PROJECT PROPOSAL BY

Yogoda Satsanga Palpara Mahavidyalaya

To

Department of Biotechnology
Ministry of Science and Technology
Government of India
New Delhi, India

Principal of College: Prof. (Dr) Pradipta Kumar Mishra
Programme Coordinator: Mrs. Sayanti Bagchi

Proforma for submission of Application under the Strengthening component for Star College Scheme

PART A:

Information about existing facilities and programmes

Section-A: General Information

A-1 **Name of the college:** Yogoda Satsanga Palpara Mahavidyalaya

A-2 **Nature of the college:** Government-aided

A-3 **Whether registered under 12(b) and 2(f) of the UGC?** YES

UGC

A-4 **Private/ NGO/Autonomous**: NO

A-5 **Application Status:** Fresh

A-6	**Complete Postal Address with Pin-Code:**	Palpara, Purba Medinipur Pin-721458 West Bengal, India
A-7	**Name of the Principal**	Prof. (Dr) Pradipta Kumar Mishra
	Telephone No. with STD Code	03220 249227
	Mobile number	7749909590
	E-mail	yspmprincipal@rediffmail.com
	Website (URL)	www.yspm.edu.in
A-8	**Location of College**	Rural Certificate
A-9	**Age of the College**	57 years
A-10	**Affiliated to which University**	Vidyasagar University
A-11	**Status about Affiliation**	Permanent

A-12 Name of Department for which the support is being sought under the Star College Scheme (Subject wise)

SL NO.	Department	Course	Year of start of course	Contact Person
1.	BOTANY	B.SC(G)	2001	Mrs. Sayanti Bagchi HOD, Dept. of Botany Email: bagchisayanti@gmail.com Ph No: 8967935556
2.	ZOOLOGY	B.SC(H) B.SC(G)	2017 2001	Ayan Kumar Bhunia SACT, Dept. of Zoology Email: ayanbhunia23@gmail.com Ph No: 9734930139
2.	CHEMISTRY	B.SC(H) B.SC(G)	2004 1984	Dr. Sanjib Dey HOD, Dept. of Chemistry Email: deysanjib2012@yahoo.in Ph No: 9434414325
3.	PHYSICS	B.SC(H) B.SC(G)	2000 1986	Dr. Arindam Pal HOD, Dept. of Physics Email: arindam.phd@gmail.com Ph No: 7602864884
4.	MATHEMATICS	B.SC(H) B.SC(G)	1996 1984	Prof. Prasanta Ghosh HOD, Dept. of Mathematics Email: Ph No:
5.	COMPUTER SCIENCE	B.SC(H) B.SC(G)	2000 1996	Prof. Sova Pal HOD, Dept. of Computer Science Email: sova_pa10l@rediffmail.com Ph No: 9734459168

A-13 Programme Coordinator Details

1. **Name:** Sayanti Bagchi
2. **Department:** Botany
3. **Designation:** Assistant Professor and HOD, Dept. of Botany
4. **D.O.B:** 14/08/1992
5. **Email id:** bagchisayanti@gmail.com
6. **Phone:** 8967935556
7. **Address:** Yogoda Satsanga Palpara Mahavidyalaya, Palpara, Purba Medinipur, Pin:721458, West Bengal

Section B: Infrastructure

B-1 Laboratories details for the proposed Departments

1. BOTANY DEPARTMENT

List of equipment purchased during past three years

SL NO.	EQUIPMENT NAME	YEAR OF PURCHASE	NO.	PRICE	CONSOLIDATED PRICE	FUNCTIONAL OR NOT
1.	Compound Light Microscopes (Olympus)	2022	2	Rs 24,000	Rs 48,000	Yes
2.	Simple Microscopes (Almicro)	2022	3	Rs 4067	Rs 12,250	Yes
3.	Quadrat 3x3 full set	2022	1	Rs 7200	Rs 7200	Yes
4.	Weight Machine (Wenser)	2022	1	Rs 12,000	Rs 12,000	Yes

Total Expenditure during last 3 years: Rs 79,450

2. ZOOLOGY DEPARTMENT

List of equipment purchased during past three years

SL NO.	EQUIPMENT NAME	YEAR OF PURCHASE	NO.	PRICE	CONSOLIDATED PRICE	FUNCTIONAL OR NOT
1.	Bacteriological incubator	2019	01	Rs 75,000	Rs 75,000	Yes
2.	PH meter	2019	01	Rs 40,000	Rs 40,000	Yes
3.	Homogenizer	2019	01	Rs 30,000	Rs 30,000	Yes
4.	Dissection tray	2021	30	Rs 525	Rs 15,750	Yes
5.	Centrifuge	2021	01	Rs 4700	Rs 4700	Yes
6.	Digital balance	2021	01	Rs 9200	Rs 9200	Yes
7.	Microtome	2021	01	50000.00	50000.00	Yes
10.	Microscopes	2021	05	28000.00	140000.00	Yes

Total Expenditure during last 3 years: Rs : Rs 3,64,650

3. CHEMISTRY DEPARTMENT

List of equipment purchased during past three years

SL NO.	EQUIPMENT NAME	YEAR OF PURCHASE	NO.	PRICE	CONSOLIDATED PRICE	FUNCTIONAL OR NOT
1	Calorimeter	2019	01	Rs 885	Rs 885	Yes
2	Digital Economy Balance(Model EB300/600)	2019	01	Rs 7670	Rs 7670	Yes

Total Expenditure during last 3 years: Rs. 8555 (Rupees Eight thousand five hundred fifty five only)

4. PHYSICS DEPARTMENT

List of equipment purchased during past three years

SL NO.	EQUIPMENT NAME	YEAR OF PURCHASE	NO.	PRICE	CONSOLIDATED PRICE	FUNCTIONAL OR NOT
1.	Power supply	2019	2	Rs 450	Rs 900	Yes
2.	Zener Diode Setup	2019	1	Rs 3500	Rs 3500	Yes
3.	Multimeter	2019	2	Rs 350	Rs 700	Yes
4.	Computer (Desktop)	2019	1	Rs 48,000	Rs 48,000	Yes
5.	Millikan Oil Drop Instrument	2021	1	Rs 35000	Rs 35000	Yes
6.	Power supply	2021	2	Rs 450	Rs 900	Yes
7.	Kater's pendulum	2021		Rs 14,200	Rs 14,200	Yes
8.	Hall Effect	2021	1	Rs34,000	Rs34,000	Yes

Total Expenditure during last 3 years: 1,37,200

5. MATHEMATICS DEPARTMENT

List of equipment purchased during past three years

SL NO.	EQUIPMENT NAME	YEAR OF PURCHASE	NO.	PRICE	CONSOLIDATED PRICE	FUNCTIONAL OR NOT
1.	Computer desk	2019	6	Rs.6000	Rs. 36000	Yes
2.	Computer Desktop	2019	2	Rs.54000	Rs. 108000	Yes
3.	Printer	2019	1	Rs.12500	Rs. 12500	Yes

4.	Computer desktop	2021	3	Rs.54500	Rs. 163500	Yes
5.	Printer	2021	1	Rs.14300	Rs. 14300	Yes

Total Expenditure during last 3 years: Rs. 3,34,300

6. COMPUTER SCIENCE DEPARTMENT

List of equipment purchased during past three years

SL NO.	EQUIPMENT NAME	YEAR OF PURCHASE	NO.	PRICE	CONSOLIDATED PRICE	FUNCTIONAL OR NOT
3	Computer Desktop	2019	01	50000.00 (Approx.)	50000.00 (Approx.)	Yes
4	Printer	2019	01	14500.00 (Approx.)	14500.00 (Approx.)	Yes
5	Inverter	2019	01	35000.00 (Approx.)	35000.00 (Approx.)	Yes
6	Computer (Desktop)	2021	01	70000.00 (Approx.)	70000.00 (Approx.)	Yes

Total Expenditure during last 3 years: 1,69,500/- (Approx.)

