

# **DEPARTMENT OF BASIC SCIENCES**

## **STUDENTS ACHIEVEMENTS**

### **CO-CURRICULAR ACTIVITES**

**SESSION: 2019-20, 2018-19, 2017-18**

## Co-Curricular

Session 2019-2020

- (a) **Department has organized an Inspire Camp w.e.f. 23-27, September 2019, sponsored by Department of Science and Technology , New Delhi. Department has received a grant of Rs.9.75 lakh from DST, New Delhi, govt. of India.**

In this camp 10+1, 10+2, science students of 50 schools of Punjab state has been participated. Students of Science society of Department of Basic Sciences played a very good role to organize this camp successfully. Appreciation certificates has been distributed to faculty and students for their hard work.

- (b) **Participation in National Seminar on ‘Recent Advances in Material Sciences’(RAMS 2020) held on 1<sup>st</sup> Feb 2020, at GGSD college, Chandigarh**

Sr. No.	Name of Student	Class	Roll No.	Title of Paper	Type of Presentation (Oral/Poster)
1.	Kajal loona	M.Sc II	8107	Physics of stem cells	Poster
2.	Lovepreet kaur	M.Sc II	8108	Physics of stem cells	Poster
3.	Amritpal kaur	M.Sc I	8004	Piezoelectric effect	Poster
4.	Riya	M.Sc I	8002	Piezoelectric effect	Poster
5.	Liza	M.Sc I	8007	Magnetic Resonance imaging	Poster
6.	Himani	M.Sc I	8009	Superconductivity and its applications	Poster
7.	Karishma	M.Sc I	8016	Liquid crystal and its types	Poster
8.	Nazia Rani	M.Sc I	8005	ESR	Poster
9.	Dolly	M.Sc I	8006	ESR	Poster
10.	Sonam	M.Sc I	8003	Magnetic materials	Poster
11.	Vijeta	M.Sc I	8001	Advancement of solar cell	Poster

**(c) Participation in 7th National Student Symposium on Physics (IAPT) at Panjab University, Chandigarh from 3-5<sup>th</sup> October, 2019**

<b>Name of Student</b>	<b>Class</b>	<b>Roll No.</b>	<b>Title of Paper</b>	<b>Type of Presentation (Oral/Poster)</b>
Nimarpreet Kaur	M.Sc. II	8104	Replicating morphology of Cicada Wing	poster

**(d) Positions of students in Project Demonstration Event organized by Science Association**

<b>Sr. No.</b>	<b>Name of the student</b>	<b>Class</b>	<b>Project name</b>	<b>Position</b>
1.	5401, 2,10	B.Sc I	Galvanometer	-
2.	5403,7,17	B.Sc I	Mini Vacuum cleaner	-
3.	5406,29	B.Sc I	AC wire detector	-
4.	5427,30	B.Sc I	Smoke absorber	-
5.	5432,38	B.Sc I	Projector	-
6.	5433,48	B.Sc I	Touch alarm	-
7.	5411,12,13	B.Sc I	Lifi	3 <sup>rd</sup>
8.	5408,20	B.Sc I	Water alarm	-
9.	5435,44	B.Sc I	Air cooler	-
10.	5427,30	B.Sc I	Running LED lights	-
11.	5425,39	B.Sc I	Rich returns	-
12.	545405,14,15,16	B.Sc I	Electricity generator	-
13.	5434,09	B.Sc I	DC Power	-
14.	5424,21	B.Sc I	Free energy electrical power generator	-
15.	5426,28,31	B.Sc I	Working fire alarm	-
16.	5422,37,45	B.Sc I	Laser Security System	-
17.	5441, 46	B.Sc I	Water alarm cum free generator	-
18.	5436, 40	B.Sc I	Dynamo	-
19.	5501,8,7	B.Sc.II	Optical Box	Ist
20.	5502,6,12	B.Sc.II	Automatic street	2 <sup>nd</sup>

