

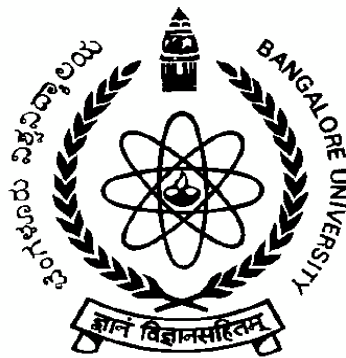
DOCTORAL DEGREE PROGRAMME

Ph.D. REGULATIONS OF 2016

(Framed under Section 44 read with Section 31 (2) (ii) of the KSU Act 2000)

(Approval of the Chancellor dated 13.12.2018

communicated vide Govt. Letter No ED 388 UBV 2018 dated 17.01.2019)



BANGALORE UNIVERSITY

FOREWORD

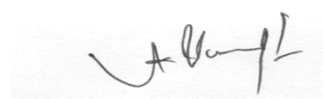


Bangalore University established in 1964 is one of the largest Universities in India with 721 affiliated colleges. It is accredited by NAAC with 'A' Grade. It is at third position amongst all the universities in the State as per KSURF Survey, conducted by Govt. of Karnataka and 37th position amongst universities in the country during 2018-19 as per the Commonwealth Universities Ranking Survey. Many of the alumni of the University have a global presence. The University is a leading University in the country well known for providing quality education and research. The research output of post-graduate departments is very good in terms of Ph.D. degrees awarded and research publications in good impact factor journals in India and abroad with a large number of citations.

Ph.D. regulation is based on the modified New Regulations and procedure for award of Ph.D. Degrees by the University Grants Commission published in the Gazette of India dated 05.07.2016. A comprehensive Regulations Governing Doctoral Degree Programme prepared by the Committee constituted under the Chairmanship of the Registrar (Evaluation) has been approved by the Academic Council and Syndicate and assented by the Government and the Chancellor. These Regulations will be a guide for all the Officers, Research Supervisors / Guides and Research Scholars of the University from the stage of submission to the stage of award of the degree.

I compliment the entire staff and members of the committee involved in preparing these Regulations. I trust that the Bangalore University Ph.D. Regulations of 2016 will be of immense help in the conduct of research activities in the University.

Bangalore


Prof. Venugopal K R
Vice-Chancellor

PREFACE

Bangalore University has an elaborate doctoral research programme which is constantly being fine-tuned and upgraded in terms of new research practices and changes. The Bangalore University Ph.D. Regulations of 2016 represents an important landmark. The 2016 regulations are an attempt to standardise, professionalise and regularise the entire Ph.D. programme of Bangalore University from the admission stage to the submission stage and award of the degree. The ultimate objective is to enhance research excellence in all respects.

Let me place on record my gratitude to the Hon'ble Vice-Chancellor Prof. Venugopal K. R. for his constant guidance, encouragement and support.

I also place on record my appreciation for the untiring efforts of all the members of the Committee, the office staff of the Examination Branch in the preparation of these Regulations, so that the doctoral programme of Bangalore University continues to grow and excel.

Prof. C. Shivaraju
Registrar (Evaluation)

BANGALORE UNIVERSITY



No .EX-II/Ph.D./Regulation/2018-19.

Jnana Bharathi,
Bangalore-56.
Date: 25.01.2019.

NOTIFICATION

Sub: Regulations Governing the degree of Doctor of Philosophy
(Ph. D) - 2016 of Bangalore University.

- Ref: 1. Resolution of Academic Council passed at its meeting
held on 12.12.2017.
2. Approval of the Chancellor dated 13.12.2018 communicated
vide Govt., letter No. ED 388 UBV 2018 dated 17.01.2019
3. Approval of the Vice-Chancellor dated: 25.01.2019.

- - - - -

In exercise of the powers conferred on it under Section 44 of Karnataka State Universities Act, 2000, the Academic Council of the Bangalore University at its meeting held on 12.12.2017 is pleased to approve the Regulations Governing the Degree of Doctor of Philosophy (Ph. D) 2016. This shall come into force from 13.12.2018 i.e., from the date of approval of the Chancellor as per KSU Act 2000.

BY ORDER


REGISTRAR

To

1. The Deans of Faculties of Bangalore University.
2. All the Chairpersons of the P. G. Department, BUB and Principals of the Research Centers of Bangalore University.

Copy

1. All the Officers of the University
2. Bangalore University Website
3. P. S to VC/Registrar/Registrar(Eval)/ & P. A to Finance Officer, BUB
4. Office copy.



BANGALORE UNIVERSITY

Pareeksha Bhavana
Jnanabharathi Campus
BANGALORE - 560 056

No. EX-II/Ph.D.-Reg-1-Amd/2016

Date : 01.08.2016

NOTIFICATION

*Sub : Constitution of a committee to examine the new Ph.D.
Regulations as per UGC new Ph.D. Regulations, 2016*

Hon'ble Vice-Chancellor, has constituted a Committee to examine the Ph.D. Regulations of Bangalore University. The Committee will meet on 2nd August 2016 at 02.00 P.M in the Board Room, Administrative Block, JB Campus, Bangalore University, Bangalore-56, with the following members*

- | | | |
|----------------------------|--|-------------------|
| 1) Dr. Suresh V Nadagoudar | Registrar (Evaluation) | - Chairman |
| 2) Dr. K. N. Ningegowda | Registrar | - Member |
| 3) Prof. Jagadeesh Prakash | Dean, Faculty of Arts | - “ |
| 4) Dr. I.S. Shivakumar | Dean, Faculty of Science | - “ |
| 5) Dr. M. Muniraju | Dean Faculty of Commerce | - “ |
| 6) Dr. H. N. Ramesh | Prof. and Dean, Faculty of Engineering | - “ |
| 7) Dr. V. Sudesh | Dean Faculty of Law | - “ |
| 8) Dr. C. S. Karigar | Special Officer (Evaluation) | - Member Convenor |

The Hon'ble Vice-Chancellor will preside over the meeting.

All the members and Special Invitees are requested to attend the meeting and give their valuable suggestions.

Sd/-
REGISTRAR (EVALUATION)

To
The Committee Members, Bangalore University, Bangalore

Copy to :

- 1) PS to Hon'ble VC / Registrar (E) and P. A to FO, B.U.B
- 2) Dy. Registrar (Eva)/Suptd., Ph.D. Section, Pareeksha Bhavana, BUB
- 3) The Dy. Registrar, Estate Section, BUB – for information & necessary action
- 4) Office Copy

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಸಂ.: ಇಡಿ 388 ಯುಬಿವಿ 2018.

ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಸಚಿವಾಲಯ,
ಬಹುಮಹಡಿಗಳ ಕಟ್ಟಡ,
ಬೆಂಗಳೂರು, ದಿನಾಂಕ:17.01.2019

ಇಂದ:

ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು,
ಉನ್ನತ ಶಿಕ್ಷಣ ಇಲಾಖೆ,
ಬಹುಮಹಡಿ ಕಟ್ಟಡ,
ಬೆಂಗಳೂರು.

RP/AD

ಇವರಿಗೆ:

ಕುಲಸಚಿವರು,
ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ,
ಬೆಂಗಳೂರು.

ಮಾನ್ಯರೇ,

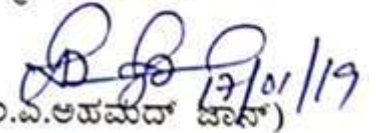
ವಿಷಯ: ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯದ Regulations governing the
degree of Doctor of Philosophy (PhD) ರ ಬಗ್ಗೆ

ಉಲ್ಲೇಖ: ತಮ್ಮ ಪತ್ರ ಸಂಖ್ಯೆ: Ex-II/Ph.D/Regulations/2018,
ದಿನಾಂಕ:09.02.2018

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ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಉಲ್ಲೇಖಿತ ತಮ್ಮ ಪತ್ರದನ್ವಯ ಸಲ್ಲಿಸಲಾಗಿದ್ದ
ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯದಿಂದ ಸಲ್ಲಿಸಲಾಗಿರುವ Regulations governing the degree of Doctor
of Philosophy (PhD) ಗಳಿಗೆ ಮಾನ್ಯ ರಾಜ್ಯಪಾಲರು ಹಾಗೂ ಕುಲಾಧಿಪತಿಗಳು
ದಿನಾಂಕ:13.12.2018ರಂದು ಅನುಮೋದನೆ ನೀಡಿರುತ್ತಾರೆ ಎಂದು ತಿಳಿಸಲು ಹಾಗೂ ಮಾನ್ಯ
ರಾಜ್ಯಪಾಲರು ಹಾಗೂ ಕುಲಾಧಿಪತಿಗಳಿಂದ ಅನುಮೋದಿಸಲ್ಪಟ್ಟ ವಿನಿಯಮಗಳ ಪ್ರತಿಯನ್ನು ಈ
ಪತ್ರದೊಂದಿಗೆ ಲಗತ್ತಿಸಿ ಕಳುಹಿಸಲು ನಾನು ನಿರ್ದೇಶಿತನಾಗಿದ್ದೇನೆ

ತಮ್ಮ ನಂಬುಗೆಯ,


(ಎಂ.ಎ.ಅಹಮದ್ ಜಾನ್)

ಸರ್ಕಾರದ ಅಧೀನ ಕಾರ್ಯದರ್ಶಿ,
ಉನ್ನತ ಶಿಕ್ಷಣ ಇಲಾಖೆ
(ವಿಶ್ವವಿದ್ಯಾಲಯಗಳು-2)

17/01/2019

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GENERAL INSTRUCTIONS

- 1 The Ph.D. candidates are required to strictly adhere to all the procedures and requirements as prescribed in these regulations.
- 2 If any action is required under these regulations, the relevant provisions have to be cited/quoted.
- 3 On the completion of the research work the Ph.D. thesis has to be prepared according to the format provided. (see Appendix 6,7,8,9) and presented as per the sequence of items as listed in Appendix 7.
- 4 The length of the thesis should preferably be between 250-300 pages. The print out should be back-to-back.
- 5 Every Ph.D. candidate is expected to procure/download a copy of the Ph.D regulations, and be familiar with all the rules, regulations and requirements. Ignorance of the rules, regulations and requirements shall not be accepted as an excuse for any technical lapse on the part of the candidate.
- 6 Every Research Supervisor is expected to be familiar with all these rules, regulations and requirements in this capacity.
- 7 The Ph.D. candidate has to prepare and sign the Declaration as per the format provided (Appendix 3)
- 8 The Research Supervisor has to prepare and sign the Declaration as per the format provided (Appendix 4)
- 9 Before sending the thesis for evaluation, both the Chairperson of the University P.G. Department and the Research supervisor shall sign the certificate for evaluation of the thesis in all the copies of the thesis. (See Appendix 5)
- 10 The research supervisor (and co-supervisor where applicable) shall to be given a final copy of the thesis.
- 11 The final copy of the thesis shall also be submitted to the Library of the University after the award of the Degree.

BANGALORE UNIVERSITY

Ph.D. REGULATIONS OF 2016

01 TITLE, COMMENCEMENT AND PURPOSE

- 1.1 These Regulations shall be called, “Regulations Governing the Degree of Doctor of Philosophy (Ph.D.) of Bangalore University, 2016”.
- 1.2 These Regulations shall come into force from the date of assent of the Chancellor.
- 1.3 **PURPOSE:** The regulations are meant to standardise, regularise and professionalise the entire Ph.D. programme of Bangalore University right from the admission stage to the submission and award of the Degree. The ultimate objective is to enhance academic/research excellence in all respects.

02 DEFINITIONS in these Regulations, unless the context requires otherwise or it is specifically so defined. All the terms used in these regulations relates to Bangalore University, unless otherwise stated.