B-2 Library

Departments	Departmental Library	Total Amount Spent
Botany	Available	Rs 15,500
Zoology	Available	Rs 1,75,000
Chemistry	Available	Rs 20,300
Physics	Available	Rs 10,000
Mathematics	Available	Rs 20,300
Computer Science	Available	Rs 15,000

B-3 Computer Internet Facility

Departments	Computer Internet Facility
Botany	No
Zoology	Yes
Chemistry	Yes
Physics	No

Mathematics	No
Computer Science	Yes

B-4 a) No. of lecture halls

Departments	**No. of lecture halls**
Botany	02
Zoology	02
Chemistry	02
Physics	02
Mathematics	03
Computer Science	03

b) No. of laboratories

Departments	**No. of laboratories**
Zoology	01
Botany	01
Chemistry	02
Physics	01
Mathematics	01
Computer Science	01

Section C: Faculty

C-1 Details about Teachers in each participating Department

A) BOTANY DEPARTMENT

Serial No.	**Name**	**Designation**	**Qualification**	**Area of Specialization**	**R & D projects received from different funding agencies**	**Publications (Last 5 years)**
1.	Sayanti Bagchi CV	Assistant Professor and HOD	M.Sc ()	Cell biology, Genetics, Molecular Biology and Biotechnology	N/A	01 PUBLICATION
2.	Sawmen Kumar Ghorai	SACT	M.Sc, M.Ed	Palaeobotany & Palynology	N/A	N/A

	CV					

B) ZOOLOGY DEPARTMENT

SL.NO.	Name	Designation	Qualification	Area of specialization	R & D projects received from different funding agencies	Publications (Last 5 years)
1.	Ayan Kumar Bhunia CV	SACT	M.Sc	Molecular Biology, Developmental Biology and Bioinformatics	N/A	N/A
2.	Supravat Maiti CV	SACT	M.Sc	Cell and Molecular Biology	N/A	N/A
3.	Puja Panda CV	SACT	M.Sc	Fishery	N/A	N/A

C) CHEMISTRY DEPARTMENT

Serial No.	Name	Designation	Qualification	Area of specialization	R & D projects received from different funding agencies	Publications (Last 5 years)
1.	Dr. Sanjib Dey CV	Assistant Professor and HOD	Ph.D	Physical Chemistry	01 PROJECT	02 PUBLICATION

2.	Dr. Sabyasachi Khatua CV	Assistant Professor	Ph.D	Physical Chemistry	N/A	02 PUBLICATION
3.	Sudip Maity CV	SACT	M.Sc	Organic Chemistry	N/A	Nil
4.	Pranabes Panda	Lab Instructor	B.Sc			

D) PHYSICS DEPARTMENT

Serial No.	**Name**	**Designation**	**Qualification**	**Area of specialization**	**R & D projects received from different funding agencies**	**Publications**
1.	Dr. Arindam Pal CV	Assistant Professor and HOD	Ph.D,Post Doctoral Fellow	Condensed Matter Physics, Organic Semiconductor	N/A	03 PUBLICATION
2.	Dr. Aminur Rahaman CV	Assistant Professor	M.Sc, Ph.D	Optoelectronics Material & Devices, General Theory of Relativity, High Energy Physics, Condensed Matter Physics.	N/A	03 PUBLICATION
3.	Kali Krishna Giri CV	SACT	M.Sc	Electronics	N/A	N/A
4.	Swadesh Ranjan Bhakta	SACT	M.Sc	Solid State Physics	N/A	N/A

	CV					
5.	Sourav Mishra CV	SACT	M.Sc	Electronics	N/A	N/A
6.	Santipada Maity CV	SACT	M.Sc	Solid State Physics	N/A	N/A
7.	Jadab Kumar Samanta	Lab Instructor	B.Sc	N/A	N/A	N/A

E) MATHEMATICS DEPARTMENT

Serial No.	**Name**	**Designation**	**Qualification**	**Area of specialization**	**R & D projects received from different funding agencies**	**Publications (Last 5 years)**
1.	Prasanta Kumar Ghosh CV	Assistant Professor and HOD	M.Sc	Advance Operational Research	Yes PROJECT	05 PUBLICATION
2.	Dr. Aniruddha Sinha CV	Assistant Professor	Ph.D, Post Doctoral Fellow	Bio-mechanics,Fluid mechanics, CFD	Yes PROJECT	12 PUBLICATION
3.	Khokan Kumar Dagar CV	SACT	M.Sc	Real Analysis	N/A	N/A
4.	Aniruddha Kar CV	SACT	M.Sc	Real Analysis	N/A	N/A

F) COMPUTER SCIENCE DEPARTMENT

Serial No.	Name	Designation	Qualification	Area of specialization	R & D projects received from different funding agencies	Publications (Last 5 years)
1.	Sova Pal CV	Assistant Professor and HOD	M.Sc, M.Tech	Operation Research	N/A	03 PUBLICATION
2.	Suman Mondal CV	Assistant Professor	M.Tech	Computer Vision	N/A	05 PUBLICATION
3.	Arnab Chakraborty CV	SACT	M.Sc		N/A	03 PUBLICATION

C-2 Details about in service training for teachers of participating departments.

A) BOTANY DEPARTMENT

SL. NO.	Name	Orientation Course	Refresher's course	Conferences/Symposia/Seminar/Workshop
1.	Sayanti Bagchi	01	N/A	07

B) CHEMISTRY DEPARTMENT

SL. NO.	Name	Orientation Course	Refresher's Course	Conferences/Symposia/Seminar/Workshop
1.	Dr. Sanjib Dey	N/A	N/A	05
2.	Dr. Sabyasachi Khatua	01	01	02

C) PHYSICS DEPARTMENT

SL NO.	Name	Orientation Course	Refresher's Course	Conferences/Symposia/Seminar/Work shop
1	Dr. Arindam Pal	1	1	07
2	Dr. Aminur Rahaman	1		06

D) MATHEMATICS DEPARTMENT

SL NO.	Name	Orientation Course	Refresher's Course	Conferences/Symposia/Seminar/Work shop
1.	Prof. Prasanta Kumar Ghosh	01	03	10
2.	Dr. Aniruddha Sinha	01	01	11

E) COMPUTER SCIENCE DEPARTMENT

SL NO.	Name	Orientation Course	Refresher's Course	Conferences/Symposia/Seminar/Work shop
1	Sova Pal (Bera)	Nil	Nil	04
2	Suman Mondal	01	01	04

Section-D: Students

D-1

a) Students Statistics for last 5 years

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
1.	**Zoology(H)**	**2017-18**	**12**	**Merit List**	**10**	**11**

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
06	02	01	02	05	04

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
2.	Zoology(H)	2018-19	12	Merit List	08	10

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
06	03	00	01	04	06

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
3.	Zoology(H)	2019-20	12	Merit List	11	12

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
05	03	01	02	06	05

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
6.	Zoology	2020-21	12	Merit List	05	05

Total no. of students admitted Category Wise

No. of students	No. of students SC category	No. of students ST category	No. of students	No. of male students	No. of female students

GEN Category			OBC category		
04	01	00	00	05	00

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
5.	Botany(G)	2016-17	90	Merit List	57	69

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
38	18	05	08	20	49

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
6.	Botany(G)	2017-18	90	Merit List	47	55

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
35	10	03	07	15	40

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
7.	Botany(G)	2018-19	90	Merit List	51	60

Total no. of students admitted Category Wise

No. of students	No. of students SC category	No. of students ST category	No. of students	No. of male students	No. of female students

GEN Category			OBC category		
42	12	01	05	08	52

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
8.	Botany(G)	2019-20	90	Merit List	59	71

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
45	12	06	08	25	46

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
5.	Botany	2020-21	90	Merit List	10	10

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
07	02	00	01	04	06

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
10.	Chemistry(H)	2016-17	32	Merit List	24	31

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
17	07	02	05	20	11

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
11.	Chemistry(H)	2017-18	32	Merit List	22	30

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
17	07	01	05	22	08

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
12.	Chemistry(H)	2018-19	32	Merit List	18	26

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
14	07	00	05	16	10

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
13.	Chemistry(H)	2019-20	32	Merit List	20	29

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
17	06	02	04	21	08

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
4.	Chemistry	2020-21	26	Merit List	22	24

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
21	02	01	05	18	06

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
15.	Physics(H)	2016-17	50	Merit List	31	40

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
25	10	02	05	36	04

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
16.	Physics(H)	2017-18	50	Merit List	25	32

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
20	05	00	07	22	10

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students	No. of students admitted

					passed out	
17.	Physics(H)	2018-19	50	Merit List	32	39

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
21	10	01	07	28	11

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
18.	Physics(H)	2019-20	50	Merit List	30	42

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
23	08	03	08	40	03

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
3.	Physics(H)	2020-21	10	Merit List	06	10

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
09	00	00	01	08	02

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
20.	Mathematics(H)	2016-17	108	Merit List	43	61

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
40	08	03	10	46	15

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
21.	Mathematics(H)	2017-18	108	Merit List	39	52

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
37	05	02	08	31	21

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
22.	Mathematics(H)	2018-19	88	Merit List	28	46

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
28	08	01	09	27	16

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
23.	Mathematics(H)	2019-20	88	Merit List	24	43

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
28	06	02	07	27	16

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
2.	Mathematics	2020-21	32	Merit List	20	26

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
20	01	00	05	19	07

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
25.	Computer Science(H)	2016-17	32	Merit List	04	04

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
04	00	00	00	04	00

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
26.	Computer Science(H)	2017-18	32	Merit List	11	12

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
11	01	00	00	11	01

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
27.	Computer Science(H)	2018-19	32	Merit List	00	04

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
04	00	00	00	04	00

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
28.	Computer Science(H)	2019-20	32	Merit List	08	09

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
08	01	00	00	08	01

SL NO.	Department	Year	No. of seats	Mode of selection	No. of students passed out	No. of students admitted
1.	Computer Science	2020-21	32	Merit List	09	13

Total no. of students admitted Category Wise

No. of students GEN Category	No. of students SC category	No. of students ST category	No. of students OBC category	No. of male students	No. of female students
12	00	00	01	11	02

b) Summer Training/Research project details.

