# PARUL UNIVERSITY

R/Notification-618/2020-21

Office of the Registrar October 25, 2021

: Rs. 1000/-

#### **NOTIFICATION-CORRIGENDUM**

Sub: Research & Development Policy of the University

- Ref: (i) Notification of Even Number dated 8.2.2021
  - (ii) Proposal submitted by Director, CR4D
  - (iii) Approval of the Medical Director

In partial modification of the notification cited at ref.(i), the following changes are made

- 1. In Point Number 8.5- incentives offered to the authors of publications are revised as follows:
  - i) UGC/NAAS listed journals (Journals found qualified through UGC-CARE Protocol) (without IF)
  - ii) Web of Science indexed/listed journals (without impact factor)
  - (without impact factor): Rs. 2000/-iii)SCOPUS/ PubMed listed journals (without impact factor): Rs. 3000/-iv)SCI indexed/listed journals (without impact factor): Rs. 4000/-v) SCOPUS/SCI/ Web of Science/ ESCI/PubMed Journals: Rs. 4000/-having SCI impact factor), with impact factor upto 2.5: Rs. 5000/-vi)Journals with SCI Impact Factor (IF) >2.5: From Rs. 6000/-(with every increase in IF of one, there would be<br/>enhancement of Rs. 1000/- with a maximum of Rs. 12,000/-)onwards
- 2. In 8.5, under Note, after the sentence- " no incentive shall be admissible for writing " Review of Book" in any journal/ magazine- the following sentence shall be added:

"For incentives claimed by the faculty members for Review Articles of PG students, the amount will be reduced by 50% of the entitlement.

3. In 8.6, under " Promoting publication of books/ book chapters", after v), the following shall be added:

Publication of Book/Book chapter by LAP-Lambart or publisher of same status (National/International) shall be treated as follows:

• Book with pages more than 200 will be treated as a Book published by an Indian publisher (Category B).

- Book with pages less than 200 will be treated as a Book chapter published by an Indian publisher (Category B).
- Book with pages less than 100 will be treated as a review article equivalent to a journal without impact factor (UGC-CARE/Web of Science).

# 4. In 8.6, in the NOTE section, the following shall be added as (4)

The above Note will not be applicable to Book chapters published by International publishers (Category A).

# 5. In 8.7., after (viii), the following may please be added in (ix)

ix) Online Paper presentation in National/International conference:

An amount equal to 75 % of the Registration fee but not exceeding Rs. 10,000/would be payable to the applicant with the submission of documentary evidence for presentation of the paper.

# 6. In 8.7, in the Note Section, the following shall be added after (1)

- For Papers (oral/poster) having the names of the faculty members but presented by students/scholars in National/International conferences/symposia, there will be NO incentives given to the faculty members.
- Paper presented in International conference should be of high standard worth publication in reputed International journals. For paper presentation (physical/OFFLINE mode) in International conference, 50 % of the claimed amount will be released on demand after attending the conference and the rest 50 % would be released after providing a proof of publication of the work (presented in the conference) in peer reviewed UGC-CARE listed journal.

# 7. After 8.10, the following shall be added in 8.11 and in 8.12

- 8.11 Membership of Professional bodies: An amount equal to 50 % of the Membership Fee to a maximum of Rs. 5000/- will be payable to the applicant. Membership of ONLY ONE professional body per year will be admissible by an applicant.
- **8.12 Honoring the Award winner:** A token amount of honorarium shall be paid to the award winner as follows:

i) International Award given by a reputed/recognized body	: Rs. 10,000/-
ii) National Award given by a Government body	: Rs. 6000/-
iii) National Award given by a Non-government body	· Rs 3000/-

(The final decision of honouring the awardees rests with the Management/committee constituted by the management)

All other items mentioned in the earlier notification remain unaltered.

By Order Registrar

To,

- Deans of Faculties
- Principals/ Directors of Colleges/ Institutes
- Dean, Doctoral Studies & Research
- Dean, Student Welfare
- The Controller of Examinations
- Director, CDC / EDC / CEP / EDP / CEC / Teachers' Training / Marketing / CR4D
- Executive/ Academic Directors

#### Submitted to,

- The President
- The Vice President
- Dr.Parul Patel, Member, Governing Body and Chairperson, Admissions Committee
- Dr.Geetika Madan Patel, Member, Governing Body and Medical Director
- Dr.Komal Patel, Member, Governing Body and Director
- The Provost
- The Pro Vice Chancellor

# PARUL UNIVERSITY

R/Notification-618/2020-21

Office of the Registrar February 8, 2021

#### NOTIFICATION

#### Sub: Research & Development Policy of the University

Ref: (i) No.R/Notification-303/ 2020-21 dated 26.12.2018

(ii) Proposal by the Director (R & D), CR4D

(iii) Approval of the Medical Director

The Research & Development Policy of the University was notified vide ref.(i). The Director (R &D), CR4D has suggested changes in the Research & Development Policy notified by the university earlier. The revised Research & Development Policy of the university is enclosed in the Annexure.

This comes into effect immediately.

This is subject to the approval of the Academic Council and the Governing Body.

#### To,

4) Dean, Student Welfare

5) The Controller of Examinations

6) Director, CDC / EDC / CEP / EDP / CEC / Teachers' Training / Marketing / CR4D

7) Executive/ Academic Directors

#### Submitted to,

1) The President

2) The Vice President

3) Dr.Parul Patel, Member, Governing Body and Chairperson, Admissions Committee

4) Dr.Geetika Madan Patel, Member, Governing Body and Medical Director

5) Dr.Komal Patel, Member, Governing Body and Director

6) The Provost

<sup>1)</sup> Deans of Faculties

<sup>2)</sup> Principals/ Directors of Colleges/ Institutes

<sup>3)</sup> Dean, Doctoral Studies & Research

# <u>ANNEXURE</u> <u>RESEARCH & DEVELOPMENT POLICY OF</u> <u>PARUL UNIVERSITY</u>

#### 1.0 PREAMBLE

Universities are the fountainheads of knowledge creation and dissemination. This includes innovations and inventions of new technologies, new products and newer implementation/interpretation of the existing knowledge. Knowledge is the foundation of all the disciplines. Parul group of Institutions, run by Parul Arogya Seva Mandal Trust, was bestowed with the University status by the Government of Gujarat under Gujarat Private University Act 2009, 2015, named PARUL UNIVERSITY. The University offers courses in multiple disciplines and has a huge pool of human resource of students and highly skilled teaching faculty. The post-graduate (PG) and Ph.D. degree programs in applied sciences, engineering and technology, pharmaceutical sciences, health sciences, agriculture sciences, social sciences and humanities, and management are offered to the students in the University. Intellectual capabilities of this pool of skilled faculty and highly motivated students need to be suitably channelized so that the outcome is not only in the form of a bunch of degree certificate holders, rather their intellectual power and efforts are utilized in creation of new technologies and inventions/innovations during their study period, which would be helpful in establishing the country as a self-reliant and developed nation. Parul University (henceforth called University) offers an ecosystem conducive for performing quality research in the stated subject areas. Being a self-financed university, it has financial constraints in fulfilling all research needs, hence it encourages its researchers for attracting research funding from external sources; but wherever necessary, it has the commitment to support the researchers financially in their R & D endeavors. This R & D policy is a guideline and not an exhaustive document of "Dos" and "Don'ts" for the researchers to inculcate the principles of honesty, integrity, trust, accountability, responsibility, openness and co-operation among the faculty members and the students giving them full academic freedom. But, it must be remembered that the University platform shall never be used against the universally accepted National and International laws and ethics or against National policies, security and National interests.

#### 2.0 THE OBJECTIVE

Followings are the objectives of this policy:

- The primary aim of this policy document is to cultivate, promote and strengthen research and scholarly activities among the faculty and the students of the University, and to enhance the quality of R & D activity undertaken by them.
- To create awareness about the processes/procedures, guidelines to be adopted by the researchers, and incentives/awards offered to the researchers of the University.
- To encourage the faculty members to utilize their expertise/skills for extending their services to external agencies/industries for the benefit and growth of the industries and to generate revenue for the University to further strengthen R & D activities in the University.
- To streamline the R & D activities and bring transparency in the management of the same.
- To encourage the researchers to conduct their research in an exemplary manner adopting universally accepted ethics/norms and good research/scientific practices avoiding scientific misconduct.
- To make the University a research oriented university by developing scientific temperament among the researchers.
- To encourage the researchers to strive for protecting their research output by patenting/copyrights or other forms of IPR, as per the IPR policy of the University.
- To co-ordinate the R & D activities conducted in various institutes of the University.
- To provide an effective support system to facilitate R & D and scholarly activities in the University.
- To promote publication of the research output in peer reviewed journals of repute with high impact values.
- To promote quality research that could be patented and exploited for commercialization.

#### 3.0 <u>SCOPE OF THE POLICY</u>

The policy is intended for all the academic, research and supporting staff (permanent or temporary), and students of Parul University engaged in teaching-learning and R & D activities. All the above stake holders are collectively termed as "researchers", throughout the length of this text.

#### 4.0 <u>CENTRE OF RESEARCH FOR DEVELOPMENT (CR4D)</u>

In order to enhance the R & D activities, CR4D has been incepted as a central coordinating department in the University. CR4D shall act as the custodian, and R & D promoting body in the University. CR4D shall engage in advisory and coordinating role for all the researchers in the University for proper management and execution of the R & D policy of the University in the following manner:

- All research proposals for extramural funding shall be routed through CR4D. CR4D advice shall be taken for improving the quality of the proposals and all research proposals shall be submitted to CR4D at least a week in advance of the last date of submission of the proposals to the funding agency.
- All intramural proposals should be submitted to CR4D for financial assistance in the prescribed format for necessary processing. CR4D shall follow the laid down procedure for processing of all such intramural proposals.
- All patent applications shall be processed by the inventors/researchers after obtaining necessary advice from CR4D office.
- All other proposals for financial assistance like proposals for travelling for paper presentation, invited expert talks, and incentives for publishing research papers, books/book chapters, for patent application filing and examination requests, or awards (Research excellence/promotion awards) should be addressed to CR4D. CR4D shall process all such applications as per the laid down procedures.
- CR4D shall maintain a record of all such activities on annual basis.

#### 5.0 <u>R & D PROGRAMS</u>

**5.1 Research at UG/PG level**: There is a limited scope of research at UG level in most of the disciplines except for those disciplines which have 'Project' work in the final year of the UG programs. Project is normally a part of teaching-learning process for these students but sometimes an observation may lead to some new finding. However, PG courses in many disciplines have a project work for full two semesters (one year) wherein the students undertake R &D work. This project work need to be taken more seriously so that it can lead to some innovations/development of new technology, but at least should provide some quality publications. The University has a well defined policy on research paper publication resulting out of each dissertation, which shall be adhered to. Best PG dissertation awards are given to the selected candidates from individual faculties.

**5.2 Ph.D. degree program**: It is understood without saying that Ph.D. is a purely research oriented program. 'Research' can be defined in different ways but is nothing but unraveling the mystery of nature, creating new knowledge/technology or redefining the existing knowledge. It also includes the use of existing knowledge for the development of new devices, products, processes or improved materials. But it excludes standard routine activities like data collection, preparation of teaching materials, routine testing, or other professional activities devoid of basic tenets of research components. Research findings are always open to scrutiny or formal assessment by subject experts.