- 2.1 **University** means Bangalore University unless otherwise stated.
- 2.2 **Degree** means the Degree of Doctor of Philosophy (Ph.D.).
- 2.3 **Fee** means the fee prescribed by the University for the Ph.D. programme from time-to- time.
- 2.4 **Entrance Test** means the test taken by the applicants who seek to qualify themselves for registration for Ph.D. programme.
- 2.5 **Research Scholar** means a candidate who is registered for a Ph.D. Programme either in a Full-time or Part-time mode as per rules of the University.
- 2.6 **Provisional Registration** means the registration memo issued to the candidates by the University w.e.f. from the date of the counselling. The memo shall be issued by the University only after the payment of the fees which shall be paid by the candidate within ten days after the counselling.
- 2.7 **Date of Registration** means the date from which the candidate is provisionally registered (see above).
- 2.8 **Course Work** means the courses prescribed as a part of Ph.D. programme and which all the candidates shall successfully complete as a pre-requisite for confirmation of registration.
- 2.9 **Research Supervisor** means the qualified permanent teacher who is recognized by the University as Research Supervisor to guide the candidates for their Ph.D. programme. Temporary, part-time and guest faculty (full-time or part-time) are not allowed to supervise Ph.D. candidates.

- 2.10 **Co-supervisor** means the recognized research supervisor (not from the same Department) who guides and supervises an inter-disciplinary doctoral thesis of a candidate as the second supervisor along with the main research supervisor.
- 2.11 **Doctoral Committee** means the Committee constituted by the University to consider the half yearly progress report, permit change of title, permit change of research supervisor, permit extension of time to submit the thesis, to issue show cause notices if required, to give permission to submit the thesis and such other duties entrusted by the University to the Committee from time-to-time in connection with the Ph.D. programme.
- 2.12 **Research Advisory Committee (RAC)** means the Committee constituted by the University to allot candidates for the Ph.D. programme from the consolidated merit list (Entrance test category) and the Non-Entrance test category; to assess the research proposal of all the candidates for registration, to review the progress reports of all the candidates, to review final synopsis of the candidates and to perform any other function assigned by the University.
- 2.13 **Board of Studies** means the Board of Studies (Post-Graduate) of the University in the discipline/subject concerned.
- 2.14 **Research Proposal** means a brief write-up on the proposed research work which shall be submitted by the candidate along with the application for registration for Ph.D. programme.
- 2.15 **Final Synopsis** means the summary of the completed research work which shall be submitted by the candidate.
- 2.16 **Sponsored Candidates** mean those permanent employees of educational and/or research institutions and organizations of public/private sector deputed to pursue Ph.D. including the permanent teachers on FIP/QIP. For these candidates the date of registration shall be effective from the date of relieving order from the employer.
- 2.17 **Foreign Students** mean those who are foreign citizens or sponsored by ICCR.
- 2.18 **Academic Council** means the Council constituted under Section 30 of the KSU Act 2000.
- 2.19 **Refereed/Reputed Journals** means a professional or literary journal or publication in which articles or papers are selected for publication through peer review process or journals listed by the UGC.
- 2.20 **Credit** means the weightage assigned to a course in terms of the contact hours.
- 2.21 **Grade** means the letter grade assigned to a student on the basis of evaluation of a course on the ten point scale as per the UGC norms.

- 2.22 **Plagiarism** means passing off someone else's work, whether intentionally or unintentionally, as your own for your own benefit. It is important to understand that plagiarism even if it is unintentional is unacceptable and is not excused.
- 2.23 **References** mean all the author/year - detailed in text citations - organised as an alphabetical list of 'references' at the end of the thesis. Note that this is a list of references and NOT a 'bibliography'. Hence the candidate should provide the details of only such sources that are cited in the text or in the footnotes.

However, every candidate may include up to a maximum of fifteen additional sources which do not figure as in-text citations, but are considered by the candidate to have had a seminal impact on the candidates understanding of his/her area of research.

03 ELIGIBILITY CRITERIA AND NATURE OF THE Ph.D. PROGRAMME

- 3.1 A candidate shall work for Ph.D. degree in a subject studied at the Master's Degree or related subject under a recognized research supervisor. However, a candidate may be allowed to conduct research in a subject other than one chosen for the Master's Degree, provided it is of an inter-disciplinary nature, with the approval of the concerned Board of Studies.
- 3.2 If the research topic is of an inter-disciplinary nature, the research supervisor may opt for a co-supervisor (not be from the same department) who shall be a recognized research supervisor of the University. However the candidate shall finalize and submit the thesis through the main research supervisor.
- 3.3 There shall be two types of research candidates: full-time and part-time candidates. Full-time Ph.D. candidates undertake research on a full-time basis. The Part-time Ph.D. programme is for working persons in the University and outside such as teachers/ scientists/ professionals / librarians/ physical education personnel and those employed in various institutions/ industries/ corporations/ organizations.
- 3.4 Those in employment and wish to take up the Ph.D. programme on a full-time basis shall produce a certificate from their employer of having been sanctioned study leave. Other candidates who take up the Ph.D. programme on a full-time basis shall give an undertaking to the effect that they will not take up any job during the period of research. If the candidate takes up a job, then the full-time registration may be converted into part-time on conditions similar to part-time research.
- 3.5 The Ph.D. scholar shall not be permitted to join any other course whether in regular and/or distance mode. They shall not appear for any other examination conducted by the University or any other University during the period of registration, except the Ph.D. course work end examination. Any candidate who violates this provision, the registration will stand cancelled.

- 3.6 If any candidate doing Ph.D. on a full-time basis is found to be doing a full-time job, his/ her Ph.D. registration will stand cancelled.

04 ADMISSION TO THE Ph.D. PROGRAMME

- 4.1 Candidates for admission to the Ph.D. programme shall have a Master's degree from a University recognised by the UGC or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized.
- 4.2 A maximum relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/Cat-I/OBC /differently abled and other categories of candidate as specified by the Government from time-to-time.
- 4.3 Candidates possessing a Degree considered equivalent to M.Phil. Degree of an Indian Institution (under the regular mode) or from a foreign educational institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. The decision of the Registrar (Eval) shall be final regarding equivalence.
- 4.4 Candidates who have cleared the M.Phil. course work through the regular mode with at least 55% marks in aggregate or an equivalent grade in a point scale wherever grading system is followed, shall be eligible to proceed to do research work leading to the Ph.D. Degree. A maximum relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/Cat-I/ OBC (non-creamy layer)/ differently abled and other categories of candidates as per the decision of the Government from time-to-time.

05 CRITERIA FOR OFFERING THE Ph.D. PROGRAMME IN THE RESEARCH CENTERS

- 5.1 Colleges may be considered eligible to offer Ph.D. programmes only if they satisfy the availability of eligible research supervisors, required infrastructure and supporting administrative and research promotion facilities as per these Regulations.
- 5.2 Post-graduate Departments of colleges, research laboratories of Government of India/State Government with at least two Ph.D. qualified teachers/scientists/other academic staff in the Department concerned, along with required infrastructure, supporting administrative and research promotion facilities, shall be considered eligible to offer Ph.D. programmes. Colleges should additionally have the

necessary recognition as a Research Center by the University to offer Ph.D. programme.

5.3 Colleges with adequate facilities for research as mentioned below shall offer Ph.D. programmes:

5.3.1 In case of science and technology disciplines, exclusive research laboratories with necessary equipment as specified by the University with provision for adequate space per candidate, along with computer facilities and essential software and uninterrupted power and water supply;

5.3.2 Earmarked library resources including latest books, Indian and international journals, e-journals, extended working hours for all disciplines, adequate space for research scholars in the Department/ library for reading, writing and storing study and research materials;

5.3.3 Colleges may also access the required facilities of the neighbouring Universities / Colleges, or of those Universities/Colleges/R&D laboratories/ organizations which have the required facilities. This has to be done with their consent.

5.3.4 Colleges should additionally have the necessary recognition as a Research Center by the University to offer the Ph.D. programme.

06 PROCEDURE TO BE RECOGNISED AS A RESEARCH SUPERVISOR, CO-SUPERVISOR

6.1 Any regular Professor of the University P.G. Department/ Constituent colleges of the university/ recognised research centers with at least five research publications in refereed/ reputed journals; and any regular Associate/Assistant Professor of the University PG Department/University constituent colleges/recognised research centers with a Ph.D. degree and at least two research publications in refereed/ reputed journals, may be recognized as research supervisor by the concerned BOS. The matter need not be placed before the Doctoral Committee.

6.2 Scientists/Professionals working in research institutions recognized as Research Centers by the University, who have Ph.D. degree with at least three years of independent research experience after Ph.D. degree as evidenced by publications in refereed/ reputed journals, shall be eligible to be recognized as research supervisors in their subjects.

6.3 Only a full-time regular teacher of the University PG Department/University constituent colleges/recognised research centers can act as a research supervisor. No part-time teachers/ temporary teachers/ part-time or full-time guest faculty will be permitted to supervise.

6.4 In case of topics which are of inter-disciplinary nature, where the University PG Department/University constituent colleges/recognised research centers feel that the

expertise has to be supplemented from outside the Department, the Research Advisory Committee (RAC) of the University P.G. Department shall – in consultation with the concerned research supervisor - suggest the name of a co-supervisor, from other Departments of the University or from other related institutions, who shall be a recognised research supervisor as per the university regulations.

- 6.5 A research supervisor shall not become a co-supervisor for more than three candidates at any given point of time.
- 6.6 The University shall not recognize the College/institution/laboratory affiliated to another University as its Research Center.
- 6.7 A research supervisor who is a Professor, at any given point of time, can guide up to a **maximum of eight Ph.D. scholars**;

An Associate Professor at any given point of time, can guide up to a **maximum of six Ph.D. scholars**; and

An Assistant Professor at any given point of time, can guide up to a **maximum of four Ph.D. scholars**.

These maximum limits prescribed above, cannot be exceeded under any circumstance, unless specified by the UGC.

- 6.8 Professor Emeritus / BSR faculty fellows with a research project from national funding agencies and who are within the University Departments, and who are recognised research supervisors, can also supervise up to a maximum of three candidates for Ph.D.
- 6.9 In case of relocation of a Ph.D. woman scholar due to marriage or otherwise, the research data shall be allowed to be transferred to the University to which the candidate intends to relocate provided all the other conditions in these regulations are followed in letter and spirit and the research work does not pertain to the project secured by the parent University / supervisor from any funding agency. The Ph.D. candidate will however give due credit to the parent research supervisor and the institution for the part of research already done.
- 6.10 All the research supervisors of the University P.G. Department/University constituent colleges/ all recognised research centers shall not be allowed to take up research guidance - full-time or part-time - in universities/research centers/ research organisations/ research laboratories outside the jurisdiction of Bangalore University.
- 6.11 The research supervisors should have a minimum of two years service left to register new Ph.D. candidates under their guidance.

07 PROCEDURE FOR ADMISSION

- 7.1 The University shall notify well in advance in the University website and through advertisement in at least two national newspapers, of which at least one shall be in the regional language, the number of seats for admission, subject/discipline-wise distribution of available seats, criteria for admission, procedure for admission, examination centre(s) where the entrance test shall be conducted and all other relevant information for the benefit of the candidates
- 7.2 The admission shall be based on the criteria notified by the University, keeping in view the guidelines/norms in this regard issued by the UGC and other statutory bodies concerned, and taking into account the reservation policy of the Central/State Government from time-to-time.
- 7.3 **Submission of Application:** The eligible candidates shall submit the application in the prescribed format (APPLICATION – A) to the Registrar (Evaluation)/ Officer designated for the purpose in response to the notification of the University.
- 7.4 If any Ph.D. candidate is found to have submitted fake records while securing admission to the Ph.D. course, his/ her registration shall stand cancelled without any notice and may also be liable for criminal action.