1. Zoology

ENVS Projects

Duration: 60 days No. of students: 25

Project List: ENVS PROJECT

2. Botany

ENVS Projects

Duration: 60 days No. of students: 90

Project List: ENVS PROJECT

3. Chemistry

ENVS Projects

Duration: 60 days No. of students: 45

Project List: ENVS PROJECT

4. Physics

ENVS Projects

Duration: 60 days No. of students: 73

Project List: ENVS PROJECT

5. Mathematics

ENVS Projects

Duration: 60 days No. of students: 76

Project List: ENVS PROJECT

6. Computer Science

ENVS Projects

Duration: 60 days No. of students: 11

Project List: ENVS PROJECT

SECTION-E: CURRICULUM

E-1 Curriculum

i) Zoology Department

- Enclose copy of curriculum
- List of the practical experiments in the curriculum actually done by the students and practical demonstrated.
- When was the last exercise for curriculum revision undertaken?
- Specialization of the course

CURRICULUM

ii) Botany Department

- Enclose copy of curriculum
- List of the practical experiments in the curriculum actually done by the students and practical demonstrated.
- When was the last exercise for curriculum revision undertaken?
- Specialization of the course

CURRICULUM

iii) Chemistry Department

- Enclose copy of curriculum
- List of the practical experiments in the curriculum actually done by the students and practical demonstrated.
- When was the last exercise for curriculum revision undertaken?
- Specialization of the course

CURRICULUM

iv) Physics Department

- Enclose copy of curriculum
- List of the practical experiments in the curriculum actually done by the students and practical demonstrated.
- When was the last exercise for curriculum revision undertaken?
- Specialization of the course

CURRICULUM

v) Mathematics Department

- Enclose copy of curriculum
- List of the practical experiments in the curriculum actually done by the students and practical demonstrated.
- When was the last exercise for curriculum revision undertaken?

- Specialization of the course

CURRICULUM

vi) Computer Science Department

- Enclose copy of curriculum
- List of the practical experiments in the curriculum actually done by the students and practical demonstrated.
- When was the last exercise for curriculum revision undertaken?
- Specialization of the course

CURRICULUM

PART- B:

Technical Details of the Proposed Program

BOTANY

1. **Half page executive summary indicating relevance and expected outcome**

Yogoda Satsanga Palpara Mahavidyalaya (YSPM) is located at Palpara of Purba Medinipur District of West Bengal. The college was established in 1964 and is affiliated under Vidyasagar University. The college is awarded by National Assessment and Accreditation Council(NAAC) and also recognized by University Grants Commission (UGC). The college is a boon for the rural people of the Palpara village and nearby villages to overcome their incapability of completing higher study and to acquire bachelor degree in different subjects of the choices.

The general degree course of Botany Department had started in 2001. The Botany Department is consisting of one laboratory, two lecture halls, one room for the faculties along with the departmental library. There are some compound and some simple microscopes, some materials for plant physiology practical, some chemicals , reagents, etc, some specimen, glass apparatus are present in the laboratory. But these are not enough according to the syllabus to complete all the essential practical Some equipment for molecular biology, a binocular microscope and a no. of instruments and another laboratory etc must be incorporated with this and thus can apply for opening an honours degree of Botany. And the general degree syllabus can also be covered well. For betterment of the students there is a great requirement for hands on training on the use of the equipment, Seminar or conference and lecture series could be organised in order to extend the knowledge, enrich concepts & ideas about the subject. Also enhance students' upgradation towards higher study & research interests.

2. **Specific objectives**

i) Incorporation of new instruments, new practical, separate laboratory with advanced equipment.

ii) To enhance the knowledges on the subject, awareness, ideas, new thinking, to motivate the students for higher study.

iii) Hands on training on different instrument including microscopes for botany practicals.

iv) Participation of the students in new workshops and seminars.

v) Including new separate departmental library comprising of no. of important books for the subject.

vi) Special Facilities of books for students of poor financial background.

vii) Different workshop programme management for including new important practicals.

viii) Upgradation of classrooms, lecture halls and smart room to be included.

ix) A no. of advanced instruments to be included for the research purposes of the faculties.

x) Programmes to be included for interaction of the students with the eminent Faculties and researchers from universities and other institutions.

3. Measures to be adopted to enhance bench skills of students, project work, summer training & industrial training ; No. of beneficiaries in each.

SL No	**Bench skills of students, project work, summer training & industrial training**	**Year**	**No. of beneficiaries**
01	A no. of Seminar, workshops, Hands on training programme on lab instruments., plants survey in nearby locality and environmental field visits.	1st ,2nd ,3rd	60
02	Workshop on advanced technology of the newly incorporated practical.	1st ,2nd ,3rd	60
03	A series of lecture on bioinformatics, Cell biology, Genetics, Plant Taxonomy & systematics.	1st ,2nd ,3rd	60
04	Students Project: a) A survey on microalgal diversity of the microalgae obtained from the lakes and ponds in the locality of the college. b) Role of arbuscular mycorrhiza as natural biofertilizers.	1st	60
05	Students Project: a) A taxonomic study on different plant families. b) Importance of Herbarium and its uses.	2nd	60
06	Students Projects: a) Basic concepts and technologies of DNA markers. b) An overview on pedigree analysis.	3rd	60

4. **Measures to be undertaken to upgrade skills of faculty by participation in faculty improvement programme.**

SL No.	Faculty improvement programme	Year
01	Paper presentation during seminar or conferences.	1st
02	Attend academic Workshops	1st
03	Hands-on training on newly introduced practical and latest technologies.	1st
04	Presentation of paper on research purposes.	2nd
05	Attend research related Workshops.	2nd
06	Industry-Academia Workshop on Successful Grant Writing Technique.	2nd
07	Attend/present paper at seminars/conferences	3rd
08	Attend academic Workshops	3rd

5. **Appropriate modifications proposed in curriculum to cover laboratory exposure to students and IPR & biosafety issues (details thereof department wise).**

   Safety measures to be taken by students in order to protect the laboratory materials, equipment and precaution to be taken to handle the chemicals and sharp object for dissection and glasses as well. Awareness programme and workshop should be provided to students following IPR seminar.

6. **Techniques to be included for hands on training to students No. of beneficiaries in each.**

SL No.	Hands on Training to students	Year	No. of beneficiaries
01	Amino acids separation by paper chromatography.	1st , 2nd, 3rd	60 per year
02	Isolation of chloroplasts by differential centrifugation.	1st , 2nd, 3rd	60 per year
03	Use of spectrophotometer for estimation of OD value.	1st , 2nd, 3rd	60 per year
04	Plant micro technique experiments.	1st , 2nd, 3rd	60 per year
05	Demonstration of ELISA	1st , 2nd, 3rd	60 per year
06	Preparation of karyotype and ideogram.	1st , 2nd, 3rd	60 per year

7. **Proposed activities for laboratory staff: N/A**

8. **Involvement of visiting faculty (details of lecture & practicals to be covered in each department).**
    - PCR, Blotting Techniques, PAGE & AGE. (Demonstration)
    - Sequence homology & Gene annotation.
    - Lectures on Basic concepts of Research & Research Methodology

9. **Additional practicals proposed to be undertaken by the college (within prescribed curriculum of the university), practicals which could not be conducted earlier due to lack of equipment or costly consumables. New equipment proposed to be purchased to be correlated with new additional practicals.**

    - Paper Chromatography, Thin layer Chromatography, Column chromatography.
    - Estimation of Protein by Lowry's method.
    - Plant micro technique experiments.
    - Isolation of chloroplasts by differential centrifugation.
    - Cell Size measurement by micrometry

10. **Timelines for activities listed at 3-5 in each academic session indicating no. of proposed courses, no. of beneficiaries.**

SL No	Type of Activity	Proposed Course	No of Beneficiaries	Timelines
01	Outreach Program	Environmental Field visit & survey.	60	January-March
02	Outreach Program	Different Lab visits.	50	March-May
03	Student Training	Webinar/Seminar/Workshops	30	June-July and August-September
04	Faculty Development Program	For Career Advancement courses, seminar/webinar and workshops.	15	November-December
05	Visiting Lectures	Timely visits, lectures/speech and training by experts.	60	Depends on time of resource person.
06	Student Projects	Departmental/Interdepartmental	60	November-February March-June
07	Student Bench Skill Development	Hands on training on Practical	40	June-August, September-November
08	Student Bench Skill Development	Inclusion of new practical.	30	January-March

11. Proposed outreach activities for school teachers and college teachers per year.

- Seminar and workshops on technologies of Plant Biotechnology & Molecular Biology.
- Awareness programme on Environmental protection & species conservation.
- Arrangement of seminars on Applied Botany & its perspectives.

ZOOLOGY

1. Half page executive summary indicating relevance and expected outcome

Yogoda Satsanga Palpara Mahavidyalaya, a leading Educational Institution under the patronage of Yogoda Satsanga Society of India, located in the extreme south-west corner from the head quarter of the district Purba Medinipur, West Bengal.