PU has a large p0.ool of PG and Ph.D. scholars who need to channelize their energy and efforts by undertaking quality research work which should be applicable to the society and for nation building. Apart from the self-financed Ph.D. scholars, the University supports the Ph.D. degree seeking scholars financially by extending financial assistance falling under the following four categories:

- Ph.D. Scholarship/Fellowship is provided to some selected applicants registered in the University as full time research scholars.
- ii) JRF/SRF Fellowship on UGC pattern is provided to a limited number of fulltime Ph.D. registered candidates in the University who are NET/GATE/GPAT qualified.
- iii) The University teachers registered for Ph.D. in the University can avail intramural research project assistance on the basis of merit for pursuing their Ph.D. degree programs.
- iv) Ph.D. scholars are provided financial support to purchase chemicals/glassware/ small equipments, testing/analysis charges etc. for their research work.
- v) Fee-waiver scheme (for a limited number) is available to faculty members of Parul University who are registered for their Ph.D. programme in the PU.

Best Ph.D. thesis award of the year is given to the selected candidates every year.

- **5.3 Post-doctoral Fellowship program**: A limited number of post-doctoral fellowships are available in the University on merit basis. Teachers of the University holding Ph.D. degree can avail this facility wherein their teaching load shall be reduced substantially to give them more time for engaging themselves in R& D activities.
- 5.4 Research by Faculty members: Faculty members are supposed to involve themselves in R & D activities along with their normal academic and administrative duties. Faculty members are encouraged to protect the intellectual property generated by their R & D activities undertaken in the University using their intellectual capability by applying for

patenting of their innovations. They should also try to disseminate their research findings by publishing in peer reviewed journals of high repute and by presenting their work in National/International conferences. Faculty members are also encouraged to upgrade their knowledge by attending QIPs/SDPs or workshops. Faculty members are encouraged to share their expertise in delivering invited expert lectures on different platforms in and outside the University.

For encouraging the faculty for R & D activities, faculty members have the options for applying for the following research schemes:

- i) Extramural projects: Due to the constraints of financial resources, the University can fund research proposals in a limited manner. It is expected that faculty members would strive for research funding from extramural sources by applying to various government funding agencies like MHRD, AICTE, UGC, DST, DBT, ICMR, CSIR, AYUSH, DAE, GUJCOST and GSBTM or private funding agencies/International funding agencies. Incentives are given to faculty members for bringing projects from externally funding agencies.
- ii) Consultancy: Faculty members are encouraged to undertake consultancy in order to harness their expertise and generate revenue for themselves and for the University. The revenue so generated would be used for strengthening of R & D infrastructure in the University. Consultancy rules as stated in IPR Policy of the University would be applicable in extending such services and sharing of the revenue shall be as stated below: The revenue generated by consultancy will be shared in the ratio of 70: 30 (i.e. 70% of the revenue goes to the faculty member and 30% to Parul University) for the 'X' amount. For the next 'X' amount, the ratio will be 50:50 and for further amounts beyond '2X' the ratio will be 30:70 for the faculty member and Parul University respectively. The amount 'X' will be decided mutually between the faculty member and Parul University. If the amount is not decided mutually, the 'X' amount will be Rs. Fifty lakhs.
- iii) Intramural funding: In order to give impetus to R & D activities of the faculty members, intramural funding shall be extended to faculty members on the basis of the merit of the research proposal in case the extramural funding is not materializing/available to such faculty members (both non-Ph.D. and Ph.D. degree holders).

Faculty members can apply for intramural funding to CR4D in the prescribed format. Applicants shall be called for presentation in CR4D and may be asked to modify the proposal in light of the comments made by the expert committee. Amount of Funding would be decided on the basis of merit of the proposal after scrutiny. Interdisciplinary research projects would be given weightage/preference for intramural funding.

iv) Research Associateship/Post-doctoral Fellowship: Research associateship is extended to a limited number of faculty members possessing Ph.D. degree for a period of one year which can be extended for one more year, if the progress is found satisfactory by the project evaluating committee. Teaching/administrative load of such selected candidate shall be reduced in order to allow them to devote more time to research activities and financial incentive is also provided.

### 6.0 <u>RECOGNIZING AND SHOWCASING THE R & D OUTPUT OF THE FACULTY</u> <u>MEMBERS</u>

- **6.1 Publication in journals**: Faculty members are encouraged to publish their research work in reputed International/National journals with high impact factors (SCI). Preference shall be given to publication of research articles in journals publishing the articles free of cost.
- **6.2 IPR protection**: If the research work has potential for industrial application then the faculty members shall not disclose their findings on any public platform by publishing in journals or by presenting the work in conferences, public display or in any other manner, before filing a patent application/other forms of IPR protection.
- **6.3 Writing of books**: Faculty members are also encouraged to disseminate their knowledge/expertise by writing books or book chapters in edited books, and publishing them with publishers of repute.
- **6.4 Research excellence/promotion awards**: The University has instituted Research Excellence Awards and Research Promotion Awards for the faculty and the students respectively, for recognizing and honoring good researchers in the University. The awards shall be given away every year (calendar).
- **6.5 Expert lecture delivering/attending training programs/paper presentation**: In order to showcase and disseminate their expertise the faculty members are encouraged to deliver invited expert lectures in and outside the University and present their research work in conferences. Faculty members are also encouraged to upgrade and refine their professional knowledge and skills by attending QIPs/SDPs/workshops organized by other institutions.

#### 7.0 MODE OF CONDUCTING AND COMMUNICATING R & D ACTIVITY

**7.1 Researchers' responsibilities**: The researchers are free to choose the area of their research but it is advised to take up those research problems which are of national interests and

priorities in specific thrust areas. The faculty members shall register Ph.D. scholars as per the UGC guidelines. The experimental methods and techniques adopted by the researchers shall not violate the established professional ethics in any way pertaining to the safety, privacy, health and personal rights of the researcher himself/herself, human subjects under study or laboratory animals. The researchers shall carry out the research in a transparent, socially responsible and ethical manner and shall not indulge in research/scientific misconduct. The researchers shall perform and report research in an honest and ethical manner maintaining the basic principles of good research practices. They shall maintain day-to-day records of their findings and raw data, and shall be open to internal/external scrutiny of their research findings. The researchers shall always give their correct affiliation (i.e. Parul University) in all of their publications, patents, books, book chapters and reports. Researchers are expected to carry out research in a manner to avoid conflict of interest between one's professional obligations to the University and one's personal interests or the interests of the funding agency. The researchers shall safeguard, maintain and use the equipments/instruments properly to increase their life span so that these facilities could be used by a wide spectrum of researchers. The researchers shall adopt all the laid down university procedures for the procurement of equipments/instruments or other consumable items. Necessary approvals from the competent statutory/regulatory bodies shall be obtained in case of research involving laboratory animals or human subjects. The faculty members shall be responsible for maintaining records (financial, research related or otherwise) and submitting the utilizing certificates of the government/private funded research projects.

The researchers are expected to create and maintain a cordial environment of mutual trust and co-operation in the working place so that an open exchange of ideas takes place among the researchers. Faculty members supervising PG/Ph.D. scholars shall be responsible for the followings:

- For supervising and training of the students for the proper conduct of experimental work, recording, processing, interpreting the results, publication of the findings and proper storage of the research records and other research materials (i.e. representative samples etc).
- For advising the students of their obligations in respect of academic integrity and ethical conduct & reporting of research work.
- For maintaining confidentiality and secrecy of their R & D activity.

- **7.2 Collaborative research**: The University strives to provide a research-conducive environment and adequate research facilities but it may not be possible to provide each and everything for undertaking R & D activity in a particular area of research. In such cases the faculty members are encouraged to undertake collaborative research programs wherein the expertise/research facilities of other institutions can be utilized to complete the research project. In such cases due recognition can be given to the collaborating institutions as per the established norms without compromising the interests of the University.
- **7.3 Industrial/sponsored research**: For the overall benefit and upliftment of the society, universities act as the hub of innovations, and such innovations are realized into useful products in the industries. So, industry-academia interaction is of utmost importance for the nation to traverse the path of industrialization.

The University encourages its faculty members to entertain industry-sponsored research projects. Financial support shall come from the industry and human resource shall be of PU for such projects. Research facilities of both, PU as well as of the industry can be used for fulfilling the objectives of the program. Researchers involved in such projects shall maintain utmost secrecy and confidentiality in disclosing the research findings under such projects to any third party. Suitable MOUs can be signed with the industry partner in this regard. In the cases of patenting or publications of the research findings, interest of PU shall be suitably safeguarded. Onus of this responsibility lies with the PI of the project in the University.

- **7.4 Research planning and designing of experiments**: It is to be understood that planning and designing of research activity cannot be the same in all the disciplines, but an overall rationalization can be done for such an activity. Aims and objectives to be achieved out of the planned research must be well defined and crystal clear. The ways and means of achieving the listed objectives should be robust and suitably validated. In case the defined ways and means fail to achieve the laid down aims, a contingency plan or an alternative route of achieving the listed aims and objectives should be explored. While designing a research project, the following points may be taken into consideration:
  - The aims and objectives of the planned research need to be properly stated and clearly mentioned.
  - Background of the project should be discussed. What is the existing prior art in the specified area of the project? Whether the project is going to add to the existing knowledge or there is no existing prior art in the specified area of the project, and what

novelty the researchers want to achieve, and why? All these questions should be addressed.

- How the outcome of the project is benefitting the society as a whole?
- The step-wise methodology to be adopted to achieve the laid down aims and objectives should be listed and defined. In case the given methodology fails, what are the alternative routes of achieving the laid down goals?
- Whether the required skills/facilities are available in-house with the research team or some sort of collaboration/outsourcing is needed?
- Experiments should be designed having suitable controls, and suitable statistical methods should be adopted in designing of experiments.
- Ways and means of gathering, analyzing and interpreting the data should be identified.
- Research facilities and instruments/equipments required for performing the research work should be identified and listed.
- Whether the required resources are available for executing the research project, if not, how would these be compensated? Whether some financial help is sought and how much and for what particular purposes? All such questions should be addressed.
- What is the time frame of completing the research project? Step-wise listing should be made on how the research work would proceed in the given time frame.
- **7.5 Research involving Human subjects**: Ethical issues are involved in research involving human subjects. The University gives due importance to ethical issues involving human beings and due respect to Indian traditions and ethics. Research involving human subjects including clinical trials shall be conducted by suitably qualified researchers only, and be approved by an appropriately licensed Institutional Ethics Committee.

Researchers in social sciences/humanities working on projects involving human subjects should be aware about applicable appropriate laws of the land. The primary responsibility in this respect lies on the PI.

**7.6 Research involving laboratory animals**: Animals are frequently used in research involving drugs and pharmaceuticals. While using laboratory animals for such projects, the principle of '3Rs' i.e. "reduction, refinement and replacement" shall be practiced. Such research shall be conducted by suitably qualified individuals after obtaining necessary approval from IAEC, duly recognized by CPCSEA, constituted under 'The prevention of cruelty to animals Act 1960' by the Ministry of Environment and Forests, Government of India.

Pharmacy Council of India directive of 2013 shall be obeyed to replace animal experimentation in D. Pharmacy and B. Pharmacy courses with software-based experimental work.

**7.7 Safety aspects**: Health and safety of the human subjects engaged in R & D activity is of utmost priority for the University. Adequate safety measures shall be adopted by the working personnel while executing research plans. A minimum of two researchers must remain present in the laboratory at any given point of time. Adequate fire fighting measures and safety kits/equipments shall be made available in the working places.

All necessary measures shall be adopted to protect the environment. No work is permitted to be done which could jeopardize the health and safety of the researchers, laboratory staff, other employees of the university, students, common public in general, and the environment.

Waste material shall be disposed off with due regard to human health and safety, and environment regulations. Biological waste shall be disposed off by incineration or by outsourcing to some external waste management agency dealing in disposal of biological waste.