			light	
21.	5510,39,40,43	B.Sc.II	Earth quake alarm	-
22.	5552,28,25,44	B.Sc.II	Accident prevention	-
23.	5530,31,32	B.Sc.II	Electric bell	-
24.	5536,37,38,41,42	B.Sc.II	Earth quake alarm	-
25.	5505,4,45	B.Sc.II	Application of laser security alarm	-
26.	5518,9,47	B.Sc.II	Michelson interferometer	-
27.	5535,3,19,24,51	B.Sc.II	Hydraulic bridge	-
28.	5516,25,27,33,26	B.Sc.II	Charging and discharging Capacitor	-
29.	5546,11,21	B.Sc.II	Fire security alarm	-
30.	5514,13,33	B.Sc.II	Room heater	-
31.	5517,22,23,39	B.Sc.II	Water level indicator	-
32.	5534,48,49,50	B.Sc.II	Free energy Mobile Charge	-
33.	5601,2,3,4,7	B.Sc.III	Laser Light Security alarm	-
34.	5605,6,12,13	B.Sc.III	LED Illusion Mirror	2 <sup>nd</sup>
35.	5608,9,10,15	B.Sc.III	Electric power free energy generator with DC motor	-
36.	5614,16,17,18	B.Sc.III	3D Hologram	3 <sup>rd</sup>
37.	5611,19,20,21	B.Sc.III	Solenoidal Engine	-
38.	5622,23,25,29	B.Sc.III	AND, OR gate and its application on traffic lights	-
39.	5628,27,24,26	B.Sc.III	Water alarm	-
40.	5637,38,39,40	B.Sc.III	Household project using Solar energy	-
41.	5634,32,33	B.Sc.III	Smoke Absorber	-
42.	5631,36,30,35	B.Sc.III	Heater	-
43.	5641,42,43,54,58	B.Sc.III	Designing AND, OR gates on Breadboards	-
44.	5649,50,51,60	B.Sc.III	Pendulum wave	-
45.	5652,53,55,59,56	B.Sc.III	Electromagnetic pendulum swing	-

46.	5644,45,46,47,48	B.Sc.III	Hydraulic Bridge	-
47.	8107,8108,8109	M.Sc.II (Physics)	Low pass Filter	-
48.	8101,8102,8105	M.Sc.II (Physics)	Band pass filter	Ist
49.	8103,8110,8111	M.Sc.II (Physics)	Constant Current source	-
50.	8001,8003	M.Sc.I (Physics)	Logic Gates	-
51.	8014,8012	M.Sc.I (Physics)	Seven Segment Cell	-
52.	8013,8002	M.Sc.I (Physics)	Voltage divider	2 <sup>nd</sup>
53.	8016,8008	M.Sc.I (Physics)	Music Rhythm LED Flashlight circuit	-
54.	8010,8011	M.Sc.I (Physics)	Clipper and clamper	-
55.	8009,8007	M.Sc.I (Physics)	RS Flip Flop	-
56.	8004,8005,8006	M.Sc.I (Physics)	Steam Engine	-
57.	8012, 8014	M.Sc.I (Physics)	Faraday Cage	3 <sup>rd</sup>

**(e) Student's Achievement**

- **Six students of B.Sc. IIIrd year qualify the National Physics Graduate examination 2020 by Indian Association of Physics Teachers.**

S.No.	Name	Roll No.	Class
1.	Raman	5643	B.Sc. IIIrd year
2.	Arshdeep Kaur	5638	B.Sc. IIIrd year
3.	Kasak	5621	B.Sc. IIIrd year
4.	Muskaan	5644	B.Sc. IIIrd year
5.	Shubhangi	5645	B.Sc. IIIrd year
6.	Manpreet Kaur	5624	B.Sc. IIIrd year

- **Ms. Nimarpreet kaur student of M.Sc. II year** has been selected to carry out research project for two months at IIT Ropar (9-01-2020 to 14-0302020). She has completed her research work under the guidance of Dr. Rajesh & V. Nain and title of their study is optical studies of defects in SiC
- **Ms. Khushboo** qualify the test for coaching in competitive exams and scored **21<sup>th</sup> rank**

- **Ms. Amandeep Kaur** pass out student of M.Sc. Physics, session 2018-19, **GATE Registration no. PH20S18003025** qualify **GATE** under SC Category in March 2020 got **All India Rank 2924** and scored **342 marks**

## Co-Curricular

Session 2018-2019

(a) 6<sup>th</sup> IAPT (Indian Association of Physics Teachers) National Student Symposium on Physics conference at Department of Physics, Panjab University, Chandigarh from 4-6 October ,2018

