

# DEPARTMENT OF MATHEMATICS

## Evaluative Report of the Department

Name of the Autonomous College- Kalyan P. G. College, Sector-7, Bhilai.

Name of the Department- Mathematics.

Dist. - Durg. State- Chhattisgarh.

Total number of the Departments in the Institution- 22.

1. No. Name of the Department – Mathematics.

1. Year of Establishment -

Courses	Year
UG	1974
PG	1986
Research Centre	1991

2. Names of Programmes offered:(UG, PG, Ph.D.)

UG Courses	B. Sc. In Mathematics
PG Courses	M. Sc. In Mathematics
Research degree Course	Ph. D. In Mathematics

3. Number of Teaching Posts Sanctioned/ Filled:

Teaching Post (2016-2017)	Sanctioned	Filled
Professors	0	0
Asst. Professors	02	01
Honorary Professors	05	06
Total	07	07

#### 4. Number of Students Enrolled:

Name of the Course	Year	Application as Received	Selected		Pass		Percentage		Total Students (2012-2017)
			Male	Female	Male	Female	Male (%)	Female (%)	
<b>B.Sc. (I,II,III)</b>	2012-2013	1140	276	306	188	241	32.30	41.40	<b>582</b>
	2013-2014	1280	307	336	213	266	33.13	41.37	<b>643</b>
	2014-2015	1132	472	448	339	399	36.85	43.37	<b>920</b>
	2015-2016	1390	390	279	307	241	45.89	36.02	<b>669</b>
	2016-2017	1460	567	242	-	-	-	-	<b>809</b>
<b>M.SC (Prev., Final)</b>	2012-2013	190	34	42	32	41	42.10	53.94	<b>76</b>
	2013-2014	285	33	61	31	61	32.97	64.89	<b>94</b>
	2014-2015	195	29	70	29	68	29.29	68.68	<b>99</b>
	2015-2016	293	34	64	33	63	33.67	64.28	<b>98</b>
	2016-2017	299	28	64	22	64	20.24	58.88	<b>92</b>

#### 5. Number of Research Projects - Total grants received:

Project	Year	Name of Investigator	funding Agency (National)	Grants Sanctioned	Grants received
<b>01</b>	2014-2015	Dr. G. K. Goswami	C.G.Cost	5,00000/-	4,40,000/-

#### 6. Inter – Institutional Collaborative Projects and Associated Grant Received:

- National Collaboration – Nil.
- International Collaboration – Nil.

#### 7. Departmental projects funded by DST-FIST, DBT, ICSSR, etc.; total grants received: Nil.

The department doesn't have any projects funded by DST-FIST; DBT.

#### 8. Special Research Laboratories Sponsored by Created by Industries or Corporate Bodies: Nil.

The department doesn't have any special research laboratories sponsored by created by industries or corporate bodies

## 9. Publications:

- Number of papers published- National-4, International– 23.
- Number of Books with ISBN- Nil.
- Number of Citation Index- 1 to 10/ Avg. 3.33
- Number of Impact Factor- 0.51 to 2.638/ Avg. 1.5
- Number of h-Index- 5.

Description of research papers are given as follows:

