

CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA



ACADEMIC ADMINISTRATIVE AUDIT (AAA)

SELF STUDY REPORT

NAME OF THE DEPARTMENT: **Physics (aided)**

PERIOD: **2019 JUNE-2020 DEC**

CATEGORY:

The Departments shall enter the necessary data in this booklet itself. For positive responses the details asked need be given only in a very brief manner. All claims must be supported by documentary evidence.

DEPARTMENT GRADING

The department is requested to submit a Self Study Report (SSR) of its performance during the academic year 2019 – 20 in the following format, for the purpose of department grading. The grading aims to encourage self-evaluation, accountability, research, and innovation in teaching and learning. It will also help to create healthy competition in curricular and extracurricular activities among departments. The grading will be performed based on the following six criteria.

Criterion I – Teaching-learning Process

Criterion II – Research

Criterion III – Consultancy and extension

Criterion IV – Extracurricular activities

Criterion V – Student Support and Progression

Criterion VI – Supportive activities

SELF STUDY REPORT

CRITERION I – TEACHING-LEARNING PROCESS

a. Does the department Plan and organize the teaching-learning and evaluation schedules?

✓ Yes

(If yes; provide documentary evidence-Submit filled up Teachers Diary (2019-20) of each teacher or any other evidence)

b. Which teaching-learning method/s is/are used by teachers?

✓ (Put ✓ marks in appropriate boxes. Details must be given)

- ✓ Lecture
- ✓ Interactive method
- ✓ Project-based learning
- ✓ Computer-assisted learning
- ✓ Experiential learning
- ✓ Seminars

c. Does the department use any modern teaching aids and tools like computers, audio-visuals, MOODLE, CAL (Computer Aided Learning), internet and other information/materials, which ensure that students have effective learning experience?

✓ Yes

If yes, give details.

Online class and study materials and assignments given through MOODLE

Seetablet and energy kit for doing experiments, NPTEL, MIT Videos etc

d. Department conducted any exams in MOODLE-Learning Management system?

✓ Yes

If yes, give details of exams.

✓ **Dr. Fr. Jolly Andrews conducted JAM test and internals exam.**

e. Does the department conduct any skill-developing programs (short-term add-on courses, soft-skill development programs etc.) for students?

✓ Yes

If yes, give details

1. **Certificate course in Medical imaging technologies**
2. **Certificate course in machine learning and Artificial intelligence.**
3. **Certificate course in Solar energy: Photovoltaic technologies**

f. Does the department apply for any new course, by designing curricula for it, during the current year?

✓ No

If yes, give details

g. How many teachers attended seminar/ workshop/ conference/ refresher courses etc. during the period (Use separate sheet if necessary) > 90% =10, >50=5, <50 =0

Sl. No	Name of faculty	Title of the Seminar/webinar/ workshop/ conference etc.	Duration		Whether international/ national/ state/regional	Organizing agency
			From	To		
1.	Dr. V. P joseph	THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019,	16 September 2019	21 September 2019	International	METAMORPHOSE VI AISBL (www.metamorphose-vi.org)
2.	Rev. Dr. Jolly Andrews	THIRTEENTH INTERNATIONAL	16 September	21 September	International	METAMORPHOSE VI

		CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019,	ber 2019	ber 2019	al	AISBL (www.metamorphose-vi.org)
3.	Dr.shaju.K.Y, Christ college,irinjalakuda	National workshop on formulation of statistical mechanics	22 june 2019	23 june 2019	State	Academy of physics teachers (APT)
4.	Dr.Shaju.K.Y,Christ college,irinjalakuda	Free and open source softwares for educational institutions	22 february 2020		state	Linuxpert systems, Chennai and internal quality assurance cell of Christ college(autonomous),Irinjalakuda
5	Prof. Edwin Jose	4-Week Induction/Orientation Programme for "Faculty in Universities/Colleges /Institutes of Higher Education"	June 04 - July 01, 2020		National	Teaching Learning Centre, Ramanujan College University of Delhi.
6	Prof. Edwin Jose	Online refresher course on 'Research Methodology: Tools and Techniques'	7th to 20th July, 2020		National	UGC-HRDC, Mizoram University.
7	Prof. Edwin Jose	One Week National Faculty Development Program on 'Research Ethics and Characterisation Techniques in Materials Science'	09-15 September 2020		National	Guru Angad Dev Teaching Learning Centre, S.G.T.B. Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMMNTT) of MHRD.