**7.8 Collection of research data and its storage**: All primary research data must be accurately and clearly recorded in a date-wise manner in laboratory notebook, and kept secure in one's possession. Any subsequent correction (addition/deletion) in the data should be clearly identified in the primary raw data. The primary data shall be made available for verification and auditing if the need arises. Loss or non-production of primary data constitutes research misconduct.

For research work involving human subjects there are additional requirements concerning confidentiality and consent. Researchers shall comply with all legal and ethical requirements of the funding agency for collection, use and storage of such data.

Confidentiality shall be maintained for IPR related projects, especially for projects funded by a third party.

Primary electronic data shall be stored accurately on the central server in addition to storage at local level. All data (primary or secondary) must be secured in the form of soft copies by using suitable password system against piracy.

**7.9 Retention and ownership of Research data**: The onus of retaining and archiving research data shall lie with the PI. Research data must be retained for a minimum period of three years after publication of the research work or closing of the research project. In case of allegation of research misconduct, the data must be retained for a sufficient period of time

till such issues are fully settled. In case a PI wishes to leave the organization, he/she shall hand over the research data to the head of the institution (Principal/Director/Dean) for all such research projects which get executed in the institute. In case the research project is moved along with the PI to some other institution outside PU, the responsibility of maintaining and archiving the data shall reside with the PI. For students in various degree programs, the research data should be retained till the degree is awarded.

Ownership of the research data produced during the research projects carried out in the University shall remain with PU except for the externally funded projects.

**7.10 Monitoring of research work**: Research monitoring is an essential aspect to assess the progress of the research work and is akin to a 'Health check' exercise.

Monitoring of research work at PG/Ph.D. level shall be done as per the University regulations of the concerned course through DRC or other suitable mechanism as per the rules.

Research monitoring of the projects sanctioned under intramural funding and University Research Associateship/postdoctoral fellowship shall be done on six-monthly basis. Funding may be discontinued in such cases in which the progress is not found satisfactory.

Monitoring of research work conducted under the externally funded projects shall be done as per the guidelines of the funding agency.

7.11 Output of the R & D activity: Research output must not remain buried under the piles of dissertations/theses. It should be used for the welfare of the society in terms of new technologies/products, or for further advancement of science and technology.

R & D activity should lead to research output that has the potential to be exploited commercially. Such research work shall not be disclosed/discussed on any public platform before its protection under IPR. Consult the IPR policy of PU for such research output.

The University encourages its researchers to publish their research work in peer-reviewed journals of high impact factors and in National/International conferences. The research work disclosed on these platforms must be reported accurately and honestly following good scientific/research practices. The authors shall solely be responsible for the contents of the publications. Plagiarism in publications brings bad name to the researchers and to the University; hence all research publications shall be screened through plagiarism checking software (like iThenticate or Turnitin) to control/check plagiarism before communicating the research/review articles for publication. Researchers who have made significant contribution to the research work should be offered authorship, with full consideration given to exclude guest/honorary authors. Priority of the sequence of authors i.e. attribution,

can be given in the order of their contribution to the work, i.e. an author contributing more should be given a priority over the other contributing comparatively lesser. The PI can retain the status of corresponding author. Contributors who do not fit into the criteria of authorship should be duly acknowledged along with the name of the funding agency. No person who fulfills the criteria for authorship should be excluded from the submitted work. Researchers shall seek permission from an individual/publisher for the borrowed work used in the publication and must duly acknowledge the individual/publisher with proper attribution. All publications (research/review articles, paper/poster presentation etc) must reflect affiliation of the authors to Parul University.

In order to popularize the research and to bring the name of the University in lime light, the researchers are encouraged to present their research work in oral/poster presentation in various National/International conferences. All ethical norms applicable to research publications are applicable to paper presentation also.

Faculty members are encouraged to disseminate their knowledge by writing books/book chapters with publishers of National/International repute indicating their affiliation to PU.

All publications/presentations of the faculty members shall be made available to CR4D for the purpose of maintaining annual records of such activities.

- **7.12 Ethical values and legal implications**: Parul University respects Indian traditions and professional ethics. It expects all its researchers to take into consideration the ethical and legal implications of their research and be aware of their responsibilities to their profession, PU, regulatory/sponsoring agencies, society and the environment.
- 7.13 Ethics and Good Research Practices: In order to conduct a responsible and quality R & D activity, the following six attributes are important to be imbibed by any researcher:
  - <u>Honesty</u>: Research work should be honestly conducted, recorded and presented. Utmost attention should be given to present the data accurately, due acknowledgement be given to the contributors and one must not indulge in scientific misconduct.
  - <u>Integrity</u>: Comply with all ethical and legal requirements applicable to one's field of interest, declare conflict of interest if any, and maintain confidentiality (especially in executing research projects funded by private agencies/industrial houses).
  - <u>Accountability</u>: The researchers are accountable to the university, society and ultimately to the nation. They should ensure that they are complying with the terms & conditions/agreements of the regulatory bodies/funding agencies.

- <u>**Trust</u>**: Researchers should be trustworthy so that their research output is reproducible, and any funding agency (public or private) has no hesitation in relying on the expertise of the researchers.</u>
- **Excellence**: The researchers shall strive to excel in the field of their interest and aim to produce research of the highest quality.
- <u>Cooperation</u>: Researchers are expected to cooperate with one another in terms of exchange of ideas, extending research facility to other researchers and providing necessary training & skills to one another (especially to the juniors and beginners), subject to due considerations to confidentiality agreements.

Theoretically, ethics determine 'human values and standards'. Ethical norms are concerned with rightness or wrongness of the action. Professional ethics define code of conduct which may be formal or informal (unwritten). It needs to be understood that ethics and laws are not the same. Scientific ethics are concerned with standards of behavior that are specific to science, and it is not a well defined area. "Research ethics" is not static as it is an ongoing conversation. All practicing scientists need to be aware of scientific/research ethics. All the researchers are advised to adhere to **UGC notification (No. 1-25/2019(QIP) (Good Research Practices in HEIs, dated 28<sup>th</sup> Oct 2020)** regarding 'Good Academic Research Practices (GARP). Research ethics are moral principles or a code of conduct which emphasizes the actions researchers should follow and the way(s) they should behave/act. It is important to adhere to ethical norms because:

- Norms promote the aims of research such as exploration of knowledge and truth, and avoidance of errors.
- Ethical standards promote the values that are essential to collaborative research such as trust, accountability, mutual respect and fairness.
- They help to ensure accountability to the society.
- They help to build public support for research.

As said earlier 'research ethics' is not a well defined area, but it constitutes the following main points:

- a) Honesty: It means honestly conducting the procedures/methods, collecting data, reporting results, publication status in scientific communications, i.e. not indulging in scientific misconduct, and not deceiving colleagues, funding agencies or public at large.
- **b) Objectivity**: It is about avoiding bias in experimental design, data analysis, data interpretation, paper review, personnel decisions and other aspects of research where objectivity is required.

- c) **Integrity**: It is about keeping promises and agreements, acting with sincerity and presenting data in full, precisely, fairly and frankly manner.
- **d**) **Carefulness**: It is avoiding careless errors, examining one's own or ones peers' work carefully and critically and keeping good records of research activities.
- e) **Openness:** It is about accepting open criticism and new ideas.
- **f**) **Respect for intellectual property**: Give credit where credit is due to all contributors, honor patents, copyright and other forms of IPR, and never plagiarize.
- **g**) **Confidentiality**: Maintain confidentiality of records for the sponsorrs, and of the records of the patients/human volunteers.
- h) Responsibility: Be responsible for the research outcome regarding:
  - Responsible publications: Publish in order to advance research, avoid duplicative and wasteful research.
  - Responsible mentoring: Help, educate, mentor and advise students regarding their research.
  - Social responsibility: Strive to promote social goodness and prevent/mitigate social harms.
- i) **Respect colleagues in collaborative work**: Foster scientific collaboration by maintaining an atmosphere of openness, mutual assistance and trust.
- **j**) **Nondiscrimination**: Avoid discrimination against colleagues/students/research subjects on the basis of gender, race, religion or any other factor not related to the scientific competence.
- k) Professionalism: Maintain and improve professional competence and expertise through learning and upgrading your knowledge by keeping abreast of scientific developments in your field of interest.
- Human rights protection: Respect human dignity, privacy and autonomy, maximize benefits and minimize harms.
- m) Animal care: Give proper respect and care to animals. Do not conduct poorly designed/ unnecessary animal experiments.
- **n**) **Legality**: Know and obey relevant institutional laws and policies, and the laws of the land.
- **7.14 Avoiding scientific misconduct and unethical research practices**: Scientific misconduct means, fabrication, falsification, plagiarism or other practices that seriously

deviate from those that are commonly accepted within the scientific community for proposing, conducting, reporting or reviewing research.

- **Fabrication**: It is presentation of fabricated (concocted or cooked) data/results which have not been obtained in the manner or by the methods described in the report, to the research community.
- **Falsification**: It is manipulating research materials/equipment or processes, or changing or omitting data or results, such that the research is not accurately represented in the research records.
- **Plagiarism**: It is the appropriation of another person's ideas, processes, results or words without giving due credit. It is misappropriation of someone else's research plan, manuscript, article or text or parts thereof as one's own, i.e. illicit presentation or use of an original research idea, plan or finding, disclosed to him/her in confidence, under his/her own name.

Some other important unethical research practices are listed below:

#### i). While performing research work:

- Sabotaging someone's work
- Rigging an experiment so that you know how it will turn out to be.
- Making significant deviations from the research protocol approved by relevant committee/board.
- Conducting/writing a review of literature that fails to acknowledge the contributions of other scientists working in the field.
- Exposing students and staff to biological risks in violation of institution's bio-safety rules.
- Not reporting an adverse event in human research experimentation.
- Using a racial/discriminatory epithet in the laboratory.
- Wasting animals in research involving animal experimentation.
- Failing to keep good research records.
- Failing to maintain research data for a reasonable period of time for verification/external auditing.
- Deliberately overestimating/underestimating the clinical significance of a drug/NCE in order to obtain economic benefits.

#### ii). While publishing your research work:

- Submitting the same paper for publication in two different journals without disclosing to the Editors.
- Publishing the same paper or part of it in two different journals (i.e. self-plagiarism).
- Practicing gift/honorary authorship or ghost authorship (removing the name of a research contributor in the manuscript) for publication.
- Maximizing the number of publications by salami slicing (i.e. breaking up a piece of research work into large number of small papers) or tiling (i.e. publishing a sequence of substantially overlapping papers).
- Trimming outliers from the data without discussing the reasons.
- Using inappropriate statistical techniques in order to enhance the significance of your research.
- Misrepresentation of research finding, i.e. use of selective or fraudulent data to support a hypothesis or claim.
- Unrevealing conflicts of interest that could affect the interpretation of the findings.
- Failing to present data that contradict one's own previous research.

