**sant longowalinstitute of engineering &technology, Longowal**

**ACADEMIC AUDIT**

**PURPOSE OF THE AUDIT:**

The objective of AA is to evaluate the performance of the departments/institution and to identify the issues need attention to improve the quality of Teaching and Research.

The main objectives of AA are:

1. To assess the strengths and weaknesses of the Departments and to suggest the methods for improvement and for overcoming the weaknesses related with teaching, learning and evaluation.
2. To ascertain whether the Departments are functioning efficiently and effectively with proven records of capacity building, research projects and publications and extension over a period of time.
3. To identify the bottlenecks in the existing academic mechanisms and to identify the opportunities for reforms in academic, administration, and examination system for a long term progression with excellence and to face the challenges of globalization in Higher Technical Education (HTE).
4. To evaluate the optimum utilization of financial and other resources, issues concerning with leadership and organization, functional autonomy and financial management of Departments/Centers.
5. To suggest the methods of improvement for maintaining quality in HTE.

**METHODOLOGY:**

**Department Profile**

* The Institute, through a well structured format, collects the necessary primary data and information from all the Departments/Centers of Studies on Programs Offered, Students Enrolment, Faculty Strength, Infrastructure, Research Projects, Consultancy, Publications, FDPs and other programmes /students activities conducted during the last year as well as last **three** years.
* The system of evaluation and internal assessment and the results of students, placement and further progression of students in HTE are assessed using these details.

**Profile of Teachers**

* To assess Faculty Qualification, Experience, Research Publications during the last three years, number of Research Projects, and Resource Generation by the faculty, Conferences Attended and Papers Presented, Foreign Academic Visits, Fellowships Obtained, Countries Visited, Organizations of Conferences, Membership of Academic Societies, etc.
* To evaluate the performances of faculty and their capability matrix under the context of their Teaching, Learning, Research and Development, and Extension Activities.

**Feedback of Students**

* To elicit the views of the students regarding the general facilities available in the Department, their opinion about the teaching and research commitment and capability of the Faculty, delays and denials of justice, and for providing better amenities and care on campus with modern tools and techniques.
* Questions regarding teacher’s regularity in conducting classes, providing up-to-date information on the subject, their orientation to the assigned part of the curriculum, style and efficiency of teaching, clarity in imparting information, availability of the teacher before and after the class hours for consultation, general ability of the teachers, their capabilities in motivating students for progression, etc are normally included in such exercises.

**Departmental Visit by Academic Audit Committee (AAC):**

* Presentation of Departmental Profile: The details of their programs, accomplishments, achievements of Faculty and the perspective plans.
* Visit of the Department(s), and Facilities for the purpose of understanding the Department, Faculty and their activities.
* This exercise is carried out in all Departments/Centers to offer valuable suggestions to improve their performances both individually and collectively.
* In addition, the AAC shall also meet the teaching faculty, non-teaching and technical staff to obtain their feedback and suggestions for improvement.
* The AAC shall visit all the laboratories, museums, student amenities, halls of residence, and facilities made available to its stakeholders.

**Head of Audit**

* Teaching & Learning Processes
* Research & Facilities, Professional Activities, Collaborative Performance
* Graduation Outcome
* Perception

**Sant longowal institute of engineering & technology**

**PROFORMA OF ASSESSMENT**

1. **NAME OF THE DEPARTMENT** : ELECTRONICS & COMMUNICATION ENGG.

2**. YEAR OF ESTABLISHMENT** : 1991

3. **REVIEWER(S)** : HOD (ECE) Convener

 Dean (Academics)

 Dr. J.S. Ubhi Nominated by HOD

 Dr. D.C. Saxena

 Dr. JapPreet Kaur

4. **DATE OF REVIEW** : July, 2019

5. **COURSES OFFERED**: (Branch and specialization, year of start:

|  |  |  |  |
| --- | --- | --- | --- |
| **ICD** | **UG**  | **PG** | **Ph.D.** |
| DEC-CTV, 2014DEC-CSME, 2014 | B. TECH (ECE) 3 Years, 1993B.TECH (ECE) 4 Years, 2014 | PG (ECE), 2009 | Electronics &Communication Engineering, 2008 |

6. **INTAKE OF THE COURSE:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of Courses/Branch | Admitted | Graduated | Admitted | Graduated | Admitted | Graduated |
| 2015-16 | 2016-17 | 2017-18 |
| ICD | 44 | -- | 62 | 36 | 67 | 35 |
| UG | 65 | 59 | 67 | 57 | 71 | 53 |
| PG | 20 | 13 | 14 | 19 | 15 | 13 |
| Ph.D. | Full Time | 6 | 0 | 2 | 1 | 4 | 1 |
| Part Time | 0 | 4 | 1 | 5 | 0 | 0 |

7. **LABORATORY FACILITY**:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.****No.** | **Name of the lab** | **Status of Lab** (Quite modernized/Need to be modernized) | **Status of Lab** **Equipment**(Functioning properly/ Need maintenance/ upgradation) | **No of experiments** (Adequate /Need to be increased) |
| 1 | Advance Communication Lab | Need to be modernized | Upgradation | Need to be increased |
| 2 | Audio/Video Lab | Quite modernized | Functioning properly | Adequate |
| 3 | Basic Communication Lab | Quite modernized | Functioning properly | Adequate |
| 4 | Basic Electronics Lab | Quite modernized | Functioning properly | Adequate |
| 5 | Computer Lab | Need to be modernized | Upgradation | Need to be increased |
| 6 | Digital Electronics Lab | Need to be modernized | Upgradation | Need to be increased |
| 7 | DSP Design Lab | Need to be modernized | Upgradation | Need to be increased |
| 8 | Microprocessor Lab | Quite modernized | Functioning properly | Adequate |
| 9 | PCB Design & Fabrication Lab | Quite modernized | Needs maintenance | Adequate |
| 10 | Servicing & Maintenance Lab/ Industrial Electronics Lab | Quite modernized | Functioning properly | Adequate |
| 11 | Television Lab | Quite modernized | Functioning properly | Adequate |
| 12 | Research Labs | Need to be modernized | Upgradation | --- |

