF2)**	**Available (AF2)**	**Required (RF3)**	**Available (AF3)**
2019-20	2	4	3	3	10	10
2018-19	2	4	3	2	10	7
2017-18	2	3	3	2	10	4
Average	2.00	3.67	3.00	2.33	10.00	7.00

Cadre Ratio Marks	
$\left(\left(\frac{AF1}{RF1}\right) + \left(\frac{AF2}{RF2}\right) \times 0.6 + \left(\frac{AF3}{RF3}\right) \times 0.4\right) \times 10$	**25.79**

Marks / score	**20**

5.3 Faculty Qualification (20)

X: No. of regular faculty with Ph. D.
Y: No. of regular faculty with M. Tech.
RF: Faculty required as calculated in 5.2.

	X	Y	RF	Assessment 2 x (10X + 4Y)/RF
2019-20	13	0	15	17.33
2018-19	13	0	14	18.57
2017-18	6	0	14	8.57
Average Assessment				**14.82**

5.4 Faculty Retention (10)

No. of faculty members in 2020-21 = 17
No. of faculty members in 2019-20 = 14
No. of faculty members in 2018-19 = 14
No. of faculty members in 2017-18 = 7
Percentage of faculty retained during the period of assessment is > 90%.

Assessment	**10**

5.5 Faculty Competencies in Correlation to Program Specific Criteria (10)

The program curriculum is designed to make the students able to analyze and design complex electrical systems and devices. It covers major areas of electric circuit analysis and synthesis, electric machines, power systems, control systems, electrical measurements, and power electronics. The department has the highly competent faculty to cater to the theoretical and practical requirement of all the major and allied areas of the program.

Name of Faculty	Qualification	Area of Specialization/Research Area
Prof. Aijaz Ahmad	Ph.D.	Power System Operation & Optimization, Flexible AC Transmission Systems, Energy System Planning & Audit
Prof. Mairaj-ud-Din Mufti	Ph.D.	Control Systems, Power System Dynamics and Control, Energy Conversion and Energy Storage Devices
Prof. Shameem Ahmad Lone	Ph.D.	Stand-Alone Power Systems, Application of Energy Storage Devices in power systems, Measurement,and Instrumentation
Prof. Abdul Hamid Bhat	Ph.D.	Power Electronics and Drives, FACTS, Power Quality, Custom Power Devices
Dr. Sheikh Javed Iqbal	Ph.D	High Voltage, Engineering, Power System Dynamics and Control, Renewable Energy, Distributed Generation
Dr. Mohammad Abid Bazaz	Ph.D.	Control System, Model Order reduction of dynamical systems

Dr. Obbu Chandra Sekhar	Ph.D	Power Electronics Control of Electrical Drives, Special Machines and Control, Modulation and Control of Multi-Level Inverters, FACTS Controllers, Micro Grids and Smart Grids
Dr. Asadur Rahman	Ph.D	Power System Optimization & Control (AGC), Renewable Energy Systems (Solar & Wind), Hybrid Energy System & Smart Grid, Application of Soft Computing in Power & Energy Systems.
Dr. Neeraj Gupta	Ph.D	Power System, Renewable energy system, Probabilistic power system, Uncertainty quantification of power system, Power system analytics, Micro-Grid, Smart-Grid, Wind, PV and Electric Vehicle modelling. Grid integration of RES.
Dr. Farhad Ilahi Bakhsh	Ph.D	Variable Frequency Transformer (VFT), Renewable Energy Systems (Solar and Wind), Power Electronics, Drives and Alternate Energy Vehicles.
Dr. Kushal M Jagtap	Ph.D	Demand Side Management, Electric Vehicles, Smart Grid, Deregulation of Power System, Loss Allocation in Distribution Network, Distributed Generation, Storage System
Dr. Ravi Bhushan	Ph.D	Power System Stability & Control, Wind Energy Systems, Applications of Optimal Controller in Power Systems.
Dr. Chilaka Ranga	Ph.D	Condition Monitoring of Transformer and Rotating Machines, Artificial Intelligence based Health Assessment and Fault Diagnosis of Electrical Apparatus, Advances in Dielectrics and Electrical Insulation, High Voltage Engineering, Digital Signal Processing.
Dr. Tabish Nazir Mir	Ph.D	Power Electronics, Induction Machine Drives, Power Quality
Dr. Shoeb Hussain	Ph.D	Control Theory, Electric Drives, Artificial Intelligence based Control
Dr. Damodhara V Siva Krishna Rao K	Ph.D	Solar Photovoltaic systems (grid connected and stand-alone), forecasting techniques, MPPT techniques, Electric Vehicles and Smart grid technologies
Dr. Hareesh Myneni	Ph.D	Power Quality Improvement in Distribution System

Marks Claimed	**10**

5.6 Innovations by the Faculty in Teaching and Learning (10)

Some of the methods adopted by faculty for improvement of student learning are:

- IEEE Student Chapter was established by Dr. Farhad Ilahi Bakhsh. This chapter gives an opportunity to all the students of the Institute to build their academic career, offering programs, activities, and professional networking opportunities that can create critical skills outside of the classroom.

