



Chandigarh

# Proposal under Research and Innovation scheme

Submitted by:

**State Project Director (RUSA)**

Department of Higher Education, U.T., Chandigarh

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## **A Final report on review of proposals submitted under RUSA scheme**

The committee set up for review consisted of the following.

Prof. Jai Rup Singh

Prof. D. V. S. Jain

Prof. Rakesh Tuli

Mr. Vikas Ahuja

Prof. SibyJohn (nominee of Director, PEC)

Prof. Suman BalaBeri (co-opted member)

Prof. KeyaDharamvir (coordinator)

The first meeting of the committee was convened on June 1, 2016. A hard-copy of all the submitted proposals was made available to the committee. These proposals were divided into 12 'themes', each theme having been assigned a coordinator and one or two co-coordinators. After preliminary examination of the proposals, the committee decided that the proposers should interact with the committee.

The proposals were from PU as well as PEC; they pertain not only to research but are also about infrastructure and development.

It was found that several of the PIs had submitted a number of proposals. A sizeable number of researchers were found to be co-PIs in various research proposals. It was felt that a large part of the grant in so few hands is not desirable. Therefore the committee asked the PIs to implement the following changes in their proposals and make short presentations.

- No individual may be PI in more than one project.
- A PI can be co-I in one other project, preferably of an interdisciplinary nature.
- In view of the fact that only 18 month of time is left for completion of the RUSA projects, and since the total grant requested by the two universities added up to a very large sum, all PIs were asked to justifiably slash the budget.

The short presentations (5 -7 minutes ppt. followed by discussions) took place according to the following schedule, in the Seminar Room of the Dept. of Physics, PU.

<b>Date</b>	<b>Time</b>	<b>Themes</b>	<b>Members present</b>
20.06.2016	10:00 AM - 1:00 PM	<b>B</b> Physical Sc.; <b>C</b> Chemistry	JRS, DVSJ, SBB, KD
20.06.2016	1:45 PM – 4:30 PM	<b>H</b> Compu. Sc.; PU infra. etc.	JRS, DVSJ, SBB, KD
22.06.2016	10:00 AM - 1:00 PM	<b>E</b> Pharma.; <b>G</b> Stem cell & Tissue Engg.	JRS, DVSJ, SBB, KD, RT
22.06.2016	1:45 PM – 4:30 PM	<b>J</b> Management; Remaining Phy.	JRS, DVSJ, SBB, KD, RT, VA
23.06.2016	10:00 AM - 1:00 PM	<b>A</b> Technology	JRS, DVSJ, SBB, KD, RT, VA
23.06.2016	1:45 PM – 4:30 PM	<b>I</b> Geology, Anthropology, Forensic Sc.; <b>D</b> Nano.; <b>L</b> Law	JRS, DVSJ, SBB, KD, RT
24.06.2016	10:00 AM - 1:00 PM	<b>F</b> Micro-bio., Biomed. Sc., Social Sc. <b>K</b> Social Sc.	JRS, DVSJ, SBB, KD, RT

The committee went through the presentations and held discussions with the presenters. Later each of the proposals were reviewed and recommendations were made based on the revised proposals which were submitted by the PIs soon after their presentations. For recommendations the following broad criteria were followed.

- Projects with a large number of co-Is were asked to keep only one as co-I and the rest as ‘investigating team’.
- Each project should have only one major item of instrumentation/ equipment (‘major’ defined as costing about 5 lacs or more)
- The same equipment may not be repeated over a number of projects.
- Viability in the restricted time of 18 months.
- Budget is submitted for 18 months and not 3 years.
- Overall adequacy of the project under RUSA (compatible with RUSA objectives)

The committee met Prof. Grover, VC PU and Chairman SHEC at 4:00 PM on 24.06.2016, soon after the presentations were over. The committee apprised him of the broad criteria adopted for the review. The committee further recommended that

- The major equipment from all the projects be collectively housed in a suitable location and labelled as under RUSA.