Zoology, a discipline was established in 2001. The Department comprises of a departmental library and a Laboratory. The Instruments are in good condition, functionally active and serving the requirements for the faculties and students. The Department proposes a four-quadrant student-oriented objective to nurture concept development viz., Syllabus-centric projects, Co-curricular activities. There should be hands-on training of various instruments provided for the students. The Department conducts the classes for rectification to encourage the students and all the faculty members provide the study materials to the students for their better understanding and improvement. In view of the research interest of the students, they are encouraged to attend seminars, conferences, interaction with the renowned teachers, from different Institutes and Universities.

The college expects the mentioned outcome from the DBT STAR college scheme; to activate the upgradation percentage of the students towards higher education and scientific research and to act for interdepartmental research for the students and faculties within college. We try to improve the scientific awareness, thinking, ideas, concepts of the students.

2. Specific objectives

The Department of Zoology on successful completion of the DBT Star College Scheme seeks to achieve the following program specific objectives

- To fulfil the needs for constructing a proper laboratory for the department.
- Upgradation of the departmental libraries.
- To impart student interest towards the subject and its depth by organising a no. of lecture series.
- To provide faculty development programmes for the faculties.
- To enhance students' interest for higher study and scientific research.

- Provide opportunity to students face to face with eminent teachers and scientists related to the discipline from various Institutes and Universities.
- A no. of reputed journals, articles could be provided for the students & faculties.
- To organise seminars/workshops/conference for students every year.
- To conduct hands on training workshop regarding the use of equipments.To conduct awareness programme regarding protection of environment an its factors.

3. Measures to be adopted to enhance bench skills of students, project work, summer training & industrial training ; No. of beneficiaries in each.

SL No	Bench skills of students, project work, summer training & industrial training	Year	No. of beneficiaries
1.	Hands on training workshop regarding the use of equipment for newly included practical.	1st , 2nd, 3rd	50
2.	Organise seminar/workshop/conference according to the needs of faculties & students.	1st , 2nd, 3rd	50
3.	Lecture series on Embryology, immunology & animal biotechnology.	1st , 2nd, 3rd	50
4.	Study on animal diversity & environmental field visits.	1st , 2nd, 3rd	30
05	Student Project: • Morphometric & Meristic study of aquatic ecosystems • Study of larval forms (crustacean, molluscs & echinoderm).	1st	40
06	Student Project: • Project on Sewage management system. • Project on Marine bio-reserve. • Study of Marine protected areas. • Project on fish farming/fish marketing/fisheries cooperative societies. • Study of house fly & their disease transmission.	2nd	40
07	Student Project: • Project on animal cell culture. • Study of behavioural activities of animal in forest / sanctuary / zoological park. • Project on nesting habit of social Insect. • Study of Chick embryo development.	3rd	40

4. Measures to be undertaken to upgrade skills of faculty by participation in faculty improvement programme.

SL No.	Faculty improvement programme	Year
1.	Attend academic Workshops	1st
2.	Paper presentation during seminar/webinar.	1st
3.	Hands-on training on Animal Tissue culture and Microscopy.	1st
4.	Attend academic Workshops	2nd
5.	Paper presentation during seminar/webinar.	2nd
6.	Industry-Academia Workshop on Successful Grant Writing Technique	2nd
7.	Attend academic Workshops	3rd
8.	Paper presentation during seminar/webinar.	3rd

5. Appropriate modifications proposed in curriculum to cover laboratory exposure to students and IPR & biosafety issues.

Students should have to be provided with SOP to protect laboratory materials, handling glass materials with proper maintenance, avoid environmental hazards. Awareness programme could be organised for such training for the students to learn about the precautions to be taken.

6. Techniques to be included for hands on training to students (department wise); No. of beneficiaries in each.

SL No.	Hands on Training to students	Year	No. of beneficiaries
1.	To perform the Acid and Alkaline phosphatase assay from serum/ tissue.	1st ,2nd ,3rd	30 per year
2.	Preparation of stained blood film to study various types of blood cells.	1st,2nd 3rd	30 per year
3.	Isolation and quantification of genomic DNA using spectrophotometer (A260 measurement)	1st ,2nd ,3rd	30 per year
4.	Agarose gel electrophoresis for DNA	1st,2nd,3rd	30 per year
5.	Separation of Serum & Plasma from Blood-Chemicals	1st,2nd,3rd	30 per year
6.	Gel Electrophoresis, SDS-PAGE and AGE.	1st,2nd,3rd	30 per year

7. **Proposed activities for laboratory staff: N/A**

8. **Involvement of visiting faculty (details of lecture & practicals to be covered in each department).**

- Concept of oncogenes and tumor suppressor genes with special reference to p53
- Retinoblastoma and Ras and APC
- Cell signalling & transduction pathways
- Inhibitors and un-couplers of Electron Transport System.
- Modes of regeneration, epimorphosis, morphallaxis and compensatory regeneration.

9. **Additional practicals proposed to be undertaken by the college (within prescribed curriculum of the university), practicals which could not be conducted earlier due to lack of equipment or costly consumables. New equipment proposed to be purchased to be correlated with new additional practicals.**

i. Isolation of mRNA & protein.
ii. Gel Electrophoresis, SDS-PAGE and AGE.
iii. Demonstration of ELISA.
iv. Acid alkaline phosphatase assay from serum/tissue.
v. Isolation & quantification of genomic DNA using Spectrophotometer.
vi. Plasmid DNA isolation & DNA quantification using Agarose Gel Electrophoresis.
vii. Paper chromatography – column / layer.
viii. Protein isolation from tissue vortex, sonicator & chemicals.
ix. DNA Fingerprinting, PCR, Western blot, Southern hybridization, DNA microarray.
x. Estimation of protein by Lowry's method.
xi. Determination of Turbidity.
xii. Microtomy.

10. **Timelines for activities listed at 3-5 in each academic session indicating no. of proposed courses, no. of beneficiaries.**

SL No	Type of Activity	Proposed Course	No of Beneficiaries	Timelines
1.	Outreach Program	Field visits & to study animal & fish diversity.	30	January-March
2.	Outreach Program	Various Lab visits.	30	March-May
3.	Student Training	Seminar/Workshop/Hands on training on the use of equipment and newly introduced practicals	30	June-July and August-September
4.	Faculty Development Program	Seminar/Workshop/Career Advancement Courses	30	November-December

5.	Visiting Lectures	Special classes on important courses of the syllabus.	30	Depends on time of resource person.
6.	Student Projects	Departmental/Interdepartmental	30	November-February March-June
7.	Student Bench Skill Development	Hands on training on Practical & use of equipments.	30	June-August, September-November
8.	Student Bench Skill Development	Introduction of new Practicals.	30	January-March

11. Proposed outreach activities for school teachers and college teachers per year.

- Awareness campaign on Endangered Animal species protection.
- Seminars/conferences on Zoological Survey.
- Seminars on Advancement of Biological science.
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Technical Details of the Proposed Program

CHEMISTRY

1. Half page executive summary indicating relevance and expected outcome.

Yogoda Satsanga Palpara Mahavidyalaya is situated in a remote area of the district of Purba Medinipur of West bengal. The majority of the students of this college come from a socio-economically backward background. The mission and vision of the founders of the college was to provide quality education to such students. The college continues to do so since it was inaugurated in 1964. At present the college aims to establish itself as an eminent institution of the district and is working hard towards fulfilling its goal.

Chemistry was introduced in General course in 1984 and in Honours course in 2004. Some of the pass-out students of the chemistry department are presently working at different research institutes of the country. The department has two laboratories, one for Inorganic & Organic Chemistry practicals and the other for Physical Chemistry practicals. Both laboratories are equipped with various important instruments and chemicals. Apart from laboratory facilities, the department has a small departmental library. The department has its own collection of books, one desktop computer and a printer. The department organises the remedial classes to help the students and all the faculty members provide study materials to the students for their better understanding. A large number of students keep interest in higher education and research.

The Department expects to improve the laboratory facilities by procuring some new instruments, advanced models of the existing instruments and costly chemicals and consumables. The department aims to provide each and every student, enrolled in Chemistry

course (both Honours & General), with proper experimentation facility. Also it aims to make arrangements for various activities like workshops, industrial and laboratory visits and lectures on modern topics of chemistry. The students will be trained to think, plan and execute different types of experiments within the framework of the university and beyond. This will enable them to learn the basic techniques of instrumentation and lab safety measures.

2. Specific objectives (not more than one page).

- Science is an experimental subject. If students get proper instrumental facilities,chemicals, they can perform the experiments on their own (guidance will be provided).They will gain confidence in the field and will gradually learn the pros and cons of theexperiment.inspire students to take up higher studies and to explore their research mind.
- Students will be motivated to participate in activities like Workshops/ Student Seminar/ Project work. Through these they will learn different problem solvingtechniques of different branches of Chemistry.
- Organize extension lectures, guest lectures, industrial visits, students' seminars, seminars, group discussions, workshops for the students.
- Upgrade the departmental library with relevant books for the new course
- To provide better library facility to the students and teachers
- Students will be motivated to participate in various activities like workshops, student seminar, project work etc. Through these they will learn different problem solving techniques of different branch of Chemistry.
- Provide opportunity to students face to face with eminent teachers and scientists related to the discipline from various Institutes and Universities.
- Provide facility to the students and teachers to access various reputed National and International Journals.