#### 8.0 PROMOTING AND INCENTIVIZING RESEARCH

The faculty members are encouraged to undertake and execute research projects, file patents, publish their research outcome in good quality research journals and participate in paper presentations, QIP/FDPs/workshops and other similar activities. Different schemes/incentives\* are made available for this purpose as mentioned below:

(\*All schemes/Incentives/assistance are subject to changes from time to time and following due scrutiny by expert committee)

- **8.1 Extramural Research Project**: Matching grant equal to 25% of the non-recurring budget shall be given to researchers fetching extramural research projects from external funding agencies (government or private) for the purchase of equipments/machinery in case there is a shortfall of funds for the purchase of the same. The matching grant can be enhanced if the need arises on case to case basis. Monetary incentives to the tune of 1% of the grant received in that financial year will be given to such faculty members phase-wise. Applicants can apply for matching grant and for incentives on Proforma A.
- **8.2 Intramural research project**: In absence of extramural research funding, faculty members can apply for intramural research projects to the University, if they wish to pursue research

in their area of interest. Funding upto a maximum of Rs. 1,50,000/- for the whole project is extended to such desirous faculty. Teachers pursuing their Ph.D. programs from PU can also apply under this project. They may be assisted to the tune of 50% of their approved budget of the project. Faculty members availing fee concession and/or getting contingency grant from PU shall be ineligible for intramural research grant. Applicants can apply for intramural research grant on Proforma B.

- **8.3 Research Associateship:** Research associateship/postdoctoral fellowship is offered to selected faculty members for a year (extendable by one more year), wherein the grantee shall have a stipend/salary of Rs. 40,000/- per month along with a contingency amount of Rs. One lac per annum. In order to have more time for R & D activity the teaching and/or administrative load of the candidate shall be reduced. Applicants can apply for this position on Proforma C.
- **8.4 Promoting Patent filing**: Research involving industrial application is encouraged to be protected by patent filing. The full expenditure for patent filing shall be borne by the University. Apart from this, the following incentives\* shall be offered to the inventors. Applicants can apply for this assistance on Proforma D.

i)	Patent application filing with full specifications	: Rs. 2000/-
ii)	Grant of patent	: Rs. 5000/-

\*The incentive shall be offered to the mentor (it may be distributed among other collaborating inventors).

**8.5 Promoting research publication**: Publication of research/review articles or letter to the Editor in peer reviewed journals is a recognized scale for measuring the outcome of R & D activity. Incentives are offered to the authors of publications as given below. Applicants can apply for this assistance on Proforma E.

UGC/NAAS listed journals	: Rs. 1000/-
SCOPUS indexed/listed journals (without impact factor)	: Rs. 2000/-
Web of Science/ SCOPUS/SCI, ESCI/PubMed Journals	: Rs. 3000/-
having SCI impact factor), with impact factor less than 2.5	
Journals with SCI Impact Factor (IF) >2.5	: From Rs. 5000/-
(with every increase in IF of one, there would be	to Rs. 10,000/-
enhancement of Rs. 1000/- with a maximum of Rs. 10,000/-)	
	SCOPUS indexed/listed journals (without impact factor) Web of Science/ SCOPUS/SCI, ESCI/PubMed Journals having SCI impact factor), with impact factor less than 2.5 Journals with SCI Impact Factor (IF) >2.5

 Additional Rs. 1000/- per research paper shall be given beyond publication of two research papers (this is applicable for the two research papers published in journals listed in SCI/SCOPUS/Web of Science) in a year. For research papers in other journals, this augmentation shall not be done.

#### NOTE:

The above given incentives (i to v) shall be applicable to research/review articles or letter to Editor as given below:

<b>Research Articles</b>	: 100% of the above given amounts
Review Articles	: 80% of the above given amounts
Letter to the Editor	: 60% of the above given amounts

♦ No incentive shall be admissible for writing 'Book Review' in any journal/magazine.

**8.6 Promoting publication of Books/book chapters**: Incentives are offered to faculty members for writing books/book chapters with reputed publishers as given below. Applicants can apply for this assistance on Proforma F.

i) Book chapter published in book published by reputed Indian Publisher:

-)			
		A Grade Publisher	: Rs. 2500/-
		B Grade Publisher	: Rs. 2000/-
		C Grade Publisher	: Rs. 1000/-
ii)	Book chapter published in book publi	shed by International H	Publisher <sup>¥</sup> :
		Category A	: Rs. 4000/-
		Category B	: Rs. 3000/-
		Category C	: Rs. 1000/-
		Category D	: -Nil-
iii)	Book published by reputed Indian Pul	blisher:	
		A Grade Publisher	: Rs. 5000/-
		B Grade Publisher	: Rs. 4000/-
		C Grade Publisher	: Rs. 3000/-
iv)	Book published by International <sup>¥</sup> Pub	lisher:	
		Category A	: Rs. 10,000/-
		Category B	: Rs. 6000/-
		Category C	: Rs. 4000/-
		Category D	: -Nil-
v)	Publication of Policy matter Report/W	White paper in	: Rs. 2500/-
	Government publications/reputed mag	gazines (such as	
	Economist, Political Weekly etc.)		

- <u>NOTE</u>: More than one book chapter in the same book by the same author(s) shall have the following distribution:
  - 1. Two book chapters : Full amount (1) for the first chapter and Half (1/2) of the above mentioned amount for the second chapter.
  - 2. Three book chapters : For the two chapters as given in point No. 1 and one third (1/3) of the above mentioned amount for the third book Chapter.
  - 3. Four book chapters and more: The incentives shall be given using the formula (1+1/2+1/3+1/4....+1/n), but not exceeding the amount equal to the incentives given for a full book)

(<sup>\*</sup>International Publishers: <u>Category A</u>: CRC Press (USA), Springer, Springer Nature, Elsevier, Academic Press, John Wiley & Sons, Wiley, Pergamon (USA), Pearson Education, Thomson Reuters, McGraw-Hill Education, Oxford University Press, Cambridge University Press, Prosveshcheniye Publishers, Shinchosha Publishing Co.; <u>Category B</u>: Lap/Lambert (Germany), Publishers of more than 10 years of standing in publishing; <u>Category C</u>: Publishers with less than 10 years but more than 3 years of standing; <u>Category D</u>: Publishers with less than 3 years of standing)

**8.7 Promoting exposure of the faculty for presenting research papers** (oral/poster)/delivery of expert talks/participating in STTPs/FDPs/QIPs/Workshops etc: Incentives shall be offered along with duty leaves for participation in all such activities as follows. Applicants can apply for assistance on Proforma G.

i)	Paper presentation (oral/poster) in International conference*	: Actual expenses
	organized outside India	upto a maximum of
	(This includes Registration charges and travel expenses)	Rs. 35,000/-
	(*A faculty member shall be eligible for such conferences O	NCE in TWO years)
ii)	Paper presentation (oral) in International conference†	: Actual expenses
	organized in India	upto a maximum of
	(This includes Registration charges and travel expenses)	Rs. 15,000/-
iii)	Paper presentation (poster) in International conference†	: Actual expenses
	organized in India	upto a maximum of
	(This includes Registration charges and travel expenses)	Rs. 12,000/-
iv)	Paper presentation (oral) in National conference <sup>†</sup>	: Actual expenses
	(This includes Registration charges and travel expenses)	upto a maximum of
		Rs. 10,000/-

v)	Paper presentation (poster) in National conference†	: Actual expenses
	(This includes Registration charges and travel expenses)	upto a maximum of
		Rs. 7,500/-
vi)	Paper presentation (oral/poster) in Regional/state level	: Actual expenses
	conference <sup>†</sup>	upto a maximum of
	(This includes Registration charges and travel expenses)	Rs. 5,000/-
	[†A faculty member shall avail ANY ONE of (i to vi) in a	year]
vii)	Participation of faculty members for expert talk/key note	-Nil-
	Address in conference/seminar/Symposium organized by	
	National agencies/reputed universities/Institutions	
	(Duty leave only shall be granted for the event)	
viii)	Participation of faculty members in STTPs/FDPs/QIP/	: Reimbursement of
	Workshops conducted by prominent/reputed institutions	full registration fee
	(Only one faculty member from One Department of each	or Rs.10,000/-
	Institute nominated by the Dean shall be eligible for one	(whichever is lesser)
	Programme in a year).	

NOTE: There shall be no additional incentives for Proceedings of paper presentations.

\*Incentives for items (Nos. 8.4 to 8.7) shall be payable for the current and the previous years only.

- **8.8 Research Excellence/Promotion Awards**: Two numbers of Research Excellence Awards for the faculty members and two numbers of Research Promotion Awards for scholars/students per listed Faculty/Faculty group per calendar year shall be conferred to outstanding researchers in the University as given below. Applicants can apply for the awards on Proforma-I/II (Applicants may also be asked for presentation in front of the expert committee).
  - i) Research Excellence Award : Rs. 20,000/-, trophy, citation and a certificate
  - ii) Research Promotion Award : Rs. 10,000/-, citation and a certificate
- **8.9 Promoting research among the Ph.D. scholars**: The University shall offer fellowships/financial assistance to scholars who get registered in the University to pursue their Ph.D. degree program as follows:
  - I. Junior Research Fellowship of Rs. 25,000/- per month on the UGC pattern is offered to scholars who qualify NET/GATE/GPAT or any other National

competitive examination recognized by UGC along with a contingency grant of Rs. One lac per annum for three years.

- II. A fellowship of Rs. 15,000/- per month on the pattern of SHODH scheme of Government of Gujarat for a period of two years is offered to the full time working scholars in order of merit along with a contingency grant of Rs. 20,000/- per annum for two years (subject to approval by Government of Gujarat).
- III. JRF fellowship of Rs. 15,000/- (for science, humanities and other faculties)/Rs.16,000/- (for Engineering & Technology, and Pharmacy), and SRF fellowship of Rs. 19,000/- (for science, humanities and other faculties)/Rs.21,000/- (for Engineering & Technology, and Pharmacy) per month shall be granted to selected applicants registered for Ph. D. as full time scholars in the University along with a contingency grant of Rs. 1 lac per annum for a period of three years.
- IV. Faculty members of PU pursuing their Ph.D. in PU shall have the following provisions for completing their Ph.D. degree programs:
  - (i) **Fee-waiver Scheme**: Half-fee concession\* shall be given to 50 % of the total strength of the candidates getting registered in the Institute at that given point of time.
  - (ii) A research supervisor shall not have more than 50 % scholars under his/her supervision under this fee-waiver scheme at any given point of time however; additional scholar(s) under the fee-waiver scheme can be allotted to a research supervisor in order to comply with point No. (i).
  - (iii) Preference shall be given under the fee-waiver scheme to faculty members with a longer period of service in Parul University.
  - (iv) In case of same length of service in PU, age-wise senior faculty member shall have a preference.
  - (v) In case a faculty member quits PU without completing one's Ph.D. degree, rules as applicable to external Ph.D. students shall be applicable to such faculty members for the remaining period of the Ph.D. program.
  - (vi) A contingency amount upto Rs. one lakh per annum (for the purchase of chemicals, fine chemicals, biochemicals, biologics, lab animals, glassware, or small lab/research equipment/gadget, testing/analysis charges etc.) for a period not exceeding three years shall be provided to every faculty member registered for Ph.D. degree in Parul University.
  - (vii) Faculty members pursuing Ph.D. degree in PU availing fee concession and/or annual contingency from PU shall not be eligible to apply for Intramural research funding.

\*Fee concession to the extent of 100% shall be at the discretion of the University Authorities/Management.

- V. Financial assistance upto a maximum of Rs. 25,000/- for the whole term shall be provided to candidates registered in the University to meet the expenditure for the purchase of chemicals, glassware, raw material, instruments, charges for analysis/testing etc for conducting their research work. Sanction of this amount shall be in the purview of the Dean/Head of the Institute.
- **8.10 Promoting quality research among PG students**: The University shall support selected PG students for financial assistance to the extent of Rs. 10,000/- for promoting quality research in their PG programs. Sanction of this amount shall be in the purview of the Dean/Head of the Institute.