(Sh. Jitender Yadav)  
State Project Director (RUSA)-cum-  
Director Higher Education  
Chandigarh Administration, Chandigarh

(Prof. Arun K. Grover)  
Chairman, SHEC (RUSA)-cum-  
Vice- Chancellor  
Panjab University, Chandigarh

## Proposals under RUSA Scheme: Research and Development Support Panjab University, Chandigarh

**Legend:** R recommended

**A. Theme: Emerging Technologies and Related Domains**

**Theme Coordinator:** Prof. Manoj Arora, Director, PEC University of Technology, Chandigarh      **Co-Coordinators:** Prof Renu Vig, Director, UIET,      Prof. Anupama Sharma, TEQIP Coordinator, SSBUICET

S.N o.	Title	PI	Email id	Co-Investigators	Team	Revised Budget	Initial Amount	Major Equipments	Recommendation
1.	Metal Oxide Semi Conductor Gas Sensors for Air Monitoring	Prof J K Goswami, UIET		S K Tripathi, Physics,	Mamta Sharma, UIET, Gurinder Singh, UIET, Devinder Mehta, Physics	23.4 Lacs	Rs. 37,79,130	Langmuir-Blodgett Self fassembly Film Set Up 14.0 Lacs	R

2.	Development of Web Based, Smart Phone Enabled Educational Intervention “Care for Breast Cancer” for Prevention, Management UICET Education of Breast Cancer Patients	Dr M K Sharma, UIET		Prof. Gurpreet Singh, Professor, (Gen. Surg.), Dr Sukhpal Kaur, Lecturer , NINE PGI		16.54 Lacs	Rs. 42,21,800	Cell Phones Etc.	R 16.54 lacs
3.	Medical Image Processing Platform as a Service on Cloud (MIPAAS)	Prof. Sukhwinder Singh, UIET		Prof. N. Khandelwal , Radio Diagnosis & Imaging, PGI, Prof. Vinod Kumar, IIT Roorkee	Prof .Savita Gupta , Dr. Naveen Aggarwal, Dr.Preeti Aggarwal and Dr MamtaJuneja , UIET	22.90 Lacs	Rs. 48,54,000	Workstation Etc. 13 Lacs	R 20 lacs
4.	Evaluation of Biocontrol Potential of Chitinase and Characterisation for the Development of Environmentally Safe Bio-Fungicide	Dr.Gursharan Singh, UIET		Dr. Jaspreet Kaur UIET		27.05 Lacs	Rs. 24,00,000	High-speed centrifuge 4 lacs Shaker-Incubator 6 l Total 10 Lacs	R 20 Lacs
5.	Development of Ionic Substituted Nano-Dimensional Hydroxyapatite	Prof Seema Kapoor, UICET				30.00 lacs	Rs. 83,77,750		R 30 lacs

6.	Establishment of a Skill Development Centre in Manufacturing & Automation	Prof Manoj Arora, Director, PEC		Dr. Sanjeev Kumar	Sh. Dina Nath	18.00	Rs. 18,00,00,000		<b>Infrastructure</b> 18.00 crore
7.	Plasma State Sintering Technology for Rare Earth Ceramics for Lasers.	Dr. J. D. Sharma, PEC		Dr. Uma Batra PEC	Dr. Ranvir Singh PEC	Rs. 70 Lakh	Rs. 1,60,00,000	Vacuum Spark Plasma Sintering Machine, Hot/Cold Isostatic Pressing Machine 70 Lakh	<b>Infrastructure</b> 1.60 crore
8.	Mechanical & Metallurgical Behavior of Friction Stir Spot Welding of Similar & Dissimilar Materials	Dr. Sarbjit Singh, PEC		Dr. Sanjeev Kumar	Prof. Sunil Pandey, SLIET, Prof. A K Sharma, IIT Roorkee, Prof. Alakesh Manna, PEC, Prof. S. S. Dhama, NITTTR	Rs. 52,00,000	Rs. 1,61,00,000	Highly Precise and Accurate Milling/ Drilling Four Component Dynamometer 35 l Ultrasonic Module >2000 Mhz 10 lacs  Total 45 lacs	R 52.0 lacs
9.	Phase Evolution, Dielectric and Magnetolectric Studies of Doped BiFeO <sub>3</sub> -PbTiO <sub>3</sub> Multiferroics.	Dr. Sanjeev Kumar PEC	<a href="mailto:Sanjeev@pec.ac.in">Sanjeev@pec.ac.in</a>	Dr. Vasundhara Singh, PEC		Rs. 15,00,000	Rs. 60,00,000	Electrometer for Leakage Current Measurement 6 Lakh	R 6 lacs