Name of Student	Class	Roll No.	Title of Paper	Type of Presentation (Oral/Poster)
Loveleen Wadhwa	M.Sc. II (Physics)	8016	Gravtational waves	Oral
Palvi	M.Sc. II (Physics)	8025	Gravtational waves	Oral
Nimerpreet Kaur	M. Sc. I (Physics)	8012	Superhydrophobic surfaces	Poster
Amanpreet Kaur	B.Sc. III (N.M.)	5630	Comparitive studyof KOH and TMAH etching of Si(100)	Poster

(b) Positions in FFF-2018 (organized by Dev Samaj College For women, Ferozpur)

Name	Class	Event	Position
Lovedeep Kaur	B.Sc. III (N.M)	Poster	3 <sup>rd</sup>
Beant Kaur and Sonali Bansal	M.Sc. II (Physics)	Model	2 <sup>nd</sup>
Maninder Kaur, Jaspreet Kaur and Soma Bai	M.Sc.II (Physics)	Model	3 <sup>rd</sup>

(c) Positions in Project Demonstration Event organized by Science Association

Sr.No.	Name of the student	Class	Model name	Position
1	Gurkanwal, Rabiya& Harsimran	B.ScIII (N.M)	Electromagnetic Pendulum	1 <sup>st</sup>
2	Dolly, Sunita&Mandeep	B.ScIII (N.M)	Electric Bell	2 <sup>nd</sup>
3	Akanksha, Khushdeep, Kajal, Karishma, Jaspreet& Gurvinder	B.ScIII (N.M)	Laser Protection System	3 <sup>rd</sup>

4	Amandeep kaur&Rani	Msc-II (Physics)	Band Pass Filter	1 <sup>st</sup>
5	Nimarpreet Kaur& Kajal	Msc-I (Physics)	D Flip Flop	2 <sup>nd</sup>
6	Harmanbir kaur, Nidhi& Manpreet kaur	Msc-I (Physics)	Rs Flip Flop	3 <sup>rd</sup>

**(d) Paper presented by students of M.Sc. I & II year in CDC sponsored National Seminar ERTEP held on Feb.22, 2019 organized by Department of Basic Sciences, Guru Nanak College of Girls, Sri Muktsar Sahib**

<b>Sr. No.</b>	<b>Name of Student</b>	<b>Class</b>	<b>Roll No.</b>	<b>Title of Paper</b>	<b>Type of Presentation (Oral/Poster)</b>
1.	Maninder Kaur	M.Sc. II (Physics)	8101	AFM: Instrumental in Biological Research	Poster
2.	Jaspinder Kaur	M.Sc. II (Physics)	8110	Parker Solar Probe	Poster
3.	Rajveer Kaur	M.Sc. II (Physics)	8104	The Experimental Trends In Nuclear Energy	Poster
4.	Beant Kaur	M.Sc. II (Physics)	8105	Trends in thin film deposition method	Poster
5.	Sonali Bansal	M.Sc. II (Physics)	8106	Large Hadron Collider Could Break All Known Science	Poster
6.	Rani Mittal	M.Sc. II (Physics)	8108	Role of Transmission Electron Microscope In Physics research	Poster
7.	Harpinder Kaur	M.Sc. II (Physics)	8103	SEM: Applications in nanotechnology	Poster
8.	Rajinder Kaur	M.Sc. II	8107	Wilson chamber	Poster



		(Physics)		role in Radiation physics	
9.	Ramanpreet Kaur	M.Sc. II (Physics)	8102	Spin Coating: A Popular Tool in Experimental Physics Research	Poster
10.	Ajashandeep Kaur	M.Sc. II (Physics)	8109	Optical Tweezers as a Tool in Biological Research	Poster
11.	<u>Amanpreet</u>	M.Sc. I(Physics)	8006	High Accuracy Modeling of X-ray Radiation in Dense Matter	Poster
12.	<u>Jyoti</u>	M.Sc. I (Physics)	8001	New Age of Nuclear Batteries	Poster
13.	<u>Pooja Rani</u>	M.Sc. I(Physics)	8008	Negative Capacitance in Ferroelectric Material	Poster
14.	<u>Nimarpreet Kaur</u>	M.Sc. I (Physics)	8012	Organic Solar Cells	Poster
15.	<u>Nidhi Sharma</u>	M.Sc. I(Physics)	8003	Aero Gallium-Nitride: Hydrophobic or Hydrophilic	Poster
16.	Harmanbir Kaur	M.Sc. I(Physics)	8004	Ionization potential Depression in Atomic –Solid - Plasma picture	Poster
17.			8005	X-Ray & EUV Spectroscopy of various Astrophysical & Laboratory Plasma	Poster
18.	Sukhwinder Kaur <sup>1</sup>	M.Sc. I (Physics)	8009	Radioactive Charged particle Emission	Poster
19.	Gurpreet Kaur <sup>1</sup>	M.Sc. I (Physics)	8010	Selective Laser Sintering Of	Poster

				Aluminium Alloy Powders	
20.	Lovepreet kaur1	M.Sc. I (Physics)	8007	Adventure of Nanoscience in stem cells	Poster
21.	Kajal loona1	M.Sc. I(Physics)	8011	High Energy Physics	Poster
22.	Amandeep Kaur	M.Sc. II (Physics)	8111	A review on applications of X-ray fluorescence technique	Poster
23.	Jyoti Arora	M.Sc. II (Physics)	8112	Nanomaterials in Cancer Therapy	Poster
24.	<i>Palvi,</i>	M.Sc. II (Physics)	8113	Rayleigh scattering cross sections (Theoretical and experimental approaches)	Poster
25.	Loveleen Wadhwa	M.Sc. II (Physics)	8116	Uranium in groundwater Malwa Region	Poster
26.	Manpreet kaur	M.Sc. II (Physics)	8115	Combined Magnetron Sputtering and Ion Implantation Technique	Poster
27.	Jaspreet Kaur	M.Sc. II (Physics)	8119	Radiation detectors used in nuclear physics experiments	Poster
28.	soma bai	M.Sc. II (Physics)	8123	Single-Phase Tin Monosulfide (SnS) Films: Overview	Poster
29.	Gurpreet kaur	M.Sc. II (Physics)	8125	dark matter	Poster
30.	Asha rani	M.Sc. II (Physics)	8128	Hydrogen in metals	Poster
31.	Manpreet kaur	M.Sc. II (Physics)	8121	Working Of SEM	Poster
32.	Mamta rani	M.Sc. II (Physics)	8126	Applications of Spectroscopy	Poster

33.	Amandeep kaur Atwal	M.Sc. II (Physics)	8129	Savvy And Faux Pas of Quarks Model	Poster
34.	Satveer kaur	M.Sc. II (Physics)	8124	solar power: Applications	Poster
35.	Yuganshi	M.Sc. II (Physics)	8127	Spin Orbital Coupling Form In a Perfect Crystal : Review	Poster
36.	<i>Kajal</i>	M.Sc. II (Physics)	8122	Gold Nanoparticles : As a Catalyst in Nanotechnology	Poster
37.	<u>Kirti.</u>	M.Sc. II (Physics)	8117	Photon-Atom Interactions and Their Applications	Poster
38.	<u>Alviz Nagpal</u>	M.Sc. II (Physics)	8118	Photon-Atom Interactions and Their Applications	Poster
39.	Diksha Rani	M.Sc. II (Physics)	8114	Development and Applications of Superconducting Materials (Present Trends)	Poster
40.	Rajveer Kaur	M.Sc. II (Physics)	8120	Role of Cyclotron in present experimental research	Poster

**(e ) Participation of Students in National Workshop Nuclear Sciences and Applications of Radioisotopes (NSAR-2019)' jointly organized by Guru Nanak College of Girls, Sri Muktsar Sahib and Indian Association of Nuclear Chemists and Allied Scientist (IANCAS) Division of Bhabha Atomic Research Center, Trombay on 9-10 Mar., 2019.**

Twenty five students of B.Sc. III (Med), fifty eight students B.Sc. III (N.Med) and eleven students of M.Sc.I and 29 students of M.Sc. II Physics attended the Workshop.

**(f) Student's Achievements**

- **Ms. Rabiya & Ms. Lovepreet Kaur** of B.Sc-III (NM) are awarded the certificate of merit as State Topper in National Graduate Physics Examination-2019 held at Guru Nanak College for girls, Sri Muktsar Sahib.
- Five students of B.Sc. (Non. Med) qualified the National Graduate Physics Examination-2019 held at Guru Nanak College for girls, Sri Muktsar Sahib.
- **Ms. Nimarpreet Kaur** of M.Sc-I (Physics) has been selected to participate in Physics Training and Talent Search (PTTS) 2019 at Manipal Institute of Technology, Manipal Academy of Higher Education, Udupi, Karnataka from May 23 to June 12, 2019.
- **Ms. Nimarpreet Kaur** of M.Sc-I (Physics) has also been selected for the internship in GSI Helmholtz Centre for Heavy Ion Research, Germany to be held from 22 July to 12 September, 2019.

**Co-Curricular**

**Session 2017-2018**

**(a) Workshop in Chandigarh for 15 days on Experimental Physics, held at P.U. Chandigarh, Dec.2017**

<b>Roll No.</b>	<b>Class</b>	<b>Name</b>
8024	M.Sc I	Kajal
8005	M.Sc I	Aman
8011	M.Sc I	Manpreet Kaur

**(b) Selection of student in Workshop, held at PTTS ( Physics Training and Talent and Talent Search ) from May21- June10, 2018**

<b>Roll No.</b>	<b>Class</b>	<b>Name</b>
8026	M.Sc I	Palvi

**(c) Intercollege Physics Quiz held at D.A.V College Malout**

<b>Roll no.</b>	<b>Class</b>	<b>Name</b>	<b>Position</b>
5620	B.Sc(III) N.M	Jaspreet kaur	Ist position
5621	B.Sc(III )N.M	Atamsangeet	Ist position
5638	B.Sc(III )N.M	Shruti single	Ist position

**(d) International Conference at Ludhiana**

<b>Name</b>	<b>Class</b>	<b>Event</b>	<b>Position</b>
Jyoti Bala	B.Sc(III)N.M	Paper presentation	-

**(e) Selection for Summer Internship at IIT ROPAR**

Nimarpreet Kaur	B.Sc (N.M) III
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**(f) Project Demonstration**

<b>Roll No.</b>	<b>Class</b>	<b>Project name</b>	<b>Position</b>
5624-5632	B.Sc.III	Saving energy from street light	Ist
5620,5646	B.Sc.III	Electronic letter box	2 <sup>nd</sup>
5601	B.Sc.III	Newton law of cooling	3 <sup>rd</sup>

5641,5643,5652,5617	B.Sc.III	Bridge rectifier	3 <sup>rd</sup>
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**(g) Paper Presentation of students by M.Sc I (Physics), 24-01-2018 (RTCEMS-2018),  
DAV Abohar**

<b>Sr. No.</b>	<b>Name</b>	<b>Roll No.</b>	<b>Title of Paper</b>
1.	Maninder kaur	8001	Synthesis of Nanomaterials
2.	Rajveer kaur	8003	Solar Energy materials
3.	Rani Mittal	8004	Nano Particles in Food technology
4.	Amandeep Kaur	8005	Nanotechnology in electronics and Communication
5.	Jaspinder kaur	8006	Nanotechnology in electronics and Communication
6.	Satveer kaur	8007	Polymers
7.	Alviz	8008	Nanostructural Materials
8.	Sonali Bansal	8009	Bio-molecules and its applications
9.	Amandeep kaur Atwal	8010	Nanotechnology in electronics and Communication
10.	Manpreet kaur	8011	Polymers in present and future
11.	Beant kaur	8013	Fuel Cells
12.	Ramanpreet kaur	8014	Solar Energy Materials
13.	Rajinder kaur	8015	Bio-molecules and its applications
14.	Jaspreet kaur	8016	Synthesis of Nanomaterials
15.	Harpinder Kaur	8017	Fuel Cells
16.	Diksha Rani	8018	Nanostructural Materials
17.	Gurpreet kaur	8019	Nano Particles in Food technology
18.	Loveleen Wadhwa	8022	Nanotechnology: Food-technology,Civil, Electronics and communication and Automobiles
19.	Kajal	8024	Nanotechnology: Food-technology,Civil,

			Electronics and communication and Automobiles
20.	Jyoti	8025	Nanotechnology in Cancer
21.	Palvi	8026	Nanotechnology in Cancer
22.	Sanjoli Bala	8027	Nanotechnology
23.	Rajveer kaur	8029	Polymers in present and future
24.	Soma Rani	8030	Polymers

**(h) Poster presentation in Women Anti-Harassment cell**

<b>Name</b>	<b>Class</b>	<b>Position</b>
Monika	B.Sc (N.M)III	1 <sup>st</sup>
Harwinder kaur	B.Sc (N.M)	2 <sup>nd</sup>
Sheena	B.Sc (N.M)	3 <sup>rd</sup>