

# ANNUAL QUALITY ASSURANCE REPORT

2009-2010



**RANI DURGAVATI UNIVERSITY, JABALPUR**  
**MADHYA PRADESH**

## Part A

### **A Plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement**

The Internal Quality Assurance Cell (IQAC) of Rani Durgavati University has decided following Plans for their implementation during the academic year 2009-10. The proposed plans were identified as being of relevance in the backdrop of current demands in academia, and are placed under principally three categories. The group classification is characterized by the sectional specific efforts focused on the developments reflected at the level of Institutional organizational policies, Quality teaching and students' progression, and Research and infrastructural support. IQAC would seek the participation of faculty members, research scholars, students, and university administration for implementation of proposed plans, and maintain frequent reviews to monitor the progress.

#### **Institutional organizational policies**

1. To undertake procedural reforms, and initiate allied activities that would maximize teaching days in academia as well as simplify the administrative protocols in the university. Planned are comprehensive computerization of administration process, students' admission, processing of examination results, and certification.
2. To set up separate cells in teaching departments to motivate and assist students to participate in competitive career oriented and professional examinations such as NET, SLET, GATE, IAS, UPSC, MP-PSC, etc.
3. To strengthen the practice of recognition of faculty/students/staff members on account of their outstanding achievements during each academic year. The IQAC aims its participation together with the Rani Durgavati University in the mechanism of motivation process at individual level.
4. To organize Alumni meet and Parent-Teacher meetings on regular basis. The participation of alumni would be solicited in various issues dealing with efficient running of current academic programmes and opening of new ones, and support to research activities.

#### **Quality teaching and students' progression**

5. To review and upgrade the current syllabi of postgraduate classes in all subjects. The current syllabuses are based on the Model Curriculum as proposed by the UGC.
6. To initiate new curriculum and vocational courses with a view to impart pertinent theoretical knowledge and practical skills that would augment the placement opportunities of students in organizations of national repute. This would also empower them to serve the society effectively in areas of current relevance.
7. To organize 3-4 programmes each academic session inclusive of orientation and refresher programmes, workshop and FDPs in each teaching department to update the faculty members on recent trends in respective subjects. The workshop activities would also be directed to benefit degree and postgraduate students. Emphasis shall be placed on developing instrumental/computational skills and data handling. Support of senior research scholars as demonstrators in workshops shall be solicited.
8. To formulate mechanism for students progression. The total number of postgraduate student in all the teaching departments is a little over one thousand, and it is planned to motivate at least 15% of upper level meritorious students to join research programmes. This fraction of select students, the IQAC believes, would constitute the prospective class of elites joining the national academic institutions and research organizations.

### Research and infrastructural support

9. To organize major research projects dealing with challenging problems of local relevance *vis-a-vis* international technological knowhow and developments. IQAC encourages research proposals dealing with mobilization of faculty and students.
10. To organize collaborations of national and international nature, and sign MOUs on prime activities of mutual benefit. Such collaborations will lead to enhanced performance of departments both at teaching and research level. Participation of budding research scholars will be encouraged.
11. To take initiatives on deliberation of quality research, articles, books and monographs in peer reviewed journals and publication houses at national and international level. The IQAC wishes to keep abreast research scholars and faculty members on publication issues such as citation index, impact factor, *h*-index, and personal appraisal keys such as academic performance index.
12. To integrate the efforts of all teaching departments and university central facilities in updating the infrastructural capabilities. This would involve integration of IQAC objectives with those approved by the UGC under the XI Plan Proposals of the university.

## Part B

### 1. Activities reflecting the goals and objectives of the institution

Activities were organized as planned for 2009-10 involving all the major components of the university. The IQAC held formative sessions on the goals and objectives of the institution, and invited mechanism to achieve them in a time-bound manner. Interactive meetings with the stakeholders have been of immense help in formulating the action plan.

The following briefs describe the major activities conducted to achieve the goal and objectives. Other activities are suitably described under the paragraphs to follow.

- (i) The currently operational UGC Model Curriculum was reviewed in all subjects, and modifications effected as were necessary. Reorganization of syllabi contents was felt to enable specific examination papers setting by relatable experts, and it was so effected.
- (ii) The University organized a number of seminars, workshops and conferences on topics of relevance to share recent developments in research, teaching and professional skills. Sessions were held with the assistance of outside experts on personality developments among students, and career guidance.
- (iii) Frequent Alumni and Parent-Teacher meetings were called at teaching department level. Expert advise and professional experiences of alumni/parents were considered in opening of new courses, and in on-site skill development of students. Issues related to progress of students were shared, and further measures on it discussed.
- (iv) The university has taken initiatives in building new and stronger infrastructural support to students, faculty and staff of the institution.
- (v) The university has set-up as exclusive centre for conduction of semester and other frequently organized examinations. This extra facility has avoided use of teaching departments for examination purposes, and shields them from activities uncondusive for academic pursuits.
- (vi) Faculty members of the university have been able to obtain financial support from national agencies for their research. A number of research scholars have also been supported under the projects.

- (vii) High quality research papers have been published in impact journals. Faculty members published monographs and books on topics of current studies and research.

## **2. New academic program initiated (UG & PG)**

A few academic programs have been started in 2009-2010 by the Department of Sanskrit to provide newer dimensions and career orientation to the students. Attention was paid to modify or introduce special optional papers in the existing programmes of the UGC so that students shall have wide choice for the curriculum of their interest.

## **3. Innovations in curricular design and transaction**

Four value added and two career oriented programmes have been added. The designing has been considered to follow new perspectives in contents materials of the syllabi, and thought to provide operational abilities among the students. The innovations that have been brought in the core curriculum are believed to gain popularity owing to linking of education with professional strength.

## **4. Inter-disciplinary programs started**

Three programmes of interdisciplinary nature have been initiated in Sanskrit and Philosophy departments of the university. The two intimate subjects benefit themselves mutually sharing faculty and students, and this has evinced profound confidence among students.

## **5. Examination reforms implemented**

All teaching programmes are conducted on semester basis. The scheme of Continuous Comprehensive Evaluation (CCE) introduced has resulted in preparedness among students, and also provided a measure to teaching faculty on the frequent evaluation of students. The deliverables are critically discussed at department level, and future measures are formulated. The weakly performing groups of students, located through the process, are supported by special teaching sessions and tutorials. A modular format of each question paper in all subjects has been made in operation. It comprises of unit-wide format of questions that are based on multiple choice to employ analytical skills, short answers to develop precision, and long but concise answers to acquire criticism and accuracy in discussion. The question paper marks have been suitably and evenly distributed among the sub-questions.

The IQAC further plans to introduce a modified system in the experimental/dissertation part of the examination. However, such new plans are still under active debate.

## **6. Candidates Qualified in NET/SLET/GETE, etc.**

Besides regular teaching and research, the faculty members of this university have taken measures to develop conceptual understanding and examination based specific proficiency to aspirants of various competitive, academic and public examinations. Notably, a total of 191 students have been selected during the year 2009-10 in various competitive examinations. This includes 41 successful examinees from the Department of Law in various examination of repute conducted by State/National or Central boards. Six examinees from Sanskrit Department also qualified in national examination during this year. A summary of candidates selected from various departments is tabulated below.