8	Rev. Dr. Jolly Andrews	One Week National Faculty Development Program on "Skills for Next Generation Teachers"	01-07 December 2020		National	Guru Angad Dev Teaching Learning Centre, S.G.T.B. Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMMNMTT) of MHRD.
9	Rev. Dr. Jolly Andrews	One Week National Faculty Development Program on "Capacity building in Drafting proposals for Funded research"	05-11 October 2020		National	Guru Angad Dev Teaching Learning Centre, S.G.T.B. Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMMNMTT) of MHRD.
10	Rev. Dr. Jolly Andrews	One Week National Faculty Development Program on "Quality Science education in India in the 21 st Century"	03-09 November 2020		National	Guru Angad Dev Teaching Learning Centre, S.G.T.B. Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMMNMTT) of MHRD.
11	Rev. Dr. Jolly Andrews	Faculty Development Programme on Moodle Learning Management System	2020-09-01 to 2020-09-15		National	IQAC Cell - Prabhat Kumar College, Contai
12	Rev. Dr. Jolly Andrews	Moodle Test for Teachers	2020-11-10		National	IQAC Cell - Prabhat Kumar College, Contai
13	Rev. Dr. Jolly Andrews	Online refresher course on 'Research Methodology: Tools and Techniques'	7th to 20th July, 2020		National	UGC-HRDC, Mizoram University.
14	Dr. K Y Shaju	International webinar on (Super) resolution with far field optics	22 nd July 2020		International	Dept of Physics, Christ college Irinjalakuda
15	Dr. K Y Shaju	International webinar on "Impact of	29th July		International	Alumni association, Dept of Physics and Dept of Chemistry Christ

		Nanotechnology”	2020		al	college Irinjalakuda
16	Dr. K Y Shaju	International webinar on Supercapacitors	3 rd August 2020		International	Dept of Physics, Christ college Irinjalakuda
17	Dr. K Y Shaju	International webinar on Defect engineered electrods for advanced rechargeable batteries	27 th August 2020		International	Dept of Physics, Christ college Irinjalakuda
18	Dr. K Y Shaju	International webinar on way to 6 th Generation communication devices	19 th September 2020		International	Dept of Physics, Christ college Irinjalakuda
19	Dr. K Y Shaju	National webinar on Women in Science	30 th September 2020		National	Dept of Physics, Christ college Irinjalakuda and Assaba College, Malappuram.

20	Dr. Sudheer Sebastian K	International webinar on (Super) resolution with far field optics	22 nd July 2020		International	Dept of Physics, Christ college Irinjalakuda
21	Dr. Sudheer Sebastian K	International webinar on “Impact of Nanotechnology”	29 th July 2020		International	Alumni association, Dept of Physics and Dept of Chemistry Christ college Irinjalakuda
22	Dr. Sudheer Sebastian K	International webinar on Supercapacitors	3 rd August 2020		International	Dept of Physics, Christ college Irinjalakuda
23	Dr. Sudheer Sebastian K	International webinar on Defect engineered electrods for advanced rechargeable batteries	27 th August 2020		International	Dept of Physics, Christ college Irinjalakuda

24	Dr. Sudheer Sebastian K		International webinar on way to 6 th Generation communication devices	19 th September 2020		International	Dept of Physics, Christ college Irinjalakuda
25	Dr. Sudheer Sebastian K		National webinar on Women in Science	30 th September 2020		National	Dept of Physics, Christ college Irinjalakuda and Assaba College, Malappuram.
26	Dr. Xavier Joseph		International webinar on (Super) resolution with far field optics	22 nd July 2020		International	Dept of Physics, Christ college Irinjalakuda
27	Dr. Xavier Joseph		International webinar on "Impact of Nanotechnology"	29th July 2020		International	Alumni association, Dept of Physics and Dept of Chemistry Christ college Irinjalakuda
28	Dr. Xavier Joseph		International webinar on Supercapacitors	3 rd August 2020		International	Dept of Physics, Christ college Irinjalakuda
29	Dr. Xavier Joseph		International webinar on Defect engineered electrodes for advanced rechargeable batteries	27th August 2020		International	Dept of Physics, Christ college Irinjalakuda
30	Dr. Xavier Joseph		International webinar on way to 6 th Generation communication devices	19 th September 2020		International	Dept of Physics, Christ college Irinjalakuda
31	Dr. Xavier Joseph		National webinar on Women in Science	30 th September 2020		National	Dept of Physics, Christ college Irinjalakuda and Assaba College, Malappuram.
32	Fr. Dr. Jolly Andrews		International webinar on (Super) resolution with far field optics	22nd July 2020		International	Dept of Physics, Christ college Irinjalakuda