08 THE ENTRANCE TEST

- 8.1 The University shall admit candidates on the basis of the following procedure:
- 8.1.1 An Entrance Test shall be conducted in which the candidate should secure minimum qualifying marks of 50% to be eligible for Ph.D. admission. The candidates who secure less than 50% in the entrance test shall not be eligible for inclusion in the consolidated merit list under any circumstance.
- 8.1.2 The syllabus of the Entrance Test shall consist of 10% questions on research methodology and 90% shall be subject specific. The Entrance Test shall be conducted at the Centre(s) notified in advance by the University.
- 8.1.3 Maximum marks for Entrance Test : 100.
- 8.1.4 Nature of questions : Multiple choice questions of two marks each (candidates will have to attempt a total of fifty questions). These shall be prepared in two sets by external experts.
- 8.1.5 Syllabus for the Entrance Test: Research Methodology and cognate/ core subjects of the P.G. courses.
- 8.1.6 The University shall make necessary arrangements for dispersing suitable remuneration for question paper setting and the conduct of the Ph.D. examination.

8.1.7 Duration of Entrance Test : 120 minutes.

8.1.8 All those candidates who take up inter-disciplinary topics for research have to compulsorily appear for the entrance test in the concerned Department where the candidate has applied. This is mandatory.

09 PREPARATION OF THE MERIT LIST, ALLOCATION OF RESEARCH SUPERVISORS, PROVISIONAL REGISTRATION AND SUBMISSION OF APPLICATION - B

9.1 After the Entrance Test, a Consolidated Merit List of all the candidates shall be prepared by the University by taking into consideration the marks of only such candidates who have secured a minimum of 50 % in the entrance test and the marks obtained by the candidate in the qualifying examination in the ratio of 50:50. However, the candidate has to secure overall minimum of 55% marks. The overall minimum marks shall be 50% for SC/ST/Cat-I/OBC to be eligible for provisional registration. No further relaxation shall be made under any circumstance even if the seats remain vacant.

9.2 The Merit List of the candidates who have cleared the UGC/CSIR: JRF Test/ NET/ KSET/ SLET/ GATE/ Recognised young researchers by DST, UGC, CSIR, AICTE, INSPIRE etc., shall be prepared in that order, based on the marks secured by the candidates at the post-graduate level/ M.Phil Degree through regular mode with course work /teachers on QIP/ foreign candidates.

All such candidates who do not figure in the list mentioned above shall have to do the Ph.D. entrance examination.

9.3 Names that appear in the consolidated merit list shall be notified by the Registrar (Eval) and shall be considered for the existing vacancies only. The candidates shall be called for counselling before the RAC at the University P.G Department, at the ratio of 1:5 according to the availability of seats.

9.4 The allocation of candidates to the research supervisors shall be done by the RAC in the University P.G Department, consisting of all the research supervisors on the following basis:

9.4.1 Admissions shall be made by filling only the existing vacancies with a research supervisor, strictly on the basis of the consolidated merit list furnished by the Registrar (Eval) at the time of counselling. No new additions shall be made to this consolidated merit list under any circumstance.

9.4.2 Admissions shall be made by strictly following the roster system;

9.4.3 Admissions shall be made by strictly adhering to the rankings secured by the candidates in the consolidated merit list, irrespective of the specialisation of the research supervisor.

- 9.4.4 The vacancies shall be allotted equally to the Entrance and non-Entrance categories. However the vacant seats, if any, are mutually transferable.
- 9.4.5 In case two candidates secure the same ranking in the entrance test, then the marks scored by the candidate in the P.G. examination shall be considered.
- 9.4.6 No research supervisor shall be allowed to guide candidates exceeding the maximum limit as stipulated in Clause 6.7. Under no circumstances can this be exceeded.
- 9.5 A Professor is allowed to guide a **maximum of eight candidates**. The candidates shall be distributed on the following basis:
a) GM - 4; b) SC - 1; c) ST/Cat-I - 1; d) IIA - 1; e) IIB/IIIA/IIIB - 1.
- 9.6 An Associate Professor is allowed to guide a **maximum of six candidates**. The candidates shall be distributed on the following basis:
a) GM-3; b) SC/ST/Cat-I-1; d) IIA - 1; e) IIB/IIIA/IIIB – 1.
- 9.7 An Assistant Professor is allowed to guide a **maximum of four candidates**. The candidates shall be distributed on the following basis:
a) GM - 2; b) SC/ST/Cat-I - 1; c) IIA/IIB/IIIA/IIIB – 1.
- 9.8 The seats reserved for SC/ST/Category-I candidates shall be Inter-changeable (i.e., if there are no eligible candidates from SC, the SC vacancy shall be filled with ST/Category-I candidate and vice-versa). These vacancies shall not be transferred to OBC or the General pool.
- 9.9 Any vacancy that may arise after the counselling by the RAC, but before the commencement of the course work shall be filled up strictly on the basis of the provisions of Clauses 9.4.1 to 9.4.6. and Clauses 9.5 to 9.8
- Any vacancy that may arise after the commencement of the course work shall remain frozen. No counselling /admissions shall be done after the commencement of the course work under any circumstance.
- 9.10 Once the allotment process is completed by the RAC, the selected list along with the relevant documents shall be sent to the Registrar (Eval) for verification and approval.
- 9.11 Provisional registration means the registration memo issued to the candidates by the University w.e.f. from the date of the counselling.
- The memo shall be issued by the University only after the payment of the fees which shall be paid by the candidate within ten days after the counselling.
- 9.12 The provisional registration memo shall be issued within one month after the counseling, the candidate has to abide by the following requirements:
- 9.12.1 The provisional registration memos shall be sent by the Ph.D. Section to the respective University PG departments within one month period.

- 9.12.2 It is the responsibility of all the candidate to personally collect the provisional registration memo from the concerned University PG Department.
- 9.12.3 Immediately thereafter, the candidate shall submit APPLICATION – B along with the tentative research proposal to the Registrar (Evaluation), through the University PG Department/University constituent colleges/recognised research centers and the concerned research supervisor. This shall be done by paying the requisite fee to the University.
- 9.12.4 The entire process should be completed before the commencement of the course work classes.
- 9.13 The course work classes shall commence within fifteen days after the provisional registration memos are issued – as per the provisions of Clauses 9.11 and 9.12. However, classes shall not be held during the official vacation of the university.

10 COURSE WORK

- 10.1 All the provisionally registered candidates shall complete the course work in the University PG Department/ University constituent colleges/ recognised research centers – where the research supervisor is working. The course work is mandatory and shall be treated as a prerequisite for Ph.D. preparation.
- 10.2 All the provisionally registered candidates shall take up the course work in the University PG Department/ University constituent colleges/ recognised research centers on the following basis:
- 10.2.1 Both the full-time and part-time candidates have to complete the course work in one semester, on a full-time basis.
- 10.2.2 In exceptional cases, the part-time research candidates may be allowed to complete the course work in two semesters.
- 10.2.3 In the case of full-time course work, the candidates shall take papers I, II, III/ complete the requirements of internal assessment/ attend the viva-voce examination/ work on the research proposal under the supervision of the research supervisor - all in one semester.
- 10.2.4 In the case of part-time course work, the candidates shall take papers I, II & III/ complete the requirements of internal assessment/ attend the viva-voce examination – all in the first semester, along with the full-time course work candidates. This is mandatory.
- In the second semester the part-time course work candidates shall prepare and submit the research proposal under the supervision of the research supervisor.
- 10.3 The University PG Department/University constituent colleges/recognised research Centers - where the candidate is pursuing research - shall conduct the course work as per the provisions prescribed in Clauses 10.1 - 10.10.

10.4 Candidates already holding M. Phil. Degree through regular mode and admitted to the Ph.D. programme and who have already completed the course work in M.Phil. are exempted from the course work. The exemption shall be granted by the RAC, provided the topic of the M.Phil. dissertation and proposed research work are in the same field. All other candidates admitted to the Ph.D. programme shall be required to complete the Ph.D. course work as prescribed in Clause 10.5.

10.5. The Pattern of the Course Work:

The credit assigned to the Ph.D. course work shall be a minimum of 08 credits and maximum of 16 credits, as per UGC notification May 5, 2016, Clause 7.

The Pattern of Course Work for the Ph.D. Programme.

Sl. No.	Name of the Course	Contact Hours per Week & Exam Hours	Maximum Marks			Credits
			Continuous Assessment	Course-end Examination	Total	
01	Paper - I: Research Methodology	03	30	70	100	04
02	Paper - II: Cognate/ Core Subject	03	30	70	100	04
03	Paper - III: Field of Specialization	03	30	70	100	04
		Total	90	210	300	12
Viva Voce			50			

10.6 The course work for Ph.D. programme shall comprise of three papers of 100 marks each, viz., Paper – I Research Methodology, Paper – II Cognate/core subjects and Paper – III Field of specialization. In addition to this, a candidate shall also work to prepare the Research Proposal under the supervision of the research supervisor. There shall also be a comprehensive viva-voce for 50 marks. The internal/continuous assessment will be 30 marks for each paper.

10.7 Papers–I and II are common for all the research candidates in a particular Department/ Subject/Discipline.

Paper–III shall be common for all the research candidates working under a particular Research Supervisor.

10.8 Each paper shall have 48 contact hours. Classes for Papers – I and II shall be arranged by the Chairperson of the University P.G Department / Principal of an constituent College / Head of the recognized Research Center and Paper – III by the concerned research supervisor. Both the full-time and part-time candidates shall attend a minimum of 75% of the classes in each paper, to be eligible to appear for the course-end examination.

- 10.9 The candidates who fail to attend a minimum of 75% of the classes in each of the papers:
 - 10.9.1 Shall not be eligible to appear for the course-end examination.
 - 10.9.2 Shall not obtain the confirmation of registration for the Ph.D. programme.
 - 10.9.3 Such candidates shall be given only one more chance to attend the classes and complete the course work. This shall be done along with the Ph.D. candidates who are admitted in the next batch.
 - 10.9.4 If the candidate fails in this examination, the provisional Registration shall stand cancelled.
- 10.10 Continuous assessment marks of the course work shall be awarded by the teachers for each paper based on the following criteria: (a) Assignments - 5 marks, (b) Review of Literature - 5 marks, (c) Seminar - 10 marks, and (d) Tests - 10 marks
- 10.11 The concerned Board of Studies (PG) shall prepare and approve the course inputs for each of the three papers.
- 10.12 There shall be a Board of Examiners (Ph.D.) which will be constituted by the Registrar (Eval) based on the panel of examiners approved by the Board of Studies.
- 10.13 The Chairperson of the University P.G Department shall get the requisite number of question papers set, get them approved by BOE, send them to the Registrar (Eval) and arrange for the evaluation of answer scripts. The Chairperson of the University P.G Department shall arrange to conduct the course work examination for all the candidates viz., those attached to the University PG Department/ University constituent colleges/ recognised research centers. The course-end examination shall take place in the University P.G Department.
- 10.14 The course-end examination will be of three-hour duration (70 marks per paper). Each answer script of the course-end examination shall be coded and assessed by two examiners preferably one internal course teacher and another external. The marks awarded to the answer script shall be the average of these two evaluations.
- 10.15 If the difference in the marks between the two evaluations exceeds 20% then it shall be assessed by a third examiner (an internal examiner who has not valued this paper earlier). The marks awarded by the third examiner shall be final.
- 10.16 Marks for the three course work papers, the internal assessment and the viva-voce examination shall be finalized and communicated to the Registrar (Eval) within one month after the course-end examination. Results shall be announced within twenty days thereafter.