* Number of laboratories : Need addition

8. **RESEARCH GROUP(S)/ INTERDISCIPLINARY GROUP(S) :**

|  |  |
| --- | --- |
| **Research Groups (Broad Area of Research)** | **Name of Faculty Involved** |
| Intelligent System & Image Processing | Dr. A.P. Singh, Dr. Ajay Pal Singh, Er. Vipul Singhal |
| RF, Microwave and Antenna Design | Dr. Anupma Marwaha, Dr. A.P. Singh, Dr. Surinder Singh, Er. Kuldip Singh  |
| VLSI Design  | Dr. J.S. Ubhi, Er. P.K. Das, Er. Sarbjeet Singh, Er. Vivek Harshey |
| Computational Electromagnetics, Nanoscale Antenna Design, Bio-Electromagnetics | Dr. Anupma Marwaha, Dr. A.P. Singh, Er. Alka Singla |
| Broadband & Optical Communication  | Dr. Surinder Singh  |
| Embedded System, Wireless Sensor Network | Dr. Dilip Kumar, Dr. Ajay Pal Singh, Dr. Surinder Singh |

9. **CONTRIBUTION OF FACULTY AND STAFF** (Last three years):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name of Faculty/ Staff** | **Designation/Qualification/Status** | **Contribution in Teaching (punctuality/ innovation/ use of ICT)** | **Contribution in BTech or ICD projects** | **Contribution in Research****(Publications#/ Projects/Ph.D. &****M Tech guidance/ Consultancy/ Patent** | **Other****(Department/Institute/ National/ International)** |
| Dr. A.P. Singh | Professor/ Ph.D/ | Use of ICT | ----N.A.------ | Journals: 14 5-SCI3-Scopus2- WoS4-Other referred Journals Conferences :25Ph.D thesis : 07 (Ongoing): 06M.Tech Thesis Guided: 07  | -Paper presented in Int. Conf.- CVO-Visit to ECAM-EPMI at Paris-Member BOS-Coordinator STTC-Class Counselor-Mentor  |
| Dr. J.S. Ubhi | Professor/ Ph.D/ | Use of ICT | 03 B.Tech | Journals:06 Conferences:06PhD:01M.Tech:06 | -Paper presented in Int. Conf.-Member of NBA expert team-Resource Person – 06 times-Chief warden-Member ACOFOR-Class Counselor-Mentor |
| Dr. Anupma Marwaha | Professor/ Ph.D/ | Use of ICT | Guided numerous B-Tech and ICD projects. | Journals:SCI-22Scopus-09Conferences: 09 PhD guided:09 on-going :06M.Tech guided:23Projects:Ongoing: 01 | -HOD (ECE)-Member BOS (BCET, GDP; SBSCET, FZP)-Paper presented in Int. Conf.-Member ACOFOR-Resource Person -Chairperson STC-Exam Coordinator (ECE)-Best Paper Award-Expert in selection committee (PTU, IIIT Una) |
| Dr. Surinder Singh | Professor/ Ph.D/ | Use of ICT | Guided numerous B-Tech and ICD projects.  | PublicationsSCI- 23Scopus- 01Conferences (International):14(National): 04Other Refereed: NILProjectsCompleted: 02Ongoing: 02 (01 on going and 01 accepted)Ph.D. Guided: 05M-Tech Guided: 09 | -Paper presented in Int. Conf.-ATPO (ECE)-Expert in selection committee (MRSPTU)-Member of Ph.d. Rules and regulation committee-Best paper award   |
| Dr. Ajay Pal Singh | Associate Professor/ Ph.D | Use of ICT | Guided 4 B.Tech projects during last 3 years | Guided 7 M.Tech students during last 3 years | -Convener Telephone exchange -Chairperson cultural committee Madhuram 2015-Co chairman SPIC MACAY chapter SLIET-Convener national level conference NCCN-16 |
| Dr. Dilip Kumar | Associate Professor/ Ph.D | Use of ICT | Project Coordinator  | Publications=13PhD Guided=1Under Guidance =5M.Tech Guided=6Under Guidance=2 | -DAAC Member-Hostel Warden-Resource person-coordinator, workshop |
| Er. P.K. Das | Assistant Professor/ M.Tech | Use of ICT | B.Tech Project Gudied=02 | M.Tech Guided=02 | -Paper presented in Int. Conf. -CocordinatorSTC -Resource Person – 02 times-Hostel Warden |
| Er. Sarbjeet Singh | Assistant Professor/ M.Tech | Use of ICT | B.Tech = 3ICD = 6 | M.Tech Guided = 3M.Tech (Ongoing) = 02 | -Industrial Training Co-Ordinator, CSME-Hostel Warden-NSS Program Officer  |
| Er. Alka Singla | Assistant Professor/ M.Tech | Use of ICT | B.Tech project = 5ICD projects = 7 | M.Tech Guided = 4Publications (referred journals) = 2 | -Member anti ragging committee-Member national science week-Member SET committee |
| Er. Vipul Singhal | Assistant Professor/ M.Tech | Use of ICT | B. Tech project guided=01B. Tech Project guiding=1 | M. Tech guided=2M. Tech guiding=01Publication=01(Ref-ereed) | -Member CTTC/-Member ICD Training committee |
| Er. Kuldip Singh | Assistant Professor/ M.Tech | Use of ICT | B. Tech—04ICD – 09B Tech (ongoing)-02 | M Tech (ongoing)- 01 | -Hostel Warden-Faculty Coordinator1.Persona Sliet2. Skating Club -Initiative for remedial classes |
| Er. Vivek Harshey | Assistant Professor/ M.Tech | Use of ICT | B. Tech. – 2ICD - 10 | M Tech – 1 (ongoing),Project – 1 (submitted) | -Initiative for remedial classes-UG project committee-Anti-ragging prevention committee -Industrial training coordinator CSME-member of organizing committee of national science week |
| Er. Rajesh Pathak | Assistant Professor/ M.Tech | Use of ICT | Guided for project ideas | Nil | Nil |