 $\langle \rangle \rangle \rangle \langle \rangle \langle \rangle \rangle \langle \rangle \langle \rangle \rangle \langle \rangle \langle \rangle \langle \rangle \langle \rangle \rangle \langle \rangle$ 

# APPENDIX

# (Application Formats)

# Proforma-A

# Parul University Application for Matching grant/Incentives\* for Extramural Research Project

### A. Personal Details

- 1. Name of the Principal Investigator (PI):
- 2. Designation of PI:
- 3. Department:
- 4. Institute:
- 5. Faculty:
- 6. Contact details: M- e-mail:
- 7. Give Bank details (Name of the Bank, Branch, IFSC, Type & Account Number, attaché a cancelled cheque or copy of first page of the passbook) for money transfer:

### B. <u>Project Details (Attach sanction letter)</u>:

- 1. Title of the Project:
- 2. Duration of the Project:
- 3. Name of the funding agency:
- 4. Total Budget sanctioned by the funding agency:
- 5. Grant received in the current financial year:
- 6. Non-recurring component of the budget sanctioned by the funding agency:
- 7. Matching grant/Incentives demanded with justification:

\*Incentives shall be offered to the PI only.

Date:

(Signature) Applicant

Principal of the Institute

Dean of the Faculty

**Comments of the Expert Committee** 

# <u>Proforma-B</u>

### **Parul University**

### **Application for the Grant of Intramural Research Project**

### A. Personal Details

- 1. Name of the Principal Investigator (PI):
- 2. Designation of PI:
- 3. Qualification (mentioning the last degree obtained):
- 4. Department:
- 5. Institute:
- 6. Faculty:
- 7. Contact details: M-

e-mail:

- 8. Give Bank details (Name of the Bank, Branch, IFSC, Type & Account Number) for money transfer:
- 9. Name of Co-investigator (Co-I):
- 10. Designation of Co-I:
- 11. Department:
- 12. Institute:
- 13. Number of Research projects in hand with titles:

### B. Project Details:

[The following details are to be given on separate sheet in the given order]

- 1. Title of the Project:
- 2. Duration of the Project:
- 3. Introduction/Background of the project including literature survey related to the proposed research work:
- 4. Aims & objective/hypothesis:
- 5. Plan of work:
- 6. Methodology to be adopted:
- 7. Graphical schedule (half-yearly) of work:
- 8. Budget:
  - A. Recurring budget (give breakup):
  - B. Non-recurring (give details):
  - C. Miscellaneous (specify):
  - D. Total budget (A+B+C)

### Date:

(Signature) Applicant

Principal of the Institute

Dean of the Faculty

**Comments of the Expert Committee** 

# <u>Proforma-C</u>

# Parul University

### Application for Research Associateship

#### A. Personal Details

- 1. Name of the Applicant:
- 2. Designation:
- 3. Qualification:
- 4. Teaching Experience:
- 5. Department:
- 6. Institute:
- 7. Faculty:
- 8. Contact details: M- e-mail:

### C. Project Details:

[The following details are to be given on separate sheet in the given order]

- 1. Title of the Project:
- 2. Duration of the Project:
- 3. Introduction/Background of the project including literature survey related to the proposed research work:
- 4. Aims & objective/hypothesis:
- 5. Plan of work:
- 6. Methodology to be adopted:
- 7. Graphical schedule (bi-monthly) of work:
- 8. Budget:
  - A. Recurring budget (give breakup):
  - B. Non-recurring (give details):
  - C. Miscellaneous (specify):
  - D. Total budget (A+B+C)

Date:

(Signature) Applicant

Principal of the Institute

Dean of the Faculty

**Comments of the Expert Committee** 

### <u>Proforma-D</u>

# Parul University Request Application for Incentives\* (For Patent Filed/Granted)

#### A. <u>Personal Details</u>

- 1. Name of the Applicant:
- 2. Designation of PI:
- 3. Department:
- 4. Institute:
- 5. Faculty:
- 6. Contact details: M- e-mail:

#### B. <u>Patent Application Details (attach copy of Form 2)</u>:

- 1. Title of the Patent:
- 2. Application No.
- 3. Name of Inventors: i)
  - ii) iii)
  - iv)
  - ....
- 4. Patent Application filed in the name of PU as Applicant (Yes/No):
- 5. Status of the Application (Filed/published/Patent Granted):
- 6. Give Bank details (Name of the Bank, Branch, IFSC, Type & Account Number, attaché a cancelled cheque or copy of first page of the passbook) for transfer of money:

\*Incentives shall be offered to the main inventor only.

Date:

(Signature) Applicant

Principal of the Institute

Dean of the Faculty

### **Comments of the Expert Committee**

# <u>Proforma-E</u>

# Parul University Request Application for Incentives\* (For Publishing Research Article)

#### A. Personal Details

- 1. Name of the Applicant:
- 2. Designation of PI:
- 3. Department:
- 4. Institute:
- 5. Faculty:
- 6. Contact details: M- e-mail:
- 7. Give Bank details (Name of the Bank, Branch, IFSC, Type & Account Number, attaché a cancelled cheque or copy of first page of the passbook ) for money transfer:

### B. Details of the Published Research Article (attach a copy):

- 1. Title of the Article:
- 2. Name of Authors:
- 3. Details of the Journal (Name, Vol., page Nos., Year):
- 4. Whether National/International:
- 5. Journal website:
- 6. ISSN No.:
- 7. Indexing/Listing status of the Journal (UGC-CARE list, Web of Science, Scopus, Pubmed etc.):
- 8. Impact Factor (SCI):
- 9. Whether it is your First/Second/Third/Fourth article in the given calendar year:

\*Incentives shall be offered only to one author (co-authors from PU may share the amount among themselves)

Date:

(Signature) Applicant

Principal of the Institute

Dean of the Faculty

### **Comments of the Expert Committee**

# Proforma-F

# Parul University Request Application for Incentives\* (For Publishing Book Chapter/Book)

#### A. Personal Details

- 1. Name of the Applicant:
- 2. Designation of PI:
- 3. Department:
- 4. Institute:
- 5. Faculty:
- 6. Contact details: M- e-mail:
- 7. Give Bank details (Name of the Bank, Branch, IFSC, Type & Account Number, attaché a cancelled cheque or copy of first page of the passbook) for money transfer:

### B. Details of the Published Book Chapter/Book (attach a copy):

- 1. Title of the Book Chapter/Book:
- 2. Name of Author(s):
- 3. Title of the Book (for Book Chapter):
- 4. Name of the Editor (for Book Chapter):
- 5. Name of the Publisher:
- 6. Whether National/International Publisher:
- 7. Number of pages in the Book/Book Chapter):
- 8. ISBN Number of the Book:
- 9. Whether Textbook or Reference Book:
- 10. Publisher website:
- 11. Whether it is your First/Second/Third Chapter\*/Book in the given calendar year:
- \*1. Incentives for all book chapters in the same book are to be applied at one time in a single application, if you have more than one book chapter in the same book.
  - 2. Joint authors from PU may share the incentives.

Date:

(Signature) Applicant

Principal of the Institute

Dean of the Faculty

### **Comments of the Expert Committee**

# Proforma-G

# Parul University Request Application for Incentives\* (For Research Paper Presentation)

#### A. Personal Details

- 1. Name of the Applicant:
- 2. Designation of PI:
- 3. Department:
- 4. Institute:
- 5. Faculty:
- 6. Contact details: M- e-mail:
- 7. Give Bank details (Name of the Bank, Branch, IFSC, Type & Account Number, attaché a cancelled cheque or copy of first page of the passbook) for money transfer:

### B. Details of the Research Paper Presentation (attach relevant documents):

- 1. Title of the Paper:
- 2. Name of Authors:
- 3. Whether you were the presenting author? (Yes/No):
- 4. Whether Presentation is Oral/Poster:
- 5. Name of the Conference:
- 6. Name of Organizers:
- 7. Whether National/International:
- 8. Website of the event:
- 9. Dates of the conference and the date of your presentation:
- 10. Registration fee:
- 11. Whether your paper won a prize (Yes/No):
- 12. If Yes, state the type of prize (attach certificate):
- 13. Whether you have attended any another conference this year:

### C. <u>Travel Details (Attach relevant documents):</u>

- 1. Place visited:
- 2. Whether travelled by Air/Train and Class:
- 3. Fare incurred:

\*Incentives shall be offered only to the presenting author.

Date:

(Signature) Applicant

Principal of the Institute

Dean of the Faculty

### **Comments of the Expert Committee**

### <u>Proforma-I</u> Parul University Faculty Research Excellence Awards

- 1. Name of the Applicant :
- 2. Institute :
- 3. Faculty :
- 4. Research contribution [Attach Copies of the Article(s)]
  - (i) a. Title of the article:
    - b. Name of Journal, Vol., Year:
    - c. Publisher:
    - d. Indexed in:
    - e. SCI -Thomson Reuters Impact factor:
    - f. Points\*
    - (ii) .... (n): Give details (a-f) as above for each article.
    - (iii) Total Points:
- 5. Patents (Attach relevant documents/certificates)
  - A. Granted Patents
  - (i) a. Title:
    - b. Type (Indian/US/any other country):
    - c. Patent No. :
    - d. Points\*
  - (ii)..... (n): Give details (a-d) as above.
  - (iii) Total Points:
  - B. Patents published/applied
  - (i) a. Title:
    - b. Type (Indian/US/any other country):
    - c. Patent Application No.:
    - d. Status (Published/under examination/contested):
    - e. Points\*:
  - (ii)..... (n): Give details (a-e) as listed above.
  - (iii) Total Points:
- 6. Paper presentation in scientific conferences/invited lectures as resource person in seminar/conference/full paper in conference proceeding (Attach Copy of the certificates):
  - (i) a. Title of the paper/Invited talk/Keynote address:
    - b. Name and place of the conference/symposium:
    - c. Status (National/International):
    - d. Mode of Presentation [Oral/Poster]:
    - e. Date and time of presentation:
    - f. Whether the presentation won any prize (yes/no):

(If yes, attach certificate)

g. Points\*:

(ii) ..... (n): Give details (a-g) as above.

- (iii) Total Points:
- 7. Research Projects (Attach relevant documents)
  - A. Research Projects applied
    - (i) a. Title of the project:
      - b. Name of the funding agency:
      - c. Total amount applied for:
      - d. Your status in the project:
      - e. Your status (whether PI or Co-PI):

f. Points\*:

- (ii)..... (n): Give details (a-f) as above.
- (iii) Total Points:

(i)

B. Research Projects sanctioned

- a. Title of the project:
  - b. Name of the funding agency:
  - c. Total amount sanctioned:
  - d. Duration:
  - e. Your status in the project:
  - f. Your status (whether PI or Co-PI)
  - g. Points\*:
- (ii)..... (n): Give details (a-g) as above.
- (iii) Total Points:

### \*Refer the Marking system to be used for self-assessment for Proforma-I & II

It is certified that the information provided above by me is correct and true to the best of my knowledge and belief. I personally shall be responsible for any wrong information provided in this proforma.