### i. DR. G. K. GOSWAMI

S.N	Name of the Paper	Name of the Journal	Impact Factor	Regional /National	International/ Approved By	Citation	ISSN Number	h-index
1	A cosmological model of thermodynamic open universe	International Journal of Theoretical Physics	0.964 (2016)	-	SCI	1	ISSN: 1572-9575	-
2	A Bianchi-III Cosmological Model with Imperfect Fluid	Aditi Journal of Mathematical Physics	-	-	-	-	ISSN 1450-216 X	-
3	Magnetized dark energy and the late time acceleration	The European Physical Journal Plus (Springer)	1.753 (2016)	-	SCI	10	ISSN: 2190-5444	-
4.	$\Lambda$ CDM-type cosmological model and observational constraints	International Journal of Theoretical Physics	-	-	-	5	ISSN: 1572-9575	-
5.	Anisotropic string cosmological models in Heckmann-Schucking space-time.	Astrophysics and Space Science	1.622	-	SCI	3	ISSN: 1572-946X	-
6.	Anisotropic universe with magnetized dark energy Astrophys Space.	Astrophysics and Space Science	1.622	-	SCI	2	ISSN: 1572-946X	-
7.	Lambda-CDM type Heckmann-Schucking model and union 2.1 compilation, Gravitation and Cosmology.	Gravitation and Cosmology	0.734	-	SCI	-	ISSN: 0202-2893	-
8.	Dark Energy $\Lambda$ -Cosmology.	<b>International Journal Of Mathematical Sciences And Engineering Applications (IJMSEA)</b>	-	-	UGC	-	ISSN 0973-9424	-
9.	Economic and Performance Evaluation of Two Unit Cold Standby System with Hardware Failure and Human	International Journal of Applied mathematical Analysis &	--	-	UGC	-	<b>ISSN 0973-3868</b>	-

	Error.	Application.						
10.	Study of Reliability Parameters of a System having two main units and a Redundant associate unit.	International Journal of Statistics and Systems	-	-		-	ISSN 0973-2675	-
11.	Cosmological Parameters for Spacially Flat Universe in BD-theory	Research in Astronomy and Astrophysics	1.371 (2016)	-	SCI	-	ISSN: 1674-4527	-

ii. **MRS. SAPNA THAKUR**

S.N	Name of the Paper	Name of the Journal	Impact Factor	Regional /National	International/ Approved By	Citation	ISSN Number	h-index
1	Prevention Measures for Thalassemia in Chhattisgarh, India: with the help of Mathematical Models.	American Journal of Mathematics and Mathematical Sciences	-	-		-	ISSN 2278-0874	-
2	Incidence of Thalassemia and Sickle Cell Disease in Chhattisgarh, Central India: Using Hardy-Weinberg Equations.	Journal of Molecular and Genetic Medicine	1.73	-		3	ISSN: 1747-0862	-
3	Study The Level of Awareness Among Sindhi Families of Durg, Chhattisgarh (India): A Questionnaire Based Statistical Study.	International Journal of Pharmacy and Pharmaceutical Sciences	0.51	-	Scopus	-	ISSN 0975 - 1491	-
4.	A Mathematical Model to Control the Transmission of Thalassemia Disease using Pure Fractions.	Indian Journal of Science and Technology	-	-	Scopus	2	ISSN : 0974-5645	-
5.	Design of a Fuzzy Model for Thalassemia Disease Diagnosis: using Mamdani type Fuzzy Inference System (FIS).	International Journal of Pharmacy and Pharmaceutical Sciences	0.51	-	Scopus	2	ISSN 0975 - 1491	-
6.	Detection of type of Thalassemia disease in patients: A fuzzy logic approach.	International Journal of Applied Pharmaceutical Sciences and Research	-	-		-	ISSN: 2455-8095	-
7.	Complex behavior of prey-predator system exhibiting group defense: A mathematical modeling study	<i>Chaos, Solitons &amp; Fractals</i>	1.455	-	SCI	-	ISSN: 0960-0779	-
8.	Application of Fuzzy Logic for Presentation of an Expert	International Journal of Computer Sciences and	2.638 (2016)	-		-	ISSN: 2347-2693	-

	Fuzzy System to Diagnose Thalassemia.	Engineering						
--	--	-------------	--	--	--	--	--	--