33	Fr. Dr. Jolly Andrews		International webinar on "Impact of Nanotechnology"	29th July 2020		International	Alumni association, Dept of Physics and Dept of Chemistry Christ college Irinjalakuda
34	Fr. Dr. Jolly Andrews		International webinar on Supercapacitors	3rd August 2020		International	Dept of Physics, Christ college Irinjalakuda
35	Fr. Dr. Jolly Andrews		International webinar on Defect engineered electrodes for advanced rechargeable batteries	27th August 2020		International	Dept of Physics, Christ college Irinjalakuda
36	Fr. Dr. Jolly Andrews		International webinar on way to 6th Generation communication devices	19th September 2020		International	Dept of Physics, Christ college Irinjalakuda
37	Fr. Dr. Jolly Andrews		National webinar on Women in Science	30th September 2020		National	Dept of Physics, Christ college Irinjalakuda and Assaba College, Malappuram.
38	Prof. Edwin Jose		International webinar on (Super) resolution with far field optics	22nd July 2020		International	Dept of Physics, Christ college Irinjalakuda
39	Prof. Edwin Jose		International webinar on "Impact of Nanotechnology"	29th July 2020		International	Alumni association, Dept of Physics and Dept of Chemistry Christ college Irinjalakuda
40	Prof. Edwin Jose		International webinar on Supercapacitors	3rd August 2020		International	Dept of Physics, Christ college Irinjalakuda
41	Prof. Edwin Jose		International webinar on Defect engineered electrodes for advanced rechargeable batteries	27th August 2020		International	Dept of Physics, Christ college Irinjalakuda

Edwin Jose	International webinar on way to 6th Generation communication devices	19th September 2020	International	Dept of Physics, Christ college Irinjalakuda
Edwin Jose	National webinar on Women in Science	30th September 2020	National	Dept of Physics, Christ college Irinjalakuda and Assaba College, Malappuram.

- h. Give details of faculty members, if any, who are selected as resource persons for seminar/workshop/conference/refresher courses etc. during this period (Use separate sheet if necessary)

Sl. No	Name of faculty	Title of the seminar/ workshop/ conference etc.	Date	Whether international/ national/ state/regional	Organizing agency
1	Dr. Shaju K.Y.	LateX	03.02.2020	State	Christ College, IJK
2	Dr. Shaju K.Y.	LateX	15.02.2020	State	Christ College, IJK
3	Dr. Shaju K.Y.	LateX	18.07.2020	State	Mercy College
4	Dr. Shaju K.Y.	LateX	25.07.2020	State	Mercy College
5	Dr. Shaju K.Y.	Solar Eclipse	20.12.2019	Regional	H.D.P Samajam, Higher secondary School, Edathirinji

Youtube link for the LateX workshop:

1. <https://youtu.be/vUNppyfj-BQ>
2. <https://youtu.be/B7Zl3e2iLjQ>
3. https://youtu.be/HWwlxwpBt_w
4. <https://youtu.be/VR-GhLxo37M>
5. <https://youtu.be/6T3uAtS5JEY>
6. <https://youtu.be/67XYMXz1cRM>

7. <https://youtu.be/0ur9YX16Pco>
8. https://youtu.be/xF4zU_4hmkA
9. <https://youtu.be/39ptxufUM-M>
10. <https://youtu.be/f4wt3Q5wfwY>
11. <https://youtu.be/GALV1Sa65Js>
12. <https://youtu.be/nMKDlFrb0lU>
13. <https://youtu.be/bosROE3lETw>

i. Does the department introduce any innovations in teaching/ learning/ evaluation during the current year? (like online tests, video lectures from out station resource persons)

✓ Yes

If yes, give details

1. Online test

j. Does the department provide remedial teaching?