# publications category wise- Conference, SCI, other Scopus, Refereed

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S.No.** | **Academic Year / Semester** | **Name of Faculty** | **Class/batch**  | **Subject code** | **No of Students** | **Pass %age** |
|  | 2015-2016/ODD | Dr. A.P. Singh | PGECE/14 | EC-9102D | 18 | 100% |
|  | GEC/14 | EC-6151 | 60 | 98 % |
|  | Ph.D. | EC-9102 D | 02 | 100% |
| 2015-2016/EVEN | PGECE/15 | EC-825C | 20 | 100% |
| 2016-2017/ODD | GEC/14 | EC-7104D | 59 | 100% |
|  | PGECE/15 | EC-911 | 20 | 95% |
|  | Ph.D. | EC-911 | 01 | 100% |
| 2016-2017/EVEN | PGECE/16 | EC-825C | 14 | 100% |
|  | Ph.D. | RM-10000 | 8 | 100% |
| 2017-2018/ ODD | PGECE/16 | E-911 | 13 | 100% |
|  | ICD/CAF/16 | EC-211 | 30 | 76.6% |
| 2017-2018/ EVEN | PG-ECE/17 | EC-825C | 9 | 100% |
|  | GEC/14 | EC-721E | 58 | 100% |
|  | 2015-2016/ODD | Dr. J.S. Ubhi | GEC/14 | EC-6103 | 58 | 98.33 |
|  | ICD/14 | EC-211 | 39 | 100% |
|  | PGECE/14 | EC-9101 | 20 | 100% |
| 2015-2016/EVEN | GEC/14 | EC-522 | 58 | 91.8% |
|  | PGECE/15 | EC-824 | 19 | 100% |
|  | ICD/14 | EC-222 | 39 | 100% |
|  | ICD/15 | EC-121 | 24 | 100% |
| 2016-2017/ODD | GEC/14 | EC-611 | 58 | 96.6% |
|  | GEC/15 | EC-513 | 62 | 89.8% |
| 2016-2017/EVEN | PGECE/16 | EC-824 | 13 | 100% |
|  | Ph.D. 17 | EC-10006 | 01 | 100% |
|  | ICD/16 | EC-121 |  | 74.19% |
|  | GEC/14 | EC-7260 | 58 | 100% |
| 2017-2018/ ODD | GEC/16 | ECT-513 | 61 | 100% |
|  | CTV, CSME/17 | EC-112 | 27 | 77.77% |
| 2017-2018/ EVEN | PG-ECE/17 | EC-824 | 15 | 100% |
|  | GME, GWT, GCT/17 | ECT-421 | 67 | 100% |
|  | 2015-2016/ODD | Dr. Anupma Marwaha | CTV, CSME/14 | EC-214 | 46 | 91.3% |
|  | GEC/14 | EC-512 | 61 | 100% |
| 2015-2016/EVEN | CTV, CSME/15 | EC-3203 | 20 | 100% |
|  | GEC/14 | EC-6204 | 59 | 100% |
|  | GEC/13 | EC-7202 | 60 | 81% |
| 2016-2017/ODD | GEC/15 | EC-512 | 59 | 64.4% |
|  | PGECE/15 | EC-912 | 20 | 100% |
| 2016-2017/EVEN | GEC/14 | EC-7202 | 58 | 100% |
|  | GEC/15 | EC-522 | 59 | 89.8% |
| 2017-2018/ ODD | GEC/16 | ECT-512 | 64 | 92% |
|  | CTV, CSME/16 | EC-214 | 56 | 88% |
| 2017-2018/ EVEN | GEC/16 | ECT-521 | 66 | 100% |
|  | GEC/14 | EC-725 | 58 | 98% |
|  | 2015-2016/ODD | Dr. Surinder Singh | GEC/14 (4 year) | EC-514 | 62 | 74% |
|  | PG/EC-15 | EC-811 | 20 | 100% |
|  | PG/EC-15 | EC-812P | 20 | 100% |
|  | PhD-14 &PhD-15 | EC-10010 | 2 | 100% |
| 2015-2016/EVEN | PG/EC-15 | EC-821 | 20 | 100% |
|  | GEC/14 (Old) | EC-6203 | 59 | 84.74% |
|  | ICD-2014 (DEC-CSME) | EC-229 | 24 | 100% |
| 2016-2017/ODD | PG/EC-16 | EC-811 | 14 | 100% |
|  | PG/EC-16 | EC-812P | 14 | 100% |
|  | GEC-15 (4 year) | EC-514 | 59 | 79.66% |
| 2016-2017/EVEN | GEC-14 | EC-623 | 59 | 88.13% |
|  | PG/EC-16 | EC-821 | 14 | 100% |
| 2017-2018/ ODD | GEC/14 | EC-713 | 58 | 98.27% |
|  | PGECE/17 | EC-811 | 15 | 93.33% |
| 2017-2018/ EVEN | GEC/16 | ECT-522 | 66 | 89.39% |
|  | GEC/15 | EC-623 | 56 | 92.85% |
|  | 2015-2016/ODD | Dr. L.S. Solanki | GEC/143Yr | EC-6104 | 59 | 100 |
|  | PGECE/15 | EC-815 | 20 | 100 |
| 2015-2016/EVEN | GEC/14 3Yr | EC-6202 | 59 | 100 |
|  | GEC/144 Yr | EC-523 | 59 | 100 |
| 2016-2017/ODD | ICD(CTV+CSME)/14 | EC-311 | 39 | 100 |
|  | CTV/15 | EC-216 | 28 | 100 |
|  | PGECE/16 | EC-815 | 14 | 100 |
|  | DEC/15 | EC-4153 | 20 | 100 |
| 2016-2017/EVEN | ICD(CTV+CSME)/14 | EC-324 | 39 | 100 |
|  | GEC/154Yr | EC-523 | 59 | 100 |
|  | CTV/15 | EC-229 | 26 | 100 |
| 2017-2018/ ODD | PGECE/17 | EC-815 | 15 | 100 |
|  | GEC/144Yr | EC-715 | 58 | 100 |
| 2017-2018/ EVEN | GEC/144Yr | EC-724 | 58 | 100 |
|  | PGECE/17 | EC-821 | 15 | 100 |
|  | GEC/154Yr | EC-627 | 56 | 100 |
|  | CSME/15 | EC-327 | 29 | 100 |
|  | 2015-2016/ODD | Dr. Ajay Pal Singh | PGECE/15 | EC-813T | 20 | 95% |
|  | PGECE/15 | EC-813P | 20 | 100% |
|  | GEC-14 | EC-6102 | 59 | 98% |
|  | GEC-14 | EC-6152 | 59 | 98% |
| 2015-2016/EVEN | GEC-14 | EC-521 | 59 | 100% |
|  | DEC-14 | EC-4204 | 29 | 100% |
|  | DEC-14 | EC-4254 | 29 | 100% |
| 2016-2017/ODD | GEC-14 | EC-612 | 59 | 95% |
|  | PGECE-16 | EC-813 | 14 | 100% |
|  | PGECE-16 | EC-817 | 14 | 100% |
| 2016-2017/EVEN | GEC-14 | EC-622 | 59 | 100% |
|  | DEC-15 | EC-4204 | 20 | 90% |
|  | DEC-15 | EC-4254 | 20 | 100% |
| 2017-2018/ ODD | PGECE/17 | EC-813 | 15 | 100% |
|  | PGECE/17 | EC-817 | 15 | 100% |
|  | GEC/15 | EC-612 | 53 | 98% |
| 2017-2018/ EVEN | GEC/16 | ECT-523 | 66 | 95% |
|  | GEC/16 | ECP-523 | 66 | 100% |
|  | Degree/14 | OE-729G | 43 | 95% |
|  | 2015-2016/ODD | Dr. Dilip Kumar | PGECE/15 | EC-814 | 20 | 100% |
|  | GEC/14 | EC-513 | 61 | 100% |
| 2015-2016/EVEN | GEC/13 | EC-7203G | 61 | 100% |