**Reco.Rs. 144.54 lacs**

**B. Theme: Emerging Areas of Research in Physical Sciences**

**Theme Coordinator: Prof.Devinder Mehta**

**Co-Coordinator :Prof. S.K. Tripathi, Dept. of Physics, PU**

<b>S.N o.</b>	<b>Title</b>	<b>PI</b>		<b>Co-PI</b>	<b>Team</b>	<b>Revised Budget</b>	<b>Amount</b>	<b>Major Equipment</b>	<b>Recommen- dation</b>
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10	Development of Nanomaterials for Energy Harvesting Photovoltaic Devices	Prof. S.K. Tripathi Dept. of Physics	<a href="mailto:surya@pu.ac.in">surya@pu.ac.in</a>	Prof. Navdeep Goyal Department of Physics Dr.Jadab Sharma Center for Nano Science and NanoTechnology, PU	Prof. G.S.S. Saini Department of Physics, PU; Prof. Anupama Sharma UICET; Dr. Sunil Arora, NSNT, CEAST PU; Dr. Rajesh Kumar, Prof. Ranjan Kumar, Dr.Sunita Srivastava and Dr. Ravi Bhatia, Dept. of Physics.	477.20 Lakhs  <b>Incorrect</b>	Rs. 20,15,00,000	Multi-chamber CVD System 100 lacs Laser Lithography 70 lacs Pulsed Laser Deposition System 80 lacs Atomic force Microscope 50 lacs E-Beam Evaporator 40 lacs Thermal Evaporator 40 lacs External Quantum Efficiency Measurement setup 28 lacs Electrochemical Work Station 50 lacs Clean Room 20 lacs Plasma Cleaner 20 lacs (Total 498 Lakh)	R  1.5 crore
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11	<p>Design and Production of Cost-Effective Water Purification Plants for Use at The Family and Community/Village Levels</p> <ul style="list-style-type: none"> <li>- Development of Nanosensors for Detection of Toxic Ions</li> <li>- Bioremediation of Waste Water from plants for Heavy Metals</li> </ul>	Prof Devinder Mehta, Dept. of Physics	<a href="mailto:dmehta@pu.ac.in">dmehta@pu.ac.in</a> , <a href="mailto:gsssaini@pu.ac.in">gsssaini@pu.ac.in</a>	Dr. J.S. Shahi Department of Physics, Panjab University	Prof. GSS Saini and Dr. Ashok Kumar Dept of Physics; Prof. Jatinder Goswamy, UIET; Dr. Navneet Kaur, Dept. of Chem.; Prof. V. P. Singh, Dr. Bimal Rai Dept. of Physics; Prof. Alok Srivastava, Dept. of Chem.; Prof. Sanjay Chhibber, Microbiology ; Prof. M. L. Garg, Biophysics; Prof. Navdeep Goyal, Physics; Prof. K. P. Singh, Geology, Dr. J. Sharma,	175.00 Lakh	Rs 19,66,40,000	Total Reflection X-Ray Fluorescence Spectrometer, Water Testing Lab., Components for Water Treatment Plants, Water Pumps (Total 175 Lakh)	<b>Recommended</b>  <b>1.5 crore</b>
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12	Up-gradation of Existing Raman Spectroscopic Facility UICET its Applications in Surface Enhanced Raman Scattering of Some Biomolecules	G.S.S. Saini, Dept. of Physics	<a href="mailto:gsssaini@gmail.com">gsssaini@gmail.com</a>	Prof. S.K. Tripathi, Physics	Dr. Ganga Ram Chaudhry Chemistry	35.55 Lacs	Rs. 85,23,000		R 35.55 lacs
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**Reco.Rs. 335.55 Lacs**