Department	Number of students Qualified in Public Exams
Bio-Science	5
Education	90
Sanskrit	6
Law	41
Geography	1
Physics & Electronics	17
Economics	18
Library and information science	1
Life-long Learning Education	1
Philosophy	4
Physical Education	7
<b>Total</b>	<b>191</b>

## 7. Initiatives towards Faculty Development Programmes

The University has taken a major initiative for strengthening the infrastructure in departments for teaching, research and training through a number of approved schemes such as the Faculty Development Programs (FDP), Orientation Programme, workshops, etc. Following this statement, "For giving best to the students, different departments of the Rani Durgavati University have taken initiatives towards Faculty Development Programmes. This has provided more opportunities to the faculty for their development and up-gradation with the state-of-the-art in learning and teaching. It creates awareness and development of newer ideas among the faculty. Some of the courses organized are as follows.

Orientation/Refresher Course	Dates	No. of Participants
74 <sup>th</sup> Orientation Programme	31.08.2009 – 26.09.2009	22
Sociology Refresher Course	04.01.2010 – 23.01.2010	17
Hindi Refresher Course	04.01.2010 – 23.01.2010	21
Short term Course	02.02.2010 -06.02.2010	56
History Refresher Course	08.02.2010 – 27.02.2010	24
Workshop	16.02.2010 – 18.02.2010	39
Computer Refresher Course	08.03.2010 – 27.03.2010	25
75 <sup>th</sup> Orientation Programme	08.03.2010 – 03.04.2010	34
76 <sup>th</sup> Orientation Programme	31.05.2010 – 26.06.2010	28

During the year under review, the UGC Academic Staff College of this university has organized five Orientation Programmes, one Workshop and one Short-term Course for newly appointed assistant professors. Almost every department of the University has hosted programmes for the development of faculties. Most of the programmes were Orientation/Refresher Courses.

## 8. Total number of Seminar/Workshops/Symposia conducted

For the development of the Students, Faculty and other stakeholders, various departments of the university have conducted Seminars, Workshops, Conferences and Symposiums at State or National Level. Philosophy Department leads with three national level seminars/conferences. Physics & Electronics Department has also conducted two state level conferences. Sanskrit Department organized one national and

two state level seminars. Economics Department organized one national seminar and another state level conference. Such activities through Seminar, Workshop, Conference and Symposium received appreciation by the participants and the general society, and were instrumental to explore new horizons of the knowledge. The summary of the activities conducted by the various departments tabulated as under.

Department	No. of Seminar/Workshop/ Symposium/Conference conducted during 2009-10
Philosophy	1 National Seminar, 2 Conferences
Yoga	1 National Conference
Journalism	1 Seminar
University Institute of Management	2 Workshop
Political Science	1 National
Physics	2 State Level Conference
Law	1 National Conference
Physical Education	1 National Conference
Sanskrit	1 National Seminar, 2 State Level Seminar
Economics	1 National Seminar, 1 State Level Conference
Geography	1 National Conference

It is to be noted that the teaching departments have actively organized national/international workshops and seminars for dissemination of knowledge and skills on topics of recent advances in their respective areas. In these workshops, seminars and conferences the researchers have given their invaluable contributions to the current issues of research. It is proposed to further strengthen such activities in years to follow.

## 9. Research projects, newly implemented and completed

The IQAC considers research as a vital part of education. It involves collective and unique efforts of both the researching students and the faculty involved. University in general and departments in particular provide necessary infrastructural facilities for the success of research programmes. Though, the faculty self-sustained programmes are no less in number, and their output is not inconsiderable, a major trend in the university has always been on amply sponsored research programmes funded by national agencies, and international organizations. Moreover, a number of faculty members have been successful in securing mega research programmes involving exhaustive investigations, added instrumental procurement and collaboration.

A list of projects that have been completed and are on-going is provided below with details on title of activity, funding agency and its outlay. Noteworthy is the total number of Major Research projects being far more in number than the Minor Research Projects during the academic year 2009-10. It was also observed that a majority of funded research project were carried out/being run by the science departments, whereas moderately funded or self-sustained activities credited to departments of arts and humanities. The IQAC has already taken initiatives to stimulate concern for funded activities.

### (i) Projects Completed

	Name of Investigator	Title of the Project	Sponsoring Authority	Outlay Rs. (Lakhs)	Duration
1	Dr. A. Sharma	Biochemical and Molecular Characterization of carbonic anhydrase from Microbial sources with a view of carbon dioxide sequestration.	DBT	23.00	2006-08
2	Dr. S.P. Gautam	Conservation and mass propagation of endemic and indigenous forest plant	DBT	56.78	2001-05

		species using tissue culture and clonal propagation techniques.			
3	Dr. Y.K. Bansal	Growth and regeneration studies in udmar ( <i>Gymnema sylvestre</i> R. Br.) through tissue culture	UGC	4.94	2005-08
4	Dr. A.K. Pandey	Development and use of secondary metabolites of indigenous strains of fungi as broad-spectrum herbicides for Integrated Management of prominent weeds of Madhya Pradesh.	CSIR	2.55	2003-06
5	Dr. A.K. Pandey	Integrated Management of Parthenium: Production, formulation, improvement and Multi-sites field trials of Mycoherbicides	DBT	17.12	2003-06
6	Dr. A.K. Pandey	Nutraceuticals from indigenous edible mushrooms	DBT	17.62	2004-07
7	Dr. D. Bagchi	Selenate toxicity and regulation of sulphur metabolism in <i>Synechococcus</i> PCC 7942	UGC	4.90	2003-06
8	Dr. Archana Jain	Studies on Single Drop Micro-extraction for Trace Analysis by Gas Chromatography–Mass Spectrometry	DST	15.0	2005-08
9	Prof. K.K. Mishra	Intramolecular Effects in Model Electron-Transfer Reactions	DST	12.0	3 years
10	Prof. R.C. Maurya	Biochemically Relevant Complexes of Vanadium	DST	7.0	3 years
11	Prof. K.K. Verma/Dr. A. Jain	Studies on Single Drop Micro-extraction for Trace Analysis by Gas Chromatography–Mass Spectrometry	DST	10.0	2005-08
12	Prof. R.C. Maurya	Deoxygenation and electrochemical reactivities of oxovanadium(IV) complexes as potential insulin mimics and relevance to fuel industry	UGC	8.5	3 years
13	Prof. R.C. Maurya	Biochemically relevant complexes of vanadium: Synthesis, characterization, electrochemical, and reactivity studies of vanadium complexes	CSIR	9.5	3 years
14	Prof. J.P. Mishra	Select Documents of Pt. Kunjilal Dubey	R.D. University	0.15	2006-08
15	Prof. S.S. Pandey	Theory of Wavelet Analysis on Locally compact groups and its application	DST	6.70	2002-2005
16	Prof.(Mrs.) M. Shrivastava	Spline approximation Techniques and Triangulation Methods.	MP-CST	2.26	2002-2005
17	Prof. J. M. Keller	“The investigation on Polyimides matrix comprising in-situ generated Nanophase Structures (IGNPS)”	ER & IPR, DRDO	37.44	2004-06
18	Prof. J. M. Keller	“Polyimide Nanofoam as Low-k ultrathin film for microelectronics	SSPL, DRDO	9.99	2005-07
19	Dr. (Ku). M. Ramrakhiani	“Studies on Electro-luminescence of II-VI Semiconductor Nanoparticles”	MP-CST	3.19	2006-08
20	Dr. Ram Shankar	Election Survey	CSDS; UGC; CNN-IBN	12.25	
<b>Total Outlay, Rs. (Lakhs)</b>				<b>260.89</b>	