- Dr. Chilaka Ranga initiated an IET student chapter (On Campus) on 15th October 2019. It gives the skills and experience to the students to succeed in their career, and supports young engineers and technicians in our Institute.

- Student club was started by Dr. Asadur Rahman. It maintains and improves the healthy atmosphere among the students.

- Dr. Ravi Bhushan started an Annual Departmental Newsletter containing information of the different departmental activities. This newsletter may expand the overall branding among the students inside and outside campus that are interested in what's happening at the department.

- Dr. Kushal M. Jagtap started Electrical Students Club in order to develop hardware projects and innovation in the area of electrical engineering.

- For the betterment of the students, remedial classes have been started in the Department. Dr. Chilaka Ranga and Dr. Ravi Bhushan are the Co-ordinates of these Remedial Classes.

- Prof. A. H. Bhat installed Micro Lab Box in Power Electronics Lab to ensure the availability of all latest equipments for Electrical Engineering students on 08-Aug-2019.

- Digital Real-time simulator was installed by Prof. A. H. Bhat in Power Electronics Lab on 09-Sep-2019. The simulator helps in providing real-time experimentation on all Power Electronic Devices for quality research.

- Faculty use Google classroom for sharing the notes/for discussion with students.

- Faculty Development Programmes were conducted by the Institute to enhance the teaching skills of the faculties.

- Students are free to discuss problems by interacting with the faculty by email, mobile applications.

- Students are encouraged to give presentations on topics pertaining to the state-of-the-art of the courses being taught.

- Lecture notes and class assignments are uploaded on the Institute website from time to time.

- Software tools like MATLAB/Simulink are used to simulate and analyze systems for a better understanding of the theoretical concepts taught in classrooms.

- Demonstrative simulation models are also uploaded on the Institute website for use and further development by the students.

Marks Claimed	**10**

5.7 Faculty as Participants in Faculty development/ training activities/ STTPs (15)

RF: Faculty required as calculated in 5.2

Name of the Faculty	Marks		
	2019-20	**2018-19**	**2017-18**
Prof. Aijaz Ahmad	0	0	0
Prof. Mairaj-ud-Din Mufti	0	0	0
Prof. Shameem Ahmad Lone	0	0	0
Prof. Abdul Hamid Bhat	8	2	0
Dr. Sheikh Javed Iqbal	0	1	0
Dr. Mohammad Abid Bazaz	0	0	0
Dr. Obbu Chandra Sekhar	0	0	0
Dr. Asadur Rahman	4	6	0
Dr. Neeraj Gupta	6	3	0
Dr. Farhad Ilahi Bakhsh	9	4	0
Dr. Kushal M Jagtap	0	2	0
Dr. Ravi Bhushan	10	0	0
Dr. Chilaka Ranga	19	2	0
Dr. Tabish Nazir Mir	0	0	0
Sum	56	20	0
RF	15	14	14
Assessment = (3 x Sum/0.5 RF) (Marks limited to 15)	22.4	8.57	0
Average Assessment	**10.32**		

5.8 Research and Development (75)

5.8.1 Academic Research (20)

Pub: No. of research publications in refereed/SCI Journals, Conferences, Books, Book Chapters, etc.

Ph.D.: No. of Ph. D. Scholars registered/ awarded.

Name of the Faculty	2019-20		2018-19		2017-18	
	Pub	**PhD**	**Pub**	**PhD**	**Pub**	**PhD**
Prof. Aijaz Ahmad	6	6	4	6	4	5
Prof. Mairaj-ud-Din Mufti	4	9	8	9	4	6
Prof. Shameem Ahmad Lone	2	7	0	8	3	7
Prof. Abdul Hamid Bhat	8	8	5	5	14	5
Dr. Sheikh Javed Iqbal	1	7	0	6	0	4
Dr. Mohammad Abid Bazaz	16	6	14	6	7	5
Dr. Obbu Chandra Sekhar	12	2	3	1	0	0
Dr. Asadur Rahman	1	2	0	2	0	0
Dr. Neeraj Gupta	4	3	1	2	0	0
Dr. Farhad Ilahi Bakhsh	15	2	3	2	0	0

Dr. Kushal M Jagtap	1	0	0	0	0	0
Dr. Ravi Bhushan	1	3	3	2	0	0
Dr. Chilaka Ranga	4	1	2	1	0	0
Dr. Tabish Nazir Mir	5	0	6	0	0	0
Total	**80**	**56**	**49**	**50**	**32**	**32**