11 MINIMUM PASS MARKS AND SUPPLEMENTARY EXAMINATION FOR COURSE WORK

- 11.1 Minimum for pass in each written paper shall be 50% in the course end examination and 55% in aggregate. This includes the course end examination marks, the viva voce examination marks and the continuous assessment marks. However, there shall be no minimum for viva-voce. But every candidate shall compulsorily attend the viva-voce examination which will be held in the University P.G. Department.
- 11.2 The results shall be declared on the basis of the marks secured by the candidate in all the three papers, the internal/continuous assessment and viva-voce examination.
- 11.3 Failed candidates shall be allowed to take only one supplementary examination within six months of their first examination. No further attempts will be allowed. In case the candidate fails even in the supplementary examination, the provisional registration will stand cancelled.

12 SUBMISSION OF RESEARCH PROPOSAL, SUBMISSION OF APPLICATION – C AND CONFIRMATION OF REGISTRATION

- 12.1 Within one month after the declaration of the course work results, the successful candidates shall submit the final application (APPLICATION – C), along with the Research Proposal to the Registrar (Eval) through the concerned research supervisor and forwarded by the Chairperson of the University PG Department / Principal of an constituent College/ Head of the recognized Research Centre.
- 12.2 In case any Ph.D. candidate does not submit Application – C within one month after the declaration of the course work results, then an additional fifteen days grace period shall be provided. If the candidate fails to submit Application – C even during this grace period, then the Provisional Registration of the candidate will stand cancelled.
- 12.3 The candidates shall prepare the Research Proposal clearly outlining the following: the objectives, scope, relevance, hypotheses, methodology, literature survey, tentative chapters of the proposed research and a bibliography.
- 12.4 The Doctoral Committee shall scrutinize and approve the research proposal. The Committee is empowered to suggest changes, if necessary, in the title/scope/ methodology of the proposal in consultation with the research supervisor and the external expert. The research supervisor shall ensure that these changes are incorporated in the research proposal, and hence it need not be re-submitted to the Doctoral Committee. It will ipso facto be taken as approved.
- 12.5 The University shall issue the confirmation of Ph.D. Registration within one month after the approval of the research proposal by the Doctoral Committee.

13 DURATION OF THE Ph.D. PROGRAMME

- 13.1 The Ph.D. programme shall be for a minimum duration of three years, including course work and a maximum of six years from the date of provisional registration.
- 13.2 Every full-time candidate after completion of a minimum of three years and maximum of five years; and every part-time candidate after completion of minimum of four years and a maximum of six years from the date of Provisional Registration, is eligible to submit the thesis.
- 13.3 The women candidates and research candidates with more than 40% disability may be allowed a relaxation of two years for Ph.D. in the maximum duration. In addition, the women candidates may be provided maternity leave/child care leave only once in the entire duration of the Ph.D. programme for up to a maximum of 240 days, with fees for extension as prescribed by the University from time-to-time.
- 13.4 Part-time to full-time and full-time to part-time: With the approval of the Doctoral Committee, a part-time candidate may be permitted to work on full-time basis on valid grounds. Similarly, a full-time candidate may also be permitted to work on part-time basis on valid grounds. The period of such registrations shall be three years from the date of changeover or four years from the date of provisional registration, whichever is earlier.
- 13.5 Part-time candidates shall work for at least 120 working days for the entire duration of the Ph.D. Course in the University PG Department/ University constituent colleges/ recognised research centers -- of the research supervisor, excluding the period of course work.
- 13.6 Under extraordinary circumstances warranting a further extension of time for submission of thesis, the candidate shall before the expiry of the maximum period as provided in Clause 13.2(after paying the extra fee as prescribed by the University) write to the Registrar (Eval) through the research supervisor and forwarded by the Chairperson of the University P.G Department/ Principal of the constituent College/ Head of the recognised Research center. The Registrar (Eval) shall refer the same to the Doctoral Committee for its opinion. The opinion of the Doctoral Committee shall be sent to the Vice-Chancellor. The decision of the Vice-Chancellor shall be final and the extension is limited to a maximum of one year.

14 PREPARATION AND SUBMISSION OF PROGRESS REPORTS

- 14.1 After the completion of the course work and confirmation of the registration, every Ph.D. candidate shall submit a half-yearly progress report regularly in the month of January and July to the Registrar (Eval) through the concerned Research Supervisor and forwarded by the Chairperson of the university P.G Department / Principal of a constituent College/ Head of the recognized research centre.

- 14.1.1 All the Ph.D. candidates (including those attached to research supervisors in the research centers) shall present the progress report once in six months before the Research Advisory committee (RAC) in the University P.G Department. This is mandatory for all the Ph.D. candidates.
- 14.1.2 Submitting the half-yearly progress reports within the deadline (see Clauses 14.1.1 – 14.1.10) is the responsibility of the Ph.D. candidate.
- 14.1.3 Every six months the research supervisor has to forward the progress report of the candidate for presentation before the RAC, irrespective of the progress made by the candidate. The RAC shall assess the progress made by the candidate. The research supervisor shall certify to the progress of the candidate in the slot provided for in the synoptic Progress Report format, even if the progress is not satisfactory. In case the progress is not satisfactory an explanation has to be provided by the research supervisor (see Appendix: 8)
- 14.1.4 The half-yearly progress reports shall be submitted by the candidate by the 15th January and 15th July respectively every year.
- 14.1.5 Once the progress reports have been received by 15th January, the Chairperson of the University P.G Department shall arrange for the presentation of all the progress reports by 15th February, to enable the University to process all the files and conduct the Doctoral committee meeting in the months of March-April every year.
- 14.1.6 Likewise once the progress reports have been received by 15th July, the Chairperson of the University P.G Department shall arrange for the presentation of all the progress reports by 16th August, to enable the University to process all the files and conduct the Doctoral committee meeting in the months of September-October every year.
- 14.1.7 Any progress report submitted after the deadlines as stipulated from Clauses 14.1.1 to 14.1.6 shall not be received and/or considered.
- 14.1.8 The half-yearly progress report should cover aspects such as: the review of literature, new data collected, research techniques developed, libraries visited, research publications if any, discussion of the work done including findings, etc.
- 14.1.9 The candidate has to fill up the synoptic progress report, as per the format provided in Appendix- 8. The entries made by the candidate in the synoptic progress report format have to be substantiated in the detailed progress report, which shall be attached to the synoptic progress report format.
- 14.1.10 After the presentation of the progress reports, the Chairperson of the University P.G. Department, shall send all the reports along with the proceedings and the attendance extract to the Registrar (Eval.)
- 14.2 If a candidate fails to submit two consecutive half-yearly progress Reports on time and/or if the progress of the candidate is not satisfactory for two half-year periods.

- 14.2.1 The Doctoral Committee can recommend to the University for cancellation of the registration in consultation with the concerned research supervisor.
- 14.2.2 Before cancellation, a show-cause notice shall be issued to the candidate within one month after the Doctoral Committee meeting.
- 14.2.3 If the candidate fails to reply to the show cause notice within one month after receiving the notice (by post/e-mail) the registration shall stand cancelled (a copy of the show cause notice shall also be sent to the concerned research supervisor and the Chairperson of the University Department).
- 14.2.4 If the candidate replies to the show cause notice within one month period then the matter shall once again be taken up for discussion and consideration by the Doctoral Committee along with the concerned research supervisor before further action is taken for continuation or cancellation.
- 14.3 Once the registration of a candidate is cancelled by the Doctoral Committee after due procedures; and
 - 14.3.1 If such a candidate desires to once again apply for the Ph.D. programme, then he/she can do so only after a gap of two years from the date of cancellation of the previous registration.
 - 14.3.2 In cases where the registration of a candidate is cancelled a second time by the Doctoral committee, then such candidates shall not be eligible to apply again for the Ph.D. programme in the University.
 - 14.3.3 The University shall maintain a record of all the Ph.D. registrations that have been cancelled.
 - 14.3.4 The University shall provide for a slot in the Ph.D. application form to ascertain from the candidate whether the registration of the candidate has been cancelled by the University earlier.
- 14.4 The decisions taken by the Doctoral Committee - regarding change of research supervisor, extension of time for submission of the thesis, approval of the final synopsis, the issue of show cause notices etc - shall be communicated to the concerned candidate and research supervisor within one month after the Doctoral Committee meeting.
- 14.5 If any Ph.D. candidate, at any point of time, is found to be misbehaving/ harassing/ victimizing/ threatening the research supervisor and/or proved to be involved in illegal/criminal activities and acting in ways that hinders the research - the matter shall be referred to the Doctoral Committee for further action, including cancellation of the registration, if necessary.

15 CHANGE OF RESEARCH SUPERVISOR

- 15.1 Any request for a change of Research Supervisor shall be entertained only within two years from the date of the provisional Registration. After the two year period,

any request for change of supervisor shall not be permitted except on the basis of the reasons cited in Clause 15.2.

- 15.2 Under extraordinary circumstances such as – death/ disability on health grounds/ transfer of the supervisor/ the research supervisor having left the country permanently – then the change of research supervisor shall be permitted by the University at the request of the research supervisor/candidate. The matter shall be placed before the Doctoral Committee.
- 15.3 When a change of research supervisor is made, the social category of the concerned candidate shall be taken into consideration. Change of guideship can be made only if the research supervisor has a vacancy of the same social category as that of the candidate.
- 15.4 In case of any type of conflict between the research supervisor and the candidate, the Chairperson of the University P.G Department shall on receipt of the request letter either from the candidate or from the research supervisor or both, refer the matter to the Registrar (Eval). Similarly, in the case of the University constituent colleges/ recognised research centers research centers, the matter has to be referred to the Registrar (Eval). The Doctoral Committee shall examine the matter and give its opinion/recommendation. The decision of the Vice-Chancellor shall be final in this regard.

16 GUIDELINES FOR Ph.D. THESIS SUBMISSION

- 16.1 A full-time candidate after completing a minimum period of three years from the date of registration and a part-time candidate after completing a minimum period of four years from the date of registration - may submit an application along with five copies of the final synopsis of the thesis through the research supervisor to the Registrar (Eval) seeking permission to submit the thesis. This can be done not less than six months before the expiry of the minimum period prescribed in Clause 13.2 for part-time and full-time candidates.
- 16.2 The final synopsis shall be submitted to the Registrar (Eval) along with the final progress report. Once the final synopsis and progress report are submitted, no further six month progress reports need be submitted by the candidate.
 - 16.2.1 If at the time of submitting the final synopsis, the last fractional report is due, then the candidate need not present the last fractional report before the RAC.
 - 16.2.2 Similarly once the last Progress Report / Final synopsis are submitted and approved by the Doctoral committee, then no further fractional reports need be placed before the Doctoral Committee for approval. The last fractional report, if due, will ipso facto be taken as approved, and the thesis can be submitted for evaluation.

- 16.3 Before the submission of the final synopsis every candidate shall submit himself / herself to a pre-submission colloquium in the University P.G Department before the faculty and supervisors showing his/her preparedness to submit the thesis. The candidate shall present the methodology followed and the data collected/analysed. The feedback and comments made in the colloquium may be suitably incorporated into the thesis in consultation with the concerned research supervisor.

The proceedings of the colloquium shall be forwarded to the Registrar (Eval) by the concerned research supervisor through the Chairperson of the University P.G Department. The Chairperson shall forward the proceedings on the same day or the next working day.

- 16.4 Not later than six months after obtaining permission from the University to submit the thesis, every candidate shall submit four copies of the thesis through the Chairperson of the University P.G Department and the research supervisor to the Registrar (Evaluation) for evaluation

16.4.1 At this stage, each candidate shall also have to submit evidence of a minimum of two articles (vouching that there is no plagiarism) pertaining to the area of research in reputed/refereed journals.