**(ii) Projects On-going**

	Name of Investigator	Title of the Project	Sponsoring Authority	Outlay Rs. (Lakhs)	Duration
1	Dr. A. Sharma	Research on Bacteria and Archaea under taxonomy capacity building.	Min. of Env. & Forest	28.60	2008-12
2	Dr. A. Sharma	Investigations on the ecological, clinical & genotypic properties of Non cholera vibrios.	UGC	11.93	2007-10
3	Dr. A. Sharma	Assesment of the suitability of bacterial lipases in lieu of chemical detergents	MPCST	8.61	2007-10
4	Dr. S.N. Bagchi	Action of bentazone and other post-emergence herbicides on photosystem II	DST	20.10	2007-10

		structure and in a cyanobacterium, Synechococcus PCC7942			
5	Dr. S.N. Bagchi	Fibrinogenolytic activity in Anabaena fertilissima: basic studies and clinical efficacy assessment	DBT	26.10	2009-12
6	Dr. D. Bagchi	Purification, characterization and regulation of selenate utilizing mutants of wild type Synechococcus PCC 7942	UGC	7.80	2007-10
7	Dr. S.S. Sandhu	Microbial Diversity of Mosquito Larvae inhabiting niches and development of Potential Microbes for Management of Aedes aegypti and Anopheles stephensi	DBT	19.00	2008-11
8	Dr. S.S. Sandhu	Improvement of Cicer arietinum through Biotechnological Approaches for Development of Disease and Herbicide Resistant Cultivars	UGC	12.00	2008-11
9	Dr. A.K. Pandey	Germplasm conservation/ microbial biodiversity preservation.	MP-Biotechnology Council, Bhopal	22.32	2007-2010
10	Dr. A.K. Pandey	Management of weeds of leguminous crops employing secondary metabolites of rhizospheric fungi	MPCST	5.52	2007-10
11	Prof. R.C. Maurya	Design of Targeting Ligands in Medicinal Inorganic Chemistry: Synthesis, Characterization and 3D-Molecular Modeling of Some Metal Chelates Involving Aminosugar Relevant to Clinical Ecology and Potential Anti-hyperglycemic Agents	CSIR	15.0	2008-11
12	Prof. K.K. Verma	Screening of chemical agents and their degradation products in water and air: optimization and validation of non-equilibrium liquid phase microextractions for trace analysis by HPLC and GC	DRDO	25.0	2007-10
13	Prof. K.K. Verma	Analytical Chemistry in a Microdrop: Development and Validation of Methods of Sample Preparation for Fibre Optic-linear Array Detection Spectrophotometry, and High Performance Liquid Chromatography-Diode Array Detection	UGC	10.00	2009-11
14	Prof. S.S.Rana and Dr.(Mrs.) M. Dubey	A study of interpolation and shape preserving properties by trigonometric splines.	MP-CST	4.00	2006-09
15	Prof. S.S. Pandey	Wavelet Analysis on Banach Spaces of Functions and Their Applications	DST	7.12	2007-10
16	Dr. (Mrs.) M. Dubey and Prof. S.S.Rana	A study of interpolation and shape preserving properties by trigonometric splines.	MP-CST	4.00	2006-09
17	Prof. M. Shrivastava	Univariate and Bivariate Spline Approximation Techniques	DST	3.60	2006-09
18	Prof. P.V. Jain and Dr. J.K. Maitra	Generalized concept of Continuity in Topological Spaces and its Applications	UGC	5.12	2007-10
19	Prof. J.M. Keller	Nanoscopically manipulated photosensitive polyimide films with graded functionalities for flexible solar cell applications	DRDO	34.99	2006-09
20	Dr. Ram Shankar	A Study of Social and Political Attitudes in MP in the Context of general Elections 2009	UGC	5.06	2008-09
21	Dr. P.B. Sengupta	Development on eco-cultural aspects of the Pando Tribes	UGC	3.00	2007-09
22	Dr. Sushma Dubey	Crech Monitoring in M.P.	Ministry of Women and Child development	9.12	2007-09
23	Dr. B.K. Sahoo/Dr. A.K. Gill	Life-long Learning Education	UGC	14.25	2007-11
24	Prof. A.D.N. Bajpai	Skills mapping in M.P. HR linkages	MP-CST	18.0	2010-12
25	Prof. P.B. Sengupta	Development of ecoculture in Pando tribe	UGC	1.0	2010-12
<b>Total Outlay, Rs. (Lakhs)</b>				<b>321.24</b>	



## 10. Patent generated, if any

No patent was generated during the year of the report. With kind assistance of Peers in the field, the IQAC has reviewed the research and technological output of the faculty members, and is happy to record that a number of innovative and advanced inventions were contributed by the faculty who owing to certain constraints, chiefly monetary, and lack of promotion did not attempt to file patents. Their novel findings have all been described in detail in research papers, and the utility of invention is demonstrated by high citation numbers. Nonetheless, the IQAC has plans to promote patent filing of research output.

## 11. New Collaborative research programmes

A memorandum of understanding (MOU) describing a bilateral or multilateral agreement involving faculty of this university is another area of apprehension for IQAC. It expresses a convergence of will between the parties, indicating an intended common line of action. For the exchange of knowledge and intellectual capacity, various departments of the university entered into collaborations with other departmental or research organizations at national and international level, as well as with industries. These collaborations have enabled to work on a broader platform research and pedagogy that has benefitted the students and faculty in the university, and in turn the participating industries and allied organizations. The collaborative activities organized by various departments are given below.

Department	Departmental Research Collaboration (National)	Departmental Research Collaboration (International)	Departmental MOU's
Physical Education	-	1	-
Law	-	-	1
Physics	10	2	5
University Institute of Management	-	-	3
Mathematics	3	-	-
Sanskrit	1	-	-
Geography	4	-	-
Bio-Science	6	-	-
<b>Total</b>	<b>24</b>	<b>3</b>	<b>9</b>

## 12. Research grant received from various agencies

Funded research project have been valuable addition to the researchers as well as to the university, and the performance attained reflects the quality of research and development. During the present year of IQAC report, various funding agencies have sponsored the research activities against the proposals submitted as major, minor, SAP and other related projects (Table below).

Type	On-Going	Completed	Total Outlay, Rs. (Lakhs)
Minor	04	02	14.30
Major	20	18	567.83
Student SciTech	-	04	
<b>Total Outlay, Rs. (Lakhs)</b>	<b>321.24</b>	<b>260.89</b>	<b>582.13</b>

Majority of the research project were granted by the UGC. The same institution granted four Student SciTech grants for various departments of this university. Other granting agencies are DBT, MOEF, MPBC, MPCST, ICSSR and DST.

### 13. Details of research scholars

A total of one hundred and seventy seven research scholars registered themselves in the university on wide aspects of researches in different departments. The general trend was in favour of biological science with highest number of registrations, and it was followed by Philosophy, physics, Sanskrit, Law, Geography, and Physical education. On an average five students each were registered in rest of the departments.

The table below shows the spread of research scholars registered during the academic year 2009-10.