Marks Claimed	**20**

5.8.2 Sponsored Research (20)

PI/CO-PI	**Title**	**Funding Agency**	**Amount Sanctioned**	**Approved Date**	**Duration**	**Ongoing/ Completed**
Dr. Abid Bazaz	Model Order Reduction for Simulation Acceleration in Power Electronics	R&D CPRI Bangalore	Rs. 7.02 lakhs	06/02/ 2019	1.5 Years	Completed
Dr. Farhad Illahi Baksh	Application of Variable Frequency Transformer for Integration of Solar Photovoltaic and Wind Energy Systems using Typhoon HIL	India and Typhoon HIL GmbH, Switzerland	Rs. 5.20 lakhs	10/08/ 2019	2 Years	Ongoing
Dr.Obbu Chandra Sekhar Prof. A. H. Bhat	Design and development of switched reluctant motor drive for plug-in hybrid electric vehicle with voltage boosting & on-boarding charging capabilities (**Submitted in March 2020**).	DST-SERB-CRG	Rs. 55.70 lakhs	26/03/ 2021	3 Years	Ongoing
Dr. Neeraj Gupta	Resource assessment and policy for renewable energy resources link wind and solar in the state of Jammu and Kashmir	TEQIP-III	Rs. 1.00 lakhs	05/12/ 2019	2 Years	Ongoing
Dr. Kushal Jagtap	Weather stimulation passive and non passive protection system for KasmirValley	TEQIP-III	Rs. 1.00 lakhs	05/12/ 2019	2 Years	Ongoing

Marks Claimed	**20**

5.8.3 Development Activities (15)

A) Research Laboratories

The following laboratories are extensively used for research activities:

- Energy Systems laboratory
- Power Electronics laboratory
- Virtual Instrumentation Laboratory

B) Working Models/ Charts/ Monograms

Many working models/ laboratory kits have been developed in the departments that serve as instructional aid/conduct of practical work by the students.

- Automatic DC motor Starter (Relay based).
- Model of a 132-kV, 50-MW, 100-km transmission line.
- Set-up demonstrating time grading of relays.
- A laboratory model of over-current protection of transformer and transmission lines using microprocessor-based relays.
- Laboratory set-up for determination of positive, negative and zero sequences components of the 3-phase transformer.
- Laboratory set-up of differential protection of a single-phase transformer.
- Laboratory set-up of linear firing scheme.
- Resistance triggering technique for SCR's
- Bridge Rectifier
- 3-phase Voltage Source Inverter
- Single-phase to 3-phase Matrix Converter PCB Setup.
- 3-phase to 3-phase Matrix Converter PCB Setup.
- UJT firing circuit

Marks Claimed	**15**

5.8.4 Consultancy (from Industry) (15)

Nill

5.9 Faculty Performance Appraisal and Development System (FPADS)(10)

The institute has in place a continuous, well-thought-of and effective faculty performance appraisal system for the faculty members. For this purpose an 'Annual Assessment Report for the Faculty Staff' is prepared for every faculty member which gives a detailed description of his/ her contribution to the teaching-learning process, contribution in laboratory development, course development, development of teaching aids, laboratory manuals, special lectures, participation in of organizing seminars, symposia, conferences, continuing education programs,

research and development activities, sponsored research projects, contribution to department and institute administration, etc. A copy of the Assessment form is provided in Annexure X.

The annual assessment report is given a due weightage in the process of promotion/ upgradation of faculty members and hence plays a vital role in the development of the academic, research and administrative system of the institute.

Marks Claimed	**10**

5.10 Visiting/ Adjunct/ Emeritus Faculty (10)

A few special lectures were organized by the department during the assessment years which include:

- 'Solar Photovoltaic System- Role of Power Electronics' by Prof. Zainul Salam, Professor, Centre of Electrical Engineering Systems (CEES), Universiti Teknologi Malaysia, 2017.

- 'How to Publish Research Work in High Impact Journals' Prof. Zainul Salam, Professor, Centre of Electrical Engineering Systems (CEES), Universiti Teknologi Malaysia, 2017.

- "Introduction and Basics of Programming skills using MATLAB and PYTHON" 27th to 31st May, 2019 by Dr. Santosh Bharti, School of Computer Science, PDPU, Gujarat, India.

Marks Claimed	**1**

SUMMARY:

Sub-criterion	**Max. Score**	**Obtained/Claimed Score**
5.1	20	10
5.2	20	20
5.3	20	14.82
5.4	10	10
5.5	10	10
5.6	10	10
5.7	15	10.32
5.8	75	55
5.9	10	10
5.10	10	1
Total	**200**	**151.14**

Marks claimed: 151.14 out of 200