3. Measures to be adopted to enhance bench skills of students, project work, summer training & industrial training :No. of beneficiaries in each.

SL No	Bench skills of students, project work, summer training & industrial training	Year	No. of beneficiaries
01	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	1st	30
02	Every semester student seminar and Group discussion. Seminar on "Chemical handling & Laboratory ethics"	1st	50
03	Students projects Title: Structural characterization of compounds by infrared and NMR spectroscopy. Existing/New/Additional Equipment Requirement: UV-Vis Spectrophotometer Project Title:a) Determination of λ_{max} of $KMnO_4$ and $K_2Cr_2O_7$ c) Measurement 0f 10 Dq spectrophotometrically.	1st	30
04	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	2nd	30
05	Workshop on "Basic Computer Programming for Chemists"	2nd	50

06	Student Project Title: ”Estimation of Ni(II) using Dimethylglyoxime by Gravimetriclly.” Existing/New/Additional Equipment Requirement: UV-Vis Spectrophotometer Project Title: “Study of kinetics of $K_2S_2O_8$ + KI reaction, spectrophotometrically”	2nd	30
07	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	3rd	30
08	Workshop on “Chemistry of Cosmetic and Perfumes”	3rd	50
09	Student Project Title: Preparation of simple drug analogues – Aspirin and magnesium bisilicate (Antacid) Existing/New/Additional Equipment Requirement: UV-Vis Spectrophotometer Project Title: “Determination of pH of unknown buffer, spectrophotometrically”	3rd	30

4. **Measures to be undertaken to upgrade skills of faculty by participation in faculty improvement programme.**

SL No.	Faculty improvement programme	Year
01	Attend/present paper at seminars/conferences	1st
02	Attend Workshops	1st
03	One day seminar on Nano materials	1st
04	Attend/present paper at seminars/conferences	2nd
05	Attend Workshops	2nd
06	Two days inter college workshop on Computational methods in Chemistry	2nd
07	One day seminar on Industrial Chemistry	3rd
08	Attend/present paper at seminars/conferences	3rd
09	Participate in various courses (including virtual ones) as part of their career advancement/ as required by curriculum at any stage and visit laboratory to keep them updated with modern research techniques	3rd

5. **Appropriate modifications proposed in curriculum to cover laboratory exposure to students and IPR & biosafety issues (details thereof department wise).**

Use of safety Glasses, full sleeve lab coats, Gloves and sound knowledge of chemicals used in Laboratory.

6. **Techniques to be included for hands on training to students (department wise); No. of beneficiaries in each.**

SL No.	Hands on Training to students	Year	No. of beneficiaries
01	Chromatographic Separations & Spectroscopic Analysis of Organic Compounds.	1st , 2nd, 3rd	40 per year
02	Spectrophotometry	1st , 2nd, 3rd	40 per year
03	Qualitative semimicro analysis of mixtures of Inorganic Compound	1st , 2nd, 3rd	40 per year

7. **Proposed activities for laboratory staff:**
Seminar and workshop on: a. Chemical waste Management b. Laboratory equipment maintenance c. Handling of laboratory chemicals d. Cataloguing and stock-maintenance of chemicals

8. **Involvement of visiting faculty (details of lecture &practicals to be covered in each department).**
Lectures on: a. Polymer Chemistry b. Inorganic Materials of Industrial Importance c. Computer Programming Basics (FORTRAN) d. Spectroscopic techniques e. Cosmetic Chemistry f. Pharmaceutical Chemistry g. Pesticide Chemistry

9. **Additional practicals proposed to be undertaken by the college (within prescribed curriculum of the university), practicals which could not be conducted earlier due to lack of equipment or costly consumables. New equipment proposed to be purchased to be correlated with new additional practicals.**

- Determination of pH of unknown buffer, spectrophotometrically
- Column Chomatographic separation of Mixture of Dyes (Fluorescein and Methylene blue.
- Separation of Fe(II) and Al(III) ions from their mixture using cellulose column chromatography
- To separate the mixture of $Ni^{2+}$and Fe^{2+} by complexation with DMG and extracting the Ni(II) DMG complex in chloroform, and determine its concentration by spectrophotometry.
- Estimation of Cr and Mn in Steel.
- Study of kinetics of $K_2S_2O_8$ + KI reaction, spectrophotometrically
- Determination of pKa values of indicator using spectrophotometry
- Spectrophotometric determination of CMC
- Measurement of 10Dq by spectrophotometric method.
- Determination of exchange capacity of cation exchange resins and anion exchange resins.
- Determination of Co(II) and Ni(II) Spectrophotometrically.
- Analysis of deodorants and antiperspirants, Al, Zn, boric acid, chloride, sulphate.

- Determination of Antimony (II) in tartaremetic by standard potassium bromate solution.
- Column chromatographic separation of leaf pigments from spinach leaves
- Study of some of the common bio-indicators of pollution
  Estimation of SPM in air samples.

10. Timelines for activities listed at 3-5 in each academic session indicating no. of proposed courses, no. of beneficiaries.

SL No	Type of Activity	Proposed Course	No of Beneficiaries	Timelines
01	Outreach Program	Seminar/Workshop	30	August-September
02	Student Field Visit	Laboratory Visit	40	February-March
03	Student Project	Departmental	40	April
04	Visiting Lectures	Time to time lecture and training by experts	40	According to the availability of recourse persons
05	Student-Teacher meet	Annual Departmental Seminar	40	At the end of one year course work

11. Proposed outreach activities for school teachers and college teachers per year.

Arrangements of Seminars on recent advances in Chemistry, different types of workshops on popular science writing, and science club - where faculty will be involved in scientific discussions among themselves, quizzes, social aspects and Environmental impacts etc.

PHYSICS

1. Half page executive summary indicating relevance and expected outcome.

Yogoda Satsanga Palpara Mahavidyalaya a College located in the rural area of Purba Medinipur district. The locality of college is in remote village area where students are deprived of higher education, advancement and economy. The college gives the village students the opportunity so that they can get the advantage to gain knowledges & educational degree coming from such poor socio-economical background.

The Physics department was established in 1986. The department comprises of collection of books in a departmental library and the Laboratory. The Departmental facilities include three Desktop computers, one Printers, one inverter with six cells Battery connected with two computers for students computer laboratory. All the equipments are functionally active and serving the necessity of both faculties and students. Besides that department have three laboratories one for general student

and other two for honours students. Department have well equipped optics laboratory both for honours and general students. The Department conducts the remedial classes to help the students and all the faculty members to provide the study materials to the students for their better understanding. A no. of students have interest in higher education and scientific research. For that they are encouraged to attend seminars, conferences, interact with the renowned teachers from various Institutes and Universities.

The need of the Project is to get the availability of a useful framework for hands on experimental education within the curriculum. It will be very much helpful for the students to get the opportunity to perform the practical of various experiments and computer language that enables them to understand theoretical physics. This type of hands-on experiment could motivate the students for basic scientific research. With the facility and advantage of DBT Star College Scheme, an atmosphere that inculcates scientific thinking can be expected with all kind of needs fulfilled for laboratory & classroom benefits.

2. Specific objectives

- To provide hands-on experimental knowledge of theoretical Physics to the students.
- To provide hands on experiment of computer language that will help to solve real physical problem.
- To motivate the students for higher education.
- To provide better library facility to the students and teachers
- Students will be motivated to participate in various activities like workshops, student seminar, project work etc. Through these they will learn how to solve a real physical problem and what is the progression of Physics in the world.
- Provide opportunity to students face to face with eminent teachers and scientists related to the discipline from various Institutes and Universities.
- Provide Facility to the students and teachers to access various reputed National and International Journals.

3. Measures to be adopted to enhance bench skills of students, project work, summer training & industrial training: No. of beneficiaries in each.

SL No	Bench skills of students, project work, summer training & industrial training	Year	No. of beneficiaries
01	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	1st	50
02	Workshop on Python and Matlab	1st	50
03	Student Project: A numerical study for radio active decay for radio active materials using Python Software.	1st	20
04	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	2nd	50

05	Workshop on Matlab and Fortran Software	2nd	50
06	Student Project: Numerical programming for curve fitting and use it to calculate spring constant.	2nd	20
07	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	3rd	50
08	Workshop on Python	3rd	40
09	Student Project: Numerical study of hydrogen atom for ground and first excited state.	3rd	20

4. Measures to be undertaken to upgrade skills of faculty by participation in faculty improvement programme.

SL No.	Faculty improvement programme	Year
01	Attend/present paper at seminars/conferences	1st
02	Attend Workshops	1st
03	Hands-on training on different software like Matlab, Mathematica, Python, Maple etc.	1st
04	Attend/present paper at seminars/conferences	2nd
05	Attend Workshops	2nd
06	Two days inter college workshop on Python Programming	2nd
07	One day seminar on Recent progress on Condensed Matter Physics	3rd
08	Attend/present paper at seminars/conferences	3rd
09	Attend Workshops	3rd

5. Appropriate modifications proposed in curriculum to cover laboratory exposure to students and IPR & biosafety issues.

The department will have to take proper bio-safety measures to conduct lab. For small scale project with independent study module to be encouraged. Attending IPR seminar in college would be necessary for the students for awareness.