iii. **HEMANT KUMAR SAW**

S.N	Name of the Paper	Name of the Journal	Impact Factor	Regional /National	International/ Approved By	Citation	ISSN Number	h-index
1.	Stochastic Modelling and Reliability Analysis of a RO Membrane System Used in Water Purification System with Patience –Time for Repair.	International Journal of Engineering Research & Technology (IJERT)	2.85	-	UGC	-	ISSN: 2278-0181	-
2.	Profit analysis of Hulling system in Rice-mill Plant with change in demand and PM at down state subject to maximum operation time.	International j. of math. sci. & Engg.Appls. (IJMSEA)	0.5250 (2015)	National	UGC	-	ISSN 0973-9424	-
3.	Reliability Modelling and Analysis of Single unit system with Environmental Failure and PM at MOT.	Bulletin of the Calcutta Mathematical Society	-	National	UGC	-	ISSN 0008-659	-
4.	Economic and Performance evaluation of a Stochastic Model with Hardware failure and Human error.	Bulletin of the Calcutta Mathematical Society	-	National	UGC	-	ISSN 0008-659	-
5.	Reliability Availability Cost analysis (RAC) of Three Unit System.	Journal of the Calcutta Mathematical Society	-	National	UGC	-		-
6.	Economic and Performance Evaluation of Two Unit Cold Standby System with Hardware Failure and Human Error.	International Journal of Applied mathematical Analysis & Application.	-	-	UGC	-	ISSN 0973-3868	-

iv. **H. L. MANKER**

S.N	Name of the Paper	Name of the Journal	Impact Factor	Regional /National	International/ Approved By	Citation	ISSN Number	h-index
1.	Mtbf Analysis of the Two-Unit Series System with Raipur Facility.	International Journal of Engineering And Computer Science	2.38	-	-	-	ISSN: 2319-7242	-
2.	Study of Reliability Parameters of a System with two Main, one Standby Unit &	Journal of Advances in Mathematics	-	-	-	-	ISSN: 2347-1921	-

	amp; two Associate Units.							
3.	Evaluation of Reliability Parameters of a System having three Independent Components with Repair Facility.	Journal of Advances in Mathematics	1.296	-	-	-	ISSN: 2347-1921	-
4.	Study of Reliability Parameters of a System having two main units and a Redundant associate unit.	International Journal of Statistics and Systems	-	-	-	-	ISSN 0973-2675	-
5.	Reliability Availability Cost analysis (RAC) of Three Unit System.	Journal of the Calcutta Mathematical Society	-	National	UGC	-		-

**10. Details of Patents and Income Generated: Nil.**

**11. Areas of consultancy and income generated: Nil.**

**12. Awards / recognitions received at the National and International level by Faculty/ Doctoral/ post doctoral fellows/ Students: Nil.**

**Faculty- Nil.**

**Doctoral/Post Doctoral Fellows- Nil.**

**Students- Nil.**

**Students State Level-02:**

S.N.	Award/Recognition	Students	Amount	Year
01	Cash Prize Award	Vinay Kumar Masiyare	1,300.00	2013
02	Cash Prize Award	Khemprakash	1,300.00	2013

**13. How many students have cleared Civil Services, Defense Services, Defense Services examinations, NET, SET (SLET), GATE and any other competitive examinations: 02.**

S.N.	Name of Student	Clear competitive examinations			
		NET	Year	SET	Year
01	Vinay Kumar Masiyare	Yes	2014, 2015	Yes	2013
02	Pradeep Kumar Dadsena	Yes	2015	-	-

**14. List of Doctoral, Post- Doctoral Students and Research Associates:**

S. N.	Fields	Result	Name o f the students		From the Host Institution/Unive rsity	From other Institution/Univ ersity
01	Doctoral Students	02	i.	Dr. Smt. Mandvi Mishra.	No	Yes
			ii .	Dr. Ramnarayan Dewangan.		
02	Post-Doctoral Students	Nil	-		-	-
03	Research Associates	01	i.	Dr. Ramnarayan Dewangan.	Yes	No

**15. Number of Research Scholars/ Post Graduate Students getting financial assistance from the University / State/ Central:**

**Post Graduate Students getting financial assistance from state – 67.**

**The following table given year wise description of the students:**

Year	Students Getting Financial Assistance			
	University	State		Central
		Research Scholars	Post Graduate Students	
2012-2013	Nil	Nil	Nil	Nil
2013-2014	Nil	Nil	14	Nil
2014-2015	Nil	Nil	18	Nil
2015-2016	Nil	Nil	23	Nil
2016-2017	Nil	Nil	12	Nil
<b>Total</b>	<b>Nil</b>	<b>Nil</b>	<b>67</b>	<b>Nil</b>