|  | DEC/14 | EC-4202 | 28 | 100% |
| 2016-2017/ODD | PGECE/16 | EC-814 | 14 | 100% |
|  | GEC/14 | EC-613 | 60 | 100% |
| 2016-2017/EVEN | DEC/15 | EC-4202 | 28 | 100% |
|  | GEC/14 | EC-7203G | 58 | 100% |
| 2017-2018/ ODD | PGECE/17 | EC-814 | 15 | 100% |
|  | GEC/14 | EC-711 | 58 | 98% |
| 2017-2018/ EVEN | GEC/14 | EC-723 | 58 | 100% |
|  | PGECE/17 | EC-825A | 6 | 100% |
|  | 2015-2016/ODD | Er. P.K. Das | On leave |
|  |
| 2015-2016/EVEN | On leave |
|  |
| 2016-2017/ODD | On leave |
|  |
| 2016-2017/EVEN | GEC/14 | EC-626 | 60 | 95% |
|  | GEC/2014 | EC-621 | 60 | 97% |
| 2017-2018/ ODD | CTV, CSME/15 | EC-312 | 44 | 86% |
|  | GEC/15 | EC-613 | 56 | 93% |
| 2017-2018/ EVEN | GEC/15 | EC-626 | 56 | 94% |
|  | PGECE /17 | EC-822 | 15 | 100% |
|  | 2015-2016/ODD | Er. Sarbjeet Singh | CFP/14 | EC-211 | 44 | 84.1% |
|  | GEC/14 | EC-511 | 61 | 95% |
|  | DEC, DIN/15 | EC-3101 | 37 | 100% |
| 2015-2016/EVEN | CTV, CSME/14 | EC-228 | 44 | 86.4% |
|  | GEC/15 | EC-423 | 12 | 83.3% |
| 2016-2017/ODD | GEC/15 | EC-511 | 59 | 84.7% |
|  | CTV, CSME.16 | EC-112 | 62 | 85.5% |
| 2016-2017/EVEN | PGECE/16 | EC-822 | 14 | 100% |
|  | CPT/15 | EC-221 | 48 | 89.6% |
| 2017-2018/ ODD | GEC/16 | ECT-511 | 66 | 86.4% |
|  | CEN/16 | EC-211 | 41 | 100% |
| 2017-2018/ EVEN | GEC/16 | ECT-524 | 66 | 82% |
|  | CSME/16 | EC-226 | 29 | 96.6% |
|  | CPT/16 | EC-221 | 48 | 81.3% |
|  | 2015-2016/ODD | Er. Alka Singla | GEC-13 | EC-7101 | 61 | 98% |
|  | DEC-14 | EC-4102 | 28 | 96% |
|  | ICD-14 | EC-213 | 46 | 95% |
| 2015-2016/EVEN |  GEC-13 | EC-7205 | 60 | 95% |
|  | GEC-14 | EC-422 | 13 | 84% |
| 2016-2017/ODD |  GEC-14 | EC-7101 | 59 | 100% |
|  | GEC-14 | EC-614 | 60 | 91% |
| 2016-2017/EVEN |  GEC-14 | EC-7205 | 59 | 100% |
|  |  DEC-15 | EC-4201 | 20 | 90% |
| 2017-2018/ ODD | GEC/15 | EC-614 | 56 | 98% |
|  | GEC/14 | EC-712 | 58 | 98% |
| 2017-2018/ EVEN | CTV, CSME/16 | EC-228 | 55 | 94% |
|  | CTV, CSME/15 | EC-322 | 43 | 97% |
|  | CSME/16 | EC-227 | 29 | 100% |
|  | 2015-2016/ODD | Er. Vipul Singhal | PGECE/15 | EC-812 | 20 | 100% |
|  | GEC/13 | EC-7102 | 61 | 100% |
| 2015-2016/EVEN | PGECE/15 | EC-823 | 20 | 100% |
|  | GEC/13 | EC-7201 | 60 | 100% |
| 2016-2017/ODD | PG/ECE/16 | EC-812 | 14 | 100% |
|  | GEC/14 | EC-7102 | 59 | 100% |
| 2016-2017/EVEN | PG/ECE/16 | EC-823 | 14 | 100% |
|  | GEC/14 | EC-7201 | 58 | 100% |
| 2017-2018/ ODD | PGECE/16 | EC-812 | 15 | 100% |
|  | GEC/15 | EC-611 | 56 | 91% |
| 2017-2018/ EVEN | PGECE/17 | EC-823 | 15 | 93% |
|  | GEC/15 | EC-625 | 56 | 95% |
|  | 2015-2016/ODD | Er. Kuldip Singh | CAC,CAF/14 | EC 211 | 47 | 89.4% |
|  | CFF,CWG/14 | EC 211 | 50 | 865% |
|  | DEC, DIN/14 | EC 4104 | 55 | 85.5% |
| 2015-2016/EVEN | CPT/14 | EC 221 | 37 | 74.2% |
|  | DEC/15 | EC 4201 | 28 | 96.4% |
|  | DEC, DIN/15 | EC 3202 | 37 | 70.2% |
| 2016-2017/ODD | ICDEC/14 | EC 312 | 39 | 90% |
|  | DEC, DIN/15 | EC 4104 | 37 | 75.7% |
|  | DEC/15 | EC 4102 | 20 | 65% |
| 2016-2017/EVEN | ICDEC/15 | EC 228 | 48 | 62.5% |
|  | ICDEC/14 | EC 321 | 39 | 97.4% |
| 2017-2018/ ODD | GEC/16 | ECT-514 | 66 | 92.4% |
|  | CTV, CSME/15 | EC-311 | 43 | 76.7% |
|  | CTD/16 | EC-211 | 24 | 95.7% |
| 2017-2018/ EVEN | GEC/15 | EC-624 | 57 | 96.5% |
|  | CTV, CSME/15 | EC-321 | 43 | 83.7% |
|  | CTV, CSME/15 | EC-324 | 43 | 88.4% |
|  | 2015-2016/ODD | Er. Vivek Harshey | -- | -- | -- | -- |
|  | -- | -- | -- | -- |
| 2015-2016/EVEN | -- | -- | -- | -- |
|  | -- | -- | -- | -- |
| 2016-2017/ODD | GEE/16 | ECT-411 | 16 | 83% |
|  | GCS/16 | ECT-411 | 33 | 85% |
|  | ICD/15 | EC-213 | 50 | 99% |
| 2016-2017/EVEN | ICD/14 | EC-323 | 40 | 78% |
|  | GEC/15 | EC-521 | 59 | 87% |
| 2017-2018/ ODD | GEC, GIN/17 | ECT-411 | 26 | 85% |
|  | PGECE/16 | EC-912 | 13 | 78% |
| 2017-2018/ EVEN | CTV, CSME/15 | EC-323 | 43 | 98% |
|  | CTV, CSME/16 | EC-223 | 55 | 79% |
|  | GEC/15 | EC-621E | 56 | 88% |
|  | 2015-2016/ODD | Er. Rajesh Pathak | CSMM/14 | EC-211 | 42 | 95.23% |
|  | CEN/14 | EC-211 | 52 | 98% |
|  | GEC/13 | EC-7104 | 61 | 100% |
| 2015-2016/EVEN | GEE/15 | EC-421 | 45 | 95.56% |
|  | GEC,GIN/15 | EC-421 | 22 | 90.9% |
|  | CSME,CTV/15 | EC-121 | 52 | 82.7% |
| 2016-2017/ODD | GEC,GIN/16 | ECT-411 | 23 | 95.65% |
|  | CSMM/15 | EC-211 | 48 | 93.75% |
|  | CSME,CTV/15 | EC-214 | 49 | 87.75% |
| 2016-2017/EVEN | GEC/14 | EC-7204 | 58 | 100% |
|  | DEC/15 | EC-4203 | 20 | 75% |
| 2017-2018/ ODD | GEC/16 | ECT-515 | 66 | 100% |
|  | GEC/14 | EC-714 | 58 | 98.27% |
| 2017-2018/ EVEN | GEC/15 | EC-622 | 56 | 98.21% |
|  | CTV, CSME/15 | EC-325 | 43 | 100% |
|  | CTV/16 | EC-222 | 26 | 96.15% |
|  | CTV, CSME/16 | EC-213 | 56 | 85.71% |