16.4.2 The candidate shall also have to produce proof of having made at least two paper presentations in conferences and/or seminars at the time of the submission of the thesis. Evidence shall be produced in the form of certificates and/or reprints.

- 16.5 The University shall evolve a mechanism using well developed software and gadgets to detect plagiarism and other forms of academic dishonesty.

- 16.6 The thesis shall contain a declaration from the candidate attesting to the originality of the work, vouching that there is no plagiarism and that the work has not been submitted for the award of any other degree/diploma of any other University (see Appendix 3)

- 16.7 The thesis shall also contain a declaration from the research supervisor that the thesis or part there of has not previously been submitted for any other degree/ diploma/ dissertation by the candidate (see Appendix 4).

- 16.8 If a thesis is proved to be copied/ plagiarised, the University shall rescind the degree of the candidate. In case it is proved that the research supervisor has also been complicit, then the recognition of guide-ship of the research supervisor shall be withdrawn for a minimum period of three years.

- 16.9 No candidate shall be allowed to submit the thesis without following the procedures and fulfilling all the requirements as prescribed in the Ph.D. regulations of the University. These requirements pertain to the following: the candidate has to be registered in the University, have a full-fledged research supervisor, complete the course work as applicable, submit the synopsis, submit all the progress

reports/fractional reports, submit the final synopsis, complete the pre-submission colloquium, pay all the required fees etc. Unless these requirements are fully met the thesis cannot be submitted. Neither will it be accepted.

17 ADJUDICATION OF THE THESIS

- 17.1 The Chairperson of the University P.G Department shall place before the BOS/circulate the Ph.D. panel of adjudicators prepared by the concerned research supervisor for approval. The research supervisor shall include the emails and mobile cell numbers of all the adjudicators, which will help to expedite the process of evaluation. The Ph.D. panel shall be placed before the BOS/circulated for approval by the Chairperson of the University P.G. Department. This can be done only after a minimum of two years from the date of the Ph.D. registration. The Ph.D. panel approved by the BOS shall be sent to the Registrar (Eval) by the Chairperson of the University P.G Department within a week after it is approved by the BOS.
- 17.2 The panel of adjudicators prepared and approved by the Board of Studies shall include only experts in the concerned field and not below the cadre of Associate Professors, or senior scientists, who possess Ph.D. in the concerned discipline/subject and have rich research experience in the field.
 - 17.2.1 Further, out of ten experts, at least five may be from universities/institutions outside Karnataka and/or foreign Universities.
 - 17.2.2 An exception shall be made for the Foreign Languages Department because of the difficulty of getting experts to evaluate the thesis. Hence the panel for the Foreign Languages Department shall consist of five examiners. The Vice chancellor shall choose two experts out of this panel to evaluate the thesis.
- 17.3 For the adjudication of the Ph.D. thesis, there shall be a Board of Adjudicators consisting of the research supervisor as Chairperson and two external members to be chosen by the Vice-Chancellor from a panel of ten experts (the Foreign Languages Department panel shall consist of five experts as indicated in Clause 17.2.2) approved by the Board of Studies.
- 17.4 The Ph.D. thesis submitted by the candidate shall be evaluated by at least two external examiners, who are not in employment within the University, of whom one examiner may be from outside the State/country.
- 17.5 Each of the adjudicators shall send the evaluation report to the Registrar (Eval) with a copy to the research supervisor, within two months from the date of receipt of the thesis.
- 17.6 Even after a reminder, if the external examiner does not respond or send the evaluation report within two months (sixty days), the thesis can be sent to the

reserve expert. In such cases, the University shall obtain one more copy of the thesis from the candidate.

17.7 The University shall develop and use appropriate methods and technologies. Email communication shall be used to expedite the process for securing the consent of the external examiner as well as sending reminders. Except under extraordinary circumstances, the entire process of evaluation of the Ph.D. thesis shall be completed within a period of six months from the date of submission of the thesis.

17.8 Each adjudicator's report shall include the following:

- A critical account of the work of the candidate as embodied in the thesis and an evaluation of the work in terms of its contribution to the advancement of knowledge.
- Details of any question/s to be asked to the candidate or points to be clarified by the candidate at the open viva-voce examination.

The adjudicators shall also be required to answer specifically the following:

- a) Whether the Ph.D. Degree can be awarded on the basis of the thesis as presented.
 - b) Whether the thesis should be referred back to the candidate for revision and resubmission.
 - c) Whether the thesis be rejected and the candidate not be awarded the Ph.D. Degree.
 - d) Whether the thesis is fit for publication or not.
- 17.9 If both the evaluation reports received by the Registrar (Eval) are positive/favourable, the Registrar (Eval) shall permit the concerned research supervisor to arrange for the open viva-voce examination, by inviting one of the external adjudicators.
- 17.10 If one of the examiners recommends for re-submission of the thesis the Registrar (Evaluation) shall communicate to the concerned candidate, for re-submitting the thesis after suitable modifications within six months from the date of communication. The re-submitted thesis shall be sent to the original adjudicator, unless he is unwilling to act as such, in which case it may be sent to another examiner from the approved Panel.
- 17.11 No candidate shall be permitted to resubmit the thesis more than once.
- 17.12 The public viva-voce examination of the candidate to defend the thesis shall be conducted only if the evaluation reports of both the external examiners are satisfactory, and include a specific recommendation for conducting the viva-voce examination.

- 17.13 If one of the evaluation reports of the external examiner does not recommend viva-voce, the following procedure will be followed:
- 17.13.1 The University shall send the thesis to another external examiner out of the approved Ph.D. panel of examiners and the viva-voce examination shall be held only if the report of this examiner is satisfactory.
- 17.13.2 If the report of this examiner is also unsatisfactory, the thesis shall be rejected and the candidate shall be declared ineligible for the award of the degree.
- 17.14 If one of the adjudicators makes a clear recommendation against the award of the Degree, the thesis shall be referred to another external adjudicator from the approved Ph.D. panel of examiners. If the report of this adjudicator is favourable, then the candidate shall be eligible to appear for the open viva-voce examination. Otherwise, the thesis shall stand rejected.
- 17.15 If both the external adjudicators make definite recommendations against the award of Ph.D. Degree, the thesis shall stand rejected.

18 VIVA-VOCE EXAMINATION

- 18.1 On the receipt of the favourable/satisfactory reports from the external adjudicators, an open viva-voce examination shall be conducted on any working day by a Board constituted by the University as shown below. The viva-voce examination shall be conducted by the research supervisor with at least one of the two external examiners.

The viva-voce Board shall comprise the following members:

- Research Supervisor : Chairperson
- The Chairperson of the Department : Member
- One external Adjudicator : Member

- 18.2 In case where the research supervisor cannot attend the viva-voce examination, then the co-supervisor or external adjudicator who had evaluated the thesis shall be made the Chairperson. However, a written consent from the research supervisor and approval from the Registrar (Eval) shall be mandatory.

When the external adjudicator is appointed as the Chairperson, then the other external adjudicator who had adjudicated the thesis shall be invited as the member if he/she is from India. If the external examiner declines to come, then another expert from the approved Ph.D. Panel shall be invited as the member.

- 18.3 Under extraordinary circumstances where neither of the external adjudicators can be present for the viva-voce examination, the Registrar (Eval) shall appoint any external expert from the approved Ph.D. panel to conduct the viva-voce examination.

- 18.4 The Chairperson of the viva-voce Board shall display one week before the open viva-voce examination, details of the viva-voce examination on the official notice board of the University P.G Department, which shall be open to research supervisors in the Department and other research centers, faculty members of the Department, research scholars and interested experts/researchers.
- 18.5 The viva-voce examination shall primarily be designed to test the candidate's grasp of the area of research and his/her ability to defend the thesis. The points raised by the adjudicators shall be clarified during the viva-voce examination, and the reports of the examiners shall be made available to the Board.
- 18.6 In case of candidates who are abroad and unable to be present physically, the viva-voce examination may be held through video-conference mode (with open viva) after the candidate pays the additional fees prescribed by the University.
- 18.7 The Report of the open viva-voce examination shall be signed by the research supervisor, the external examiner and the Chairperson of the University P.G Department.
- This report shall be forwarded by the Chairperson of the University P.G Department to the Registrar (Eval) on the same day or the next working day.
- 18.8 If the performance of the candidate in the viva-voce examination is not satisfactory, he/she may be given only one more chance to reappear for the viva-voce exam within three months.
- 18.9 If the candidate deceases prior to conduct of the viva-voce examination, the University may award the Ph.D. degree posthumously, provided both the external reports are favourable, as a special case.
- 18.10 If the candidate fails to take the viva-voce examination, the RAC of the University P.G Department can permit a maximum three months' extension. If the candidate still fails to take up the viva-voce examination even during the extended period, the matter shall be referred by the Chairperson of the University PG Department to the Registrar (Eval) for further action.

19 Ph.D. NOTIFICATION AND AWARD OF THE DEGREE

- 19.1 After the successful completion of the open viva-voce examination by the candidate, the Chairperson of the Viva-voce Board shall send the report of the viva-voce examination along with the consolidated report on the thesis and recommendation made by the viva voce Board. These shall be forwarded by the Chairperson of the University P.G Department to the Registrar (Evaluation) for award of the Degree of Doctor of Philosophy to the candidate. The Report shall be forwarded by the Chairperson on the same day or the next working day.

- 19.2 The University shall issue the Declaration Notification within one month after the viva voce examination.
- 19.3 The candidate shall, after the viva-voce examination, incorporate the suggestions, if any, by the adjudicators into the thesis, and submit two hard copies and two soft copies (in pdf format) to the Registrar (Evaluation) for sending them to the University Library and the soft copy to the UGC.

20 PUBLICATION OF THE THESIS

- 20.1 After the award of Ph.D. Degree, the entire thesis or any part of the thesis may be published by the candidate with the written permission of the University, giving due credit to the research supervisor. Two copies of the published works shall be submitted to the University Library.
- 20.2 After the award of the Ph.D. Degree, the thesis or any publication derived from the thesis work shall be the property of the University. The University shall rightfully share with the candidate and research supervisor for any copyright, patent or recognition to the thesis.

21 DOCTORAL COMMITTEE (DC)

- 21.1 There shall be a subject-wise Doctoral Committee constituted by the University for the purpose of smooth conduct of the Ph.D. programme.

The Committee shall comprise of the following members:

- | | |
|--|---------------|
| • Dean of the concerned Faculty | : Chairperson |
| • Chairperson of the University | : Member |
| • P. G. Department/P.G. Board of Studies | |
| • External Expert in the subject | : Member |
| • Research Supervisors | : Members |
| • Deputy Registrar/Assistant Registrar | : Convenor |

The quorum for the meeting shall be three. If the Dean is not available, the Chairperson of the concerned P.G. Board of Studies shall preside over the meeting and vice-verse.

- 21.2 The Doctoral Committee shall meet at least twice a year, preferably in March-April and September-October.
- 21.3 The Doctoral Committee shall be re-constituted once in two years.

22 DUTIES AND RESPONSIBILITIES OF THE DOCTORAL COMMITTEE (DC)

- 22.1 To consider the half-yearly progress reports/fractional reports of all the registered candidates

- 22.2 To consider any request from the candidate for a change in the title of the thesis and extension of time for the submission of the thesis. Request for a change in the title can be made at any stage.
- 22.3 To approve the final synopsis and grant permission for submission of thesis.
- 22.4 To issue show cause notices to candidates, if required.
- 22.5 To carry out such other duties as the University may entrust to the Committee from time-to-time.