Date:

(Signature) Applicant

Principal of the Institute

Dean of the Faculty

### **Comments of the Expert Committee**

### Proforma-II

### Parul University

# Students/Scholars Research Promotion Awards

- 1. Name of the Applicant :
- 2. Institute :
- 3. Faculty :
- 4. Research contribution [Attach Copies of the Article(s)]
  - (i) a. Title of the article:
    - b. Name of Journal, Vol., Year:
    - c. Publisher:
    - d. Indexed in:
    - e. SCI -Thomson Reuters Impact factor:
    - f. Points\*:
  - (ii) .... (n): Give details (a-f) as above for each article.
  - (iii) Total Points:
- 5. Patents (Attach relevant documents/certificates)
  - A. Granted Patents
  - (i) a. Title:
    - b. Type (Indian/US/any other country):
    - c. Patent No. :
    - d. Points\*:
  - (ii)..... (n): Give details (a-d) as above.
  - (iii) Total Points:
  - B. Patents published/applied
  - (i) a. Title:
    - b. Type (Indian/US/any other country):
    - c. Patent Application No.:
    - d. Status (Published/under examination/contested):
    - e. Points\*:
  - (ii)..... (n): Give details (a-e) as listed above.
  - (iii) Total Points:
- 6. Paper presentation in scientific conferences/invited lectures as resource person in seminar/conference/full paper in conference proceeding (Attach Copy of the certificates):
  - (i) a. Title of the paper/Invited talk/Keynote address:
    - b. Name and place of the conference/symposium:
    - c. Status (National/International):
    - d. Mode of Presentation [Oral/Poster]:
    - e. Date and time of presentation:
    - f. Whether the presentation won any prize (yes/no):
(If yes, attach certificate)

g. Points\*:

(ii) ..... (n): Give details (a-g) as above.

- (iii) Total Points:
- 7. Research Projects (Attach relevant documents)
  - A. Research Projects applied
    - (ii) a. Title of the project:
      - b. Name of the funding agency:
      - c. Total amount applied for:
      - d. Your status in the project:
      - e. Your status (whether PI or Co-PI):

f. Points\*:

(ii)..... (n): Give details (a-f) as above.

(iii) Total Points:

B. Research Projects sanctioned

- (ii) a. Title of the project:
  - b. Name of the funding agency:
  - c. Total amount sanctioned:
  - d. Duration:
  - e. Your status in the project:
  - f. Your status (whether PI or Co-PI)
  - g. Points\*:
- (ii)..... (n): Give details (a-g) as above.
- (iii) Total Points:

# \*Refer the Marking system to be used for self-assessment for Proforma-I & II

It is certified that the information provided above by me is correct and true to the best of my knowledge and belief. I personally shall be responsible for any wrong information provided in this proforma.

Date:

(Signature) Applicant

Principal of the Institute

Dean of the Faculty

# **Comments of the Expert Committee**

(To be filled in by Centre of Research for Development)

# Marking system to be used for self-assessment for Proforma-I & II:

# A. Research Papers

(i) Research paper in peer-reviewed UGC listed Journals without an	
impact factor	10 Points
(ii) Research paper in peer-reviewed Scopus listed Journals without	t
an impact factor	15 Points
(iii) Research paper in peer-reviewed UGC listed Journals with	
Impact Factor upto 1	20 Points
(iv) Research paper in peer-reviewed UGC listed Journals with	
Impact Factor Between 1-2	25 Points
(v) Research paper in peer-reviewed UGC listed Journals with	
Impact Factor Between 2-5	30 Points
(vi) Research paper in peer-reviewed UGC listed Journals with	
Impact Factor Between 5-10	35 Points
(vii) Research paper in peer-reviewed UGC listed Journals with	
Impact Factor > 10	40 Points
(*Impact Factor will be calculated for journals listed in	
Scopus/ Web of science/Pubmed).	

# **B.** Patents

	(i)	Indian patent application filed/published	10 points
	(ii)	International patent application published	15 points
	(iii)	Indian Patent Granted	30 Points
	(iv)	International Patent Granted	50 Points
		(International means a country other than India)	
C.	Confe	rence proceeding	
	(i)	Publication of proceeding in National conference	10 Points
	(ii)	Publication of proceeding in International conference	20 Points
	(Poi	nts for Paper presentation will not be counted while	
	cons	sidering the points for conference proceedings)	
D.	Paper	presentation/Invited talk/keynote address	
	(i)	Presentation in National conference	05 Points
	(ii)	Presentation in International conference	10 Points
E.	Projec	ts	
	(i)	Submitted projects to Indian funding agencies	
		• Amount asked For (up to 5 lakh )	05 Points
		• Amount asked For (5-10 lakhs)	10 Points
		• Amount asked For (10- 30 lakhs)	20 Points
		<ul> <li>Amount asked For (10- 30 lakhs)</li> <li>Amount asked For (30- 50 lakhs)</li> </ul>	20 Points 30 Points

# (ii) Submitted projects to International funding agencies

٠	Amount asked For (up to 50 lakh )	30 Points
•	Amount asked For (> 50 lakhs )	50 Points

# (iii) Sanctioned projects (Indian funding agencies)

•	Amount Sanctioned (up to 5 lakh)	15 Points
•	Amount Sanctioned (5 - 10 lakh)	20 Points
٠	Amount Sanctioned (10- 30 lakh )	30 Points
•	Amount Sanctioned (30 - 50 lakh)	40 Points
•	Amount Sanctioned (Above 50 lakh)	50 Points

# (iv) Sanctioned projects (International funding agencies)

•	Amount Sanctioned (up to 50 lakh)	30 Points
•	Amount Sanctioned (> 50 lakhs)	50 Points

 $\diamond$ 

# PARUL UNIVERSITY

# **RESEARCH & DEVELOPMENT POLICY**

2016



Waghodia, Vadodara-391760

Gujarat, India

CONTENTS	
1. BACKGROUND	3
2. INTRODUCTION	5
2.1. Scope	-
<ul><li>2.2. Researcher responsibilities</li><li>2.3. Collaborative research</li></ul>	
2.3. Collaborative research	
3. BASIC PRINCIPLES OF GOOD RESEARCH PRACTICE	7
4. RESEARCH GOVERNANCE	9
4.1. Research leadership	
4.2. Research management	
4.3. Research chairs	
4.4. Establishment of directorate of research	
5. TRAINING AND MENTORING	12
5.1. Researcher development	
5.2. Research at UG and PG levels	
5.3. Ph.D. programme	
5.4. Supporting new researchers	
5.5. Minor research projects	
6. ETHICAL VALUES AND LEGAL IMPLICATIONS	15
6.1. Research involving animals	
7. UNDERTAKING RESEARCH	17
7.1. Funding applications	
8. RESEARCH PLANNING AND DESIGN OF EXPERIMENTS	19
8.1. Safety	
8.2. Collection and storage of data	
8.3. Research monitoring	
8.4. Data retention	
9. RESEARCH OUTPUTS	23
9.1. Quality assurance	
9.2. Research publication	
9.3. Intellectual property rights (IPR)	
9.4. Authorship and acknowledgement	
9.5. Publicity	
9.6. Research exploitation and commercialization	
9.7. Incentives for outstanding research	
9.8. Centers of excellence	
10. FINANCIAL REQUIREMENTS	29

2

#### ACKNOWLEDGEMENT

#### 1. BACKGROUND

Parul University was established under Gujarat Private University Act 2009; vide a bill passed by the Government of Gujarat on 26th March, 2015 giving University status to Parul Group of Institutes run by Parul Arogya Seva Mandal Trust.

Parul University has various support cells which facilitate 360 degree learning and career building, be it during the period of study or after completion, for Jobs, to Students. Research & Development Cell, Entrepreneurship Development Cell, Career Development Cell, Training & Placement Cell, International Relations Cell, International Students' Affair Cell, Department of Events & Media Relations, Students' Council and Alumni Association to name a few.

Parul University is not prescriptive about the individual approaches taken by its researchers to solving particular research problems. The University respects academic freedom and believes that an atmosphere of free and open discussion is essential to its life and work. Such an atmosphere can be achieved only if all concerned behave with necessary tolerance, and avoid needlessly offensive or provocative action and language. The University takes steps to ensure that freedom of speech within the law is secured for its staff and students.

The Indian Universities have a proud record in research. In fact, practically all famous scientists and scholars whom we remember were university people.

Through good conduct the University aims to maintain its own reputation, as well as public trust in research as a whole. The University aims to ensure that there are adequate structures to promote and promulgate good research practice. The following Guide supports this aim and demonstrates that the University is committed to a culture and environment where high standards of personal and professional conduct are encouraged and expected. It is the responsibility of all researchers to be aware of their commitments and the expectations of the University as outlined in this Guide.

The Guide to Good Research Practice is intended to sit alongside the University Research Strategy and complement other University policies, procedures and guidelines. The Guide attempts to draw together elements of good practice which are of particular relevance to research, however this guidance is by no means exhaustive. Researchers should consult with related University policies, procedures and guidelines as appropriate, including those on research ethics, allegations of research misconduct, whistle blowing, confidentiality/data protection, intellectual property, dignity at work/grievance, disciplinary action, equality, health and safety, staff development and finance.

### 2. INTRODUCTION

In this Guide, the University has set out general standards, principles and responsibilities regarding good research practice. The Guide does not stipulate how these should be put into operational practice at a local level, as this will vary according to the particular research environment of the Faculty, Institution and Department.

The University Research Committee is responsible for reviewing the contents of this guide once in three years.

#### 2.1. Scope

This Guide is intended for academic, research, support staff and other individuals employed by Parul University to carry out research at, or on behalf of, the University. The term researcher has been used throughout this Guide to refer collectively to the above groups of people.

#### 2.2. Researcher responsibilities

Parul University expects all its researchers to act with the highest standards of integrity irrespective of the source from which their posts or projects are funded. Researchers should consider good practice in research as a routine part of their work and should be aware that good practice includes reporting concerns about the (mis)conduct of research.

Researchers should:

- a) Recognize their responsibility to conduct research of high ethical standards;
- b) be aware of Parul University's policies and procedures on good practice in research and seek guidance where necessary;
- c) work with the University to ensure they have the necessary training, resources and support to carry out their research; and
- d) suggest to the University how guidance on good practice in research might be developed or revised.

#### 2.3. Collaborative research

Researchers should be aware of the standards and procedures for the conduct of research followed by any organizations involved in collaborative research that they are undertaking. Similarly, Parul University researchers should ensure collaborating partners are aware of the standards and procedures outlined in this Guide. Researchers should ensure the agreement of, and compliance with, common standards and procedures for the conduct of collaborative research, in consultation with support departments and research managers as necessary. Researchers should try to anticipate any issues that might arise as a result of working collaboratively and agree jointly in advance how they might be addressed.

### 3. BASIC PRINCIPLES OF GOOD RESEARCH PRACTICE

Parul University expects the basic principles, mentioned below, to be integrated into all aspects of research and scholarly activity.

i) EXCELLENCE: Researchers should strive for excellence when conducting research and aim to produce work of the highest quality.

ii) HONESTY: The University works to create and maintain a culture of research that fosters and supports honesty in research. Researchers should be honest in relation to their own research and that of others. They should do their utmost/best to ensure the accuracy of data (and results), acknowledge the contributions of others, and neither engage in misconduct nor conceal it.

iii) INTEGRITY: Researchers must comply with all legal and ethical requirements relevant to their field of study.

iv) CO-OPERATION: The University and its researchers should promote the open exchange of ideas, research methods, data and results and their discussion, scrutiny and debate, subject to any considerations of confidentiality.

v) ACCOUNTABILITY: The University and its researchers should recognize that in and through their work they are ultimately accountable to the general public and should act accordingly. They should ensure that any research undertaken complies with any agreements, terms and conditions relating to the project, and allows for proper governance and transparency. Researchers should follow the requirements and guidance of any professional bodies in their field of research.

**vi)** TRAINING AND SKILLS: Training and opportunities for development should be provided for researchers, along with the necessary resources to enable them to conduct

research to the required standards. Researchers should be supported in identifying unmet needs for training and development. Researchers should ensure that they have the necessary skills, training and resources to carry out research, in the proposed research team or through collaboration with specialists in relevant fields.