## List of Faculty

S. NO.	Name of Faculty
1.	Dr. G. K. Goswami
2.	Mrs. Sapna Thakur
3.	Ms. Leena Dewangan
4.	Ms. Kuleshwari Deshmukh
5.	Mr. Gajendra Kumar
6.	Mrs. Anamika Ray
7.	Ms. Chetna Gaur

### 1. LIST OF RESEARCH PAPER (EACH MEMBER) –

#### v. DR. G. K. GOSWAMI

S.N	<u>BIBLIOGRAPHY</u>
1.	A cosmological model of thermodynamic open universe. International Journal of theoretical Physics, 51(8), (2012), pp-1-10, ISSN: 1572-9575.
2.	A Bianchi-III Cosmological Model with Imperfect Fluid, Aditi Journal of Mathematical Physics, 1(1), (2012), pp-1-8, ISSN- 1450-216X.
3.	Magnetized dark energy and the late time acceleration, European Physics Journal plus, (2012), ISSN-2190-5444.
4.	Lambda CDM-type cosmological model and observational constraints, International Journal of Theoretical Physics, 54, (2015), pp- 315-325.
5.	Anisotropic string cosmological models in Heckmann-Schucking space-time, Astrophysics and Space Science, (2016) 361:47 DOI 10.1007/s10509-015-2629-4.
6.	Anisotropic universe with magnetized dark energy Astrophysics and Space Science, (2016) 361:119 DOI 10.1007/s10509-016-2708-1.
7.	Lambda-CDM type Heckmann-Schucking model and union 2.1 compilation, Gravitation and Cosmology, 22(4), (2016), pp- 1-10.
8.	Dark Energy Lambda Cosmology, International Journal of Mathematical Science and Engineering, 10, (2016), pp- 191-207, ISSN 0973-9424.
9.	Economic and Performance Evaluation of Two Unit Cold Standby System with Hardware Failure and Human Error, International Journal of Applied mathematical Analysis & Application, (2017), ISSN 0973-3868.
10.	Study of Reliability Parameters of a System having two main units and a Redundant associate unit.



	International Journal of Statistics and Systems, ISSN 0973-2675.
<b>11.</b>	Cosmological Parameters for Specially Flat Universe in BD-Theory, Research in Astronomy and Astrophysics, 17(3), (2017) DOI: 10.1088/1674-4527/17/3/27.

**vi. MRS. SAPNA THAKUR**

<b>S.N</b>	<b><u>BIBLIOGRAPHY</u></b>
<b>1.</b>	Prevention Measures for Thalassemia in Chhattisgarh, India: with the help of Mathematical Models, American Journal of Mathematics and Mathematical Sciences, 2(2), (2013), pp-193-200.
<b>2.</b>	Incidence of Thalassemia and Sickle Cell Disease in Chhattisgarh, Central India: Using Hardy-Weinberg Equations, Journal of Molecular and Genetic Medicine, 9(1), (2015), pp-1-5.
<b>3.</b>	Study The Level of Awareness Among Sindhi Families of Durg, Chhattisgarh (India): A Questionnaire Based Statistical Study, International Journal of Pharmacy and Pharmaceutical Sciences, 7(9), (2015), pp-341-346.
<b>4.</b>	A Mathematical Model to Control the Transmission of Thalassemia Disease using Pure Fractions, Indian Journal of Science and Technology, 9(4), (2016), pp-1-5.
<b>5.</b>	Design of a Fuzzy Model for Thalassemia Disease Diagnosis: using Mamdani type Fuzzy Inference System (FIS), International Journal of Pharmacy and Pharmaceutical Sciences, 8(4), (2016), pp-356-361.
<b>6.</b>	Detection of type of Thalassemia Disease in Patients: a Fuzzy Logic Approach, International Journal of Applied Pharmaceutical Sciences and Research, 1(2), (2016), pp-88-95.
<b>7.</b>	Complex behavior of prey-predator system exhibiting group defense: A mathematical modeling study, Chaos, Solitons & Fractals, 100, (2017), pp-74-90.
<b>8.</b>	Application of Fuzzy Logic for Presentation of an Expert Fuzzy System to Diagnose Thalassemia, International Journal of Computer Sciences and Engineering, 5(6), (2017), pp-54-61.