23 RESEARCH ADVISORY COMMITTEE (RAC) AND ITS FUNCTIONS

- 23.1 There shall be a Research Advisory Committee(RAC) consisting of all the research supervisors of the concerned University P.G Department, which shall be convened and chaired by the Chairperson of the University P.G. Department. This Committee shall have the following responsibilities:
 - 23.1.1 To allot candidates for the Ph.D. programme from the Consolidated Merit List i.e., from both the Entrance Test category and the Non-entrance test category.
 - 23.1.2 To review the research proposal and help the candidate develop the study design and methodology of research.
 - 23.1.3 To review the progress reports of the candidates once in six months as per the provisions of Clauses 14.1.1 to 14.1.10.
 - 23.1.4 To undertake such other responsibilities that the University may assign from time-to-time.
- 23.2 All the candidates shall appear before the RAC in the University PG Department once in six months to make a presentation of the progress of the research work, following which, the Chairperson of the University P.G Department shall submit all the progress reports to the Registrar (Eval) for further action.
- 23.3 In case the progress of the candidate is unsatisfactory, the RAC shall record the specific reasons for the same and suggest corrective measures. If the candidate fails to implement these corrective measures, even by the next round of presentations, the RAC along with the consent of the concerned research supervisor may recommend the matter to the Registrar (Eval) for further action.

24 PROHIBITION FOR DOING Ph.D.

- 24.1 The statutory officers of the University are prohibited from registering for Ph.D. degree in the same University during their tenure.

25 DEPOSITORY WITH INFLIBNET

- 25.1 Following the successful completion of the evaluation process and announcement of the award of Ph.D. the University shall submit a soft copy of the Ph.D. thesis to the UGC within a period of thirty days, for hosting the same in INFLIBNET.
- 25.2 Prior to the actual award of the degree, the University shall issue a Declaration Notification to the effect that the Degree has been awarded in accordance with the provisions of the UGC Regulations, 2016.

26 REPEAL AND SAVINGS

- 26.1 Notwithstanding anything contained in these Regulations, the Provisions of Guidelines, Order, Rule or Regulations in force shall be inapplicable to the extent of their inconsistency with these Regulations.
- 26.2 The University shall issue such orders, instructions and prescribe the format and procedure, as it may deem fit to implement the provisions of these Regulations from time-to-time.
- 26.3 If any difficulty arises in the implementation of these Regulations, the Vice-Chancellor shall, in consultation with the Deans, be competent to issue necessary clarifications and at the earliest possible opportunity and thereafter report the action taken by him to the Academic Council.

APPENDIX 1 : *Layout of Outer Cover*

TITLE OF THE THESIS

Thesis submitted to Bangalore University

For the award of the degree of

DOCTOR OF PHILOSOPHY

NAME OF THE CANDIDATE

BANGALORE UNIVERSITY LOGO

Department's name

BANGALORE UNIVERSITY

BANGALORE 560 056

YEAR

APPENDIX 2 : *Layout of Title Page*

TITLE OF THE THESIS

Thesis submitted to Bangalore University

For the award of the degree of

DOCTOR OF PHILOSOPHY

NAME OF THE CANDIDATE

NAME OF THE GUIDE

BANGALORE UNIVERSITY LOGO

Department's name

BANGALORE UNIVERSITY

BANGALORE 560 056

YEAR

APPENDIX 3 : *Declaration by the Research Candidate*

DECLARATION

I declare that the thesis entitled ‘.....’ submitted by me for the award of the degree of Doctor of Philosophy of Bangalore University is my own work. I vouch that the thesis has not been plagiarised and that the University can rescind the degree at any point of time, if it found to be plagiarised. The thesis has not been submitted for any degree/diploma of this university or any other University prior to this date.

Sd/-

Place:

Date:

NAME OF THE CANDIDATE

APPENDIX 4 : *Declaration by the Research Supervisor*

DECLARATION

I declare that the thesis entitled ‘.....’ submitted by Sri/Smt..... for the award of the degree of Doctor of Philosophy of Bangalore University has not been submitted for any degree/diploma of this university or any other University prior to this date.

Sd/-

Place:

Date:

NAME OF THE RESEARCH SUPERVISOR

(A similar Declaration shall be given by the co-supervisor, if applicable)

APPENDIX 5 : Certificate for Evaluation of the thesis

We recommend that the thesis be placed
before the examiners for evaluation

Sd/-

Sd/-

NAME OF THE CHAIRPERSON

NAME OF THE SUPERVISOR

(P.G. Board of Studies)

SEAL

SEAL

Place:

Date:

APPENDIX 6 : *Ph.D. Synopsis Format*

The synopsis is expected to provide a broad and comprehensive exposure of the candidates' field of research. The length of the synopsis should ideally be **between 12-14 pages** (excluding bibliography) in A4 size paper, with **Times New Roman, Font 12 and 1.5 line spacing**.

The synopsis must follow the following structure:

Section 1 : Background (two pages)

The candidate must briefly posit the broad context of the research problem.

Section 2 : Review of Literature (six pages)

The review of literature must be organised in a thematic manner and NOT merely as a listing of summaries of important references. In the process, such issues relevant to the thesis must be highlighted. Thereby the research gaps can also be identified.

Section 3 : Definition, rationale and Scope of the Study (one-and-a-half pages)

Based on the critical survey of relevant literature brought out in section 2 , the candidate shall clearly define the research area that is being addressed and explain the rationale and scope of the study.

Section 4 : Research Problem/Questions and Hypotheses (one page)

In this section the candidate should present a clear statement of the research problem. The research questions must be clearly formulated. This should be followed by a crisp and cogent statement of the research hypotheses posed in the form of falsifiable propositions.

Section 5 : Research Methods (one page)

The candidate should provide a clear description of how the research questions will be addressed/answered. Hence a detailed exposition of the research methods shall be provided in this section. Statements like the use of descriptive/analytical methods will not suffice. The candidate must also mention the type/sources of data required for the study.

Section 6 : Tentative chapters (maximum two pages)

The scholar should provide a list of tentative chapter titles with a brief description (not exceeding 4-5 lines each) of the content of each chapter. The first and last chapter must be titled 'Introduction' and 'Conclusion' respectively.

Bibliography

All the sources that may be relevant to the research should be listed in the style outlined in Appendix 9.

APPENDIX 7 : *Layout, font and structure*

- The thesis must be printed **back-to-back on A4 size paper**, within a margin of 1.5 inches on the left-side of each page and **1 inch on the right side**. The **top and bottom margins should also be an inch**.
- The main text shall be in **Times New Roman, Font 12 and 1.5 spacing**. Long quotations (running over two sentences) should be single space and left indented. The candidate has to ensure that the print is legible and clear.
- Use either Indian (British) spellings or American spellings. Do not use both simultaneously in the thesis.
- The page numbering shall start from the Introductory chapter upto the end of the References.
- The page numbering from the Declaration by the candidate to the List of Abbreviations (optional) - shall be in Roman numerical.
- The page numbering for the Annexures shall be in Roman numerical.

The thesis shall have the following sequence of items;

1. Cover Page (Appendix 1)
2. Title Page (Appendix 2)
3. Declaration by the candidate (Appendix 3)
4. Declaration by the research supervisor (Appendix 4)
5. Certificate for evaluation of the thesis (Appendix 5)
6. Acknowledgements
7. Table of Contents
8. List of Figures, Tables and Illustrations
9. List of Abbreviations (optional)
10. Chapters of the thesis
11. Annexure (if any)
12. References

Chapter 1 should be called '**INTRODUCTION**' containing a clear exposition of the context and rationale of the study, the research questions(s), the hypotheses, scope of the study, the methodology and an outline of the structure of the thesis.

The **final chapter** should be called '**CONCLUSIONS**' and must briefly restate the research problem and summarise the main findings and implications of the study.

APPENDIX 8 :**BANGALORE UNIVERSITY, BANGALORE****Ph.D. Progress Report in synoptic form****Progress Report Number:** _____

Period of the six month Progress Report: (If it is a Fractional Report also specify the period)	
Name of the Scholar	
Date of Registration and No	
Name of the Guide	
Title of the Thesis	
Average no. of hours spent on research work per week during the period	
Total no. of interactions with your research guide during the period	

1 Abstract of Research Progress

1.1 No. of Journal articles read	
1.2 No. of books/reports referred	
1.3 Libraries visited	
1.4 Data bases accessed	
1.5 Persons met for research purpose	
1.6 Institutions visited for research purpose	
1.7 Any other efforts	

2 Conferences/ Seminars/Workshops/Publications

2.1	No. of Conferences / Seminars attended	
2.2	No. of Workshops/Training Programmes attended (research related)	
2.3	No. of Papers presented at State/National/International level	
2.4	No. of papers published in National/International Journals	
2.5	Other publications (Books, Articles, Conference proceedings etc)	

1	Self-Evaluation of your performance	
2	Any other information the candidate will like to submit	

Signature of the Research Scholar

Date.....

Assessment of the candidates progress by the Research Supervisor	Excellent	Good	Satisfactory	Not Satisfactory
				(reasons to be specified in a separate note, and to be attached)

Signature of the Supervisor.....

Date.....

Signature of the Chairperson.....

Date.....

Note: The detailed progress report shall be prepared as per the provisions of clause 14.1.8 and attached to the synoptic progress report form.

APPENDIX 9 : References Format

REFERENCES

(* indicates a primary source)

- Follow the following style for different types of references:

Books

Surname, First Names/Initials (year), *Title in italics*, Place: Publisher.

Abraham, I. (1999), *The Making of the Indian Atomic Bomb: Science, Secrecy and the Postcolonial State*, New Delhi: Orient Longman.

Articles or other work in a journal

Surname, First Names/Initials (year), "Title of the article", *Name of Journal in italics*, vol (no): page numbers.

Arrow, K.J. (1962), "The Economic Implications of Learning by Doing", *Review of Economic Studies*, 29 (3): 155-173.

Article, chapter, or work in an edited volume

Surname, Firstnames/Initials (year), "Title of the article", in Names of Editors (eds.) *Title of the edited volume*, Place: Publisher.

Cox, Robert (1992), "Towards a Post-Hegemonic Conceptualisation of World Order: Reflections on the Relevancy of Ibn Khaldun", in James N. Rosenau and Ernst-Otto Czempiel (eds.) *Governance without Government: Order and Change in World Politics*, Cambridge: Cambridge University Press.

Article in a newspaper or magazine

Surname, Firstnames/Initials (year), "Title of the article", *Newspaper*, Place, Exact date [dd Month yyyy].

Chatterjee, Partha (1999), "Fragile Distinctions: Between Good and Bad Nationalism", *The Times of India*, New Delhi, 20 August 1999.

Unpublished dissertation or paper

Surname, First Names/Initials (year), *Title of thesis*, Ph.D Thesis, Place: University.

Bhattacharya, Abanti (2004), *Chinese Nationalism: The Impact on Policy*, Ph.D. Thesis, New Delhi: Jawaharlal Nehru University.

Translated book

Surname, Firstnames/Initials (year), *Title of the Translated work*, Name of Editor (ed) if any, Translated by Names of the Translators, Place: Publisher.

Borges, Jorge Luis (1999), *Selected Non-Fictions*, Elliot Weinberger (ed), Translated by E. Allen, S.J. Levine and E. Weinberger, New York: Penguin.

Government, International Organisations and NGO publications

Name of the Government/ International Organisation (year), *Title*, Publication Details (number etc) if any, Place.

Government of India (2005), *Economic Survey 2004-2005*, Ministry of Finance, New Delhi.

OR

Ministry of Commerce (2000), Government of India, Ministry of Commerce, *Newsletter of Ministry of Commerce: India and the WTO*, 2 (12) December.

Ministry of Commerce (2001a), Government of India, Ministry of Commerce, 'India reaffirms position on WTO issues at Mexico meet', *Newsletter of Ministry of Commerce: India and the WTO*, 3 (6-7), June-July: 3-9.

Ministry of Commerce (2001b), Government of India, Ministry of Commerce, 'India reaffirms position on WTO issues at Mexico meet', *Newsletter of Ministry of Commerce: India and the WTO*, 3 (9), September.

World Bank (2003), *World Development Report 2003*, Oxford University Press: New York.

Congressional Hearings, I, (1999), US 106th Congress, Session 1st, Senate, Committee on Foreign Relations, Hearings, The Taiwan Security Enhancement Act, August 4, 1999 (US Government Printing Office: Washington. DC).

Legal case

List cases by title; give volume number and abbreviated name of reporting service, starting page-number in the volume, court that decided the case, and year.

Examples:

Document/agreement obtained from the United Nations Treaty Series (UNTS):

Agreement for the Prosecution and Punishment of the Major War Criminals of the European Axis, (1951), 82 UNTS 280.

Geneva Convention of August 12, 1949 Relative to the Treatment of Prisoners of War, (1950), 75 UNTS 135.

United Nations Documents like General Assembly Resolutions/ Security Council Resolutions:

Rome Statute of the International Criminal Court (Year), UN Doc A/CONF.183/9,
Statute of the International Tribunal for the Former Yugoslavia (1993) UN Doc. S/RES/827, annex.

Statute of the International Tribunal for Rwanda (1994), UN Doc. S/RES/955, annex.

GA Res. (Year), 217 A (III), UN Doc. A/810 (the reference to this GA Resolution and the text etc. would be there in the main text).

Decisions of the International Court of Justice:

Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, (1996), ICJ Reports, 226, para. 70

LeGrand (Germany v. United States of America), Provisional Measures, Order of 3 March 1999, (1999), ICJ Reports 1, para. 29.

GATT Document in the Basic Instruments and Selected Documents

Agreement on the Interpretation of Article VI of the General Agreement on Tariffs and Trade (GATT, BISD 26 Supp. 171 (1980).

WTO cases

United States-Standards for Reformulated and Conventional Gasoline. Appellate Body Report and Panel Report, WTO Document WTO/DS2/9 of 20 May 1996.

Indian Supreme Court (SC)/High Court cases reported in the All India Reporter (AIR).

Lallubhai Chakubhai Jariwalala vs. Samaldas Sankalchand Shah, AIR, 1934 Bom. 407.

Mahendra Verma vs. Rajendra Verma, AIR 1999 SC 3345.

Some Variants

Two authors

Bhagwati, J and P. Desai (1970), *India: Planning for Industrialisation*, London: Oxford University press.

Three or more authors

Judge, G.G. et al. (1985), *The Theory and Practice of Econometrics*, New York: John Wiley & Sons.

Reprinted book

Schumpeter, J.A. (1954), *History of Economic Analysis*, New York: Oxford University Press, reprinted 1976.

Book in several volumes

Chenery, H. and T.N. Srinivasan (eds) (1988), *Handbook of Development Economics*, Vol. I, Amsterdam: North Holland.

Indirect Source

For a source you know only as it is quoted or cited by another scholar, give full publication data for the original source and for the other scholar, linked by the phrase "quoted in" or "cited in."

Levi-Strauss, C. (1969) *The Raw and the Cooked: An Introduction to a Science of Mythology*. New York: Harper & Row. Quoted in Howard Gardner (1983), *Frames of Mind: The Theory of Multiple Intelligences*, New York: Basic Books.

Internet Sources

Brin, D. (1993), "The good and the bad: Outlines of tomorrow", [Online: web] Accessed 5 Sept. 1995 URL: <http://kspace.com/KM/spot.sys/Brin/pages/piece1.html>.

Harvey, G. (1995), *Writing with Sources: A Guide for Harvard Students*, Gordon Expository Writing Program, Harvard University, [Online: web] Accessed 15 May 2005, URL: <http://www.fas.harvard.edu/~expos/sources/>.

ICTSD (2004), International Centre for Trade and Sustainable Development (Geneva), "India Submits Cautious Services Offer", *BRIDGES Weekly Trade News Digest*, 8 (3), 28 January: 4-5, URL: <http://www.ictsd.org/weekly/04-01-28/BRIDGESWeekly8-03.pdf>.

IFATPC (2004), International Food and Agricultural Trade Policy Council, "Twenty-Five Ways to Improve the Derbez Draft on Agriculture", 10 February. URL: <http://www.agritrade.org/Doha/Derbez/Assessment%20Paper.pdf>.

Przeworski, Adam and Frank Salomon (1995), "The Art of Writing Proposals: Some Candid Suggestions for Applicants to Social Science Research Council Competitions", New York: Social Science Research Council, revised 1998, [Online: web] Accessed 3 February 2006, URL: http://www.ssrc.org/fellowships/art_of_writing_proposals.page.

Class lecture, conference paper, speech, or performance

Lal, Deepak (2005), "Globalizing Capitalism", Lecture delivered on 19 April 2005 at the Centre for International Trade and Development, School of International Studies, Jawaharlal Nehru University: New Delhi.

Prior to citing lectures and conference papers, ensure that the author has not specified that the lecture/paper is not for citation.

Personal or phone interview, letter or e-mail

Agarwal, M.L. (2005), e-mail to the author, 5 April 2005.

Weeramantry, C.G. (2000), personal interview, Baudholoka Mawatha, Colombo, 28 April 2000.

BANGALORE UNIVERSITY



Guidelines for Implementation of Sponsored Research Projects



Jnana Bharathi, Bangalore University, Bangalore-560 056



BANGALORE UNIVERSITY

Guidelines for implementation of sponsored research projects

Objective: To implement successfully all the objectives of the sponsored research projects and to utilize the sanctioned financial support/assistance in the prescribed project, the following guidelines are to be followed:

1. The Principal Investigator (PI)/Coordinator has to submit the proposal to the funding agency through the concerned Chairman, Departmental Council/Coordinator, Center to the Director, PMEB with enough number of copies and one additional copy for the University records.

The proposal has to be forwarded to the concerned funding agency along with the certificate/s (as per the format prescribed by the funding agency) within five working days by the University.

The PI can also submit the proposal including scientists from other universities/institutes of national stature/international institutions as well. In such cases, a formal letter expressing his/her willingness to serve as Co-Investigator has to be submitted to the Registrar, Bangalore University, Bangalore.

2. The PI/ Coordinator can submit the revised proposal, and/or the revised budget directly to the funding agency as per the suggestion/s by the funding agency. He/ She has to submit a copy of the revised proposal and revised budget along with a copy of the letter received from the funding agency to the Development section for the University records.

3. The project sanction order/approval letter issued by the concerned funding agency has to be submitted to the Director, PMEB through the Chairman, Departmental Council/Coordinator, and Center.

4. The PI/ Coordinator has to submit the date of implementation of the sanctioned project directly to the funding agency, as per the format prescribed by the funding agency. A copy of the same has to be submitted to the Director, PMEB for records.

5. Implementation of Projects:

There will be separate university accounts for the project funds. All funds received for projects will be deposited in the account. A separate section of the finance office with an officer/ superintendent will assist the DR/PMEB in administering the project.

Receipt of grants: The superintendent/Deputy Registrar/Assistant Registrar should be given access to monitor the project sb account concerning the receipt of grants from funding agency. The concerned officer has to monitor deposition of grant into the project account from the concerned funding agency.

The concerned officer has to intimate the receipt of such grant/s to the PI/Co-PI immediately so that the project implementation can be initiated in time.

6. One Time Sanction Order:

The PI/ Coordinator shall obtain a one time administrative sanction, for the Head-wise expenditure of the grant/s (as approved and awarded by the funding agency) for the entire duration of the project i.e., from the date of implementation to the completion/termination of the project from the Vice-Chancellor. In case of extension of the tenure of the project with additional/revised budget, then a separate one time sanction order has to be obtained.

7. The PI/Coordinator is permitted to draw advances directly from the Finance Officer, without seeking administrative sanction from the Registrar using the annexure –I appended to the guidelines.

8. The PI/Coordinator of the concerned project shall open and operate a SB account, in the nationalized bank in the name of the PI and operate the same to implement the project grants.

9. Appointment of research personnel:

i. After receiving the sanction letter from the finding agency, the PI with the intimation to the DR, PMEB will notify/ advertise in news paper/s and in relevant website calling applications for the posts sanctioned by funding agency. In addition, an advertisement calling applications has to be circulated to several university departments for wide circulation.

ii. In consultation with the Director PMEB/ DR, date of interview may be fixed and recruit the required personnel as per the norms of university as well as funding agency.

iii. The committee for recruitment shall be as follows.

Director, PMEB - Chairman

Chairman of the department - Member

Principal investigator - Member and Convener

Co-PI (If any) - Member

One subject expert (as suggested by PI/Coordinator)

iv. TA/DA may be paid to the subject expert only.

v. Soon after the selection of the candidates, the PI should send the proceedings to PMEB / DR, who will issue an appointment order to the candidates selected for a period as prescribed by the funding agency.

vi. Appointee shall report to his/her duties by submitting four copies of joining report along with bio-data to the PI/Coordinator. Further, the PI / Coordinator will forward the joining report through the Chairman, Departmental Council to the Director, PMEB.

vii. As and when the time demands the above personnel will be relieved taking the recommendation of PI into consideration. Subsequently, the PI can initiate the process of appointing staff again.

10. Procurement of equipments and consumables:

The financial limits vested with various levels for purchase based on lowest quoted rates among three firms as follows:

a) Up to Rs. 10, 000/- per bill/ invoice: the PI/ Coordinator of the project may spend up to Rs.10, 000/- at a time on any item without calling for comparative quotations and send the bill/invoice on a DC bill payable to the Finance Officer, Bangalore University, Bangalore for payment to the concerned firm or the PI/ Coordinator if, the amount has been meet by the concerned project implementing authority.

The items to be procured include any chemicals, materials, glassware or any other material required for the implementation of the project. In addition minor civil works related to renovation/alteration/electric works/civil works pertaining to laboratory/ animal house, directly or through resident engineer.

b) Up to Rs. 1, 00, 000/- of items (equipments/chemicals, etc): For procurement of items costing up to Rs. 10,00,000/- comparative quotations shall be called from at least six suppliers/dealers/firms. However, there should be a minimum of three quotations while finalizing the indent. Such purchases need to be approved by the Vice-Chancellor and suitable order be issued by the Finance Officer, BUB. After the procurement of the items, the bills/invoices have to be submitted to the Finance Officer, BUB for payment to the concerned firm or the PI/ Coordinator, if the amount has been met by the concerned project implementing authority.

Items whose prices are approved by the Government of Karnataka and/ or DGS and D, Government of India can be directly purchased without calling for quotations. For purchase of items directly from the manufacturers such as Sigma/Aldrich/Merck/items under rate contract, sole suppliers or distributors of Indian /foreign materials in India and from standard company show rooms, it is not necessary to obtain comparative quotations. The single quotation obtained from any of the above suppliers may be used to place the order with the approval from the Vice-Chancellor, BUB.

c) Equipments/chemicals costing above Rs.1, 00, 000/- are to be procured through e-procurement system.

i. The committee constituted for the purpose of such procurements shall have the following members:

Director, PMEB	-Chairman
Chairman of the department	-Member
Principal investigator	-Member and Convener
Co-PI (If any)	-Member
One subject expert (as suggested by PI/Coordinator)	

ii. The committee shall meet to open the technical and the financial bids and scrutinize the same. The PI/Coordinator will have to prepare the proceedings of the meeting/s and submit the recommendations of the committee along with the PR-1 form (Rule 9.7 of the purchase proposal) quotations, comparative statement, justification for such procurements, indent to the Finance Officer, Bangalore University, Bangalore.

iii. The central purchase committee can recommend the procurement of the equipments/chemicals/items for final approval by the Syndicate.