# 4. RESEARCH GOVERNANCE

It is the responsibility of each individual member of the University involved in research to adhere to the principles of good research practice. As Chair of the University Research Committee, the Provost is charged with overall responsibility for research conduct in the University on behalf of the Senior Management Group/the Board of Governors/ The PASM. The Director (R&D) and Deans are responsible for ensuring good research conduct in their respective faculties. In addition, Faculty Directors, Principals, Heads of Departments and other senior faculty staff should ensure that they create and maintain an environment that ensures good research conduct within the University Campus.

#### 4.1. Research leadership

Senior Faculty Members of the University will provide direction and leadership for research activities and by doing so, they ensure that a research climate is created and research culture is inculcated in the Campus. Director (R&D), Deans, Principals, Departmental Heads and Faculty Directors are responsible for ensuring that the research culture promulgated at University level is communicated to all involved in research in the Faculty, and that these staff are made aware of the Guiding Principles. Those responsible for leading groups of research staff (principal investigators, team leaders) are responsible for ensuring that the research culture promoted at the University, Institutes, Departments levels is translated into good practice during the conduct of research activities. These research leaders should create an environment of mutual cooperation, in which all members of a research team are encouraged to develop their skills, and in which the open exchange of ideas is fostered and encouraged while proper conduct of research is carefully observed. They must also ensure that appropriate supervision and mentoring of researchers is provided, taking special account of the needs of new or young researchers. Senior Faculty members must be aware of their obligations to staff and students working as part of the research team. Each team member has the right to know who is sponsoring the research and supporting his or her salary or stipend.

#### 4.2. Research management

In an environment where good research practice is encouraged and where there is adequate supervision at all levels, 'research misconduct' is least likely to arise. Sound management practice should create an effective and enabling environment ensuring the integrity and quality of research activities and the timely delivery of research outputs. Sound management practice includes good recruitment practice, effective management of staff (including their development and training), and implementing robust systems of project and budget management and the recording, storage and archiving of research data.

# 4.3. Research chairs

The University shall create research chairs and a scheme for appointment of 'Professor Emeritus' for a particular term, where very senior scientists or professors shall be appointed and they shall conduct research on an important topic for a stipulated period. The research chair professors shall take some teaching load in line with the principle of integrating the research and teaching.

# 4.4. Establishment of directorate of research

To promote, monitor and incentivize research, the University shall have an exclusive and dedicated Directorate of Research, led by a senior scientist. The Directorate shall take care of day-to-day monitoring of all the above mentioned research activities, generating and implementing ideas about the conduct of research in different areas, meeting the requirement of funding, monitoring the activities and assessing the outcomes periodically.

The Directorate of Research shall be an essential component for any research endeavor in the University. The Directorate shall have the functions to disseminate the findings of research to society and also to integrate research with teaching.

# **5. TRAINING AND MENTORING**

#### 5.1. Researcher development

It is the responsibility of the University to ensure that there are adequate provisions for training and development to enable researchers to attain the necessary skills for their current role, and to support their future career development. Training is to be perceived as the continual development of awareness. It does not only include formal workshops and courses but also access to guidance and briefings, as well as managerial and peer support.

The "Researcher Development Framework" is a professional development framework for planning, promoting and supporting the personal, professional and career development needs of researchers. The University recognizes the need to support the "Career Development of Researchers" which consists of a set of key principles for the support and management of research careers.

The University shall strive to create conducive environment for research. Due to limited resources, the University may not support fully all research activities likely to be undertaken, but it shall allocate the space, facilities, (partial) funding, and other resources for research programmes based on the scholarly and educational merits of the proposed research. It shall also provide development opportunities to researchers for writing research proposals and reports, publications, patents, copyrights filing, etc.

#### 5.2. Research at UG and PG Levels

Teaching and research are equally important in a University. Even before the establishment of the University, it was thought that to promote creativity among the undergraduate and post-graduate students, some research component in the curricula, especially in the final or pre-final year of the bachelors programme and final year in the master's programme, is necessary. Accordingly, in the pre-final and final year of the

bachelors programme the Minor Research Project and Major Research Project are inducted where the students under the guidance of the faculty work on the decided topic of the dissertation and submit the findings periodically. The final project is submitted to the institution and also the viva is conducted.

Similarly, in the postgraduate programme, research was emphasised emphatically and students were trained for robust research skills. Some such projects have been taken forward and Patents / Copyrights were filed in the past, even before establishment of University. Today, the University shall further reinforce research training in both undergraduate and postgraduate programmes.

#### 5.3. Ph.D. Programme

Parul University, being a self-financed University, has limited resources for conducting research and also in the development of rich infrastructure for research in different fields. It encourages to collaborate with different prominent National Institutions having requisite research facilities and also expertise to guide doctoral students in different areas.

The University shall further strengthen doctoral research and earmark appropriate budget for scholarships and also develop research facilities in different Institutions. It shall also build relations with reputed R&D Organizations.

The University shall continue to encourage faculty and research scholars to get funding for attending International Conferences from external agencies as a matching share so that the quality in research paper can be maintained. It shall urge research scholars to Publish, Patent or Copyright their research work.

#### 5.4. Supporting new researchers

It is the responsibility of all members of staff, particularly senior staff, to ensure that new researchers understand the principles of good research practice and are encouraged through development, training and mentoring arrangements to reach their full potential

as researchers. Individuals with supervision responsibilities are expected to ensure researchers receive appropriate induction, even if they have previously worked elsewhere. They should: ensure that new researchers have reasonable access to relevant guides and are aware of relevant policies and regulations. Each Faculty should ensure that it has a mentoring system in place for new researchers.

#### 5.5. Minor research projects

The young and enthusiastic innovators were always encouraged by the PASM even before assuming the status of University. It has developed a scheme for providing financial assistance to Minor Research Project.

According to this scheme, a faculty member prepares Minor Research Project, which is submitted to a committee at Department/University level, which will evaluate the Project based on its technical excellency, relevance to society and commercial potential; and based on the recommendations of the committee the University gives financial assistance up to Rs. 1.00/- Lakh to the faculty concerned.

To have periodical assessment of all such research projects and also with an aim to guide the researcher, the Departmental or Institutions level committees are constituted. It is mandatory to submit a quarterly progress report of such Minor Research Project to the University. Every year the University earmarks financial budget under each institution for this purpose.

The Minor Research Project Scheme helps young faculty to think about research, prepare project proposal, conduct research and write a research report. Further, it also assists them in preparing proposals for major research projects. The University shall continue to encourage young faculty to take up minor research projects and shall earmark appropriate budget for this purpose.

#### 6. ETHICAL VALUES AND LEGAL IMPLICATIONS

Parul University respects (Indian) Traditions and Ethical Values. It expects all researchers to consider the ethical and legal implications of their research and to be aware of their responsibilities to society, the environment, their profession, the University, regulatory bodies, sponsors and research participants.

Departmental Heads, Principals of Institutes, Deans of Faculties, Directors, Supervisors and Mentors should be willing to assist junior colleagues in reviewing and screening of proposed projects which may give rise to ethical issues.

#### 6.1. Research involving humans

Where Parul University faculty or staff or students or independent consultants are associated with research involving humans, researchers should consider at an early stage the possibilities for reduction, replacement and refinement of experiments involving humans.

Any research involving humans (including clinical trials) must be conducted by suitably qualified individuals under license, and should be subject to ethical approval by an appropriately qualified research Institutional Ethics Committee (IEC).

#### 6.2. Research involving animals

Where Parul University faculty or staff or students are associated with research involving animals, researchers should consider at an early stage the possibilities for reduction, replacement and refinement of animal involvement.

Any research involving animals must be conducted by suitably qualified individuals under license, and should be subject to ethical approval by an appropriately qualified research Institutional Animal Ethics Committee (IAEC), recognized by Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA). Further CPCSEA has been constituted under the provisions of 'Prevention of Cruelty to Animals act, 1960'. The nature of Parul University's involvement should be recorded by the faculty concerned.

# 7. UNDERTAKING RESEARCH

# 7.1. Funding applications

Lead applicants should take all reasonable measures to ensure the accuracy and completeness of information that is contained in applications for funding, including the proper costing of bids.

Research grant applications and contract research for public or private benefit are supported by the R & D Cell of Parul University. Consultancy and commercial research contracts should be properly negotiated through R & D Cell.

All applications for research funding from State or Central Funding Agencies such as GUJCOST, AICTE, UGC, DST, DBT, TIFAC, PCI, CCH, CCIM, NMC (MCI), ICMR and COA or International Agency such as UNDP etc., must go through the R & D Cell and the required University procedures, including appropriate sign-off allowing sufficient time to signatories concerned to comment before the application deadline. Awards are made to the University not the individual; hence contracts must be signed by appropriate University signatories.

The University provides all kinds of infrastructure facilities available for conducting a Major Research Project.

#### 7.2. Major research projects

Parul University Faculty can submit Major Research Project proposals to the agencies either at State or National or International level. These proposals are scrutinized before submitting the same to a funding agency. The University provides all kinds of infrastructure facilities available for conducting a Major Research Project.

The University plans to evolve a mechanism through which it shall scrutinize the proposals and monitor the progress of Major Research Projects funded by an external

agency, maintain its accounts and submit the utilizing certificate in time to the funding agency as per the requirement of the funding agency.

The University shall provide funding on its own to certain important Major Research Projects where the funding from the outside agency is not possible. It shall earmark appropriate budget for this purpose.

# 7.3. Industry sponsored research

An Industry can sponsor a project to Parul University and the experts of the institution concerned can conduct research on this project for which the financial support will come from the Industry. Normally such Industry related problems are interdisciplinary; and Parul University encourages such 'interdisciplinary problem' solving.

In this industry-academy collaboration, if any patent is registered, then there shall be a sharing of income coming out of the patent among the industry, researcher and the University. This will lead to multiple benefits, the researcher will get exposure to the concerned area of research and industry involved, the industry will get solutions for its nagging problems; and the researcher, the University and the Industry involved can earn money; and at the end, the society ultimately will be benefited.

# 7.4. MOUs with industries and institutions

Parul University has already signed Memorandum of Understanding (MOUs) with several industries and educational institutions both in India and abroad. The University plans to strengthen its existing MOUs and also enter into new MOUs with industries and Institutions to further strengthen collaborative national/international research, mutual learning and expertise sharing.

#### 8. RESEARCH PLANNING AND DESIGN OF EXPERIMENTS

All research should be conducted to the highest levels of integrity. This includes appropriate research design and frameworks to ensure that findings are robust and defensible. Wherever possible, research designs should include quality assurance measures and protocols for ongoing monitoring and evaluation. Sufficient consideration should be given to project management and the roles and responsibilities of the key individuals involved, including how poor performance would be prevented and dealt with should it arise.

When designing research projects, researchers should ensure that:

a) the proposed research addresses pertinent question(s) and is designed either to add to existing knowledge about the subject in question or to develop methods for research into it;

b) the design of the study is appropriate for the question(s) being asked and addresses the most important potential sources of bias;

c) the design and conduct of the study, including how data will be gathered, analyzed and managed, are set out in detail in a pre-specified research plan or protocol;

d) all necessary skills and experience will be available to carry out the proposed research, in the proposed research team or through collaboration with specialists in relevant fields;

e) sufficient resources will be available to carry out the proposed research and that these resources meet all relevant standards; and

f) any issues relating to the above are resolved as far as possible prior to the start of the research.

Researchers are advised to clearly document every stage of the project, with entries signed and dated to help protect intellectual property rights. Such evidence should be retained for an appropriate period after the research has been completed, in order to assist in registering appropriate intellectual property rights, or with making or defending appropriate challenges to such rights.

Researchers are further advised to make note of the suggestions provided in the 'Lab Note Book', prepared by R&D Cell for this purpose.