10. **INFRASTRUCTURE**:

|  |  |
| --- | --- |
| Special Facilities in the Department (if any) | 1. The department has dedicated Research Labs* Machine Vision and Motion Control Lab
* Broadband Communciation Lab
* VlSI Design Lab
* PHD RESEARCH LAB (COMPUTER LAB)well equipped with commercial licensed softwares.
* PG RESEARCH LAB (DSP LAB)
* UG PROJECT LAB

2. Good number of Sponsored research projects facilitating International participation 3. DST-FIST in process to generatefacility for Electromagnetic Measurements to initiate consultancy work. |
|  | 800 Lines EPABX Telephone Exchange |
| Shortage in department (if any) | 1. Deptt. lacks consultancy work and patents.2. Shortage of class rooms, faculty rooms, Labs.3. Shortage of compuational facility4. Common room (Staff/students) for  recreational activities |

11. **ANNUAL BUDGET OF THE DEPARTMENT** (Allocated and Expenditure): (In Lacs)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Allocated | Expenditure | Allocated | Expenditure | Allocated | Expenditure | Allocated | Expenditure |
| Equipment’s | 22.00/- lacs | 19.56/- lacs | 33.00/- lacs | 31.17/- lacs | 28.00/- lacs | 27,87,815/- | 25.00/- lacs | 5,81,900/- |
| Maintenance | -- | -- | -- | -- | -- | -- | 1.00/- lacs | 58,410/- |
| Tour & Training | -- | -- | -- | -- | -- | -- | 0.75/- lacs | -- |
| Research & Development | -- | -- | -- | -- | -- | -- | -- | -- |

12. **NO. OF SEMINARS/CONFERENCES/SHORT TERM COURSES ATTENDED/ORGANIZED** (last 3 years):