Department	No. of students registered
History	6
Sanskrit	12
Law	12
Physics	18
English	4
Economics	4
Mathematics	10
Journalism	8
Chemistry	8
Computer sci.	6
Philosophy	19
Physical education	12
Hindi	4
Sociology	8
Political Science	6
Rural Studies	2
AIHCA	6
Bio-Science	20
Geography	12
<b>Total</b>	<b>177</b>

### 14. Citation index of faculty members and impact factor

A list of research papers published by faculty members during 2009-10 is presented in the end of this report. Though the list is not comprehensive, it evinces the activities undertaken and the reputation of journals that were selected for publication. It is planned to provide full list of publication in the self-study report for the next accreditation. In the table below, the review of available data on certain departments is summarized.

Departments	Range	Average	<i>h</i> -index	No. in SCOPUS
Bio-Science	0.2-3	1.5	-	39
Comp. Sc.	0.2-5	0.5	-	-
Chemistry	0.5-4.5	3	12	09
Economics	-	-	1	-
Mathematics	1-6	1.8	1.46	02
UIM	-	-	2	-

Physics	2-3	2	6	25
A.I.H.C.A.	-	-	3	-
English				01
Political Science				02
<b>Total</b>	<b>0.2 - 6</b>	<b>1.3</b>	<b>25.46</b>	<b>78</b>

### 15. Honours/awards to faculty

The faculty members of various departments have achieved following awards during the academic year 2009-10. Not included in the Table below are recognition data of faculty members by national/international journals of repute by inviting subject experts for reviewing the submitted research papers for publication. As a token of appreciation by the publishers, the reviewers have been provided access to data search engines and full text of articles.

Departments	No. of awards
Sanskrit	1
Economics	1
Chemistry	2

### 16. Internal resources generated

As per the table below, various departments have generated following grants from their self-financing programmes during 2009-10. Department of Law has received the highest amount for self-financing program during the year, and the Department of Biological Science followed the trend. It is also evident from the table that other Departments also received reasonable grants for their SF programs. These funds generated were utilized to strengthen the infrastructural facilities in the departments.

Departments	Income from SF Programmes Rs. (Lakhs)
Bio-Science	84.85
Computer Centre	1.41
Journalism	9.71
Computer Science (Maths)	32.42
Life-long Learning Edu.	2.65
Law	90.91
Education	61.53
Sociology	24.88
Yoga Centre	4.85
Library and Information Science	6.84
M.C.A.	82.30
University Institute of Management	50.58
Physical Education	42.61
Physical Education Development	19.88
Women Study Centre	0.13
Economics	18.36
Physics	3.05
<b>Total, Rs. (Lakhs)</b>	<b>536.96</b>

### 17. Details of Departments getting SAP, COSIST (ASSIST)/DST.FIST, etc., assistance/recognition

During the year 2009-10, only Department of Mathematics received grants under UGC-SAP. Formerly, some of other departments were also supported by the UGC under FIST programme, and Department of Biological Science, and Department of Chemistry. Further applications to secure such supports could not be made by certain departments in view of less than required number of regular faculty members. The IQAC has reacted with utmost concern over this issue, and appealed to the university for promptly filling the vacant academic positions in the university. Grants received from UGC and other agencies are as under. During the same year, M.P. Government provided grant of Rs. 59.04 lakh as scholarship for SC/ST/OBC students, and 39 lakh as Rajeev Gandhi National Fellowship.

Granting Agency	Department	Amount in Rs.
UGC	11 <sup>th</sup> Plan Grant	1,84,27,000
	Merged Schemes	2,15,47,000
	Bio-Science	2,24,800
	Life-Long Learning Education	11,00,000
	Physics	3,44,100
	UGC-NET Coordination	5,67,000
	Crèche Monitoring	4,56,100
	RGNF	39,00,000
	Ekal Kanya Scholarship	80,000
DST	Bio-Science	12,20,267
	Mathematics	2,00,000
	Chemistry	3,66,500
MEF	Bio-Science	9,47,743
ICSSR	Geography	45,000
DBT	Bio-Science	4,46,000
MP-CST	Bio-Science	14,94,938
	Geography	60,000
	Physics	3,34,000
	MP-CST Cell (RDVV)	9,47,743
	Student assistance	1,80,000
MPBTI	Bio-Science	3,72,000
ICHR	History	2,94,360
CSIR	Bio-Science	4,29,435
	Geography	50,000
	Chemistry	6,26,980
M.P. Govt.	SC/ST/OBC Scholarship	59,04,263
<b>Total, Rs.</b>		<b>605,65,229</b>

### 18. Community services

During the year 2009-10, the teaching Departments of Rani Durgavati University organized activities for the welfare of students especially from weaker section of the society. Programmes were also in place for the campus development and its maintenance. Such activities involved faculties, students and other staff of

the university. Tabulated below is a succinct account of contributions made by various departments for society.

Name of the Department	Contribution
Biological Science	<ul style="list-style-type: none"> <li>• Counselling and group discussion on environmental awareness.</li> <li>• Concern and effective measures for biological pollution.</li> <li>• Monitoring of Narmada river water for occurrence of certain chemicals and bacteria.</li> </ul>
Chemistry	<ul style="list-style-type: none"> <li>• Development of analytical methodologies for pesticides and industrial chemicals in the water bodies.</li> <li>• Monitoring of Narmada river water for pesticides.</li> <li>• Monitoring of toxic metals in soil and water.</li> </ul>
Economics	<ul style="list-style-type: none"> <li>• Economic survey.</li> <li>• Market sassing.</li> <li>• Polythene free zone, and aesthetic practices in the campus.</li> </ul>
Education	<ul style="list-style-type: none"> <li>• Survey of local schools with respect to standard of teaching.</li> <li>• Development of teaching programmes for schools.</li> <li>• Studies on adoption of virtual classes.</li> </ul>
Geography	<ul style="list-style-type: none"> <li>• Studies based on land and water bodies.</li> <li>• Plantation and other activities on campus maintenance.</li> </ul>
Hindi	<ul style="list-style-type: none"> <li>• Use of Language lab especially for students of weaker sections of the society.</li> </ul>
Journalism	<ul style="list-style-type: none"> <li>• Students attend lectures and seminars on environment.</li> </ul>
Law	<ul style="list-style-type: none"> <li>• Awareness for human rights, and prevention of gender harassment.</li> <li>• Law makers view point for environmental pollution.</li> </ul>
Mathematics	<ul style="list-style-type: none"> <li>• Popularization of mathematical skills among school children.</li> <li>• Awareness about Vedic mathematics, and its use.</li> </ul>
Political Science	<ul style="list-style-type: none"> <li>• Awareness on political systems.</li> </ul>
Physics and Electronics	<ul style="list-style-type: none"> <li>• Support services for development of minor equipments.</li> <li>• Areas for use of luminescence as alternative to electricity.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Popularization of ethical practices in society.</li> <li>• Social measures for gender harassment.</li> </ul>
Physical Education	<ul style="list-style-type: none"> <li>• Support services to growing children on sports.</li> <li>• Sports as means for mutual understanding, and inculcation of moral values.</li> </ul>
University Institute Management	<ul style="list-style-type: none"> <li>• Awareness about management skills in routine matters.</li> <li>• Management measures on prevention of gender harassment.</li> </ul>
UICSA	<ul style="list-style-type: none"> <li>• Computational skills enhancement programmes.</li> <li>• Computer applications in routine matters.</li> </ul>
Sanskrit	<ul style="list-style-type: none"> <li>• Holistic aptitude and religious concerns for environmental protection.</li> <li>• Religious view point on gender discrimination and harassment.</li> </ul>

## 19. Teachers and officers newly recruited

Unfortunately, no recruitment of teachers and officers was done during the year 2009-2010. The IQAC has shown its concern for declining number of teaching faculty in various departments.