The University expects that the lead researcher should undertake an ethical review and carry responsibility for risk assessment and the applicability of health and safety regulations; all researchers should be aware of the individual with whom this responsibility lies prior to the commencement of the research.

The potential to exploit IP should be considered at an early stage and certainly before data are submitted for publication (of a research paper) or presented in any other public forum (seminar/workshop) including the internet; public dissemination of research will result in the inability to register certain intellectual property rights such as patents / copyrights.

In certain cases it is necessary for nondisclosure agreements to be in place prior to the commencement of research in order for research results to be commercially exploited; planning ahead is therefore essential.

#### 8.1. Safety

All research should be conducted in an environment which is safe with respect to the researchers involved, the University community, the general public and the wider environment. Waste materials should be disposed of with due regard for appropriate health, safety and environmental regulations.

Researchers should receive adequate information, training and monitoring regarding safe practices. Equipment should be located in safe, suitable accommodation and serviced in accordance with the manufacturer's instructions. (A member of staff should be designated as responsible for the maintenance of the equipment and the supervision of other users).

Employees have responsibilities to take reasonable care of themselves and other people affected by their work activities and to co-operate with the University in meeting their legal obligations. Researchers who could be considered 'lone workers' should take note of risks involved in lone working. This includes researchers who work by themselves without close or direct supervision; those who work from home; those who work outside normal hours and those who are working away from their usual fixed base.

#### 8.2. Collection and storage of data

Researchers must ensure that clear and accurate records of research procedures and results are maintained. All data relating to research projects must be kept securely. Data must be available for reference, verification and audit. The loss of primary data is common to cases of misconduct and would justify a prima facie assumption of negligence, if not dishonesty.

Primary electronic data should be stored securely on a central server, in addition to any storage that is maintained at the local level. Individual researchers may hold copies of appropriate materials for their own use, but in order to protect themselves against loss or allegations of research misconduct, primary data in hard format (e.g. in a laboratory book) should be kept securely within the University.

Raw data should be dated and subsequent corrections or additions clearly identified. Special attention should be paid to recording the use and disposal of potentially hazardous materials.

Researchers should comply with all legal, ethical, funding body and organizational requirements for the collection, use and storage of data, especially personal data. They should also maintain confidentiality where undertakings have been made to third parties or to protect intellectual property rights. Researchers should ensure that data relating to publications is available for discussion with other researchers, subject to any existing agreements on confidentiality.

Any researcher processing, or proposing to process, sensitive data or who may be sending any data overseas, are advised to discuss the matter with the University Registrar. Data should not be sent to a country that does not have adequate ethical safeguards.

#### 8.3. Research Monitoring

Routine monitoring processes should be built into research designs in order to check on progress against aims, objectives and indicators, and to check research quality. Lead researchers of individual faculties supported by R & D of Parul University should carry out regular monitoring to see how outcomes and outputs are developing, and to ensure that the project is being delivered on time and within budget.

Monitoring should be viewed as a regular 'health check' exercise to highlight any potential issues or difficulties and to ensure that research processes are robust. Clear records of monitoring exercises should be kept in case of audit or query. Many funding bodies require the completion of regular monitoring reports. Evidence of effective monitoring may help to bolster claims of research quality. Routine monitoring may also serve to highlight positive news stories which can be used to generate publicity and interest. Major developments should be fed back to research sponsors, where appropriate.

#### 8.4. Data retention

The length of the data retention period will vary although ten years from the date of publication (or completion if publication is not envisaged) is the normal minimum. Data gathered in the course of research projects remain the property of the University unless otherwise agreed by contract with a research sponsor, collaborator or funder. Those who wish, on leaving the University, to retain data or make copies should seek authorization from the Dean of Faculty / Principal concerned, in consultation with the University Provost's Office as appropriate.

#### 9. RESEARCH OUTPUTS

#### 9.1. Quality assurance

Peer review is an important part of good practice in research and particularly so in the publication and dissemination of research and research findings. Researchers should make use of formal and informal peer review throughout the course of the research. Researchers should make every effort to allow research to be peer reviewed prior to it being published, publicized or disseminated.

Researchers are encouraged to act as peer reviewers wherever possible. They should maintain confidentiality and not retain or copy any material under review without the written permission of the individual or organization which requested the review. They should not make use of research findings from a paper under review without the permission of the author(s) and should not allow others to do so.

Peer review of research outputs is important for quality assurance. Outputs which have been subjected to peer review are recorded as part of the University's research monitoring exercises, which assess the overall quality and health of research units and centers.

#### 9.2. Research publication

Parul University encourages publishing in prestigious, high-impact peer reviewed journals / outlets. Papers in internationally recognized peer refereed journals, conferences of international / national standing and dissemination in the form of books and monographs are encouraged.

Researchers have a duty to publish and disseminate research accurately. Submitting research reports to more than one potential publisher at any given time or publishing findings in more than one publication without disclosure and appropriate acknowledgement of any previous publications is unacceptable.

The University recommends that sponsors should be informed of any potential publication of the research findings. This will enable the sponsor to have adequate time and accurate information to liaise with the University in order to protect any arising intellectual property, or to plan public relations. Any contractual terms relating to publication must be complied with.

Publication of papers is important for the effectiveness of an individual faculty member as well as the University. The University encourages publication of papers by the faculty. A faculty member shall be expected to publish a reasonable number of research papers in refereed and esteemed journals, identified by respective Institutes, at national and international levels.

Such Research Papers either for publication or presentation in national/international conferences shall be scrutinized / guided by a committee of senior professors.

Each institution shall be encouraged to publish a quality journal and organize research conference, from time to time to boost research activities in the Institute and to contribute to the existing body of knowledge.

#### 9.3. Intellectual property rights (IPR)

Research can lead to results that have the potential to be exploited commercially. Research outcomes in this category may need protection via nondisclosure or other agreements and the filing of patents / copyrights. In certain cases, it may be necessary for nondisclosure agreements to be in place before the research is undertaken.

As soon as research results are in the public domain, which includes any form of disclosure to third parties, options for exploitation are inhibited. Researchers should not give prior disclosure of research or the findings of research when this might invalidate any IPR or commercial property rights that could result. However, any delay in publication and pending IPR protection should be kept to a minimum.

Where research involves a student who will necessarily be required to produce a dissertation or thesis for external marking and publication, any contract with a sponsor must reserve these rights for the student, even if the publication of such work is to be on a restricted basis only.

Note that IPR can only be adequately protected if researchers have kept thorough and accurate research records. All intellectual property, know-how, products and materials generated by University employees / students in the course of University approved research projects are and remain the property of the University. However, the University may agree to share the value or proceeds of these with external sponsors subject to the terms of the appropriate contract(s) in place. Normally, such agreements will be negotiated at the research proposal stage and the University will be bound by any such contracts entered into formally.

As a general principle, the University recognizes a research student as the owner of any IPR he/she produces while registered as a student at the University. Assignments of those rights to the University or a third party may be necessary depending on the terms of the agreements in place with funding bodies and/or sponsors. If such an assignment is required the student must be informed and their consent obtained before any research commences.

Parul University encourages Innovations and their protection with the help of IPR. When a scholar prepares a draft for filing a Patent / Copyright, a thorough scrutiny will be carried out by R&D Cell. A mechanism is already in place for scrutinizing such drafts for Patents / Copyrights, and is being followed.

The University bears all expenditure for filing applications for Patents / Copyrights. If the patent is commercialized the sharing of earnings is to be done between researcher and the University as per the guidelines developed from time to time. The University shall create awareness about intellectual property rights among faculty, researchers and scholars from time to time.

#### 9.4. Authorship and acknowledgement

Authorship should be restricted to those contributors and collaborators who have made a significant intellectual or practical contribution to the work. No person who fulfils the criteria for authorship should be excluded from the submitted work.

The authors of a publication are responsible for its content. The University expects authorship to be based on 1) substantial contributions to conception and design of experiments, or acquisition of data, or analysis and interpretation of data; and 2) drafting the article (drafting of a Research Paper or Patent or Copyright) or revising it critically for important intellectual content. The practice of honorary authorship is unacceptable.

Anyone listed as an author should accept responsibility for ensuring that he or she is familiar with the contents of the paper and can identify his or her contribution to it. Researchers should list the work of all contributors who do not meet the criteria for authorship in an 'acknowledgements' section.

It is standard practice to acknowledge funding sources in publications or publicity unless the sponsor states otherwise.

Researchers must clearly acknowledge all sources used in their research and seek permission from any individuals if a significant amount of their work has been used in the publication.

#### 9.5. Publicity

Researchers have a duty to disseminate their research as widely as possible, especially to those who will benefit directly from it, and to publish where their research will have

the greatest impact. The University encourages researchers to be as open as possible in discussing their work with other researchers and with the public.

Publicity may be desirable to industrial sponsors and to fundraising charities but it is also increasingly important to the University itself since raising its profile with industry and funding agencies is integral to the University creating new research opportunities and securing future funding.

The details of all published research outputs should be made available through the <u>Parul University Research Repository</u>\*; this includes written materials, audio-visual materials, web-based content, exhibition information and compositions. Staff is advised to cross-link to details held in the Repository from their staff profile web pages.

#### 9.6. Research exploitation and commercialization

Parul University wishes to encourage the development and exploitation of its intellectual property, through whichever means is most appropriate, to the benefit of the University, to its staff, and as part of its contribution to economic development, through patents / copyrights via its R&D Cell, or the formation of development companies through its Entrepreneurship Development Cell (EDC).

In line with national policies, the University positively promotes exploitation of research through University spin-out companies or license agreements with external partners. Appropriate alternative routes may be consultancies or other forms of knowledge transfer. Further guidance is available from the EDC Office.

#### 9.7. Incentives for outstanding research

The University encourages qualitative research in different areas. Outstanding research contributions done by faculty, researcher, and research scholar shall be recognized and rewarded. The University shall prepare a scheme for providing incentive(s) to researchers. The incentives include the following:

- a) Incentive in terms of money;
- b) Incentive in terms of award/prize;
- c) Incentive in terms of enhanced funding for an ongoing research project;
- d) Incentive in terms of certificate or giving more weightage/emphasis for career advancement scheme, etc.

# 9.8. Centers of excellence

The University would like to create research environment in each Department and Institution where students and faculty can work in a specific research area and be known as a specialist(s) of the domain. This will induce both students and faculty to stay focused on the specific research activities in the specialized areas. Through these efforts, the University shall promote a particular Department or an Institution as the Centre of Excellence in due course of time.

#### **10. FINANCIAL REQUIREMENTS**

Researchers should ensure that the terms and conditions of any grant or contract related to the research are adhered to and comply with organizational guidelines regarding the use and management of finances relating to research projects.

Guidelines related to the purchasing or procurement of materials, equipment or other resources for research can be obtained from the Parul University Procurement Unit.

Researchers are expected to co-operate with any monitoring and audit of finances relating to research projects and report any concerns or irregularities to their Faculty Finance Officer as soon as they become aware of them.

#### ACKNOWLEDGEMENT

The preparation of this document, "*Parul University, RESEARCH & DEVELOPMENT POLICY- 2016*" was greatly supported by the reports mentioned below; and their support is gratefully acknowledged.

Indian Institute of Technology, Delhi, Industrial R&D Unit

Kingston University, London, Academic Guidance 4: Guide to Good Research Practice (2015-2016)

National IPR Policy (Submitted by IPR Think Tank) 2014, New Delhi

Research and Development in Industry: An Overview (DSIR\_2007)

Stanford University- Research Policy Handbook

UGC's Policy and Programme for Improvement of Research in Universities