**vii. HEMANT KUMAR SAW**

<b>S.N</b>	<b><u>BIBLIOGRAPHY</u></b>
<b>1.</b>	Stochastic Modelling and Reliability Analysis of a RO Membrane System Used in Water Purification System with Patience –Time for Repair, International Journal of Engineering Research & Technology (IJERT), 3(2), (2014), pp- , ISSN: 2278-0181.
<b>2.</b>	Profit analysis of Hulling system in Rice-mill Plant with change in demand and PM at down state subject to maximum operation time, International Journal of Mathematical Science and Engineering Applications, 8, (2014), pp-251-263, ISSN 0973-9424.
<b>3.</b>	Reliability Availability Cost analysis (RAC) of Three Unit System, Journal of the Calcutta Mathematical Society, 12(1), (2016), pp- 47-64.
<b>4.</b>	Economic and Performance evaluation of a Stochastic Model with Hardware failure and Human error, Bulletin of Calcutta Mathematical Society, 107(5), (2015), pp- 411-420, ISSN 0008-659, UGC Sr. No. 5913 in UGC Notification No.F.1-2/2016 (PS).

5.	Reliability Availability Cost analysis (RAC) of Three Unit System, Journal of the Calcutta Mathematical Society, 12(1), (2016), pp-47-64.
6.	Economic and Performance Evaluation of Two Unit Cold Standby System with Hardware Failure and Human Error, International Journal of Applied mathematical Analysis & Application, (2017), ISSN 0973-3868, UGC Sr. No. 16380 in UGC Notification No.F.1-2/2016 (PS).

viii. **H. L. MANKER**

S.N	<b><u>BIBLIOGRAPHY</u></b>
1.	Mtbf Analysis of the Two-Unit Series System with Raipur Facility, International Journal of Engineering And Computer Science, 3(5), (2014), pp- 6043-6047, ISSN- 2319-7242.
2.	Study of Reliability Parameters of a System with two Main, one Standby Unit & two Associate Units, Journal of Advances in Mathematics, 9(3), (2014), pp- 24321-2443, ISSN: 2347-1921.
3.	Evaluation of Reliability Parameters of a System having three Independent Components with Repair Facility, Journal of Advances in Mathematics, 11(2), (2015), pp-4053-4069, ISSN: 2347-1921.
4.	Study of Reliability Parameters of a System having two main units and a Redundant associate unit, International Journal of Statistics and Systems, 12, (2017), pp- 235-250, ISSN 0973-2675.
5.	Reliability Availability Cost analysis (RAC) of Three Unit System, Journal of the Calcutta Mathematical Society, 12(1), (2016), pp-47-64.

2. **LIST OF SEMINARS (EACH MEMBER)-**

<b>1) DR. G. K. GOSWAMI</b>		
	<b>Contents of Field</b>	<b>Description</b>
1.	National Seminar -	Recent Algorithmic Approach On Computer Science & Mathematics
	Organized By -	Swami Shri Swaroopanand Saraswati Mahavidyalaya
	Date -	January 2013
	Roll -	Delivered a Guest Lecture On The Paper Was “Lambda CMD Cosmology”.
	National Seminar -	Recent Algorithmic Approach On Computer Science & Mathematics
2.	National Seminar -	“Application Of Mathematical Modeling In Science & Technology”
	Organized By -	BIT, Durg (C.G.)
	Date -	March 15 <sup>th</sup> -16 <sup>th</sup> , 2013
	Roll -	Presented Invited Talk on “Cosmology”.
3.	National Conference -	Emerging Research Trends In Mathematics And Computation
	Organized By -	BIT, Durg (CG)