**20. Teaching/Non-teaching staff ratio**

During the year 2009-10, the number of teaching staff and non-teaching staff was respectively 60 and 572. Teaching and non-teaching staff ratio was about 1:9.

**21. Improvement in the library Services**

Constant efforts have been made by the Central Library of the University to update the existing software of the library to improve the transaction services rendered to the student and faculty. At the same time initiation of the automation of the library was started. Since the adequate functioning of Central Library is based on conscience of the authorities and users, awareness has been developed for maintenance and updating of library, catering to the needs of readers, and in establishing a direct dialogue between the library authorities and users in procurement of titles of specific choice.

**22. New books and journals subscribed and their value**

During the year 2009-2010, a total of 2054 books, 132 reference books, 2 e-journals, and 1 digital data base related to academics have been procured in the library. Teaching departments also maintain an exclusive library for the use of departmental students. Thus, books procurement has also been done in behalf of teaching departments of the university. Among the departments (Table below) which have procured books (number given in parentheses) for their libraries are Mathematics (800), Geography (432), UICSA (391), and Economics (213). The purchases were made from the self-finance budget of departments, and had a total cost of about 4 lakhs. In the same year the Central Library of the University procured about 3000 text books worth Rs. 36 lakhs.

Department	Text book	Ref. Book	e-Journal	Digital
Economics	213	54	2	1
Geography	432	-	-	-
Political Science	141	-	-	-
Biological Science	50	25	-	-
Physics and Electronics	27	48	-	-
Mathematics	800	5	-	-
UICSA	391	-	-	-
<b>Total</b>	<b>2054</b>	<b>132</b>	<b>2</b>	<b>1</b>

**23. Course in which student assessment of teachers is introduced and the action taken on student feedback**

In all departments, students and feedback of teachers is taken on regular bases. The feedbacks so collected are compiled and analyzed for necessary follow up. The head of department then shares the relevant discrepancies and weaknesses on individual basis in friendly manner for quality improved.

**24. Unit cost of education**

Total number of students in teaching departments of the university is 1078 in the year 2009-10. University has about 240 affiliated colleges. The total fee received is Rs. 257.59 lakhs. Expenditure incurred on salary of teachers is Rs. 5 crore and on contingencies about Rs. 20 lakhs. The Unit cost of education comes about Rs. 0.24 Lakh.

## 25. Computerization of administration and the process of admissions and exam results, issue of certificates

The university has taken measures on computerization of administrative processes and on students' admission to various courses. Equal attention is paid to examination results processing and their publication. Some of these activities are mentioned below.

- On line process of admission has been introduced.
- Publication of online results is being done on a regular basis.
- Negotiations are being made with the bank for on line deposit of various types of fees and dues.
- Operation of accounting services through TALLY.
- Accounts section has been fully computerized.

## 26. Increase in infrastructural facilities

A huge sum of money has been spent for the development of its infrastructure for the benefit of its stakeholders. Some examples are mentioned below,

Department	Campus area	Class rooms	Laboratories/ Library	Seminar Halls	Equipment	Value of Equipment Rs. Lakh	Source of funding	Others, Rs. Lakh	Total Rs. (Lakhs)
Life Long Learning education	210 sq. m.	2* 2#	1*	-	-	-	-	-	-
Chemistry	4000 sq. m.	3*	4*	3*	10	225	DST, UGC, CSIR, DRDO, European Union	-	225
Geography	5200 sq. ft.	3*	1*	1*	3*	-	-	-	-
Library & Information Science	1500 sq. ft.	2*	1*	-	-	-	-	-	-
UIM	2 Acre	4*	2*	4*	-	-	University	-	-
Political Science	---	2*	-	1*	-	-	-	-	-
Sanskrit	-	4* 1#	1*	1* 1#	-	-	-	-	-
Biological Science	6478 sq. m	10*	13*	2*	45	670	DBT, UGC, DST, MoEF, MP-CST	-	670
Journalism	2400 sq. ft.	2*	1*	1*	--	-	-	-	-
Physics and Electronics	-	-	-	-	1#	115.35	UGC	-	115.35
Physical Education	-	3*	3*	-	7#	14.75* 50.85#	Physical welfare Fee, and Dept Develop. fee	0.69	65.61
Yoga	-	4*	1*	1*	-	-	-	-	-
Law	-	7*	--	1*	-	-	SF	-	-
Mathematics	1.5 Acre	6*	1* 1#	2*	UPS Slide Projector	-	UGC; University Fund	-	-
English	-	2*	---	1*	-	-	-	-	-
History	-	2*	1*	-	-	-	-	-	-
Education (B.Ed.)	-	3*	1*	1*	-	0.67	University	-	0.67

\*Existing, # newly added.

New buildings with modern amenities have been constructed with a total cost of about Rs. 1 crore, and made available for housing teaching departments such as life-long learning education, journalism and mass communication, and Education.

## 27. Technology up-gradation

During the year 2009-2010, Rani Durgavati University has up-graded the technologies by initiating computer centers, computer labs, internet facilities, and browsing centers for the benefit of students, faculties and researchers.

Summary of technology up-gradation by the various Departments are shown in the following table.

Department	Total Computers	Computer Labs	Internet	Browsing Centers	Computer Centre	Office
AIHCA	1*	0	Yes	0	0	0
Life Long Learning education	10*	1*	yes	0	0	0
Economics	0	0	1* 2#	0	0	0
Chemistry	20*	1*	Yes	0	0	0
Geography	3*	1*	3*	3*	1*	1*
UIM	60*	1*	1*	1*	1*	2*
Sanskrit	2*	1*	1#	1#	0	1*
Biological Science	30*	1*	1*	1*	1*	1*
Journalism	14*	1*	12*	1*	0	2*
Physics and Electronics	20*	1*	Yes	11* 1#	0	0
Philosophy	2*	1*	1*	-	0	0
Physical Education	4*	-	Yes	Yes	0	0
Yoga	1*	1*	0	0	0	1*
Law	3	0	0	0	1	0
Mathematics	20* 20#	1* 1#	1* 1#	0	1*	0
English	3*	0	0	0	0	3*
UICSA	25* 5#	1*	Broadband (1)	1*	1*	1*
History	4*	0	3*	0	0	-
Education (B.Ed.)	1* 1#	0	0	0	1*	1*

\*Existing, # newly added.

All teaching departments of the university have witnessed growth in computational and internet facilities. Most departments have upgraded facilities vis-à-vis introduction of new versions of softwares, and computer peripherals. Such advancement has been brought in the departments of Economics, Sanskrit and Education. Department of Mathematics has added 20 new computers, 1 computer Laboratory and a few more internet facilities.

## 28. Computer and internet access and training to teachers and students

Most of the department of the University have adopted computer and internet access, and demonstrated effective training in these areas for teachers and students. Technology up-gradation, as briefly



depicted in the table of previous paragraph, has also been a major activity. In terms of both knowledge acquisition and skill development through academic programmes, it was experienced that teachers training in the use and application of technology are the key determining factor for improved performance students. The IQAC believes that the educational technology is by no means transformative on its own unless it involves dedicated and prepared teachers. Thus, basic elements of computer technology and its applications have been integrated in subjects' curriculum where it was previously not thought as a necessary element.

Department	Access to Internet
AIHCA	Yes
Biological Science	Yes
Chemistry	Yes
Economics	No
English	No
Education (B.Ed.)	Yes
History	Yes
Geography	Yes
Journalism	Yes
Law	No
Life Long Learning education	Yes
Library & Information Science	Yes
Mathematics	Yes
Political Science	No
Physics and Electronics	Yes
Philosophy	Yes
Physical Education	Yes
Sanskrit	No
Tribal Studies	No
UIM	Yes
UICSA	No
Yoga	Yes

## 29. Financial aid to students

Rani Durgavati University extended the support to students by providing financial assistance through endowment, free-ship and scholarship by government, and scholarship by the institution and other support services. Some examples are illustrated below.

Department	Financial support from government		No. of students who received international/National recognitions	
	No. of students	Amount (Rs.)	No. of students	Amount, Rs
AIHCA	8	17,600	-	-
Economics	1	UGC		
Chemistry	As JRF	As per norm of funding agency	-	-
UIM	37 (ST/SC)	-	-	-

Sanskrit	9	-	3	3,56,000
Biological Science	30	7,30,000	2	2,50,000
Journalism	-	-	10	As per govt. norms
Physics and Electronics	6	27,500	-	-
Law	SC/ST	Tuition Fees	--	
Mathematics	1	10,000	-	-
UICSA	16	3,84,800	-	-
History	11	82,400	-	-
Education	35 (ST/SC)	6,57,000	-	-

With the help of IQAC, the departments have developed a mechanism of assisting students in presenting their case for national support through diverse scholarship schemes. The circulars of such agencies are brought to the notice of students directly by the office of Students' Welfare Dean.

### 30. Activities and support from the Alumni Association

The university has an active Alumni Association comprises of faculty members, research scholars and students who were previously on roll in any of said positions. Frequent meetings of alumni association are called at the level of departments and the university. The alumni themselves also organize events where they share their views and extend support to their *Alma mater*.

The activities of Alumni Associations are as follows:

- Sharing achievements with growing students through meetings and informally.
- Advising authorities and concerned faculty about up coming courses.
- Participation on case studies of successful personalities in workshops.
- Participation and contribution to institutional conferences, seminars, workshops, etc.

A brief summary of activities and support from the Alumni Association during the year 2009-2010 is given below.

Department	Alumni Association Activities and support
Geography	RDVV, Alumni Association Meet
UIM	Organized lectures on placement of the student
Political Science	Meetings with Alumni
Biological Science	Meeting of Alumni placed at various National & international organization, and extended assistance in placement of the students and research scholars
Journalism	Alumni Association supported the student of the department
Education	Alumni feedback on current trends in education

During the year 2009-10, Alumni Associations of certain departments extended their support to students on placement services.

The Alumni are encouraged to make full use of social net working web sites in developing exclusive web pages, micro blogging, and feedback mechanisms to facilitate exchange of information, job prospects and opportunity harvesting.

### 31. Activities and support from the Parent-Teacher Association

Departments have been asked to obtain feedback from parents of registered students in different programmes of 2009-10, and to develop mechanisms for a regular interaction with concerned faculty

members. A number of departments supported the Parent-Teachers Association, and include departments of Geography, Political Science, Journalism, Law, and Education. The IQAC has stressed need for parent-teacher meetings, at least once in a semester, in all departments.

### 32. Health Services

The University has a well developed Health Center that has a full time qualified allopathic Doctor and supporting staff from the university to provide on campus services to students, employees and teachers. The Center is strategically located at arms distance to the university boys and girls hostels. The health center provides primary health care including hospitalization, distribution of medicines, ECG and other diagnostic services, etc. In addition to regular health care activities, university has also organized health camps by Endocrinologists, Dentists, Dieticians and practitioners of Ayurveda and Homeopathy therapies.

### 33. Performance in sports activities

During the year 2009-10, students from certain Departments participated in sports activities. Two students participated at State/University Level from the Dept. of Biological Science; 23 students participated at State/University Level, 3 students participated at National Level from Dept. of Physical Education and 2 students from Mathematics department participated in state level competition.

Department	No. of student participated	
	State/University Level	National Level
Biological Science	2	-
Physical Education	23	3
Education (B.Ed.)	Yes	-
Mathematical	2	-

### 34. Incentives to outstanding sportspersons

During 2009-2010, one student from the Department of Physical Education was adjudged outstanding sports persons, and presented with 2 National level awards, and one student of University Institute of Management was presented with 1 MP State level award.

Department	No. of medals and awards		
	State/University Level	National Level	Incentives
Physical Education	-	Boxing - 2 Hockey - 1	11,000 1,98,000
UIM	1	-	

### 35. Students achievements and awards

Student research fellowships and awards presented in 2009-10 are summarized in the following table.

Department	Achievements and Awards	
	No. of research scholar receiving the fellowship	No. of award/medal won by student in cultural events
Life-long Learning Education	1	-
Economics	1	-
Chemistry	6	-
UIM	-	4
Education	-	1
Sanskrit	-	3
Biological Science	16	-
Philosophy	4	-
History	3	-
Law	1	-

### 36. Activities of the Guidance and Counselling unit

Career guidance and counseling programmes run in the university have been effective in developing students' competence and personality, educational and occupational exploration, and career planning. It is a voluntary comprehensive programme. During 2009-10, a number of students were benefited by the Counseling and Career Guidance involving participation of various Departments (Table below).

Department	Student Counseling and Career guidance	No. of student benefited
AIHCA	Archaeological explorations and ancient history.	1
Economics	Economic surveys.	14
Chemistry	Pharma industries and employment prospects.	10
Geography	Counseling to appear in various exams and private sector jobs.	5
Library & Information Science	Information for various vacant posts at different colleges.	-
UIM	Organizational management.	58
Sanskrit	Group discussion for students.	17
Biological Science	Regular counseling sessions	78
Journalism	Print and electronic media services.	20
Physics and Electronics	Nano-technology and job prospects.	12
Philosophy	Personality development.	17
Physical Education	Counseling on job selections.	25
Yoga	Office productivity through yoga.	24
Law	Self employment and law practice.	125
Mathematics	Computational skills for placement.	20
History	Documentation in electronic media.	5
Education	Positions available in Local Schools-Teachers liaison for prospective jobs	4
<b>Total</b>		<b>435</b>

### 37. Placement services provided to students

Vocational placement services have been helpful to students to enter into appropriate jobs. Students are provided with job-information by special bulletins, audio-visual-aids and publication of handbooks detailing job opportunities. In the following Table available data on students' placement are mentioned. The IQAC plans to publish annually a brochure on curriculum vitae and other details of students who are in final semester of postgraduate classes, and give it a wide circulation among industries and other organizations.

Name of the Department	On Campus			Off Campus
	No. of organization visited	No. of students participated	No. of students placed	No. of students placed
Economics	-	-	-	18
UIM	2	20	4	15
Journalism	-	13	9	4
Physics and Electronics	-	-	-	6
Physical Education	-	-	-	80%
Education	-	-	-	80%

### 38. Development programs for non-teaching staff

During the year under assessment report, certain departments developed programs for the welfare of non-teaching staff of the university. To share common problems related with office work performance and computer application abilities, Departments of UIM, Geography and History organized programmes on chosen subjects for non-teaching staff. Department of Economics helped on accounts keeping.

Name of the Department	Welfare Schemes for Non-Teaching Staff
History	File keeping and on-line services
UIM	Office management
Geography	Computer applications (Word processing and Excel)
Economics	Accounts keeping

### 39. Healthy practices of the institution

Following healthy practices have been maintained in the university.

#### (i) Best practices in curricular aspects

- At the end of each semester feedback of students and teachers were obtained on suitability of courses, and on further additions/deletions.
- Practical exercises in science subjects were modified/substituted with attention to green practices.
- Summer training and job training have been incorporated in various courses as additional activities.

- The Institution-Industry Interaction has been made operative by subjecting students to such options in the curriculum.
- (ii) Best practices in teaching-learning and evaluation**
- Mandatory Comprehensive Continuation Evaluation (CCE) in each subject and semester.
  - Teachers' appraisal by students at regular interval.
  - Use of modern teaching aids, and virtual classes.
- (iii) Best practices in Research, consultancy and extension**
- Organization of 3-days long science meets every year to mark the National Science Day.
  - Invited lectures of distinguished personalities and subject experts.
  - *Vislesan (The Analysis)* a research Journal of university published separately for Science and Arts/Humanities.
  - *Sampreshan* a monthly newsletter published by the Department of Journalism and Mass Communication. It provides a rare opportunity to students of the department to act as editor, correspondent and interviewer.
  - Conducting centre on Women Study Development and Research especially for tribal and rural women folk. It also promotes inter disciplinary research on issues pertaining to women.
  - Organization of young scientist meets under the assistance of MP Council of Science and Technology, Bhopal, and using our own resources.
- (iv) Best practices in development of Infrastructure and Learning Resources**
- Procurement of new and advanced instruments for research.
  - Regular training of students and research scholars on instrumental use by organization of workshops.
  - The university has evolved the practice of participation of students and staff in maintenance of cleanliness of infrastructure.
  - The students are encouraged to participate in the environment management programmes.
- (v) Best practices in student support and progression**
- The University has constituted *Durgavati Award* to honour the mother of a meritorious girl student hailing from tribal region.
  - Incentive to meritorious students belonging to the low income group by Pandit Kunjilal Dubey award.
  - Remedial coaching to students belonging to SC/ST/OBC. It also provides special coaching classes to physically challenged students, and those from low income families.
  - Career Counselling and Development Centres for vocational and competitive examinations.
- (vi) Best practices in governance and leadership**
- All the matters related to academic and administrative placed within the purview of Academic Staff Council established in each departmental.
  - Coordination Committees for teaching and non-teaching employees of the university.
  - Students' grievance redressal cell in each department. Similar facility available with the office of students' welfare dean.

Department	Initiative undertaken
Geography	<ul style="list-style-type: none"> <li>• Study of campus topology. Construction of sump dam.</li> <li>• Rain water harvesting.</li> </ul>
UIM	<ul style="list-style-type: none"> <li>• Assistance to administration on office management.</li> <li>• On-campus placement services.</li> </ul>
Political Science	<ul style="list-style-type: none"> <li>• Human rights awareness programmes in the campus.</li> </ul>

Biological Science	<ul style="list-style-type: none"> <li>• Knowhow and remedies on plant diseases. Pest control in the campus.</li> <li>• Eradication of harmful weeds and plants from the campus by biological means.</li> <li>• Botanical garden with medicinal plants.</li> <li>• Biological pollution in campus. Safe disposal of biological waste.</li> </ul>
Journalism	<ul style="list-style-type: none"> <li>• Electronic media training and awareness programmes.</li> <li>• Publication of tabloids/e-journals covering national/social issues.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Interactive programmes on ethical issues in the society.</li> </ul>
Physical Education	<ul style="list-style-type: none"> <li>• Promotion of sports activities among school children.</li> <li>• Awareness programmes on health issues.</li> <li>• Awareness programmes on drug addiction, and remedies.</li> <li>• Self-protection workshops for children and women.</li> </ul>
Law	<ul style="list-style-type: none"> <li>• Awareness programmes on legal issues on gender harassment, rape and social discrimination.</li> <li>• University students and law practicers interactions.</li> <li>• Awareness programmes on legal issues in academia.</li> </ul>
Mathematics	<ul style="list-style-type: none"> <li>• Promotion of mathematical skill among school children.</li> <li>• Organization of mathematical quiz programmes.</li> </ul>
English	<ul style="list-style-type: none"> <li>• Training programmes on spoken English.</li> <li>• English writing skills.</li> <li>• Training programmes on phonetics in English.</li> </ul>
UICSA	<ul style="list-style-type: none"> <li>• Training programmes/workshops on computer applications.</li> <li>• Awareness programmes on professional computer softwares.</li> </ul>
Education	<ul style="list-style-type: none"> <li>• Awareness programmes on waste disposal management.</li> <li>• Informative programmes on ethnic art work.</li> <li>• Workshops on ill-literacy and combating mechanisms.</li> </ul>
Chemistry	<ul style="list-style-type: none"> <li>• Awareness programmes on air and water pollution.</li> <li>• Safe disposal of chemicals.</li> <li>• Adoption of green technologies in laboratories, and offices.</li> <li>• Chemical monitoring of soil and water bodies in the campus.</li> </ul>

#### 40. Linkages developed with National/International academic/research bodies

During 2009-10, certain Departments developed research linkages with national and international organizations, including universities/institutes. Department of Economics established cooperation with Gyanvani AIR, and Department of Biological Science and Mathematics formulated research collaborations. The Law department established teaching cooperation with the National Institute of Law, Bhopal.

#### 41. Any other relevant information the institution wishes to add

##### (i) Innovative Initiatives taken by certain Departments

Summary of innovative process adopted by the various Departments in teaching and learning are given below.

Department	Innovative process adopted by the institution in teaching and learning
Economics	Development of oral and power point presentation skills in seminars.
Chemistry	Preparation and presentation of wall magazines on current scientific topics.
Library & Information Science	Workshops on on-line services in library.
UIM	Interactive workshops on thematic management issues.

Political Science	Dialogical concept of education.
Sanskrit	Workshops on spoken Sanskrit, and phonetic system.
Biological Science	Study on biodiversity in the campus.
Journalism	Mock seminars and conferences.
Philosophy	Value added courses, Yoga education
Law	Moot courts.
Mathematics	Computerization of students data.
Education	Lesson/teaching programmes involving pupil teachers.

**(ii) Other information**

- (a) The University maintains a crèche (*Palna Ghar*) for children of the working women. It is maintained by the Director, Women Study Development and Research Centre, and provides the play, sleeping, feeding facilities under hygienic environment.
- (b) The University has zero tolerance to ragging. It operates through committees at the central and departmental levels.
- (c) The University sensitizes its faculty and students to avoid plagiarism in research work and publications.
- (d) The University has *Anti-Sexual Harassment Cell* for safety of women employees and students. It also encourages a healthy and congenial environment to the women.

**(iii) Research Publications (2009-10)**

1. Shrivastava, A., Khan, A.A., Jain, S.K., Singhal, P.K., Jain, S., Marotta, F., Yadav, H., Biotechnological advancement in isolation of anti-neoplastic compounds from natural origin: A novel source of L-asparaginase, (2010) *Acta Biomedica*, 81, pp. 104-108.
2. Ramrakhiani, M., Dongre, J.K., Enhanced photovoltaic effect using nanostructured multi-layered photoelectrode, (2010) *Ceramic Engineering and Science Proceedings*, 31, pp. 83-90.
3. Gupta, M., Jain, A., Verma, K.K., Determination of amoxapine and nortriptyline in blood plasma and serum by salt-assisted liquid-liquid microextraction and high-performance liquid chromatography, (2010) *Journal of Separation Science*, 33 (23-24), pp. 3774-3780.
4. Kumar, S., Raizada, A., Study of geomagnetic storms with Dst < -100 nT during 1999 – 2002, (2010) *Indian Journal of Radio and Space Physics*, 39 (5), pp. 284-289.
5. Verma, K.S., Iqbal, Y., Khare, D., Ethno-medicinal importance of weeds and their present status in Jabalpur, (2010) *Vegetos*, 23 (2), pp. 33-41.
6. Upadhyay, M.K., Kumar, A., Pandey, A.K., Optimization for production of fungal amylases isolated from *penicillium chrysogenum* (FGC/JNU201) in solid state fermentation, (2010) *Asian Journal of Microbiology, Biotechnology and Environmental Sciences*, 12 (4), pp. 731-734.
7. Singh, J., Pandey, A.K., Effect of temperature and storage time on shelf life of mycoherbicidal products of *colletotrichum dematium* FGCC#20, (2010) *American Journal of Agricultural and Biological Science*, 5 (3), pp. 315-320.
8. Chandra, B.P., Goutam, R.K., Chandra, V.K., Raghuwanshi, D.S., Luka, A.K., Baghel, R.N., Mechanoluminescence induced by elastic and plastic deformation of coloured alkali halide crystals at fixed strain rates, (2010) *Radiation Effects and Defects in Solids*, 165 (12), pp. 907-919.
9. Sharma, A., Bhattacharya, A., Enhanced biomimetic sequestration of CO<sub>2</sub> into CaCO<sub>3</sub> using purified carbonic anhydrase from indigenous bacterial strains, (2010) *Journal of Molecular Catalysis B: Enzymatic*, 67 (1-2), pp. 122-128.
10. Sharma, R., Baghel, R.K., Pandey, A.K., Dynamics of acid phosphatase production of the ectomycorrhizal mushroom *Cantharellus tropicalis*, (2010) *African Journal of Microbiology Research*, 4 (20), pp. 2072-2078.



11. Gautam, S.P., Bundela, P.S., Pandey, A.K., Awasthi, M.K., Sarsaiya, S., Evolution of composting as a strategy for managing organic municipal solid wastes in central India, (2010) *Australian Journal of Basic and Applied Sciences*, 4 (10), pp. 5451-5455.
12. Quereshi, S., Panjwani, R., Pandey, A.K., Singh, A.K., Formulation of phytotoxins from *Phoma* sp. FGCC#18 for the management of *Parthenium hysterophorus* L., (2010) *Archives of Phytopathology and Plant Protection*, 43 (13), pp. 1260-1267.
13. Thakur, R., Sandhu, S.S., Species confirmation of fungal isolates by molecular analysis, (2010) *Indian Journal of Microbiology*, 50 (3), pp. 280-291.
14. Waxar, H., Sen, D., Ramrakhiani, M., Study of different parameters in nanocrystalline CdSe based photoelectrochemical cells, (2010) *Optoelectronics and Advanced Materials, Rapid Communications*, 4 (8), pp. 1208-1210.
15. Gautam, S.P., Bundela, P.S., Pandey, A.K., Jamaluddin, Awasthi, M.K., Sarsaiya, S., Physicochemical analysis of municipal solid waste compost, (2010) *Journal of Applied Sciences Research*, 6 (8), pp. 1034-1039.
16. Khare, P.K., Pal, A., The effect of electric field stress on pure poly(vinyl chloride), poly(methyl methacrylate) and their polyblend samples, (2010) *Journal of Electrostatics*, 68 (4), pp. 328-336.
17. Gautam, S.P., Bundela, P.S., Pandey, A.K., Jamaluddin, Awasthi, M.K., Sarsaiya, S., Municipal solid waste management in central India, (2010) *Journal of Applied Sciences Research*, 6 (8), pp. 1029-1033.
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## Part C

### Details on the plan of the institution for the next year

The IQAC proposes the following key activities marked for various departments of the university. These plans are related with teaching and research in departments at individual/inter-departmental basis. Specific plans are also formulated for administrative obligation.

Department	Plans of institution for the next year
AIHCA	<ul style="list-style-type: none"> <li>Field study of Gondwana region.</li> </ul>
Life-long Learning Education	<ul style="list-style-type: none"> <li>Strengthening of infrastructural facilities.</li> <li>Proposal for funds for construction of separate building for the department.</li> <li>Proposal for audio-visual equipment and adult education accessories.</li> </ul>
Economics	<ul style="list-style-type: none"> <li>Up-gradation of existing facilities.</li> </ul>
Chemistry	<ul style="list-style-type: none"> <li>Awareness on occupational health. Green methodologies in the practice of chemistry.</li> <li>Miniaturization of laboratory methods for teaching. Development of suitable techniques by research.</li> <li>Operational instrumental facilities for micro-element analysis.</li> </ul>
Geography	<ul style="list-style-type: none"> <li>Strengthening of the department facilities.</li> </ul>
Library & Info. Science	<ul style="list-style-type: none"> <li>Development of ICT systems.</li> <li>Library automation and strengthening of readers support facilities.</li> </ul>
UIM	<ul style="list-style-type: none"> <li>Strengthening of institute-industry interactions.</li> <li>Workshops on office management.</li> <li>Students' placement services, and campus interviews.</li> </ul>
Sanskrit	<ul style="list-style-type: none"> <li>Popularization of Sanskrit.</li> <li>Organization of classical stage plays in Sanskrit in the campus.</li> <li>Inculcation of moral values among students by cultural street plays.</li> </ul>
Biological Science	<ul style="list-style-type: none"> <li>Further up-gradation of central instrumentation laboratory.</li> <li>Petroleum degradation by biological means.</li> <li>Mushroom culture.</li> </ul>
Journalism	<ul style="list-style-type: none"> <li>Up-gradation of facilities on electronic services and photography laboratory.</li> </ul>
Physics and Electronics	<ul style="list-style-type: none"> <li>Introduction of new courses on material science/nano-technology.</li> <li>Up-gradation of teaching laboratories including procurement of laser sources.</li> <li>Luminescence and areas of its possible use alternative to electricity.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>Professional ethics, research activities, seminars, discussion, student teachers interaction.</li> <li>Moral counseling and programmes on social ill-practices.</li> </ul>
Physical Education	<ul style="list-style-type: none"> <li>Workshops on players psychology, and personal fitness.</li> <li>Organization of sports skill development programmes.</li> </ul>
Law	<ul style="list-style-type: none"> <li>Construction of moot court building.</li> <li>National level competitions, and students support.</li> <li>Legal aspects on moral issues. Social behaviour.</li> </ul>
Mathematics	<ul style="list-style-type: none"> <li>Beginning of research programme on computer science.</li> <li>Ramanujam Centre proposal for support of young mathematicians.</li> </ul>
UICSA	<ul style="list-style-type: none"> <li>Fresh and state-of-art courses on software/hardware technologies.</li> </ul>
Education	<ul style="list-style-type: none"> <li>Teaching methodologies and virtual classes.</li> <li>Application of ICT in teaching programmes.</li> </ul>



(Coordinator, IQAC)



(Chairperson, IQAC)