**C. Theme: Recent Advances In Chemical Sciences**

**Theme Coordinator:** Prof S K Mehta, Deptof Chemistry, PU  
PU

**Co-Coordinator:** Dr. Deepak B. Salunke, Deptof Chemistry,

S.No.	Title	PI		Co-PI	Team	Revised Budget	Amount	Major Equipments	Recommen dation
13	Fabrication ofBiodegradable Nanoparticles to Study the Chemo-Preventive Effect of Benzyl Isothiocyanate: Effects on Dose Reduction ofTamoxifen	Dr.Khushwi nder Kaur Department of Chemistry				28.50 Lacs	Rs. 42,43,000	Lyophilizer,Deep Freezer, Centrifuge 24 Lac.	R 5 lacs
14	Exploring Novel Amphiphilic Assemblies asNanoreactorsand Their Biomolecular Interactions	Prof S K Mehta, Deptof Chemistry		Prof S K Kansal, UICET		89,50,000	Rs 1,70,00,000	Circular Dichromism Spectrometer, Isothermal Titration Calorimeter 80,000,00	R 60 lacs

15	Development of Durable Color Changing Lenses and Glasses Using Organic Photochromes and Supramolecular Host Systems for Spectacles, Toys, Clothing and Industrial Applications	Dr PalaniNatrajan Dept. of Chemistry	pnatraj@pu.ac.in	Prof S K Mehta, Dept of Chemistry		Rs. 32,00,000	Rs. 47,30,000	Fluorescence Spectrometer With Time Correlated Single Photon Counting 24 lacs Photo reactor 3 lacs (27,00,000)	50 lakh
16.	Design and Synthesis of New Metal-Organic Frameworks (Mofs) for Energy Storage Application In Batteries and Super Capacitors	Subash Ch. Sahoo,				50 lacs	Rs 75,00,000	Electrochem workstation 30 lacs Rotary Evaporator 4 lacs Magn. stirrers (2) 50 K Total 34.5 lacs	50 lakh
17.	Design and Synthesis of Novel Amphipathic Molecules as Squalamine and Polymyxin B Mimics: Development of New Antimicrobial and Antiangiogenic Agents	Deepak B. Salunke Dept of Chemistry				Rs. 50,00,000	Rs. 1,25,00,000	HPLC 20 lacs Rotary Evaporator 4 lacs Magnetic Stirrers (4) 1 lacs High vacuum pump 1 lacs Total 26 lacs	50 lakh
18.	Detection of Toxic Heavy Metal Ions In Environmental Samples Using Peptide and Aptamer Based Nano-Conjugates	Dr. Rohit Kumar Sharma Dept. of Chemistry, PU		Dr. Nishima, UIET		<b>25,74,000</b>	Rs. 20,00,000	High Performance Liquid Chromatography (Hplc) 18 Lacs	R 20 lacs

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**D. Theme: Nanoscience UICET Nanotechnology**  
**Theme Coordinator: Prof B S Bhoop, UIPS**

**Co-Coordinator: Prof. O P Katare, Dean Research, PU**

S.No.	Title	PI	Co-PI	Team	Revised Budget	Amount	Major Equipments	Recommendation
19	Surface-Functionalized Electrospun Cellulose (Derived From Waste Biomass) as An Optical Sensing Membrane	Prof Anupama Sharma, UICET			60.27lacs	Rs. 1,76,58,000	Fluorescence Spectrophotometer 16 lacs Electro-Spinning Unit 8 l High Temperature Autoclave 7.5 lacs Microwave Reactor 16 l <b>Total 47.5 lacs</b>	Recommended 21 lacs
20	Targeted Delivery of Chemotherapeutic Drug Using Peptide Functionalized Gold Nanocarriers.	Dr. Nishima, UIET, PU	Dr. Rohit K Sharma, Dept. of Chemistry		<b>22,90,000</b>	Rs. 22,00,000	Probe Sonicator 10,00,000	Recommended 20 lacs

**Reco.Rs. 41.0 lacs**

**E. Pharmaceutical Sciences**

**Theme Coordinator:** Prof O P Katare

**Co-Coordinator:** Prof Anil Kumar, UIPS, PU

S.No.	Title	PI		Co-PI	Team	Revised Budget	Amount	Major Equipment	Recommendation
21	Topical Probiotic formulation for Skin Ailments	Prof. Indu Pal Kaur, UIPS	<a href="mailto:Director_research@pu.ac.in">Director_research@pu.ac.in</a>	Dr Praveen Rishi, Dept. of Microbiology	Dr O.P. Katare&Dr Bs Bhoop, UIPS	28,04,800	Rs. 85,75,000	Skin Visiometer, Mpa6 With Sebumeter, Corneometer, CutometerUICET Other Suitable Attachments: Tewameter, Visiopore Pp34n and Mexameter 20 Lacs	R 25 lacs
22	Novel Topical Nanogel of Tacrolimus and White Curcumin for Treatment of Atopic Dermatitis	Dr. Vandita Kakkar, UIPS				36.4 lacs	Rs. 43,60,000	Dynomill 25 Lacs	R 25 lacs
23	QbD-Enabled Development of Nanocarriers of Anticancer Agents with Enhanced Therapeutic Performance	Prof. B S Bhoop, UIPS		Prof O P Katare		97.24 Lacs	1,16,60,000	Flow cyclometer 35 lacs High shear Fluidiser 35 lacs Total 70 lacs	R 85 Lacs
24	Development of Xanthine Derivatives for the Treatment of Parkinson's Disease: Computer Aided Drug Design, Synthesis and Pharmacological Evaluation.	Prof. Ranju Bansal, UIPS				27,76,000	Rs. 27,76,000	Computer Aided Drug Design Softwares (Work Station Included) 10 lacs Flash Chromatograph 4 lac Elisa Reader 4 lacs Total 18 Lacs	R 17.76 lacs

25	Design and Development of Novel Nano-Structural Pharmaceutical Products for External Application in Burns and Wounds	Prof. O.P. Katare, UIPS		Prof. Sanjay Chibber	Prof. B S Bhoop & Prof Anil Kumar, UIPS Dr. Vijay Goni, PGIMER	33.30 lacs	Rs. 1,57,13,100	HPLC including accessories. 25 lakh	R 37 lacs
26	Neuroprotective Strategies in Experimental Model of Traumatic Brain Injury-Induced Cognitive Deficits: Possible Neuroinflammatory and Apoptotic Pathways	Prof. Anil Kumar, UIPS	<a href="mailto:kumaruips@yahoo.com">kumaruips@yahoo.com</a>	Prof. O P Katare, Prof. Rupinder Tiwari, Prof. Sukant Garg, HSI		25.93 Lacs	Rs. 1,89,29,000	Cryostat [for Brain Sectioning UICET Slicing] Hplc With Ecd Detector 14 Lacs	R 25 lacs

**Reco.Rs. 214.76 lacs**

**F. Theme: Microbiology, Medical & Biomedical Sciences**

**Theme Coordinator:** Prof Sanjay Chibber, Dept. of Microbiology, PU **Co- Coordinators:** Prof. Praveen Rishi, Dept. of Microbiology, PU, **Prof Ashish Jain**, HSIJDS, Prof. D. K. Dhawan, Dept. of Biophysics, PU

S.No.	Title	PI		Co-Pi	Team	Revised Budget	Amount	Major Equipments	Recommendation
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26	Functional Validation of Gut Microbiota in Pathogenesis of Celiac Disease and to Evaluate Effect of Zingerone (Dietary Compound) on Immunomodulation and Microbiota Modulation	Prof. Kusum Harjai, Dept. of Microbiology		Dr. Rakesh Kumar Kochhar, & Dr. B.R. Thapa, PGIMER		31,85,040	Rs. 1,33,50,000	DNA/RNA Kit, Metagenomics, Animal Model Work, RT-PCR KIT, CBA Kit, Chemicals  16.82 Lacs	R 20 lacs
27	Defining The Transcriptomic Landscape of <i>Candida Glabrata</i> During and Planktonic Growth Phase by RNA-Sequencing	Mr. Khem Raj, Dept. of Microbiology				5.5 lacs	Rs. 28,30,000		R 5 lacs
28	Evaluation of Ops-Fyua Conjugate as a Vaccine Against <i>Klebsiella Pneumonia</i> Pmediated Lung Infection	Prof. Sanjay Chhibber Dept of Microbiology				31.05	Rs. 78,20,000	PCR machine 4 lacs GEL Documentation 10 la Sonicator 5 lacs 19 Lacs	R 30 lacs
29	Evaluation of Native and Redesigned Alpha-Defensin as Potent Therapeutic Agent Against Methicillin Resistant <i>Staphylococcus Aureus</i> Mediated Topical Infections	Prof Praveen Rishi, Dept. of Microbiology		Prof Indu Pal Kaur, UIPS		19.70	Rs. 70,16,932/-	FLOW CYTOMETER REQUIRED  CONTINGENCY 12 LAC	R 10 LACS



30	Structural Characterization of Elongation Factors of <i>Mycobacterium Tuberculosis</i>	Dr. Ranvir Singh Human Genome	<b>Ranvir1@pu.ac.in</b>			8 lacs	Rs. 8,00,000		Recommended 8 lacs
31	Transcriptional Regulation of Rv0774c in <i>Mycobacterium Tuberculosis</i>	Prof. Jagdeep Kaur, Dept. of Bio-Tech				Rs. 15,00,000	Rs. 10,00,000	High Speed Centrifuge (6.5 Lacs)	Recommended 13.5 lacs
32	Assessment of Mechanistic Role of Zinc in Ameliorating Neurodegenerative Changes During Huntington Disease	Prof. D. K. Dhawan Dept of Biophysics	<a href="mailto:coordnu_cmed@pu.ac.in">coordnu_cmed@pu.ac.in</a>	Dr. Neha Singla, Biophysics		23.70 Lacs	Rs. 63,36,228/-	Stereo Techtic equip. 15 l Vertical gel electrophoresis app. 1 lac Total 16 Lac	R 23.70 Lacs
33	Implications of N-Butyldeoxynojirimycin Mediated Glycosylation Inhibition in Adjuvant Arthritis	Dr. Tanzeer Kaur, Dept. of Biophysics		Prof. D. K. Dhawan, Biophysics		22.23 lacs	Rs. 64,86,228/-	Gel doc 5 lacs 96 well plate reader 6 lacs Total 11 lacs	R 5 lacs
34	Radiolabelling, Characterization and Bioevaluation of N-Acetylneuraminic Acid for its Potential Role in In vivo Imaging of Cancer Sialylation	Dr. Vijayta D Chadha, Nuclear Medicine	vdchadha@pu.ac.in	Prof. D K Dhawan, Biophysics		20.70 lacs	Rs. 1,95,80,000	Liquid Scintillation Counter 12 Lacs	R 20.70 lacs

35	Development and Investigation of Optically Stimulated Luminence Dosimeters (OSLD)	Dr. Vivek Kumar, Centre for Medical Physics		Dr. D. Mehta & Dr. J SShahi Physics		7.5 lacs	1,57,16,000		R 5.0 Lacs
36	Assessing the Involvement of Calcium Deregulation in Vascular Dementia Induced Alzheimer's Disease in Rats	Prof. RajatSandhir, Biochemistry	sandhir@pu.ac.in			35.38 lacs	Rs. 44,50,000	Laser Doppler flow setup, gas anesthesia setup 18 l Biosafety cabinet 4.5 lacs  22.5 lacs(total)	R 30.0 Lacs

**RecommendedRs. 170.9 lacs**

**G. Theme: Stem Cell UICET Tissue Engineering**

**Theme Coordinator:** ProfSanjivPuri, UIET

**Co-Coordinator:** Dr.Seemha Rai, Centre for Stem Cell and Tissue Engineering

S.No.	Title	Pi	Co-Pi	Team	Revised Budget	Amount	Major Equipment	Recommendation
37	Integrative approach for alleviating renal pathologies from molecular cross talk to organ regeneration	Dr VeenaPuri, Systems Biology and Bioinformatics, Pu	Dr Seemha Rai, Stem Cell and Tissue Engineering,	Sanjeev pure (project coordinator), Prof vivekanandJha, Dr.Vivek Kumar, PGI	53 lacs	Rs 75,00,000	Table top two laser cyto meter 35 lacs	R 50 lacs

**Recommended Rs. 50 lacs**

**H. Theme: Computer Science****Theme Coordinator:** Prof R K Singla, DCSA**Co-Coordinator :** Dr Anu Gupta, DCSA

S.No.	Title	PI		Co-PI	Team	Revised Budget	Amount	Major Equipments	Recommendation
38	Panjab University Data Centre Modernization Project	Prof. R K Singla DCSA	rksingla@pu.ac.in			1.95 Lacs	Rs. 1,95,00,000		R <b>Infrastructure</b>
39	Online HUI CET written Mathematical Expression Recognition	Prof R K Singla, DCSA		Dr Anu Gupta, DCSA	Dr Anuj Sharma, DCSA	12 Lacs	Rs 20,00,000	Laptops (3) 3 Lacs Server and Software 5.25 lacs	R 12 lacs

**Recommended Rs. 12 lacs****I. Geological, Anthropological and forensic Sciences****Theme Coordinator:** Vishal Sharma, Forensic Science**Co-Coordinator :** Dr J S Sehrawat, Anthropology

S.No.	Title	PI		Co-Investigator	Team	Revised	Amount	Major Equipments	Recommendation
40	Morphometric, Ontogenetic and Intraspecific-Geographic Variation Studies of Early Middle Cambrian Trilobites Pagetia and Oryctocephalus Indicus In The	Dr. Birendra P. Singh Dept. of Geology				4,30,000	7,80,000	Recommended	R 4.3 lacs

	Spiti Region, Northwest Himalaya	y							
41	A Novel Approach for Characterization and Differentiation of Paper/Ink Samples from Optical and Elemental Analysis Coupled with Chemometrics: forensic Application to Questioned Document	Vishal Sharma, Forensic Science	Sharmavisha105@gmail.com	Dr J. S. Sehrawat, Anthropology		49,00,000	70,50,000	Ion Chromatography Unit for Analysis 43lacs	R 45 Lacs

**Reco.Rs. 49.3 lacs**

**J. Theme: Management**

**Coordinator:** Prof Sanjeev Sharma, Director, UIAMS **Co-Coordinator:** Dr.AmanKhera, UIAMS

S.No.	Title	PI	Co-PI	Team	Revised Budget	Amount	Major Equipments	Recommendation
42	Strategies for Citizen Centric E-Governance Initiatives in North India – an Empirical Investigation.	Prof. Sanjeev Sharma, UIAMS	Dr Nitesh Goyal, DAV College, Chandigarh	Dr Monika Aggarwal, PDF, UIAMS	<b>27,19,000</b>	Rs. 49,60,000	Laptop With Latest Configuration	Reco 5 Lacs

**Reco.5 lacs**

**K. Theme: Social Sciences**

**Coordinator:** ProfNandita Singh, Education

**Co-Coordinator:** Prof. Ramanjit Kaur Johal, Dept. of Public Administration

S.No.	Title	PI	Co-PI	Team	Revised Budget	Amount	Major Equipments	Recommendation
43	Youth Empowerment Through Capacity and Competency Building Modules	Prof. Nandita Singh, Dept. of Education	Four Co-I		3,00,000	Rs. 87,86,500		R 3 lacs
44	Electoral Politics In Chandigarh Parliamentary Constituency: A Study of Political Attitudes and Opinion	ProfAshutosh Kumar Depttof Political Science			1,50,000	Rs. 85,500		R 1.5 lacs

**Recommended 4.5 lacs**