	Date	-	February 20-21, 2015
	Roll	-	Delivered an Invited Talk 'In The National Conference Held During
4.	International Conference	-	Emerging Research Trends In Mathematics And Computation
	Organized By	-	BIT, Durg (CG)
	Date	-	February 20-21, 2015
	Roll	-	Delivered an Invited Talk 'In The National Conference Held During
5.	International Conference	-	General Relativity
	Organized By	-	Sant Gadge Baba Amravati University Amravati (India)
	Date	-	Nov 25-28, 2015
	Roll	-	Delivered an Invited Talk "CDM Type Heckmann-Suchuking Model & Union 2.1 Compilation".
6.	National Seminar		Ancient Indian Mathematics
	Organized By	-	Govt. Dr. B.S.B.A. College, Dongargaon (C.G.)
	Date	-	January 22 & 23, 2016
	Roll	-	He Has Presented A Paper & Invited Talk Entitled Astronomy & Cosmology.
7.	National Seminar		BITCON
	Organized By	-	Bhilai Institute Of Technology, Durg (C.G.)
	Date	-	January 29 & 30, 2016
	Roll	-	Delivered an Invited Talk "Dark Energy A-Cosmology" .
8.	National Conference	-	Application Of Mathematics In Science & Engineering
	Organized By	-	BIT College, DURG (C.G.)
	Date	-	March 10-11, 2016
	Roll	-	Presentation Entitled "Dark Energy $\Lambda$ -Cosmology".
9.	National Conference	-	Application Of Mathematics In Science & Engineering
	Organized By	-	BIT College, DURG (C.G.)
	Date	-	March 10-11, 2016
	Roll	-	Presented a Paper Entitled "Magnetized Strings In $\Lambda$ Dominated Anisotropic Universe.
10.	National Conference	-	Differential Geometry And Its Application
	Organized By	-	DDU Gorakhpur University, Gorakhpur (C.G.)
	Date	-	January 27-28, 2017
	Roll	-	Delivered an Invited Talk On "Cosmological Parameters For Specially".
11.	National Conference		Challenges In Mathematics For The Development of Science And Technology
	Organized By	-	BIT College, Durg(C.G.)

	Date	-	28 <sup>th</sup> March 2017
	Roll	-	Delivered an invited talk entitled “Cosmological Parameters For Spatially Flat Dust Universe In Brans-Dicke Theory.

2) **MRS. SAPNA THAKUR**

	<b>Contents of Field</b>	-	<b>Description</b>
1.	National Conference	-	Application of mathematical in science & technology
	Organized By	-	Bhilai Institute Of Technology, Durg (C.G.)
	Date	-	15- 16 March 2013
	Roll	-	“she has attended a Seminar”
2.	National Conference	-	CME of Transfusion Medicine Entitled Interdisciplinary Comprehension in Transfusion Medicine
	Organized By	-	India Institute of Medical Sciences Raipur (C.G.)
	Date	-	28 January 2014
	Roll	-	“she has attended a Conference”
3.	National Conference	-	Challenges In Mathematics For The Development Of Science And Technology
	Organized By	-	BIT College,Durg(C.G.)
	Date	-	28 <sup>th</sup> March 2017
	Roll	-	She Has Presented A Paper Entitled “Thalassemia Risk Prediction Model Using Fuzzy Inference Systems: An Application Of Fuzzy Logic”.

**3. LIST OF WORKSHOPS (EACH MEMBER)-**

<b>1) DR. G. K. GOSWAMI</b>			
	<b>Contents of Field</b>	-	<b>Description</b>
1.	State Level Workshop	-	On Latex Language And Mathematics Modeling
	Organized By	-	B.C.S. Govt. P.G. College, Dhamtari (C.G.)
	Date	-	December 08
	Roll	-	Topics of the Talk “Riemannian geometry A Brief Introduction”.
2.	National Workshop	-	Mathematics And Its Application In Various Field
	Organized By	-	St. Thomas College, Bhilai
	Date	-	21-22 January 2013
	State Level Workshop	-	On Latex Language And Mathematics Modeling

3.	National Workshop	-	On Fuzzy Sets & Its Application & General Mathematics
	Organized By	-	Govt. J.Y. Chhattisgarh College, Raipur (C.G.)
	Date	-	January 17-19, 2013
	Roll	-	Delivered an Guest Lecture On The Topics “Algebra”.