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2015-16 | 2016-17 | 2017-18 |
| Details of Seminars/Conferences organized by the faculty in the institute | National Conference on Communication & Networking (NCCN)**(Dr. Ajay Pal Singh)** | STTP on Frontiers in Electronics & Communication Engg.**(Dr. J.S. Ubhi)**Twodays Workshop on MEMS System & Design**(Dr.Dilip Kumar)** |  |
| Details of Seminars/Conferences attended by the faculty outside the institute | **Dr. A.P. Singh (Professor)**" Virtual Instrument for Monitoring Process Parameters: A Versatile Tool for Engineering Education, " Sixth International Conference on Industrial Engineering and Operations Research (IEOM), Kuala Lumpur, Malaysia, March 8-10, 2016." Image Segmentation using Teaching-Learning-based Optimization Algorithm and Fuzzy Entropy, " 15th International Conference on Computational Science and its Application (ICCSA-2015), Banff Calgary, Canada, June 22-25, pp.67-71, 2015."On the Design of Wearable Fractal Antenna" 17th International Conference on and Telecommunication Engineering (ICCTE-2015) organized by World Academy of Science, Engineering & Technology (WASET), at Singapore on July 04-05, pp.130-135. 2015.**Dr.Anupma Marwaha (Professor)**“Performance analysis of graphene based nano patch antenna for various substrate materials in THz regime”, In Proceedings of International Conference on Electrical and Electronics Engineering, Pattaya, Bangkok, Thailand, 2015.**Dr. J.S. Ubhi (Professor)**“Comparison of Reactive Routing Protocols in MANET’s”, 4th  International Conference on Advancements in Information Technology, Toronto, Canada, August 17 – 18, 2015.**Dr. Surinder Singh (Professor)**“An Approach to Flatten the Gain of Fiber Raman Amplifiers with Multi-Pumping,” 17thInternational Conference on Communication Systems and Computer Networks 04-05 June, 2015, New York, USA**Dr. Ajay Pal Singh (Associate Professor)**“An Efficient Method for Quality Analysis of Rice using Machine Vision System” in Proc. International conference on Advancements in Information Technology held at Toronto, Canada, August 17-18, 2015.**Er. Pankaj Kumar Das (Assistant Professor)**“Pankaj Kumar Das, Ravi Kumar “Propagation and Crosstalk Delay Analysis of Mixed Carbon Nanotube Bundle (MCB) for Global VLSI Interconnect”, International Annual Conference on Life Sciences and Engineering (ACLSE-2015), OSAKA, Japan, Aug 25-27, 2015. | **Dr. L. S. Solanki (Associate Professor)**"An ANN Approach for False Alarm Detection in Microwave Breast Cancer Detection", IEEE World Congress on Computational Intelligence, 24-29 July 2016, Vancouver, Canada. | **Dr.Anupma Marwaha (Professor)**A Review of novel materials for nanoscale Antenna design for terahertz wirelesscommunications”, International Interdisciplinary Conference On Science, Technology, Engineering, Management, Pharmacy And Humanities (IIC-STEMPH-2017-1451), Singapore, 2017.**Dr. Surinder Singh (Professor)**“Photonic Crystal Fiber Sensor Based on Sensing Ring for Different Blood Components: Design and Analysis”, The Ninth International Conference on Ubiquitous and Future Networks (ICUFN 2017), Milan, Italy, 4-7 July, 2017**Dr. L. S. Solanki (Associate Professor)**" Determination of Soil Suitability for Agriculture Farming Using Microwave Analysis", Proceedings of Ninth International Conference on Ubiquitous and Future Networks (ICUFN 2017), 4th July-7th July, 2017, Milan, Italy.**Dr. Ajay Pal Singh (Associate Professor)**“Impact of Different Modulation Techniques on the performance of Free Space Optics”, International conference on Communications, Networking and Mobile computing held at Toronto, Canada, June 15-16, 2017.**Dr.Dilip Kumar (Associate Professor)**AntMQoS: An Ant-based Multi-Constrained QoS Routing Protocol for Wireless Sensor Networks”, Presented in World Congress on Engineering, London, U.K., 5-7 July, 2017.**Er. Pankaj Kumar Das (Assistant Professor)**“Pankaj Kumar Das, Anjali Yadav, Komal Kumar, ”Propagation Delay Analysis of Multi-layered GNR and Multi-walled CNT Through-Silicon via at Different Technology Nodes”, International Conference of Electrical & Electronics Engineering organized by International Association of Engineers, London, U.K., July 5-7, 2017. |

13. **RESEARCH PUBLICATIONS IN THE DEPARTMENT/CENTER:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2015-16 | 2016-17 | 2017-18 |
| SCI/SCIE Journals  | 19 | 23 | 9 |
| Scopus Indexed | 9 | 4 | 0 |
| Peer reviewed | 28 | 27 | 9 |
| Indexed conferences | 24 | 29 | 14 |
| National Conferences | 23 | 31 | 8 |
| International Conferences | 7 | 3 | 6 |
| Books Published | 1 | 2 | 0 |
| Any other | **Dr. Anupma Marwaha**: Best Paper Award at International Conference on Electrical and Electronics Engineering, Pattaya, Bangkok, Thailand, July 2015**Dr. Dilip Kumar:** Got IET premium award 2015 by IET society, UKBiography was selected for the inclusion to the 33rd edition of Marquis Who’s Who in the World 2016 | **Dr. Dilip Kumar:** Nominated for Indian Electronics at Semiconductor Association Technovation awards 2016 | ---- |

14. **STUDENTS PERFORMANCE IN NATIONAL LEVEL COMPETITIVE EXAMS** (Gate/NET etc.)

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2015-16 | 2016-17 | 2017-18 |
| GATE | Data not available | Data not available | 09 |
| CAT | --- | --- | --- |
| Any other |  |  |  |

List of GATE Qualified UG Students -2018

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.NO.** | **REGD. NO.** | **NAME** | **MARKS** | **ALL INDIA RANK** | **Percentile** |
| 1 | PG/ECE/1750051 | Vishu Goyal | 37.33 | 2318 | 98.15 |
|  2 | PG/ECE/1750053 | Sampurnanand Dwivedi | 39.33 | 1823 | 98.55 |
| 3 | PG/ECE/1650107 | Rahul Singh | 43.33 | 1145 | 99.09 |
| 4 | PG/ECE/1650130 | Maninder Kaur | 42.33 | 1216 | 99.03 |
| 5 | GEC/SL/14/4217 | Om Prakash | 39.33 | 1900 | 98.49 |
| 6 | GEC/SL/14/4201 | Praveen Prajapat | 30.67 | 4775 | 96.20 |
| 7 | GEC/SL/14/4209 | Divya Mittal | 26.00 | 7652 | 93.92 |
| 8 | GEC/SL/14/4219 | Richa  | 24.30 | 9168 | 92.71 |
| 9 | GEC/SL/132405 | Ajit Kumar | 24.33 | 9000 | 92.84 |

1. **DETAILS OF STUDENT ACTIVITIES**

(Workshops/ seminars/industrial tours/ Delivery beyond syllabi/ innovative practices/ remedial activities/ Tutor-Guardian scheme implementation)

1. Industrial tours and other student activities are arranged time to time.
2. Various workshops/seminars have been arranged for students.
3. Tutor Guardian and Students Mentor scheme is implemented.
4. The students of the Deptt. actively participate in the technical events organized in the Institute and number of teams visit other Institutions for participation in the competitions.
5. Remedial classes for academically weak students are being conducted by faculty.
6. (a) **NEW FACILITIES CREATED IN LAST 3 YRS**
7. PhD Research Lab (Computer Lab)
8. PG Research Lab (DSP Lab)
9. UG Project Lab
10. Broadband Communication Lab
11. Machine Vision and Motion Control Lab
12. VLSI Design Lab

Electronics Design Automation (EDA) Tools such as Cadence, H-SPICE, etc

 (b) **NEW EQUIPMENTS PROCURED IN LAST 3 YRS (BASIC EQUIPMENTS)**

Test benches for conducting experiments, various kits for Communication Lab, Basic Electronics Lab, Analog and Digital Electronics Lab.