✓ Yes

If yes, furnish the following (use separate sheet if needed); provide evidence for student attendance

Sl. No.	Name of the teacher	Class for which remedial teaching is arranged	No of students benefited
1.	Dr. Sudheer Sebastian, Christ college ,irinjalakuda	BSc Physics core IIIrd and IVth sem	10
2.	Ms. Sreedevi Chakiar	BSc Physics core IIrd and IIIrd sem	10

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k. Does the department provide coaching for entrance tests/eligibility tests (JAM, CSIR/UGC, University entrance tests etc..)? 15

✓ Yes

If yes, furnish the following (use separate sheet if needed); provide evidence for student attendance

Sl. No.	Name of the teacher	Class for which remedial teaching is arranged	No of students benefited
1.	Dr. Fr. Jolly Andrews	BSc Physics Core	40
2	Dr. Sudheer Sebastian K	BSc Physics Core	40(online through whatsapp)

CRITERION II – RESEARCH

a. Give details of the publication by faculty, if any during the period . 2 for each – max 10

Sl.	Name of faculty	Title of the paper	Title of the Journal and	Citation index
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No			year of publishing	and impact factor of the journal, if available
1.	Dr.Sudheer Sebastian.K	Device modeling of non fullerene organic solar cell with inorganic CuI hole transport layer using SCAPS 1-D	Optik,2020	1.914
2	Dr.Sudheer Sebastian.K	Simulation and optimization of CH ₃ NH ₃ SnI ₃ based inverted perovskite solar cell with NiO as Hole transport materials	Materials Today: Proceedings, 2020, 33, 1246-1251	0.576
3.	Dr. sudheer Sebastian.K	Numerical modelling of non-fullerene organic solar cell with high dielectric constant ITIC-OE acceptor	Journal of Physics Communications, 2020, 4, 025012	3.748
4	Dr. V.P. Joseph	“Frequency Dependent Radiation Properties of Negative Permittivity Metamaterial Reflector Antenna”	<i>Physica Scripta</i> , Phys. Scr. 94 (2019) 105811 (9pp), <i>IOP Science</i> .	1.985
5	Rev. Dr.Jolly Andrews	“Frequency Dependent Radiation Properties of Negative Permittivity	<i>Physica Scripta</i> , Phys. Scr. 94 (2019) 105811 (9pp), <i>IOP Science</i> .	1.985

		Metamaterial Reflector Antenna”		
6	Dr. V.P. Joseph	Wide Band Microwave Absorber using Flexible Broadside Coupled Split Ring Resonator Metamaterial Structure	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
7	Dr. V.P. Joseph	Rotation Sensor based on Near Field Perturbations of Metamaterial Split Ring Resonator	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
8	Dr. V.P. Joseph	Direct Amplitude Modulation Technique using Metamaterial Broadside Coupled Split Ring Resonator (BCSRR) Structure”	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
9	Dr. V.P. Joseph	Thin Film Metamaterial Split Ring Resonators at Microwave Frequencies	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455,	

			IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
10	Dr. V.P. Joseph	Metamaterial Split Ring Resonator made of Polyaniline - polytetrafluoroethylene at Microwave Frequencies	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
11	Dr. V.P. Joseph	Specially Designed Metamaterial Split Ring Resonator for High Resolution Imaging at Microwave Frequencies	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
12	Dr. V.P. Joseph	Frequency Tunable Monopole Patch Antenna Using Broadside Coupled Split Ring Resonator for Wireless Communication Applications	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
13	Dr. V.P. Joseph	Nonstandard FDTD Realization of Radiation Behaviour of Epsilon Negative Metamaterial Corner Reflector Antenna	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455,	

			IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
14	Rev. Dr.Jolly Andrews	Wide Band Microwave Absorber using Flexible Broadside Coupled Split Ring Resonator Metamaterial Structure	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
15	Rev. Dr.Jolly Andrews	Rotation Sensor based on Near Field Perturbations of Metamaterial Split Ring Resonator	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
16	Rev. Dr.Jolly Andrews	Direct Amplitude Modulation Technique using Metamaterial Broadside Coupled Split Ring Resonator (BCSRR) Structure”	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
17	Rev. Dr.Jolly Andrews	Thin Film Metamaterial Split Ring Resonators at Microwave Frequencies	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455,	

			IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
18	Rev. Dr.Jolly Andrews	Metamaterial Split Ring Resonator made of Polyaniline - polytetrafluoroethylene at Microwave Frequencies	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
19	Rev. Dr.Jolly Andrews	Specially Designed Metamaterial Split Ring Resonator for High Resolution Imaging at Microwave Frequencies	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
20	Rev. Dr.Jolly Andrews	Frequency Tunable Monopole Patch Antenna Using Broadside Coupled Split Ring Resonator for Wireless Communication Applications	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455, IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
21	Rev. Dr.Jolly Andrews	Nonstandard FDTD Realization of Radiation Behaviour of Epsilon Negative Metamaterial Corner Reflector Antenna	2019 THIRTEENTH INTERNATIONAL CONGRESS ON ARTIFICIAL MATERIALS FOR NOVEL WAVE PHENOMENA (METAMATERIALS), Rome, Italy, 2019, pp. X-453-X-455,	

			IEEE Explorer, doi: 10.1109/MetaMaterials.2019.8900801	
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b. Is the department recognized as a research department?

✓ Yes

If yes give the number of research scholars joined this year.

✓ **Two**

c. Did the department produce any Ph. D during the last two years? (*For research departments only*)

✓ Yes

If yes furnish the following

Sl. No	Name of the Research scholar	Name of the guide	Title of the thesis	Year of awarding
1	Ranjith.P.K	DR. Anto.P.L	Quantum chemical and spectroscopic investigations of substituted quinoline azatricyclo and pyrazine carboxamide derivatives	06-03-2020
2.	Sreedevi.p.chakyar	Dr. V.P.Joseph	Development of a permittivity measurement technique based on the resonant properties of split ring resonator Metamaterial structure	28-05-2020
3.	Nees paul	Dr.V.P.Joseph	Development of humidity sensitive polyaniline polytetrafluoroethylene	23-07-2020

4.	Joe Kizhakkooden	DR.V. P.Joseph	conducting polymer based split ring resonator metamaterial structure Metamaterial inspired microwave horn and patch antennas for modified structural and radiation characteristics	30-07-2020
5.	Jovia Jose	DR.V. P.Joseph	Development of nonstandard finite difference domain method(NS-FDTD) for conducting media leading to the design of metamaterial inspired reflector structures	17-11-20

d. Does the department have running Major research projects?

✓ No

e. Does the department have running Minor research projects?

✓ No

a. Did the department submit any new proposal for project, seminar etc. to funding agencies during the academic year?

✓ No

b. Did the department conduct seminar/workshop/conference etc. during the academic year?

✓ Yes

If yes furnish the following

Sl. No	Title of the seminar/ workshop/ conference etc. (Webinar)	Duration		Whether international/ national/ state/regional	Funding agency
		From	To		
1	International webinar on way to 6 th generation communication devices	19 th September 2020		International	
2	Defect engineered electrodes for Advanced rechargeable batteries	27 th August 2020		International	
3	Supercapacitors	3 rd August 2020		International	
4	Impact of Nanotechnology	July 29 2020		International	
5	Super resolution with far field optics	22 nd July		International	

- c. Is there any publication from faculty like books, articles, conference/seminar proceedings, course materials (for distance education), software packages or other learning materials, any other (specify) ?

✓ Yes

If yes give details.

1. **Dr.Shaju K.Y. – Mechanics I**
2. **Dr.Shaju K.Y. – Methodology of science and basic mechanics**
3. **Dr.Shaju K.Y. –Mechanics**
4. **Dr. Sudheer Sebastian K- Optics and Spectroscopy**

CRITERION III – CONSULTANCY AND EXTENSION

- a. Does the department have any MoU/ MoC (memorandum of contract)/ mutually beneficial agreements signed with industry /agency, or other academic institutions?

✓ Yes

If yes give details.

1. Solwatt Pvt. Power limited
2. EKN center
3. Artificial intelligence research and intelligence systems

- a. Does the department have collaborative activities (on-the-job training, student placement, internship, publication, curriculum development, research, consultancy, etc.) with other organizations (service sector, agricultural sector, local bodies/community, administrative agencies, state/national/international organizations)?

Yes

If yes give details

APT, Kerala exam, workshop, webinar

- b. Does the department conduct/coordinate any kind of extension activities which are integrated with the academic curricula, contributive to community development etc.?

✓ Yes

If yes give details.