2) **MRS. SAPNA THAKUR**

	<b>Contents of Field</b>		<b>Description</b>
1.	National Workshop	-	Application of mathematics in different fields of science
	Organized By	-	Govt. Nagarjuna P.G. College of science, (C.G.)
	Date	-	12-14 October 2012
	Roll	-	participated in the UGC sponsored workshop
2.	National Workshop	-	The rich heritage of Mathematics in India
	Organized By	-	Govt. V.Y.T.P.G. Autonomous College of Durg, (C.G.)
	Date	-	26-27 October 2012
	Roll	-	participated in the CCOST sponsored Workshop
3.	National Workshop	-	Mathematics and its application in various field
	Organized By	-	St. Thomas College of Durg, (C.G.)
	Date	-	21-22 January 2013
	Roll	-	“She has attended a Workshop”
4.	National Workshop		Deployment and collaboration of analysis reports & model
	Organized By	-	NIT college Raipur, (C.G.)
	Date	-	1 February 2013
	Roll	-	“She has attended a Workshop”
5.	National Workshop	-	E-Books in
	Organized By	-	National Institute of Technology, Raipur (C.G.)
	Date	-	15-16 November 2013
	Roll	-	“She has attended a National Workshop”
6.	National Workshop	-	Workshop on Academic Ethics and IPR.
	Organized By	-	National Institute of Technology, Raipur (C.G.).
	Date	-	04-05 April 2014.
	Roll	-	“She has attended a Workshop”.
7.	National Workshop	-	National Level Workshop on General Relativity and Cosmology.
	Organized By	-	Kalyan P. G. College, Bhilai Nagar, Chhattisgarh.

Date	-	08-09 February 2016
Roll	-	“She has attended a Workshop”

**4. ORIENTATION/REFRESHERS ATTENDED (EACH MEMBER) -**

S.No.	Orientation	refreshers	Short term course	year
1.	Nil	Nil	05	2013-2015

Description of Short term courses attended by Mrs. Sapna Thakur given as follows-

<b>1) <u>Mrs. Sapna Thakur</u></b>		
	<b>Contents of Field</b>	<b>Description</b>
1.	National Level Short Term course -	Mat lab Based Design and Implementation of Advanced Control, Signal and Image Processing Algorithm
	Organized By -	National Institute of Technology, Raipur (C.G.)
	Date -	16-21 August 2013
	Roll -	“She has attended a Short Term Course”
2.	National Level Short Term Course -	A Glimpse of Differential Equations in Science and Engineering
	Organized By -	National Institute of Technology, Raipur (C.G.)
	Date -	10-14 March 2014
	Roll -	“She has attended a Short Term Course”.
3.	National Level Short Term Course -	Mathematical Modeling in Science and Engineering.
	Organized By -	National Institute of Technology, Raipur (C.G.).
	Date -	02-06 July 2014.
	Roll -	“She has attended a Short Term Course”
4.	National Level Short Term Course -	Training on Uses of E-Resources
	Organized By -	National Institute of Technology, Raipur (C.G.)
	Date -	10 September 2014
	Roll -	“She has attended a Short Term Program”
5.	National Level Short Term Course -	Current Trends in Applied Mathematics: Applications and Future Aspects.
	Organized By -	National Institute of Technology, Raipur (C.G.).

Date	-	06-10 July 2015.
Roll	-	“She has attended a Short Term Course”

## 5. MEMBERSHIP (STATE/NATIONAL/INTERNATIONAL BODIES)

### 1) Dr. G. K. GOSWAMI

S. No.	Name of bodies	Year of Membership
1.	General Relativity and Gravitation, Society (GRG, Society)	1997
2.	Tensor Society of India (TSI)	2016

## 6. DETAILS OF LECTURES (AS A RESOURCE PERSON/ SUBJECT EXPERT)

### 1) Dr. G. K. GOSWAMI

S. NO.	Level	Venue visited	Title	year
1.	National	B.C.S. Govt. P. G. College Dhamtari	Riemannian Geometry, A Brief Introduction	(8 to 9)-12-2012
2.	National	Govt. J. Y. College, Raipur, C.G.	Algebra	(17 to 19)-01-2013
3.	National	ST. Thomas College, Bhilai	The Dynamic Universe	(21 to 22)-01-2013
4.	National	Swami Shri Swaroopanand Saraswati Mahavidyalya, Bhilai	Lambda CMD Cosmology	23-01-2013
5.	National	BIT, Durg	Presented Talk on Cosmology	(15 to 16)-03-2013
6.	National	BIT, Durg	Introduction To Cosmology	(20 to 21)-01-2015
7.	National	Govt. Digvijay P.G. College, Rajnandgaon, C. G.	Lecture on “Science for Development of India”	25-02-2015
8.	International	SGB Amravati University, India	Lambda CMD type Heckmann Suchuking Model and Union 2.1 Compilation	(25 to 28)-11-2015
9.	National	Govt. Dr. B.S.B.A. College, Dongargaon, C.G.	Astronomy and Cosmology	(22 to 23)-01-2016
10.	National	BIT, Durg	Dark Energy Lambda-Cosmology	(29 to 30)-01-2016
11.	National	BIT, Durg	Dark Energy Lambda-Cosmology	(10 to 11)-03-2016
12.	National	SGB Amravati University, India	Magnetised String in Lambda Dominated Anisotropic Universe	(17 to 18)-06-2016
13.	National	GLA, University Mathura	CDM Type Lambda in Specially Homogenous and Anisotropic Universe	(17 to 22)-10-2016
14.	National	DDU Gorakhpur, University	Cosmological Parameters for Specially Homogenous and Isotropic BD- Universe	(27 to 28) -01-2017

15.	National	BIT, Durg	Cosmological Parameters for Specially Flat Dust Filled Universe in Brans-Dicke Theory	28-03-2017
16.	National	GLA, University Mathura	Cosmological Models in Special Reference of Lambda CMD Cosmology	26-06-2017 to 06-07-2017

#### 7. EVENTS ORGANIZED (DEPARTMENTAL)

S. NO.	Name of events	Year	Date
1.	Madhava Mathematics Competition	2013	6-01-2013
2.	Madhava Mathematics Competition	2014	5-01-2014
3.	Madhava Mathematics Competition	2017	8-01-2017

#### 8. Paper Citing (If Any)

<b>1) <u>Dr. G. K. GOSWAMI</u></b>				
S.N	Name of the Paper	Name of the Journal	Citation	ISSN Number
1	A cosmological model of thermodynamic open universe	International Journal of Theoretical Physics	1	ISSN: 1572-9575
2.	Magnetized dark energy and the late time acceleration	The European Physical Journal Plus (Springer)	10	ISSN: 2190-5444
3.	$\Lambda$ CDM-type cosmological model and observational constraints	International Journal of Theoretical Physics	5	ISSN: 1572-9575
4.	Anisotropic string cosmological models in Heckmann-Schucking space-time.	Astrophysics and Space Science	3	ISSN: 1572-946X
5.	Anisotropic universe with magnetized dark energy Astrophys Space.	Astrophysics and Space Science	2	ISSN: 1572-946X
<b>2) <u>Mrs. SAPNA THAKUR</u></b>				
1.	Incidence of Thalassemia and Sickle Cell Disease in Chhattisgarh, Central India: Using Hardy-Weinberg Equations.	Journal of Molecular and Genetic Medicine	3	ISSN: 1747-0862
2.	A Mathematical Model to Control the Transmission of Thalassemia Disease using Pure Fractions.	Indian Journal of Science and Technology	2	ISSN : 0974-5645
3.	Design of a Fuzzy Model for Thalassemia Disease Diagnosis: using Mamdani type Fuzzy Inference System (FIS).	International Journal of Pharmacy and Pharmaceutical Sciences	2	ISSN 0975 - 1491



9. SOCIAL ACTIVITY (IF ANY) – Nil.

**SIGNATURE OF HOD**

**Dr. G. K. GOSWAMI**

**MATHEMATICS**