 **(c) PROCUREMENT OF SOME ADVANCED EQUIPMENTS(for research and consultancy)**

1. Connectorization Cum Spicing Kit for Broadband Communication Lab
2. In process to procure Vector Network Analyzer for development of facility for Electromagnetic Testing and Measurement
3. In process of establishment of Automation center with external agencies is in process

17. **REQUIREMENT FOR BETTERMENT**:

1. To procure equipment for ICD, UG and PG laboratories as per new scheme.
2. To procure specialized/high end equipment for Microwave Lab equipment, Machine Vision and Motion Control Lab, Wireless Communication, VLSI design and Optical Communication.
3. To establish Centre for skilled development.
4. To establish Centre of Excellence in the area of VLSI Design, Electromagnetic Design and Measurements.
5. To Collaborate with industry people for the designing and development of curriculum and laboratory experimentation.

18. **STRENGTH OF THE DEPARTMENT**:

1. Experienced, Dedicated and Highly qualified faculty in specialised areas with good number of publications in reputed journals (SCI indexed).
2. MoU with Industry, research institute for dissemination of knowledge and use of their research facilities.
3. Research fellowships to support the research.
4. Well established laboratories and research facilities with efficient technical support.
5. Good interactions with outer world.

**WEAKNESS OF THE DEPARTMENT**:

1. Limited bondage between Department & Industry for accessing Industrial needs.
2. Shortage of smart class rooms in the Department.
3. Lacking in consultancy.
4. Lack of running informal courses.

19**. INTERNATIONAL EXPOSURE (**in the form of visiting professor or academic associates)

The faculty of the department has good exposure to present research paper and chair technical session in international conferences abroad. Data of last 3 yrs is as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Faculty | 2015-16 | 2016-17 | 2017-18 |
| Visiting Country | Purpose | Visiting Country | Purpose | Visiting Country | Purpose |
| Dr. A.P. Singh Pharwaha | Malaysia  | International Conference |  |  |  |  |
| Singapore | International Conference |  |  |  |  |
| Dr. J.S. Ubhi | Canada | International Conference |  |  |  |  |
| Dr. Anupma Marwaha | Thailand | International Conference |  |  | Singapore | International Conference |
| Dr. Surinder Singh |  |  |  |  | Italy | International Conference |
|  |  |  |  | Italy | Chaired Session |
| Dr. L.S. Solanki |  |  | Canada | International Conference | Italy | International Conference |
| Dr. Ajay Pal Singh | Canada | International Conference | Canada | International Conference |  |  |
| Dr. Dilip Kumar |  |  |  |  | U.K. | International Conference |
| Er. P.K. Das | Japan | International Conference |  |  | U.K. | International Conference |
| Er. Sarbjeet Singh |  |  |  |  |  |  |
| Er. Alka Singla |  |  |  |  |  |  |
| Er. Vipul Singhal |  |  |  |  |  |  |
| Er. Kuldip Singh |  |  |  |  |  |  |
| Er. Vivek Kumar |  |  |  |  |  |  |

20. **FACULTY ATTENTIVENESS**

1. Course File Preparation: Accomplished by faculty
2. Attendance Register: Regularly maintained
3. Display of attendance alert: Notified by faculty
4. Preparation of model answer: Not being followed
5. Makeup classes: Taken up by faculty
6. Use of ICT in Teaching:Actively utilized

**Outcomes**

1. Placement

(i) UG students

|  |  |  |
| --- | --- | --- |
| Year | No. of Students in the Batch | No. of Students placed |
| 2014-2015 | 62 | 15 |
| 2015-2016 | 58 | 14 |
| 2016-2017 | 61 | 27 |
| 2017-2018 | 62 | 13 |
| 2018-2019 | 58 | 15 |

(ii) PG students

|  |  |  |  |
| --- | --- | --- | --- |
| Batch | No. of Students in the Batch | No. of Students in Industry | No. of Students in Academic |
| 2011-2013 | 22 | 15 | 2 |
| 2012-2014 | 18 | 7 | 6 |
| 2013-2015 | 16 | 13 | 0 |
| 2014-2016 | 18 | 7 | 0 |
| 2015-2017 | 19 | 4 | 3 |