1. **Dr. Sudheer Sebastian K conducted Gandhi Global Yatra- Student Solar Ambassador work shop for solar lamp assembling on October 2nd 2019 for plus two students in collaboration with IIT Mumbi.**
2. **Dr. Shaju K.Y. (HOD of physics dept. of Christ college Autonomous, Irijnalakuda) conducted a program on Solar eclipse on 19th December, 2019.**

- c. Does the department have partnership with University/Research institutions/Industries/ NGOs etc. for extension activities?

✓ Yes

If yes give details

EKN center, Irinjalakuda

CRITERION IV – EXTRACURRICULAR ACTIVITIES

- a. Mention achievements of students , if any, of the students under the department (D- zone, Quiz competitions etc..) outside the college

✓ Yes

- b. Mention the association activities, if any, during the academic year other than inauguration and sent off

1. Physics Fest –Two day program from 22.01.2020-23.01.2020

- ✓ **Inter-Collegiate EKN memorial quiz competition**
- ✓ **Inter-Collegiate Power point competition**
- ✓ **Physics stage show conducted by Prof. Ananthkrishnan**
- ✓ **Intra-College Troll competition**
- ✓ **Exhibition organized in physics lab for higher secondary students of nearby schools.**

2. **Interactive Session and demonstration on 28th February, 2020 conducted by Mr. Prasanth of VHHS, Koylandy, Calicut.**

- c. Mention performance of students in sports activities during the academic year (Athletics, Games etc in Intercollegiate/University competitions)

- d. Any other relevant information the department wishes to add.

CRITERION V – STUDENT SUPPORT AND PROGRESSION

- a. Furnish the pass percentage for degree main 2019 – 20 batch (pass out) and PG 2018 – 20 batch.

max 60

Postgraduate course : **100 %** pass

Degree (Main) : **87.5%** pass

Marks	>90%	89-80%	79-70%	69-55%
Number of students: 48 UG	10	23	6	3
Number of students: 13 PG	1	7	1	4

Language & Complementary Course (Batch-wise)

Batch	Number of students with grade			
	>90%	89-80%	79-70%	69-55%

Pass > 90 % = 20 marks, > 80 % = 10 marks, <80% = 0 marks.

For UG: Each >90% 2 marks each, 1 for 89-80% (Max 50)

For PG: Each >90% 3 marks each, 2 for 89-80% (Max 50)

For Language/Complementary for each students > 90% 2 marks, 1 for 89-80%, 0.5 for 79-70% (Max 20)

- b. Mention about CSIR-UGC-NET, if any, obtained for the 2018 – 20 batches. (provide documentary evidence)

NA

- c. No of students who got admission in Top universities/institutions
(List of institutions- IITs, NITs, JNU, Hyderabad University, EFLUs, CUSAT, IISC, Pondicherry University, IISERs)

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Should submit list of students with register number

1	Balagopal Marar	Msc Physics- Material science	Institute of chemical Technology,Mumbai
2	Irene Joy V	MSc Physics	Central University of Kerala
3	Milan K B	MSc Physics	CUSAT
4	Anusree.M.A	MSc ocean and atmospheric science	University of hyderabad
5	Sourabh pv	Msc computer science specialised in cyber security	liitmk trivandrum
6	Aparna K P	Msc Physics	Institute of chemical Technology,Mumbai
7	RAHULKRISHNAN C M	MSW	Central university of Karnataka
8	Nandana T R	MSc Physics	School of pure and applied physics MG Univers
9	Annarose J Palliyan	MSc Physics	University of Hyderabad
10	AKSHAY K J	Msc. Physics	Pondicherry Central University
11	Anu Ayyappan	MSc Physics	Cochin University of Science and Technology
12	Vaisakh P S	Msc photonics	Manipal Academy of Higher Education
13	Ajisha C Sajayan	MSc Physics	Cochin University of Science and Technology
14	BEKCY JOSEPH	M.Sc. Physics	Pondicherry University

- d. Mention the efforts made by the department to minimize the dropout rate and facilitate the students to complete the course.