6. Techniques to be included for hands on training to students (department wise); No. of beneficiaries in each.

SL No.	Hands on Training to students	Year	No. of beneficiaries
01	C/C++/FORTRAN Language	1st, 2nd, 3rd	60 per year
02	Curve Fitting	1st, 2nd, 3rd	60 per year

03	Python Programming	1st, 2nd, 3rd	60 per year

7. **Proposed activities for laboratory staff**

Staff activity:

- Active participation of laboratory staff in order to provide all technical support to run the laboratory properly
- To take care pf safety of students during laboratory hours.
- Cleaning of equipment to make it in working condition.

Staff development programme:

- Lab technician would be encouraged to participate in various hands-on workshop of lab experiments.
- One-week hands on training on newly proposed experiments.

8. **Involvement of visiting faculty.**

Arrangement of Lecture series on Python programming, Numerical simulation, Holography, Nonlinear Optics, group theory.

9. **Additional practicals proposed to be undertaken by the college (within prescribed curriculum of the university), practicals which could not be conducted earlier due to lack of equipment or costly consumables. New equipment proposed to be purchased to be correlated with new additional practicals.**

- OTFT Characterization
- Measurement of Capacitance of insulating materials for TFT fabrication
- Solar cell Characterization
- Variation of Bandgap with temperature for semiconductor
- Measurement Of Magneto Resistance of different materials
- Electron Spin Resonance of magnetic materials.
- Solve simple harmonic equation using OPAMP.

10. **Timelines for activities listed at 3-5 in each academic session indicating no. of proposed courses, no. of beneficiaries.**

SL No	Type of Activity	Proposed Course	No of Beneficiaries	Timelines
01	Outreach Program	Visit to research laboratories, educational sites	40	December-January

02	Student Training	Training on Python, Matlab etc	70	Febuary-March
03	Students bench skill development	Hands on training on practical, code writing.	50	March-April
04	Faculty Development Programme	Seminar, workshop or other development programme	50	May-July
04	Visiting Lectures	Time to time lecture and training by experts	60	According to the availability of recourse persons
05	Student-Teacher meet	Annual Departmental Seminar	60	At the end of one year course work

11. Proposed outreach activities for school teachers and college teachers per year.

* Arrangement of seminars, workshops on e-learning techniques, computer programming and use of different software.
* Awareness Campaign towards education Post- pandemic.
* For the school students: Science exhibition, Quiz Competition.

MATHEMATICS

1. **Half page executive summary indicating relevance and expected outcome.**

Yogoda Satsanga Palpara Mahavidyalaya is one of the oldest rural college in the district of Purba Medinipur under Vidyasagar University and has high demand for its academic environment and infrastructure with green campus, attracts a large number of students from the rural areas to pursue under-graduate courses in Sciences as well as Humanities.

Mathematics is a particular discipline of basic science, was introduced in 1984. The Department has its own collection of books, journals, study materials and a well-equipped Computer Laboratory. The Departmental facilities include seventeen Desktop computers, three Printers, one inverter with six cells Battery connected with eight computers, and one LCD Projector. All the equipment is functionally active and serving the necessity of both faculties and students. The Department organises the remedial classes and practical classes for on hand practice to help the students and all the faculty members provide the study materials to the students for their better understanding. A large number of

students keep interest in higher education and research. A huge number of pass-out students are engaged in the teaching profession, research activity and in others. In view of that students are encouraged to attend seminars, conferences, interact with the renowned teachers in various Institutes and Universities.

The aim of the Project is to provide a useful framework for hands on experimental education within the curriculum. It will be great for the students getting the opportunity to do the practice of various software for solving realistic problems and they would be tutored to compare their results with the existing numerical and experimental data. Through the DBT Star College Scheme, we expect to provide an atmosphere that inculcates scientific thinking.

2. Specific objectives

The Department of Mathematics on successful completion of the DBT Star College Scheme seeks to achieve the following program specific objectives

- Main objective is to strengthen the academic and physical infrastructure by providing sufficient lab facilities, proper guidance, inspiring and motivating teaching and learning techniques to the students, specially coming from the economically weaker section of society.
- Enrichment of the departmental library with sufficient number of good books and journals, sufficient number of computers with internet facility, will increase the source of knowledge for our students and faculty members which is the important and key factors for effective learning.
- To provide hands-on software experience (Like, Mathematica, Matlab etc.) to the students.
- To provide the concept of algorithm development and regular monitoring of designing/coding software development which can help the solving of the problem related with the mathematics.
- To improve the progression rate of the students to higher education and motivate them on research-oriented activity in the field of mathematics.
- To provide better library facility to the students and teachers.
- Students will be motivated to participate in various activities like workshops, student seminar/conference, project work etc. will make the learning process more joyful with huge knowledge. These knowledge-based activities increase their confidence level and strengthen personality. Through these they will learn different problem-solving techniques of different branch of Mathematics.
- Provide opportunity to students face to face with eminent teachers and scientists related to the discipline from various Institutes and Universities.
- Provide facility to the students and teachers to access various reputed National and International Journals.

3. Measures to be adopted to enhance bench skills of students, project work, summer training & industrial training : No. of beneficiaries in each.

Bench skill of the students will be enhanced by rigorous practice of the regular curriculum-based workshop, special lecture and graphical representation of any function/integration/derivation or numerical computation or numerical simulation by C++ or C programming languages or using Mathematica or Matlab software.

SL No	Bench skills of students, project work, summer training & industrial training	Year	No. of beneficiaries
1.	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	1st Year	70
2.	Workshop on Software Mathematica and Matlab	1st Year	70
3.	Student Project: A numerical study for solving PDE by using MatLab Software: Application to hemodynamic	1st Year	70
4.	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	2nd Year	69
5.	Workshop on Mathematica and Matlab Software	2nd Year	69
6.	Student Project: A Comparative study of different numerical methods for solving algebraic and transcendental equations	2nd Year	69
7.	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	3rd Year	65
8.	Workshop on Mathematical Software using Mathematica and Matlab.	3rd Year	65
9.	Student Project: Study of advanced optimization problems : Application to Linear and Non-Linear constrained and un-constrained optimization problem.	3rd Year	65

4. Measures to be undertaken to upgrade skills of faculty by participation in faculty improvement programme.

The CBCS curriculum has been introduced in the department of Mathematics. In 3rd semester C++ programming and Mathematica or MATLAB software are already introduced to graphical demonstration to graph plotting of a functions or surface integral in the syllabus in each semester. The exert are not available. Some visiting faculties from various institutes are involving with the department to contact the said practical or theoretical classes.

Therefore following measures to be undertaken to upgrade skill:

SL No.	Faculty improvement programme	Year
	Attend/present paper at seminars/conferences	1st Year
	Attend Workshops on computational Mathematics	1st Year
	Hands-on training on different software	1st Year

	Attend/present paper at seminars/conferences	2nd Year
	ICT, C language, C++ language, Mathematica and Matlab training based workshop programmes attainment.	2nd Year
	Two days inter college workshop on Computational methods	2nd Year
	One day seminar on Recent trend on advance mathematics and computation	3rd Year
	Participation in orientation programmes and refresher courses in various universities on various topics of mathematics.	3rd year
	Attend several faculty development programme on Mathematics and different software organised by different University and Institution.	3rd Year

5. Appropriate modifications proposed in curriculum to cover laboratory exposure to students and IPR & biosafety issues (details thereof department wise).

Students are provided Standard operating procedure (SOP) to protect personal, laboratory & environmental exposure to maintain the use of hazardous materials or physical hazards. Attending IPR seminar in college would be mandatory for the students for awareness. For awareness of the students the following models related to biosafety and mathematics are considered.

(a) Preparing some pollution control mathematical model.

(b) Formulate and solve some epidemic model in the pandemic situation.

(c) Formulate some prey-predator model and check their stability using stability theory.

(d) Develop algorithms for above mentioned models and obtain the results using Mathematica/ MATLAB software.

6. Techniques to be included for hands on training to students (department wise); No. of beneficiaries in each.

SL No.	Hands on Training to students	Year	No. of beneficiaries
1.0	Mathematica, Matlab software for mathematical problem solving.	1st,2nd,3rd	70 per year
2.0	Microsoft 365 soft ware	1st,2nd,3rd	65 per year
3.0	Java, C, C++, Fortran Languages with its application. .	1st,2nd,3rd	70 per year
4.0	Application of different software on Numerical problem solving.	1st,2nd,3rd	70 per year.

7. **Proposed activities for laboratory staff : N/A**

8. **Involvement of visiting faculty**

Yes, some visiting faculties from various institutes are involving with the department to contact the MATLAB, C or C++ programme said practical or theoretical classes. Also they deliver lectures on Mathematical problems on Operational research, Numerical simulation, Bio-Mathematical problems and their applications and fuzzy set theory.

Sl. No.	Topic	Course	Name of Faculty
1.	(a) Matlab Theory / Practical . (b) Bio-Mathematical Problem and its application	B.Sc Courses	Mr. Jayanta Kumar Dey Associate Professor of Mathematics, Mahishadal Raj College, West Bengal
2.	(a) C or C++ Theory / Practical (b) Numerical Simulation.	B.Sc Courses	Dr. Arindam Roy Associate Professor of Pravhat Kumar College, Contai in Mathematics, West Bengal
3.	(a) Advanced Optimization Techniques and its application in operational research. (b) Fuzzy set theory.	B.Sc Courses	Prof. Dr. Samarjit Kar, Professor, Dept. Of Mathematics, NIT Durgapur, West Bengal.

9. **Additional practical proposed to be undertaken by the college (within prescribed curriculum of the university), practical which could not be conducted earlier due to lack of equipment or costly consumables. New equipment proposed to be purchased to be correlated with new additional practical.**

MATLAB theory and practical is in the prescribed curriculum in B.Sc Mathematics Hons Semester-III. Within the prescribed curriculum the following practical are conducted by the department with MATLAB and MATHEMATICA.

- Fitting of a polynomial.
- Optimum solution of unconstrained/ constrained objective function / objective functions with graphics.

- Non-linear differential equation solving.
- Knowledge of graphics on different function, curve tracing, solution of differential equations and different dynamical problems.

10. Timelines for activities listed at 3-5 in each academic session indicating no. of proposed courses, no. of beneficiaries.

The computers, MATLAB software and interactive boards (Smart class room) are not sufficient so the proposed items are needed in the dept.

SL No	Type of Activity	Proposed Course	No of Beneficiaries	Timelines
1.	Outreach program	ICT based workshop C or C++ Workshop	70	Decembe'2022-January 2023.
2.	Student Training	Seminar/Workshop	70	Feb-March '2023
3.	Student Training	Mathematica and Matlab workshop	70	April--May,2023
4.	Visiting Lectures	Time to time lecture and training by experts	65	According to the availability of recourse persons
5.	Student-Teacher meet	Annual Departmental Seminar	70	At the end of one year course work

11. Proposed outreach activities for school teachers and college teachers per year.

- Arrangement of seminars, workshops on e-learning techniques, computer programming and use of different software.
- Awareness Campaign towards education Post-pandemic.
- For the school students: Science exhibition, Quiz Competition.

COMPUTER SCUENCE

1. Half page executive summary indicating relevance and expected outcome

The Department of Computer Science has always had well-trained and intellectual faculty members who have assisted their students in progressing to higher education. Many graduates of the Department of Computer Science are now employed at various research institutes and companies across the country. For Honours and General courses, the department has a laboratory. The laboratory area is equipped with a variety of critical machines, including individual desktop computers with internet access, scanners and printers, and projectors. Aside from laboratory facilities, the department offers students

access to an extensive Seminar library. To assist students in preparing for higher education, the Department hosts student seminars, tutorial sessions, and homework assignments on a regular basis. Faculty in the department use a traditional chalkboard as well as an audio-visual system. Because of the current pandemic, the department is using the College's Learning Management System (LMS) portal and the Google Meet platform for online classes. Regular Teachers are also available for intellectual contact with students outside of class hours and during vacations. The Department plans to upgrade the laboratory's equipment by purchasing new instruments, a more modern variant of the current computer, as well as expensive graphics cards, processors, and consumables. The department's goal is to provide sufficient research facilities to all students enrolled in Computer Science courses (both Honours and General), as well as to organize various events such as workshops, industry visits, and lectures on current computer science topics. They will be taught how to think about, design, and carry out many types of research investigations within the institution and beyond. This will enable them to gain a fundamental understanding of research in the field of computer science. This would allow them to work on a variety of projects in the future.

2. Specific objectives (not more than one page).

The Department of Computer Science hopes to attain the following program-specific objectives after completing the DBT Star College Scheme.

- To equip students with hands-on software experience.
- To increase the number of students who progress to higher education.
- To improve library facilities for students and teachers.
- Students will be encouraged to participate in workshops, student seminars, project work, and other activities. They will acquire various problem-solving approaches from various branches of Computer Science through these.
- Provide students with the opportunity to meet with famous lecturers and scientists from various institutes and universities who are experts in the field.
- Students and teachers should have access to a variety of reputable national and international journals.

3. Measures to be adopted to enhance bench skills of students, project work, summer training & industrial training : No. of beneficiaries in each.

SL No	Bench skills of students, project work, summer training & industrial training	Year	No. of beneficiaries
01	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	1st	60
02	Workshop on Software MATLAB	1st	50

03	Student Project: A surveillance scene representation and Trajectory Anomaly Detection	1st	30
04	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	2nd	50
05	Workshop on Python	2nd	50
06	Student Project: A Comparative study of different anomaly techniques on videos	2nd	30
07	Students Seminars, Workshops, Laboratory Visit, Educational Field visit	3rd	50

4. **Measures to be undertaken to upgrade skills of faculty by participation in faculty improvement programme.**

SL No.	Faculty improvement programme	Year
01	Attend/present paper at seminars/conferences	1st
02	Attend Workshops	1st
03	Hands-on training on different software	1st
04	Attend/present paper at seminars/conferences	2nd
05	Attend Workshops	2nd
06	Two days inter college workshop on Computational methods (Collaborating with Mathematics Department)	2nd
07	One day seminar on Recent trend on advance computational techniques (Collaborating with Mathematics Department)	3rd
08	Attend/present paper at seminars/conferences	3rd
09	Attend Workshops	3rd

5. **Appropriate modifications proposed in curriculum to cover laboratory exposure to students and IPR & biosafety issues (details thereof department wise).**

Standard operating procedures (SOP) are offered to students to protect personal, laboratory, and environmental exposure while using hazardous products or physical dangers.

6. **Techniques to be included for hands on training to students (department wise); No. of beneficiaries in each.**

SL No.	Hands on Training to students	Year	No. of beneficiaries
01	MATLAB Software	1st , 2nd, 3rd	70 per year

02	Python Software	1st , 2nd, 3rd	70 per year
03	Latex Training	1st , 2nd, 3rd	70 per year

7. **Proposed activities for laboratory staff :**

Seminar and workshop on:
a. Computer Maintenance;
b. Laboratory Machine Handling; and
c. Computer Equipment Cataloguing and Stock-Maintenance.

8. **Involvement of visiting faculty (details of lecture & practicals to be covered in each department).**

Machine Learning, Python, MATLAB, and other research problems and their applications are covered in these lectures.

9. **Additional practicals proposed to be undertaken by the college (within prescribed curriculum of the university), practicals which could not be conducted earlier due to lack of equipment or costly consumables. New equipment proposed to be purchased to be correlated with new additional practicals.**

- Solving Different Problems in MATLAB and Python
- Working with New NVIDIA Graphics Card Using MATLAB and Python

10. **Timelines for activities listed at 3-5 in each academic session indicating no. of proposed courses, no. of beneficiaries.**

SL No	Type of Activity	Proposed Course	No of Beneficiaries	Timelines
01	Outreach Program	Seminar/Workshop	30	December-February
02	Student Training	Seminar/Workshop	50	March-April
03	Outreach Program	Visit various Institutional Laboratory	60	May
04	Visiting Lectures	From time-to-time lectures and training by experts	70	According to the availability of recourse persons
05	Student-Teacher meet	Annual Departmental Seminar	70	At the end of one-year course work

11. Proposed outreach activities for school teachers and college teachers per year.

- Organizing seminars and workshops on e-learning methodologies, computer programming, and software application.
- Post-pandemic educational awareness campaign
- Science exposition and quiz competition for school children.

12. Details of Institutional Ethics Committee. if any: YES

ETHICS COMMITTEE

PART- C:

Department wise Budget Requirement: (Individual table for each Department)

(Rs in lakhs)

Department: BOTANY

Non-Recurring Budgets

Item	Unit Cost (in Rs)	Quantity	Total (in Lakhs)
Compound Microscope (Olympus)	24,000/-	13	3.12L
Simple Microscope (ALMICRO)	4000/-	6	0.24L
Labomed Binocular Microscope	60,500/-	02	1.21L
Incubator	18,000	01	0.18L
ELISA reader	1,44,000/-	01	1.44L
Spectrophotometer	1,00,000/-	01	1L
Digital Centrifuge Machine	20,000/-	01	0.20L
Gel Electrophoresis Unit	20,000/-	01	0.2L
Electrophoresis Power Supply	24,000/-	01	0.24L
Vertical/Horizontal Laminar Airflow Bench	1,49,000/-	01	1.49L
Total			10.32L

Recurring Budgets

Item	1st Year (in Rs)	2nd Year (in Rs)	3rd Year (in Rs)	Total (in lakhs)
Chemicals, Botanical Specimens , dry specimens, Permanent slides, Reagents, Herbarium sheets and electron micrographs.	45,000/-	45,000/-	45,000/-	1.35L
Books and journals, Photographs.	20,000/-	20,000/-	20,000/-	0.6L
Contingency	15,000/-	15,000/-	15,000/-	0.45L
For performing Workshop, Seminar, projects, Faculty Development Programme.	15,000/-	15,000/-	15,000/-	0.45L
Travel & field visit	20,000/-	20,000/-	20,000/-	0.6L
Grand Total				3.45L

Department: ZOOLOGY

Non-recurring Budget			
Item	Unit Cost (in Rs)	Quantity	Total (in Lakhs)
LYZER Laboratory Microscope (LT-9B)	29,900/-	08	2.392L
OLYMPUS CX22 Binocular Microscope	65,400/-	02	1.308L
Spectrophotometer	1,10,000/-	01	1.1L
Centrifuge	31,500/-	01	0.315L
Vortex	20,000/-	02	0.4L
Micropipette	45,000/-	02	0.9L
Laminar Air flow Cabinet	35,000/-	02	0.7L
ELISA reader	1,45,000/-	01	1.45L
Gel Electrophoresis Apparatus	25,000/-	01	0.25L
Conductivity Meter	20,000/-	01	0.2L

Turbidity Meter	20,000/-	01	0.2L
Beacon Octa1Plus Digital Colorimeter	58,500/-	01	0.585L
RT PCR Thermal Cycler	1,45,000/-	01	1.45L
Grand Total			**11.25L**

Recurring Budget				
Item	1st Year (in Rs.)	2nd Year(in Rs.)	3rd Year(in Rs.)	Total (in Lakh)
Laboratory chemicals, Antibodies, Reagents, glass apparatus.	60000/-	60000/-	60000/-	1.8L
Books & Journals	20000/-	15000/-	15000/-	0.5L
Contingency	10000/-	10000/-	10000/-	0.3L
Seminar, Workshop related, Project related, Faculty development program	15000/-	15000/-	10000/-	0.4L
Travel & Field visit	20000/-	20000/-	20000/-	0.6L
Grand Total				**3.6L**

Department: CHEMISTRY

Non-recurring Budget			
Item	Unit Cost (in Rs)	Quantity	Total (in Lakhs)
4 decimal Digital weight machine	87000/-	1	0.87L
3 decimal Digital weight machine	75,000/-	1	0.75L
Digital Potentiometer	24000/-	2	0.48L
UV Visible Spectrophotometer	340000/-	1	3.4L
p H Meter	22500/-	2	0.45L
Desktop Computer	42000/-	2	0.84L
Conductivity meter	27000/-	2	0.54L
Filtration Assembly with oil free vaccum pump	15000/-	2	0.30L
Colorimeter	24000/-	2	0.48L
Air Oven	50000/-	1	0.50L
Electrical hot water bath	6000/-	1	0.06L
Distilled water Plant	55000/-	1	0.55L
Melting and boiling point apparatus	30000/-	1	0.30L
Muffle furnace (950^0C)	14500/-	1	0.145L

Muffle furnace (1200^{0}C)	21000/-	1	0.21L
Heating Mantle	2200/-	2	0.044L
Hot plate	2500/-	2	0.050L
Magnetic stirrer with hot plate	13000/-	1	0.13L
Water Bath	3800/-	2	0.076L
Oil Bath	7600/-	1	0.076L
Rotary evaporator	44000/-	1	0.44L
Reflux Condensor	3900/-	1	0.039L
Micropipette	1800/-	2	0.036L
Rotary Pump	6500/-	2	0.13L
Grand Total			**10.896L**

Recurring Budget				
Item	1st Year (in Rs.)	2ndYear(in Rs.)	3rdYear(in Rs.)	Total (in Lakh)
Books &Journals	10000/-	8000/-	6000/-	0.24L
Consumables (Chemicals & Glassware)	70000/-	70000/-	55000/-	1.95L
Contingency	20000/-	20000/-	20000/-	0.60L
Travel (within India)	7000/-	7000/-	7000/-	0.21L
Grand Total				**3.00L**

Department: PHYSICS

Non-recurring Budget			
Item	Unit Cost (in Rs)	Quantity	Total (in Lakhs)
HP Desktop (Intel Core i5 Processor and Compatible motherboard , 8 GB RAM, 256 GB SSD, 1TB HDD, Windows 10)	62,500.00/-	4	2.5L
Laser Printer (HP LaserJet Pro MFP M329dw Multi-Function Monochrome)	31,900/-	1	0.32L
UPS+Inverter (LUMINOUS Cruze 2KVA Inverter with RC 18000 Battery(Two), Tubular Inverter Battery (150Ah))	35,500/-	1	0.355L
Four Probe Instrument with Temperature Controller	65,000/-	2	1.3L
Hall Effect Setup	85.000/-	1	0.85L
Frank Hertz Experimental Setup	47,000/-	2	0.95L
Measurement Of Magneto Resistance Setup	84,000/-	1	0.84L

Plancks Constant Apparatus	36,000/-	2	0.72L
LCR Meter	83,000/-	1	0.83 L
Electro Spin Resonance Spectrometer	43,000/-	2	0.86L
Solar Cell Characteristics Apparatus	25,500/-	2	0.51L
Cathode Ray Oscilloscope	22,500/-	2	0.45L
Polarimeter	85,000	1	0.85L
Grand Total			**11.335L**

Recurring Budget				
Item	1st Year (in Rs.)	2nd Year(in Rs.)	3rd Year(in Rs.)	Total (in Lakh)
Books & Journals	30000/-	20000/-	20000/-	0.7L
Consumables	25000/-	25000/-	25000/-	0.75L
Contingency	30000/-	30000/-	30000/-	0.9L
Travel (within India)	20000/-	20000/-	20000/-	0.6L
Books & Journals	30000/-	20000/-	20000/-	0.7L
TOTAL				**3.65L**

Department: MATHEMATICS

Non-recurring Budget			
Item	Unit Cost (in Rs)	Quantity	Total (in Lakhs)
HP Desktop (Intel Core i5 Processor and Compatible motherboard , 8 GB RAM, 256 GB SSD, 1TB HDD, Windows 10)	62,500	8	5.00 L
Laser Printer (HP LaserJet Pro MFP M329dw Multi-Function Monochrome)	27500	1	0.275 L
UPS+Inverter (LUMINOUS Cruze 2KVA Inverter with RC 18000 Battery(Two), Tubular Inverter Battery (150Ah))	42,500	1	0.425L
MatLab Software (Perpetual License)	1,65,500	1	1.650 L
Mathematica Software (Perpetual License)	1,10,000	1	1.100 L

Smart Interactive digital White board (CLEVERTOUCH, 78 inches)	1,40,000	1	1.400 L
Microsoft 365 Academic Version (License)	5,000	10	0.500 L
Almirah	25,000	1	0.250 L
Total			**10.600 L**

Recurring Budget				
Item	1st Year (in Rs.)	2nd Year(in Rs.)	3rd Year(in Rs.)	Total (in Lakh)
Books & Journals	25,000	25000	25000	0.750 L
Consumables for Software upgradation and others	50,000	50000	50,000	1.500 L
Contingency	30,000	30,000	30,000	0.900 L
Travel (within India)	20,000	20,000	20,000	0.600 L
Total				**3.750 L**

Department: COMPUTER SCIENCE

Non-recurring Budget			
Item	Unit Cost (in Rs)	Quantity	Total (in Lakhs)
HP Desktop (Intel Core i5 Processor and Compatible Motherboard, 8 GB RAM, 240 GB SSD, 1TB HDD, Windows 10)	60,500.00/-	6	3.63L
MSI GEFORCE RTX 3050 GAMING X 8GB GDDR6	35,590/-	6	2.13540L
Laser Printer (HP LaserJet Pro MFP M329dw Multi-Function Monochrome)	31,900/-	1	0.319L
Smart Interactive digital Whiteboard (CLEVERTOUCH, 78 inches)	1,40,000/-	1	1.4L
Mat-Lab Software (Perpetual License)	1,55,000/-	2	3.1L
RS PRO Network Outdoor CCTV Camera, 1945 x 1097 Resolution	24,000/-	2	0.48L
Grand Total			**11.0644L**

Recurring Budget

Item	1st Year (in Rs.)	2nd Year(in Rs.)	3rd Year(in Rs.)	Total (in Lakh)
Books & Journals	32000/-	22000/-	22000/-	0.76L
Consumables	13000/-	13000/-	13000/-	0.39L
Contingency	32000/-	32000/-	32000/-	0.96L
Grammarly Prices	12240	12240	12240	0.3672L
Travel (within India)	25000/-	25000/-	25000/-	0.75L
Grand Total				**3.2272L**

Signature of Executive Authority
of the Institute/University with Seal
Date:

Signature of Program
Coordinator