(iii) Ph.D. students)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S. No. | Name of Candidate | Yr. of Award | Yr. of Joining | Regd. No. | Placements |
| 1 | Parvinder Kaur | 2014 | 2008 | **S**LIET/Ph.D./65/08 | Chandigarh College of Engg., Sector 26, Chandigarh |
| 2 | Baljit Singh | 2014 | 2008 | SLIET/Ph.D/4008 | Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib  |
| 3 | Shweta | 2015 | 2010 | PEC/1003 | Maharaja Ranjit Singh Punjab Technical University, Bathinda, 151001 |
| 4 | Jagtar Singh | 2015 | 2010 | PEC/1001 | Yadavindra College of Engineering, Punjabi University Campus, Talwandi Sabo, Bathinda |
| 5 | Balkrishan | 2015 | 2008 | SLIET/Ph.D/36/08 | Yadavindra College of Engineering, Punjabi University Campus, Talwandi Sabo, Bathinda |
| 6 | Ajay Pal Singh | 2016 | 2007 | SLIET/Ph.D./13/07 | Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur  |
| 7 | Ashwani Kumar | 2016 | 2008 | SLIET/Ph.D./53/08 | Yadavindra College of Engineering, Punjabi University Campus, Talwandi Sabo, Bathinda |
| 8. | AdishBindal | 2014 | 2009 | SLIET/Ph.D./99/09 | Govt. Polytechnic Ambala Cantt. |
| 9. | Vinod Kumar Verma | 2015 | 2010 | PCS-1003 | Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur  |
| 10. | Amandeep Singh | 2016 | 2011 | PEC-1103 | Entrepreneur, SWAASHoshairpur |
| 11. | YadvinderKumar | 2016 | 2011 | PEC-1105 | Yadavindra College of Engineering, Punjabi University Campus, TalwandiSabo, Bathinda |
| 12. | Lakhvinder Singh Solanki | 2017 | 2008 | Ph.D./51/2008 | Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur |
| 13. | Manoj Pandey | 2017 | 2009 | SLIET/Ph.D./85/2009 | BK Birla Institute of Engineering & Technology |
| 14. | Surita Maini | 2012 | 2008 | SLIET/Ph.D./46/08 | Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur  |
| 15. | Rajni | 2016 | 2010 | PEC/1004/2010 | SBSCET, Firozpur, Punjab  |
| 16.  | Rajni Bala | 2016 | 2013 | PEC/1301 | NIT, Kurukshetra |
| 17. | Lovkesh | 2016 | 2011 | PEC/1106 | Punjabi University, Patiala |

2. Average No. of Ph.D.s Awarded per Year: 03 per year

3. Publications per Faculty in Indexed Journals/Year (Average of last three years)

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2015-16** | **2016-17** | **2017-18** |
| SCI/SCIE Journals  | 19 | 23 | 9 |
| Scopus Indexed | 9 | 4 | 0 |
| Peer reviewed | 28 | 27 | 9 |
| Total | 56 | 54 | 18 |
| No. of regular faculty | 13 |
| Publications per Faculty in Indexed Journals/Year (Average of last three years) | 3.28 |

4. Average Citations per Faculty/Year (Last-Three Years) (Web of Science/Scopus)

|  |  |  |  |
| --- | --- | --- | --- |
| **Faculty** | **Designation** | **Citations** | **h-Index** |
| Dr. A. P. Singh Pharwaha | Professor | 541 | 12 |
| Dr. Anupma Marwaha | 299 | 10 |
| Dr. J.S. Ubhi | 87 | 5 |
| Dr. Surinder Singh | 273 | 13 |
| Dr. Ajay Pal Singh | Associate Professor | 88 | 5 |
| Dr. Dilip Kumar | 1469 | 15 |
| Dr. Lakhwinder Singh Solanki | 4 | 1 |
| Er. Pankaj Kumar Das | Assistant Professor | 31 | 3 |
| Total Citations | 2792 | 64 |
| Average Citation per author per year | 53.69 | 1.23 |

5. Recognitions; Awards(National/International) to Faculty/Students

**Name of Faculty: Dr. A.P. Singh**

**Year 2014-15**

1. KFAntia Memorial Prize for the paper titled, “On the Design and Analysis of Modified Koch Curve Fractal Antenna, ” published in the Journal of the Institution of Engineers (India) 2014-2015
2. Elected third time in the year 2015 as an Executive Member to the State Committee of Institution of Engineers (India) with a tenure of two years for Punjab & Chandigarh State Centre, Punjab, India.

**Name of Faculty: Dr.Anupma Marwaha**

**Year 2015-16**

1. Best Paper Award for the research paper, "Performance analysis of graphene based nano patch antenna for various substrate materials in THz regime", presented at International Conference on Electrical and Electronics Engineering, Pattaya, Bangkok, Thailand, ISBN:9788193137307, July 2015

**Name of Faculty: Dr.Dilip Kumar**

**Year 2015-16**

1. Got IET premium award 2015 by IET society, UK for paper titled, “Performance Analysis of Energy Efficient Clustering Protocol for Maximizing lifetime of Wireless Sensor Networks”.
2. His biography was selected for the inclusion to the 33rd edition of Marquis Who’s Who in the World 2016.
3. Nominated for Indian Electronics at Semiconductor Association Technovation awards 2016.
4. Got best paper award in International Multi Track conference on Sciences, Engg. and Technical Innovations sponsored by ISRO organized by CT group of institutions Jalandhar.

**Students:**

1. Vikash Ranjan of GEC/14 (4-year Degree Programme) was awarded by Department of Atomic Energy, New Delhi for his essay “Societal benefits of non-power applications of nuclear science and technology” on 28th Oct, 2016.
2. Vikash Ranjan of GEC/14 (4-year Degree Programme) was awarded first prize in the National Level Scientific Writing contest on topic: Technology in Digital Communication, organized by the academy at NASI(National Academy of Sciences) , Allahabad on 27th Feb, 2017.

6. Consultancy and Externally Funded Projects

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Title of Project** | **Name of Principle Investigator** | **Duration of Project** | **Funded by** | **Grant received** |
|  | Enhancement of flexibility & Expandability of Optical Communication Networks | Dr. Surinder Singh | 03 years (2013-2016) | AICTE | Rs.15,00,000/- |
|  | Reconfiguration of optical fiber links in optical network topologies for enhancement of broadband optical communication network | Dr. Surinder Singh | 01 year(2013-2014) | TEQIP-II | Rs.75,000/- |
|  | Design and development of novel optoelectronic devices for high speed reconfigurable optical access network | Dr. Surinder Singh | 03 years(2017-2020) | AISTDF-DST | Rs.18,07,080/- |
|  | Development of Facility for Electromegnetic Testing and Measurement | Dr. Anupma Marwaha | 2019-2022 | DST –FIST | Rs. 61 lacs |
|  | Optical metrology of ultra short pulse for design of flexible MIMO based next generation optical communication network | Dr. Surinder Singh | 2018-2021 | Indo-Russian joint project, DST, New Delhi | Rs. 21.17 lacs |
|  | Design and development of photonic biosensor | Dr. Surinder Singh | 2018-2021 | AICTE, New Delhi | Rs. 25 lacs (appr.) |

7. No. of Ph.D. graduates who took Academics as Career (Last 5 Years): More than 90% have opted for Academic Career

Date:

|  |  |
| --- | --- |
| Name & Signature of Audit Committee | Name & Signature of HOD |