NA

- e. Give the percentage of the students progressed to higher studies. Give details for last year. (If records are kept >70%- 05 marks, 69-60%-3 marks, 59-50%- 2marks)
24 , 50%

Submit the list of students, admitted course, college and university

	Name	Name of Course	College
1	Ajay Francis	Msc Physics	St Thomas College(Autonomous),Thrissur
2	Balagopal Marar	Msc Physics-Material science	Institute of chemical Technology,Mumbai
3	Irene Joy V	MSc Physics	Central University of Kerala
4	Milan K B	MSc Physics	CUSAT
5	Anusree.M.A	MSc ocean and atmospheric science	University of hyderabad
6	Sourabh pv	Msc computer science specialised in cyber security	liitmk trivandrum
7	Ronaldo Roy	Msc physics	Catholicate college
8	Aparna K P	Msc Physics	Institute of chemical Technology,Mumbai
9	Sruthi S	MSc Physics	Amrita Vishwavidhyapeedam Coimbatore
10	RAHULKRISHNAN C M	MSW	Central university of Karnataka
11	Nandana T R	MSc Physics	School of pure and applied physics MG University
12	SILPAMOL JAIMON	Msc physics	St. Thomas college, Thrissur
13	Annarose J Palliyan	MSc Physics	University of Hyderabad
14	Emilda Davis	M.Sc physics	Christ College Irinjalakuda
15	Anjana Joy	Msc.Physics	Morning star home science college , Angamaly
16	AKSHAY K J	Msc. Physics	Pondicherry Central University
17	Anu Ayyappan	MSc Physics	Cochin University of Science and Technology
18	Paulsy Paul	Msc.physics	Calicut University
19	Vaisakh P S	Msc photonics	Manipal Academy of Higher Education
20	Leya Pauly	MSc Physics	St.Thomas College(Autonomous),Thrissur
21	KRISHNENDU C P	Msc physics	Vimala college autonomous,Thrissur
22	Ajisha C Sajayan	MSc Physics	Cochin University of Science and Technology
23	Aparna	MSc physics	Calicut University malappuram
24	BEKCY JOSEPH	M.Sc. Physics	Pondicherry University

f. Does the department provide any support for students for appearing and qualifying in various competitive examinations? (UGC-CSIR-NET, JAM, SLET, CAT, TOFEL, GMAT, GRE etc.); If yes provide evidence

✓ Yes

1. JAM coaching provided
2. P.P. Thomas endowment

g. Does the department provide placement and counseling services for students

NA

If yes give the number of students benefited

h. Does the department encourage and develop entrepreneurial skills among students

NA

If yes give details

i. Does the department have a mechanism to seek and use data and feedback from its graduates and from employers, to improve the growth and development of the institution?

NA

If yes give details

CRITERION VI – SUPPORTIVE ACTIVITIES

a. Members of the department involved in the administrative/club/committee activities of the college in 2019-20 academic year?

Sl. No.	Name	Activity to which associated
1	Dr. Fr. Jolly Andrews	Vice Principal, Christ College Autonomous, Irijnalakuda Bursar, Christ College Autonomous, Irijnalakuda Students Aid fund convener, Christ College Autonomous, Irijnalakuda

2	Dr. V.P. Joseph	<p>Dean of Science, Christ College Autonomous, Irijnalakuda</p> <p>HOD, Dept. of Physics, Christ College Autonomous, Irijnalakuda</p> <p>Academic monitoring committee convener, PG section, Christ College Autonomous, Irijnalakuda</p> <p>Research coordinator, College Autonomous, Irijnalakuda</p>
3	Dr. Shaju K.Y.	<p>Medisep</p> <p>UGC Salary fixation</p>
4	Dr. Sudheer Sebastian K	<p>Alumni association secretary, Christ College Autonomous, Irijnalakuda</p> <p>College website coordinator, Christ College Autonomous, Irijnalakuda</p> <p>Scholarship Nodal officer Christ College Autonomous, Irijnalakuda</p> <p>PTA executive committee member</p>
5	Dr. Xavier Joseph	<p>Returning officer, Christ College Autonomous, Irijnalakuda</p> <p>Admission committee convener, Christ College Autonomous, Irijnalakuda</p> <p>Grievance Redressal Cell (Students), Christ College Autonomous, Irijnalakuda</p>
6	Mr. Edwin Jose	<p>IQAC (assistant coordinator), Christ College Autonomous, Irijnalakuda</p> <p>RUSA coordinator</p>

b. Describe the measures taken for maintaining the cleanliness of staff room, classrooms, labs, museums etc.

1. Lab renovation -Floor tiling
2. Painting

c. Does the department maintain proper documentation of data on Internal marksheets /Question papers/ Stock register (Details to be furnished)

✓ Yes

d. Mention the measures if any, taken by the department for personality development of students.

Date:

Signature:

Head of the department: