

ONGOING R&D PROJECTS EXECUTED DURING FINANCIAL YEAR 2015-16
(UPTO MARCH 31, 2016)

A. R&D Projects Carried forward from Previous years :						
Sl. No.	Project No.	Title of the Project	Coordinator(s)	Department	Total cost of the project (Rs. in lakhs)	Sponsoring agency
1.	DST(56)/2010-2011/280/AGP	To Strengthen the Post-graduate teaching in the area of Petro-physics in the Department of Applied Geophysics	Prof P R Mohanty	Applied Geophysics	120.00	DST
2.	UGC(70)/2010-2011/291/ME	To motivate and promote the culture of research at the undergraduate level for departments of engineering and technology, Deptt of Mining, ISM	Prof D C Panigrahi	Mining Engineering	5.00	UGC
3.	UGC(72)/2011-2012/296/AGP	UGC Assistance to the Department of Applied Geophysics, ISM, Dhanbad at the level of CAS-I	Prof P R Mohanty	Applied Geophysics	80.00	UGC
4.	UGC(73)/2011-2012/297/ECE	UGC Assistance to the Department of Electronics Engineering, ISM, Dhanbad at the level of DRS-I under SAP	Dr. Mukul Kumar Das Assoc. Prof	Electronics Engineering	28.50	UGC
5.	DST(59)/2011-	Distribution and corbon	Dr. Ajay Kumar	Applied Geology	17.22	DST

	2012/300/AAGL	isotopic variations of Benthic Foraminifera from Gas Hydrate Rich Peru Offshore	Bhaumik Asstt. Professor			
6.	DST(60)/2011-2012/301/APH	Stable Isotope, Geochemical and Geochronological studies of Ajjanahalli and parts of gadag gold prospects, chitradurga schist belt, South India	Dr.S. Sarangi Assoc. Prof	Applied Geology	18.25	DST
7.	DST(61)/2011-2012/303/AGL	Comprehensive Monitoring and Assessment of Drought in India : Implications for process –based understanding of drought propagation	Dr. T H Syed Assoc. Prof.	Applied Geology	17.16	UGC
8.	MWR(3)/2011-2012/307/AGL	Artificial Recharge and Rainwater Harvesting Structures within the compounds of ISM, dhanbad	Prof B C Sarkar	Applied Geology	174.85	MWR
9.	MWR(3)/2012-2013/308/ESE	Estimation of Aquifer Potential in Jharia Coal Mining Region with Suitable Techniques to improve the recharge	Dr. P K Singh Assoc. Prof.	Environmental Science & Engg	28.54	MWR
10.	DAE(2)/2012-2013/309/AM	Pseudo-differential operators and wavelet transform involving fractional fourier transform on function and distribution spaces	Dr. Akhilesh Prasad Assoc. Prof	Applied Mathematics	10.07	DAE
11.	DST(65)/2012-2013/310/ME	To strengthen teaching facilities in the area “Geomatics” and “Underground Space	Prof P P Bahuguna Dr Dheeraj Kumar	Mining Engineering	257.00	DST

		Technology”				
12.	DST(66)/2012-2013/311/ECE	Modeling characterization and design of substrate Integrated waveguide based dielectric resonator antenna	Dr. Santanu Dwari Asstt Prof	Electronics Engineering	2.82	DST
13.	DST(67)/2012-2013/312/AC	Triplesalen-based metal – organic frameworks (mofs) and investigation on their functional applicability	Dr. Hari Pada Nayek	Applied Chemistry	25.40	DST
14.	UGC(76)/2012-2013/313/EE	On line condition monitoring of mine winder motor	Prof T K Chatterjee	Electrical Engineering	9.05	UGC
15.	CSIR(11)/2012-2013/314/CSE	Design of machine learning techniques for specialized biological online database-mining	Dr. Haider Banka Assoc. Prof	Computer Science & Engineering	16.05	CSIR
16.	DST(68)/2012-2013/315/AC	A photochemical approach to surfactant free metal nanoparticles and nanoclusters and their catalytic applications in organic reactions	Dr. Somnath Yadav Asstt. Prof	Applied Chemistry	27.00	DST
17.	UGC(77)/2012-2013/316/CSE	Design and Implementation of group key generation protocols and its applications for secure multicast	Dr. Sachin Tripathi Asstt. Prof	Computer Science & Engineering	10.78	UGC
18.	UGC(78)/2012-2013/317/AGL	Facets of strain and vorticity attributes and their intraplate seismotectonic implication: A study in area around Son valley, Central India	Dr. R K Dubey Assoc. Prof	Applied Geology	11.42	UGC

19.	UGC(79)/2012-2013/318/ESE	Assessment of ground water level fluctuations with respect to changing patterns of rainfall in jharia coal mining region	Dr. P K Singh Assoc. Prof	Applied Chemistry	9.25	UGC
20.	UGC(80)/2012-2013/319/AM	Some aspects of mathematical programming problems involving generalized convex functions	Dr. Anurag Jayswal Asstt. Prof.	Applied Mathematics	9.79	UGC
21.	UGC(81)/2012-2013/320/HSS	Poetics of tension: contemporary Indian English women's poetry	Dr(Mrs.) Rajni Singh Assoc. Prof	Humanities & Social Sciences	8.55	UGC
22.	OIL(1)/2012-2013/321/PE	Studies on interfacial properties, wettability alteration and rheological behaviour of nano particle stabilized micro emulsions for its use in enhanced oil recovery	Dr. Ajay Mandal Assoc. Prof	Petroleum Engineering	24.33	OIL
23.	MOES(4)/2012-2013/322/AGP	Estimation of crustal stress and development of geo-mechanical earth models for few oil/gas fields of Eastern India.	Dr(Mrs.) Rima Chatterjee Assoc. Prof	Applied Geophysics	22.80	MOES
24.	UGC(82)/2012-2013/323/APH	Synthesis and characterization of nanocomposite thin films for optoelectronic applications	Dr S K Sharma Assoc. Prof	Applied Physics	6.28	UGC
25.	DST(69)/2012-	Studies on the effect of	Dr. Subindu Kumar	Electronics	4.32	DST

	2013/324/ECE	gaussian size distribution and inter diffusion on the optical absorption spectra of realistic III –V semi conductor quantum dot systems	Assoc. Prof	Engineering		
26.	DST(70)/2012-2013/325/PE	Carbon dioxide sequestration and simultaneous bio-fuel generation using micro-algae in a photo bio-reactor	Dr. Chandan Guria Assoc. Prof.	Petroleum Engineering	14.48	DST
27.	CSIR(12)/2012-2013/326	Development of fracturing fluid for high preswure high temperature (HPHT) reservoirs with minimum formation damage	Dr(Mrs.) Keka Ojha Assoc. Prof	Petroleum Engineering	14.00	CSIR
28.	CSIRNW(1)/2012-2013/327/ME	Geological and Technological Controls for underground coal gasification	Prof D C Panigrahi Prof A K Varma/AGL Prof V K Saxena/CE	Mining Engineering	91.60	CSIRNW
29.	ISRO(1)/2012-2013/328/AM	Stability and chaos in phto gravitational N-Body problem with Solar Wind Drag	Dr. B S Kushvah Asstt. Prof	Applied Mathematics	16.97	ISRO
30.	MOM(1)/2012-2013/329/FME	Beneficiation of low-grade iron ore and tailings by selective flocculation	Prof N R Mandre	Fuel & Mineral Engg	25.82	MOM
31.	UGC(82)/2013-2014/330/MS	Corporate Entrepreneurship in India : an Explanatory Study	Prof G S Pathak	Management Studies	7.76	UGC

32.	UGC(83)/2013-2014/ 331/MS	System Dynamics based decision support system for Indian micro-finance institutions	Prof Chandan Bhar	Management Studies	6.44	UGC
33.	UGC(84)/2013-2014/ 332/MS	Developing an accounting system for small and micro enterprises of Jharkhand	Prof J K Pattanayak	Management Studies	5.38	UGC
34.	UGC(85)/2013-2014/ 333/MS	A framework of entrepreneur success among aspiring entrepreneurs of micro enterprises in Jharkhand region	Dr. Niladri Das Asstt. Prof.	Management Studies	6.57	UGC
35.	UGC(86)/2013-2014/ 334/PE	Functionalization of nano fly ash for drilling fluid applications	Prof A K Pathak	Petroleum Engineering	13.04	UGC
36.	UGC(87)/2013-2014/ 335/PE	Development of Nanoparticle induced chemicals and consolidating loose formation to improve oil production	Dr(Mrs.) Keka Ojha Assoc. Prof	Petroleum Engineering	13.23	UGC
37.	UGC(88)/2013-2014/ 336/PE	Selective catalytic oxidation of Karanja Oil : An alternative source of Petrochemical products	Dr. Chandan Guria Assoc. Prof	Petroleum Engineering	14.54	UGC
38.	UGC(89)/2013-2014/ 337/AM	Modeling the spatiotemporal complexity of ecoepidemiological systems: A dynamical system approach.	Prof R K Upadhyay	Applied Mathematics	3.49	UGC
39.	UGC(90)/2013-2014/ 338/MS	Testing theory in Process Industry Transformation Systems Using Case Studies	Dr. K S Thyagaraj Asstt. Prof	Management Studies	9.15	UGC
40.	DST(71)/2013-2014/	To augment the research	Prof P S Mukherjee	Mechanical	50.00	DST

	339/ME&MME	facilities in the department of Mechanical Engg, Indian School of Mines, Dhanbad		Engineering		
41.	UGC(91)/2013-2014/340/PE	Experimental and Modeling Studies of Flow of Paraffinic Crude Oil through a Complex Flow Loop	Dr. T K Naiya Asstt. Prof	Petroleum Engineering	13.78	UGC
42.	UGC(92)/2013-2014/341/ECE	Design and Characterization of Compact, High Performance Patch Antennas Loaded with Matamaterials	Dr. Santanu Dwari Asstt. Prof	Electronics Engineering	7.20	UGC
43.	UGC(93)/2013-2014/342/ECE	Implementation of Spectrum Sensing for Cognitive Radio	Prof Debjani Mitra	Electronics Engineering	9.99	UGC
44.	UGC(94)/2013-2014/343/ECE	Real-time Implementation of Speech Coders”	Prof S. Bhattacharya	Electronics Engineering	7.58	UGC
45.	DST(72)/2013-2014/344/ECE	To augment the research facilities in the deptt of Electronics Engineering, ISM, Dhanbad	Dr. Sushrut Das Asstt. Prof.	Electronics Engineering	120.00	DST
46.	UGC(95)/2013-2014/345/EE	Development of hybrid off-grid power supply system for remote areas	Dr. Nitai Pal Assoc. Prof	Electrical Engineering	7.16	UGC
47.	UGC(96)/2013-2014/346/EE	Development of a load frequency control system with A PID controller designed through A Frequency Domain Matching Method	Prof S Pan	Electrical Engineering	9.33	UGC
48.	UGC(96)/2013-2014/347/EE	Simulation and real-time implementation of smart grid	Dr. Vivekanand Mukhopadhyay Asstt. Prof	Electrical Engineering	5.55	UGC

49.	DST(73)/2013-2014/ 348/AC	High Performance Multifunctional Modified Guar Gum for Wastewater and Industrial Effluent Treatment	Dr. Sagar Pal Assoc. Prof	Applied Chemistry	24.94	DST
50.	DST(74)/2013-2014/ 349/ME&MME	Experimental Investigation on flow induced vibration of elastically mounted bluff bodies	Dr. L A Kumar Swamydash	Mining Machinery Engineering	17.40	DST
51.	DST(75)/2013-2014/ 350/PE	Development of Foam based Drilling Fluid for CBM Wells	Dr(Mrs.) Keka Ojha Assoc. Prof	Petroleum Engineering	16.16	DST
52.	DST(76)/2013-2014/ 351/AGL	Geodynamics and Structural Evolution of Kachchh Province	Prof S Mohanty	Applied Geology	32.21	DST
53.	DST(77)/2013-2014/ 352/AGP	Geodynamic Modeling of the Eastern Subduction Margin of India	Dr. P K Khan Assoc. Prof.	Applied Geophysics	28.44	DST
54.	UGC(98)/2013-2014/ 353/Mech	Critical Analysis of Heat distribution in submerged arc welding process	Dr.Somnath Chattopadhyay Assoc. Prof	Mechanical Engineering	10.21	UGC
55.	UGC(99)/2013-2014/ 354/Mech	Wear and Friction study of nano composites	Dr. K K Singh Asstt. Prof	Mechanical Engineering	6.85	UGC
56.	ICSSR(2)/2013- 2014/355/MS	Evaluating the efficacy of financial inclusion in Jharkhand	Dr. Niladri Das Asstt. Prof	Management Studies	3.00	ICSSR
57.	DST(78)/2013-2014/ 356/AC	Mesoporous mixed oxide supported gold nanoparticles catalysts for oxidant free dehydrogenation reaction of alcohol	Dr. Biswajit Chowdhury Assoc. Prof	Applied Chemistry	48.96	DST
58.	MOES(5)/2013- 2014/357/AGP	Seismic Hazard Estimation for Bihar-Jharkhand Using	Dr. P N Singha Roy	Applied Geophysics	139.78	MOES

		GPS strain, seismicity and seismic study	Assoc. Prof.			
59.	DST(79)/2013-2014/ 358/AGL	Petrological and Tectonic Significance of Archaean Banded Iron Formation (BIF) from parts of the Palghat Couvery Shear Zone (PCSz) of South India	Dr(Ms) Upama Dutta Asstt. Prof	Applied Geology	9.00	DST
60.	DST(80)/2013-2014/ 359/APH	Density Functional theory of freezing transitions and properties of inhomogeneous systems	Dr. Pankaj Mishra Asstt. Prof.	Applied Physics	15.46	DST
61.	DST(81)/2013- 2014/360/MECH	Diagnosis of a vibrating Structural failure through modal analysis	Mr. M L Chandravanshi Asstt. Prof	Mechanical Engineering	17.03	DST
62.	DST(82)/2013-2014/ 361/AGL	To augment the research facilities in the Deptt of Applied Geology, ISM, Dhanbad	Prof A K Varma	Applied Geology	238.00	DST
63.	CSIR(12)/2013- 2014/362/AM	Study of torsional wave in anisotropic and non-homogeneous media	Prof S Gupta	Applied Mathematics	10.92	CSIR
64.	DST(83)/2013-2014/ 363/CE	Dynamic Instability of Elastic Structural Elements under Deterministic Loading	Dr. Sarat Kumar Panda Asstt. Prof.	Civil Engineering	16.80	DST
65.	DST(84)/2013-2014/ 364/AGP	Magnetotelluric Investigations in the Geothermal Province of Bakreshwar, West Bengal	Prof Shalivahan	Applied Geophysics	19.10	DST
66.	DST(85)/2013-2014/ 365/AGP	Seismic & Resistivity imaging for detection of	Prof P R Mohanty	Applied Geophysics	15.62	DST

		subsurface cavities associated with coal working				
67.	DST(86)/2013-2014/ 366/AM	Generalized convexity and its applications to mathematical programming problems	Dr. Anurag Jayswal Asstt. Prof	Applied Mathematics	11.64	DST
68.	IPEM(1)/2013- 2014/367/INST	International Project India 4EUII under Erasmus Mundus	Prof V M S R Murthy AD(IR&AA)	Institutional Project	2.47	Erasmus Mundas
69.	DST(87)/2013-2014/ 368/Mech	Synthesis and characterization of dental polymeric nanocomposite materials	Dr. Ashis Mallick Assoc. Prof	Mechanical Engineering	54.00	DST
70.	CSIR(13)/2013- 2014/369/PE	Experimental and Modeling Studies of Chemically Enhanced Water Alternating Gas (CEWAG) Injection for Enhanced Oil Recovery	Dr. Ajay Mandal Assoc. Prof	Petroleum Engineering	17.97	CSIR
71.	DST(88)/2013-2014/ 370/AC	Synthesis and Functionalization of graphene for controlled dispersion of polymer blends”	Dr. G C Nayak Asstt. Prof.	Applied Chemistry	23.60	DST
72.	CSIR(14)/2013- 2014/371/AC	Catalytic transformation of Glycerol to Acrolein Over Mesoporous Silica Supported acid Functionalized Transition Metal	Dr. Biswajit Chowdhury Assoc. Prof	Applied Chemistry	16.92	CSIR
73.	DST(89)/2013-2014/ 372/AC	To augment the research facilities in the Department of Applied Chemistry	Prof G. Udayabhanu	Applied Chemistry	150.00	DST
74.	DST(90)/2013-2014 /	Studies on rare-earth ions	Dr. Kaushal Kumar	Applied Physics	23.28	DST

	373/APH	doped upconversion nano-phosphors as optical sensors	Asstt. Prof			
75.	DST(91)/2013-2014/ 374/AC	Design of Novel bifunctional gold Ti and Fe-modified zeolite functional materials for the catalytic oxidation of hydrocarbons	Dr. Biswajit Chowdhury Assoc. Prof	Applied Chemistry	35.96	DST
76.	DAE(3)/2013-2014/ 375/AGL	Characterization of argillite rocks of Vindhyan and Cuddapah super-groups in assessing their suitability as host rock for deep geological repository for high level radioactive waste disposal	Dr. R K Dubey Assoc. Prof	Applied Geology	28.50	DAE
77.	DST(92)/2013-2014/ 376/APH	To Augment the Research Facilities in the Department of Applied Physics, Indian School of Mines, Dhanbad	Prof A K Nirala	Applied Physics	185.00	DST
78.	OIL(2)/2013-2014/ 377/PE	Study of Organic Solid Deposition in the Petroleum Reservoir Rock	Dr. Vikas Mahto Assoc. Prof	Petroleum Engg	8.58	OIL
79.	DST(93)/2013-2014/ 378/APH	Design and fabrication of metal oxide-based transparent thin film transistors	Dr. R Thangavel Asstt. Prof	Applied Physics	23.28	DST
80.	DST(94)/2013-2014/ 379/APH	Development of MgB ₂ based conduction cooled superconducting current leads with high critical current for cryogenic devices	Dr. P M Sarun Asstt. Prof	Applied Physics	26.14	DST
81.	CSIR(15)/2013- 2014/380/APH	Development of Rare earths doped upconversion phosphor particles for fingerprint	Dr. Kaushal Kumar Asstt. Prof	Applied Physics	12.25	CSIR

		detection and sensors				
82.	DST(95)/2013-2014/ 381/ESE	Influence of chlorine disinfectant and natural organic matter gradients on disinfection by-product formation in drinking water of some Indian cities	Dr. Brijesh Mishra Asstt. Prof	Environmental Science & Engineering	20.60	DST
83.	DST(96)/2013-2014/ 382/APH	Tuning of Schottky barrier height	Dr. Achamma Bobby	Applied Physics	20.60	DST
84.	DST(97)/2013-2014/ 383/APH	Development of Hybrid Polymer-Nanoparticle Based White Light Emitting Diodes (WLEDs) and Solar Cells	Dr. Prashant Kumar Sharma Asstt. Prof	Applied Physics	20.04	DST
85.	DST(98)/2014- 2015/384/AGP	Geotechnical Characterization of Jharia Coal Field Area Using Geophysical Techniques	Dr. S K Pal Asstt Prof	Applied Geophysics	31.59	DST
86.	DST(99)/2014- 2015/385/APH	Investigation of electron scattering phenomena in biological and environment sensitive molecules	Dr. B K Antony Assoc. Prof	Applied Physics	26.56	DST
87.	DAE(4)/2014- 2015/386/APH	Synthesis and Assembly of Hybrid Nanostructured Materials for Explosives, Narcotics and Harmful Chemical Detection	Dr. P K Sharma Asstt. Prof	Applied Physics	24.71	DAE
88.	DST(100)/2014- 2015/387/AC	Biodegradable imprinted nanomaterials: A unique combination of selectivity	Dr(Mrs.) Rashmi Madhuri Asstt. Prof	Applied Chemistry	23.18	DST

		sensitivity & biocompatibility				
89.	DST(101)/2014-2015/388/AC	A Study of Polymeric Layer on Efficiency Enhancement of Upconversion Nanoparticles for Biomedical Applications	Dr. Sumanta Kumar Sahu Asstt Prof	Applied Chemistry	24.80	DST
90.	DST(102)/2014-2015/389/FME	Effect of feed characteristics on the performance of dense medium cyclones treating metallurgical coal	Mr. Anand Anupam Asstt. Prof	Fuel & Mineral Engineering	21.34	DST
91.	DST(103)/2014-2015/390/APH	Development of multicolour long lasting phosphors based on colour conversion process"	Prof Jairam Manam	Applied Physics	46.19	DST
92.	DST(104)/2014-2015/391/ME	Stability analysis of roof rock and establishing safe hard cover for coal exploitation below ground during conversion of opencast mine to underground mine	Dr. A K Verma Asstt. Prof	Mining Engineering	8.76	DST
93.	DST(105)/2014-2015/392/AC	Kinetics and Mechanistic Approach towards Water Splitting by Ruthenium Complexes having Polypyridyl Ligands	Dr. Sumanta Kumar Padhi Asstt Prof	Applied Chemistry	25.00	DST
94.	DST(106)/2014-2015/393/AM(FIST)	To Augment the Research Facilities in the Department of Applied Mathematics, Indian School of Mines, Dhanbad	Dr. S P Tiwari Assoc. Prof Dr. B S Kushwaha Asstt Prof (Co-PI)	Applied Mathematics	37.50	DST
95.	DST(107)/2014-2015/394/AC	Catalytic partial oxidation of glycerol to acrylic acid over	Dr. Chanchal Halder	Applied Chemistry	24.40	DST

		polymer-bound immobilised metal complexes under mild condition	Asstt. Prof			
96.	DST(108)/2014-2015/395/MS	Developing a framework of critical indicators for entrepreneurial success of Science and Technology (S&T) graduates in Eastern India	Dr. Niladri Das Asstt. Prof	Management Studies	10.72	DST
97.	MoEs(6)/2014-2015/396/ESE	Phosphorus fractionation in surface sediments: An Implication in Restoration and Conservation of Govind Balabah Pant Sagar, Singrauli, MP	Dr. Anshumali Asstt Prof	Environmental Science & Engg	32.46	MoES
98.	UGC(100)/2014-2015/397/ME	UGC-BSR Research Start-Up-Grant for newly recruited faculty at Assistant Professors level in Science Department	Dr. A K Verma Asstt. Prof	Mining Engineering	6.00	UGC
99.	DST(109)/2014-2015/398/AC	Synthesis of polynuclear metal complexes from metalloligands of group 14 elements and their catalytic activities	Dr. H P Nayek Asstt. Prof	Applied Chemistry	52.80	DST
100	IPEM(2)/2014-2015/399/INST	International Project AREAS+ under Erasmus Mundus”	Dr. Biswajit Chowdhury Assoc. Prof	Applied Chemistry	2.40	Partnership Agreement
101	ISRO(2)/2014-2015/400/ECE	Photonic Microwave Arbitrary Waveform Generation with adjustable Chirp parameter based on remote sensing applications	Dr. S K Raghuvanshi Asstt Prof	Electronics Engg	14.62	ISRO

102	DRDO(1)/2014-2015/401/ECE	Studies on Multi-Element Multi-Segment Dielectric Resonator Antenna for Wireless Application	Dr. R K Gangwar Asstt. Prof	Electronics Engg	17.00	DRDO
103	MHRD(CoE)/RE/2014-2015/402/INST	Establishment of Centre of Excellence for Training and Research in Frontier Areas of Science and Technology (FAST) in Renewable Energy	Dr. Mukul Das Dr. R Thangavel Dr. Biswajit Chowdhury Dr. Jitendra Kumar DR. Tanmoy Maity	ECE, APH, AC, MME	400.00	MHRD For Establishing Centre of Excellence in Renewable Energy
104	DST(110)/2014-2015/403/PE(FIST)	To Augment the Research Facilities in the Department of Petroleum Engineering, Indian School of Mines, Dhanbad	Dr.(Mrs) Keka Ojha Assoc. Prof	Petroleum Engg	160.00	DST(FIST)
105	DST(111)/2014-2015/404/AGL	“Landslide risk analysis of road cut hill slopes near Sonapur, Meghalaya, India”	Dr. Kripamoy Sarkar Asstt Prof	Applied Geology	22.63	DST
106	DST(112)/2014-2015/405/MECH	Active Modal Vibration Control of Composite Structure”	Dr. Prashanta Kumar Mahato Asstt Prof	Mechanical Engg	27.10	DST
107	CSIR(16)/2014-2015/406/FME	Characterization and Beneficiation Studies on Low Grade Graphites from the state of Arunachal Pradesh,	Prof Nikkam Suresh	Fuel & Mineral Engineering	14.72	CSIR
108	MoES(6)/2014-2015/407/AGL	Characterization, quantification and genesis of gas hydrate in Krishna-Godavari Basin, Bay of Bengal using benthic	Dr. A K Bhaumik Asstt. Prof	Applied Geology	64.92	MoES

		foraminiferal, geochemical and geophysical studies”				
109	ICPR(1)/2014-2015/408/HSS	Traversing the Territory of Comparative Philosophy	Dr. Gyan Prakash/HSS	ICPR	2.00	ICPR
110	DST(113)/2014-2015/409/AGL	“Geochemistry and Petrogenesis of different granitoid suites associated with the Tsundupalle Greenstone Belt, Eastern Dharwar Craton (EDC), South India: Implications for crustal evolution during Archaean”	Dr Jinia Nandi, Applied Geology	DST	31.70	DST
111	CIL(3)/2014-2015/410/AGP	An integrated geo-physical approach for tectonic study in Moher main coal basin of Singrauli coalfield using 3D inverse modeling of Gravity, Magnetic and AMT data”	Dr. U K Singh, AGP	CIL	289.70	CIL

B. R&D Projects Received during the Financial year 2015-16 (upto March 31, 2016)

Sl. No.	Project No.	Title of the Project	Coordinator(s)	Department	Total cost of the project (Rs. in lakhs)	Sponsoring agency
1.	UGC(101)/2015-2016/411/PE	UGC Assistance under Special Assistance Programme (SAP) – Review of the programme in the Department of Petroleum Engineering, ISM for upgradation/continuation from DRS-II to DRS-III	Prof S Laik	Petroleum Engineering	106.00	UGC

2.	UGC(102)/2015-2016/412/APH	UGC Assistance under Special Assistance Programme (SAP) – Review of the programme in the Department of Applied Physics, ISM for upgradation/continuation from DRS-I to DRS-II	Prof A K Nirala	Applied Physics	125.70	UGC
3.	UGC(103)/2015-2016/413/FME	UGC Assistance under Special Assistance Programme (SAP) – Review of the programme in the Department of Fuel & Mineral Engineering, ISM for upgradation/continuation from DRS-II to DRS-III	Prof R Venugopal	Fuel & Mineral Engg	150.00	UGC
4.	ICSSR(3)/2015-2016/414/MS	Green Consumption Behaviour of Urban Consumers in Rajasthan – An Empirical Study on FMCG Products	Dr. Bibhas Chandra Assistant Professor	Management Studies	3.18	ICSSR
5.	DST(114)/2015-2016/415/AC	Novel modified biopolymer based hydrogels and nanogels: synthesis, characterization and application	Dr. Sagar Pal Associate Professor	Applied Chemistry	35.26	DST
6.	MoES(7)/2015-2016/416/AGP	Delineation of blind faults and its geometry around Kishanganj vis Bayesian neural network inversion of gravity date	Dr. Saumen Maiti Assistant Professor	Applied Geophysics	38.56	MoES
7.	MOM(2)/2015-	Development of Low	Prof A K Mishra	Mining Engineering	29.13	MoM

	2016/417/ME	Density Emulsion Explosives for Energy Efficient Blasting in Environmentally Sensitive Areas				
8.	DST(115)/2015-2016/418/AC	Metal Free Oxidative C-N Bond Formation: Synthesis of N-Heterocycles	Dr Soumitra Maity Assistant Professor	Applied Chemistry	35.00	DST
9.	MCIT(3)/2015-2016/419/CSE	Information Security Education and Awareness (ISEA) Phase-II	Dr. Sachin Tripathi Assistant Professor	Computer Science & Engineering	148.10	MCIT
10.	DST(116)/2015-2016/420/CSE	Design of Reliable and Energy Efficient Transport Layer Protocols for Ad-hoc and Sensor Network	Dr. Sachin Tripathi Assistant Professor	Computer Science & Engineering	23.13	DST
11.	DST(117)/2015-2016/421/APH	Atomistic simulations of boron nanoclusters for hydrogen storage and electro-optical applications	Dr. Sridhar Sahu Assistant Professor	Applied Physics	25.23	DST
12.	DST(118)/2015-2016/422/AC	Vanadium and Copper Catalyst Grafted on Graphene Oxide For Oxidation of Hydrocarbons and Alcohols	Dr. Chanchal Halder Assistant Professor	Applied Chemistry	52.92	DST
13.	DST(119)/2015-2016/423/AGL	Integrated Geological-Geotechnical approach for prediction and mitigation measures of landslides along road-cut slopes of area around Gangtok-Mangan, Teesta Valley, Sikkim	Dr. R K Dubey Associate Professor	Applied Geology	22.18	DST
14.	MoES(8)/2015-2016/424/AGL	Origin and evolution of crust in the NE part of the Singhbhum craton:	Dr. Sukanta Dey Associate Professor	Applied Geology	24.89	MoES

		constraints from geochemistry and geochronology of granitoids”				
15	MoES(9)/2015-2016/425/ME	Rockfall hazard assessment along the Road Cut Slopes on NH-44A between Aizawl city and Lengpui Airport, Aizawl, Mizoram, India	Dr. A K Verma Asstt Professor/ME & Dr. K Sarkar Asstt Professor/AGL	Mining Engineering	34.18	MoES
16.	MoES(10)/2015-2016/426/AGL	Unified Geological-Morphometrical-Geotechnical Study for Prediction and Mitigation of Landslides along Road-cut Hills of Rishikesh-Joshimath route, Kumaon Himalaya	Dr. R K Dubey Associate Professor	Applied Geology	38.00	MoES
17.	DST(120)/15-16/427/AM	“Study of various graph domination problems on restricted graph classes”	Dr. Dinabandhu Pradhan Asstt. Professor	Applied Mathematics	17.67	DST
18.	OIL(3)/2015-2016/428/PE	Synthesis and extraction of surfactants from natural resources and their characterization for application in enhanced oil recovery	Dr Ajay Mandal, Associate Professor	Petroleum Engineering	22.61	OIL
19	DST(121)/2015-2016/429/ESE	Geochemical investigation of Heavy metals and REEs in Water and Surface Sediments: An Implication in Restoration and Conservation of Ken and Betwa Rivers	Dr. Anshumali, Assistant Professor	Environmental Science & Engg.	24.50	DST
20	CSIR(17)/2015-2016/430/AM	A PAIR OF FRACTIONAL POWERS OF BESSEL	Dr. Akhilesh Prasad, Associate	Applied Mathematics	15.00	CSIR

		WAVELET TRANSFORMS AND PSEUDO-DIFFERENTIAL OPERATORS	Professor			
21	DRDO(2)/2015-2016/431/CSE	Energy Efficient Intruder Detection Schemes for WSN using Learning Based Techniques	Dr. Chiranjeev Kumar, Associate Professor	Computer Science & Engg	28.52	DRDO
22	DST(122)/2015-2016/432/APH	Preparation and characterization of lanthanides doped materials for multifunctional applications	Dr. Vineet Kumar Rai, Assoc. Professor	Applied Physics	25.35	DST
23	DST(123)/2015-2016/432(A)/ECE	Design and Development of Circularly Polarized Dielectric Resonator Antenna for Wireless Application	Dr. R K Gangwar, Assistant Professor	Electronics Engineering	25.45	DST
24	DST(124)/2015-2016/433/APH	Design and Fabrication of Ultrasensitive Optical Biosensors based on Surface Plasmon Models in Gold Nanostructures	Dr. M R Singh, Assistant Professor	Applied Physics	21.80	DST
25	ICHR(1)/2015-2016/434/HSS	An Introductory Study to the History and Evolution of Comic Art in India	Dr. Aju Aravind, Assistant Professor	Humanities & Social Sciences	4.00	ICHR
26	HUDCO(1)/2015-2016/436/CE	Investigation on Mechanical and Durability Properties of Self Compacted Concrete Prepared with Recycle Coarse Aggregate from C&D Waste	Dr. S K Panda, Assistant Professor	Civil Engineering	16.41	HUDCO
27	DRDO/(3)/2015-2016/437/Mech Engg.	Design and Fabrication of an Experimental Facility for	Dr. Rabindra Nath Hota, Associate	Mechanical Engg	99.50	DRDO

		Measurement of Acoustic Impedance Afterburner Screech Liner	Professor			
28	MHRD/(FDC)/2015-2016/438/INST	“(PMMMNTT) Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching	Prof. A.K.Nirala, Dept. of Applied Physics Prof. P C Pal, Dept. of App. Math, Dr. Mahendra Yadav, Dept. of Applied Chemistry	Applied Physics	269.00	MHRD
29	UGC(104)/2015-2016/439/ME	UGC Assistance under Special Assistance Programme (SAP) – Review of the programme in the Department of Mining Engineering, Indian School of Mines for upgradation/continuation from CAS III to CAS IV	Prof D.C.Panigrahi	Deptt of Mining Engineering	300.00	UGC
30	DBT(1)/2015-2016/440/FME	HyWATER – Treatment of Contaminated drinking water using a hybrid low-cost process	Dr. Barun Kumar Nandi, Assistant Professor	FME	33.88	DBT
31	MOC(1)/2015-2016/441/ME	Techno-economic Evaluation and Performance Behaviour of Self Advancing (Mobile) Goaf Edge Supports (SAGES) (Phase – II)	Prof. U.K.Singh	Mining Engineering	33.04	MOC

32	DST(125)/2015-2016/442/ECE	Special Lecture Tour Programme (Exploratory Exchange)	Dr. Subindu Kumar, Asstt. Professor	ECE	1.88	DST
33	MoEF(1)2015-16/443/ESE	Remediation of Ground Water Contaminated with Hexavalent Chromium in Sukhina Valley, Odisha, using Nano Zero Valent Iron (nZVI) Technology	Dr. Alok Sinha, Asstt. Professor/ESE	ESE	24.80	MoEF
34	DRDO(4)/2015-16/444/Mech. Engg.	Study, Investigation and Development of Machining Parameters of FRP Composites using a Laser to Maintain Better Surface Integrity	Dr. A.K.Das, Asstt. Professor	Mech. Engineering	9.77	DRDO
35	DST(126)/2015-16/445/ME	Training cum field workshop for Numerical Simulation of Landslide Studies	Dr. A.K.Verma, Asstt. Professor	Mining Engineering	3.65	DST
36	DST/SERB(127)/2015 – 16/446/MME	Design and Development of Series-Parallel Hydraulic Hybrid Energy Efficient Excavator having Displacement Controlled Actuators	Dr. Jayanta Das, Asstt. Professor	MME	22.20	DST
37	DST(128)/2015-16/447/AGL	Geospatial Fusion of Parameters Controlling Urogenic Gold Mineralization and Delineation of Gold Prospective Zones within Chandil Formation North Singhbhum & Mobile belt, Eastern Indian Craton – A	Dr. Sahendra Singh, Asstt. Professor	AGL	38.50	DST

		Regional Scale Analytical Approach Through the Integrated Applications of GIS, SPS and Remote Sensing Technology				
38	DST/SERB(129)/2015-16/448/Chem. Engg.	Development of an Efficient Pd-Cu Bimetallic Catalyst for the Catalytic CO ₂ Hydrogenation for Methanol Production	Dr. Siddhartha Sengupta, Asstt. Professor	Chemical Engg.	22.15	DST
39	MOC(2)/2015-2016/449/Civil Engg.	Constructing Structure on Backfilled Opencast Coal Mines: An Attempt to Suggest Viable Methodologies	Prof. S.C.Dutta,	Department of CE	304.12	MOC
40	MOM(16)2015-16/450/ME	Assessment and Prediction of Land Surface Deformation due to Underground Metal Mining in Northern Aravali Range of Hills using Microwave Remote Sensing Data sets and Ground Based Observations	Prof. Dheeraj Kumar Md. (Dr) Soyeb Alam	Department of ME	45.00	MoM
41	ICPR/2015-16/451/HSS	Ethical Leadership: A Study on Macintyre and Levins	Dr. Sarita Kar, Asstt. Professor	Department of HSS	3.00	ICPR
42	DST/SERB(130)/2015-16/452/AGL	Stable and Radiogenic Isotope Geochemical, Geochronological, and Fluid Inclusion Studies of Granite – Gneiss hosted Gold Deposits of the Eastern Dharwar Craton at Chigarguntha	Dr. S. Sarangi, Associate Professor	Department of AGL	50.82	DST

		(South KGF) and Jonnagiri, Andhra Pradesh India				
43	MDWS/2015-16/453/ESE	Control of Disinfection By-products Formation in Drinking Water Supplies of India	Dr. S. K. Gupta, Associate Professor	Department of ESE	25.20	MDWS
44	DST(SERB)(131)/2015-16/454/MECH. ENGG	Investigation on Hydrokinetic Turbine Performance Corresponds Variable Rotor Shape and Surface Velocity using Different Augmentation Techniques	Dr. Shibayan Sarkar, Asstt. Professor	Department of MECH. ENGG	20.62	DST
45	DST(SERB)(132)/2015-16/455/MECH. ENGG	Early Detection of Bearing Fault and Fatigue Crack in a Rotor System	Dr. Sachin Kr. Singh, Asstt. Professor	Department of MECH. ENGG.	31.33	DST
46	MoES(11)/2015-16/456/AGP	Investigation on Crustal Stress, Seismic Velocity and Porosity in Rock and Deformation Modelling	Prof. Rima Chatterjee,	Department of AGP	20.01	MoES
47	DST(SERB)(133)/2015-16/457/AGL	Geochemical Characterization of Malangtoli Volcanics and Emplacement Mechanism over Singhbhum Granite in and around Kendujhar District, Odisha	Dr. Pranab Das, Asstt. Professor	Department of AGL	25.73	DST
48	DST(SERB)(134)/2015-16/458/Electrical Engg.	Sensorless Speed Control of Brushless Doubly Fed Reluctance Motor Drive Utilizing Model Reference Adaptive Controller	Dr. Sukanta Das, Asstt. Professor	Department of Electrical Engg.	30.84	DST
49	DST(SERB)(135)/2015-	Experimental Investigation on	Dr. Lohitkumar	Department of CE	18.00	DST

	16/459/CE.	Characteristic Behaviour of Two Nearby Embedded Shallow Foundations	Nainegali, Asstt. Professor			
50	DST(SERB)(136)/2015-16/460/CE	Low-cost Sustainable Approach of Improving lateral load resisting capacity of unreinforced masonry structures	Dr. Sanket Nayak, Asstt. Professor	Department of CE	23.76	DST
51	CIL (4)/2015-16/461/ Mining Engg.	Development of guideline for prevention and mitigation of explosion hazard by risk assessment and determination of explosibility of Indian coal incorporating risk based mine emergency evacuation and re-entry protocol – CIMFR, Dhanbad, ISM, Dhanbad and CIL, Kolkata.	Prof. D. C. Panigrahi	Department of Mining Engg.	833.57	CIL

C. SUMMARY OF R&D PROJECTS EXECUTIED DURING THE FINANCIAL YEAR 2015-2016 (upto March 31, 2016)

		INR in lakhs
Total value of the projects carried forward from the previous Financial year		4151.00
Total value of the Projects Received during the financial year 2015-2016 (upto March 31, 2016)		3383.14
Total Value of the Projects carried out during the financial year 2015-2016 (upto March 31, 2016)		7534.14

Abbreviations of the Sponsoring Organizations :

DST : Department of Science & Technology

UGC : University Grants Commission

CSIR	:	Council of Scientific & Industrial Research
MoES	:	Ministry of Earth Sciences
MoEF	:	Ministry of Environment & Forests
MOC	:	Ministry of Coal
CIL	:	Coal India Limited
MWR	:	Ministry of Water Resource
DAE	:	Department of Atomic Energy
IPEM	:	International Project Erasmus Mundus
ICSSR	:	Indian Council of Social Science Research
MRD	:	Ministry of Rural Development
ISRO	:	Indian Space Research Organisation
OIL	:	Oil India Limited
MOM	:	Ministry of Mines
DRDO	:	Defence Research & Development Organization
ICPR	:	Indian Council of Philosophical Research