- iv. PI/ Coordinator may be invited to CPC for any clarifications as and when required.
- iv. At the time of submission of the indent the expected expenditure towards the payment of customs duty, if any, to be paid to The Govt. of India has to be furnished. The said expenditure has to be met out of the budget head under equipments.
- v. In extraordinary cases, the sanction order can be issued pending approval of such procurements by the syndicate, BUB.
- vi. The equipment and furniture procured under the research grants shall be first entered in to Stock Register book of the concerned Department and then issued to the concerned PI. In addition, the PI shall maintain a separate stock book of equipment/furniture for the purpose of operation of the individual grants.
- The consumables need not be entered into the Stock Register of the Department. The PI shall also maintain a logbook documenting the utility of the equipment.

All the equipments procured under the projects shall remain in the department to which the PI belongs.

11. Procurement of books/monographs/encyclopedia, etc:

The books may be purchased both by calling for quotations or directly from the suppliers/dealers without calling for quotations with at least 10% discount except in case of publications of Government/ Scientific organizations. In case of foreign books, the bills should accompany the price proof and GOC conversion rate applicable at the time of supply.

12. Fieldwork:

In projects where fieldwork is a component, the Coordinator/ PI shall take it up as far as possible on holidays and weekends. Where field work is carried out for less than 5 days, the coordinator/ PI may undertake it with prior approval of the concerned Principal/ Chairman. The teachers working in the coordinated projects may also undertake field trips, for a period not exceeding 5 days with prior approval of the Coordinator and the concerned Principal, so as to ensure that routine works of the Department are not hampered. For field work exceeding more than 5 days, prior approval of the Registrar is essential.

13. Library Reference work/laboratory outside the University:

- i) The Coordinator/PI and all the personnel working under the sanctioned project are permitted to visit institutions for the above purposes with prior consent of the concerned Principal without affecting the examination, University and Department works/functions etc. The registration fees for seminar/symposium/conference/workshop may be claimed under separate development grant scheme for college teachers.
- ii) Attendance certificates: Ordinarily the faculty members are expected to submit attendance certificate in respect of travels undertaken by them for attending meetings, reference works and research works. In exceptional/genuine cases they may be exempted by the Vice-Chancellor. For field works no attendance certificate is expected. However, the concerned faculty member shall certify himself/herself regarding the work undertaken.

14. TA and DA to project personnel:

TA and DA to project personnel is admissible as per KCSR. Those drawing a salary (fellowship) of Rs. 10,000/- or more per month are eligible for III AC rail. The PI/Coordinator is authorized to sanction TA and DA for undertaking activities related to item 4 and 5 above, to research personnel (eg. JRF, SRF, project assistant, postdoctoral fellows, research associates, co-investigators, etc.) and teachers participating in the project.

15. Vehicle hiring:

The Coordinator/PI may hire taxi whenever needed for conduct of fieldwork or other project related works. In case of car the current rate admissible by the University (per km) and payment for minimum of 300 kms per day is allowed. In cases involving fieldworks in interior areas like forests, hills etc, hiring of vehicles AC/non-AC jeep/tempo/car etc. is permitted as per the existing market rates, but after obtaining the formal approval from the Vice-Chancellor for constituent colleges. In case of short distance field works (less than 100 km each way) the investigators may also use own cars and claim Rs 5.50 per km. The format as given in Appendix-V may be submitted along with the bills.

16. Photocopying and typing charges:

In order to obtain quality service in photocopying and typing works, the prevailing market rates as certified by the Coordinator/PI are allowed.

17. Appointment of Secretarial Assistant/Lab cum Field Attendant:

In case there is a provision to appoint secretarial assistant/Lab-cum-field attendant they may be paid out of the working expenses/contingency/overhead charges subject to the provisions of the funding agency. The said personnel may be appointed after following the usual procedures of the University. In case of part time secretarial assistance (those who can type, operate computer, process papers for placing orders, passing the bills, maintain the files and stock books, etc.) a payment of Rs. 600-800 may be paid, depending upon the experience. In case of full time Secretarial Assistant/ Lab-cum-field Attendant, etc., the daily allowance shall be paid as prescribed by the University from time to time. Prior approval of the Director, CDC should be obtained for such appointment as well as payments.

18. Overhead charges:

Some R & D agencies provide overhead grants. The grant available under this head may be utilized for maintenance of equipment and benefits to the personnel employed in the project. The funds may be used to procure the equipment and accessories, laboratory table/chairs/stools/cupboards/shelves for books, glassware, chemicals, etc, air conditioner, stabilizer, UPS, exhaust fan, fan, animal cages, aquarium, dust free cabins, computer and its peripherals, printer, scanner, photocopier, Fax machine, phone, electrodes, optical/electronic components, photographic equipment, spares, consumables (chemicals, glassware, insecticides, fungicides, farm yard manure, pots for growing plants, thin section of rocks), books, scientific journals and for payment of reprint charges, block and page charges for publication and postage. The overhead funds may also be utilized for alteration/renovation of laboratory facilities, purchase of furniture and any other expenditure related to the project including travel. However the university will utilize 50% of the overhead charges as handling charges.

However, if the PI is working as a Assistant Professor, in such cases, the overhead budget can be utilized up to 75% which in each case requires the prior approval of the Vice-Chancellor.

19. Settlement of Bills and Advances:

- i) All bills/vouchers/invoices/receipts will have to be certified by Coordinator/PI. The PI/Coordinator will maintain the Xerox copies of all bills/vouchers/invoices/receipts/ before submitting the original copies of these to the office of the Finance Officer, BUB
- ii) All bills/vouchers/invoices/receipts submitted to the Finance Officer, BUB should be settled within 2-3 weeks and the PI/coordinator be intimated regarding the same.
- iii) The accounts shall be audited by the Government Auditor or a Chartered Accountant (permitted by the funding agency).

20. It is the responsibility of the PI/Coordinator to submit the utilization certificate and statement of accounts at the end of the each financial year. After obtaining the signatures of the Finance Officer, and the Registrar, Bangalore University, Bangalore, the same has to be sent to the concerned funding agency by the PI/Coordinator.

21. The PI/Coordinator has to attend the mid year/interim/end evaluation/monitoring of the sanctioned project and present the progress of the work carried under the project to the funding agency.

The PI/Coordinator has to submit the copy of the evaluation report received from the funding agency to the development section soon up on receipt of the same.

22. The PI/Coordinator has to correspond with the funding agency regarding the release of the subsequent installments as well as the revised budget of the project.

23. The unspent amount, if any, has to be returned to the funding agency within 3 months after the completion of the project.

2. The PI/Coordinator shall submit the hard and soft copy of the final technical/ project completion report submitted to the funding agency to PMEB/DR for record.

Note: Director/PI/Coordinator is advised to strictly adhere to the guidelines prescribed by UGC/concerned funding agency in addition to the guidelines by the University.

However, if the PI is working as a Assistant Professor, in such cases, the overhead budget can be utilized up to 75% which in each case requires the prior approval of the Vice-Chancellor.

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Honaray DoctorateDegrees Awarded during 2017-22



Honorary Doctorate Awardees during 2017 to 2022

Date of Annual Convocation	Name	Honorary Degree	Field of Recognition
54 th 22.04.2019	Dr. C.N. Manjunath Director, Jayadeva Institute of Cardiovascular Sciences and Research	D.Lit.	Medicine
	Dr. Kamini Rao Obstetrician & Gynecologist Medical Director of Millann	D.Lit	Medicine
	Sri S.V.S. Subramanya Gupta	D.Lit.	Social and Philanthropy
56 th 29.4.2022	Sri Madhu Pandit Dasa President, ISKCON and Chairman, The Akshaya Patr Foundation	D.Lit.	Philanthropy and Spirituality
	Sri S.G.Vasudev Artist	D.Lit	Visual Art
	Sri M.S. Muthuraj Writer, Artist and Social Worker	D.Lit.	Art and Literature
57 th 5.12.2022	Dr. T. Anill Kumar Artist Painter, Photographer	D.Lit.	Art, Painting and Social Work
	Shri Bungle Shamarao Dwarakanath Actor, Director and Producer	D.Lit	Kannada Cinema
	Shri Amarnath Gowda Attorney and Counselor At Law	D.Lit.	Social Service



How many made it

65,039

UG and PG students
eligible for
convocation

33,036

Distinctions

20,437

Pass class

6,656

Second class

166

PhDs

Honorary Doctorates

The university that has not given Honorary Doctorates for more than two years has got a green signal from the Governor of Karnataka who is the Chancellor of the University to do so this time. Governor Vajubai Vala cleared three of the 11 names recommended by a committee. They are:

- **Dr CN Manjunath**, director of Jayadeva Institute of Cardio Vascular Sciences
 - **Dr Kamini Rao**, medical director of Milann
 - **SVV Subramanya Gupta**, social worker
- Bangalore Mirror, 21.04.2019



ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ
೫೫^{ನೇ} ವಾರ್ಷಿಕ ಪಟಕೋತ್ಸವ
BANGALORE UNIVERSITY
55th ANNUAL CONVOCATION

30th JANUARY 2021

BU confers honorary doctorate on Akshaya Patra founder, two others

The New Indian Express, 30.4.2022

EXPRESS NEWS SERVICE
@ Bengaluru 30-04

RECOGNISED for his contributions in the fields of community welfare and food security, Akshaya Patra founder-chairman and ISKCON president Madhu Pandit Dasa, was conferred an honorary doctorate at Bangalore University's 56th Annual Convocation on Friday.

He was conferred the doctorate alongside visual artist S G Vasudev, and writer and activist M S Muthuraj. S G Vasudev was involved in establishing the Visual Arts Department at BU, while M S Muthuraj was recognised for his contributions as an activ-



Governor Thaawarchand Gehlot (centre) attends the 56th Annual convocation of Bangalore University, in Bengaluru on Friday

ist, to eradicate untouchability.

In addition, over 68,000 students had been conferred the degrees at the university's convocation. With 321 gold medals handed out to a total of 186 students. Sushma H, a chemistry student from Ban-

galore University was awarded seven gold medals.

Speaking at the convocation, National Assessment and Accreditation Council director, Dr S C Sharma, talked about the importance of an updated curriculum, saying that if a curriculum is obsolete, the first casualties would be students and teaching faculty. "The global pandemic has taught a valuable lesson to all universities across the world. But a boon came in the form of digital education and the digital university," he said.

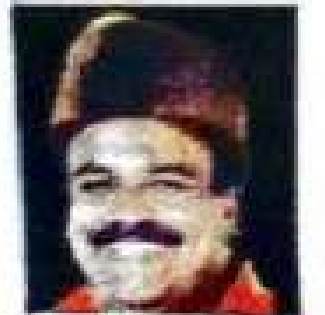
For the first time, the students will be able to download their degree certificates from DigiLocker and the National Academic Directory (NAD).



ಮಧು ಪಂಡಿತ್ ದಾಸ್



ಎಸ್.ಜಿ.ವಸುದೇವ್



ಮುತ್ತುರಾಜ್



56th Convocation of Bangalore University



ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ
57 ನೇ ವಾರ್ಷಿಕ ಘಟಿಕೋತ್ಸವ

ದಿನಾಂಕ : 5ನೇ ಡಿಸೆಂಬರ್ 2022

BANGALORE UNIVERSITY
57TH ANNUAL CONVOCATION
DATE: 5th December, 2022



ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ
BANGALORE UNIVERSITY

57ನೇ ವಾರ್ಷಿಕ ಘಟಿಕೋತ್ಸವ
57th Annual Convocation
05th December 2022



Veteran actor, director, and producer Dwarakish, Amarnath Gowda, Attorney and Counsellor at Law, and founder president of The Law Offices of Amarnath Gowda in Farmington Hills, Michigan, U.S., and T. Anil Kumar, renowned artist, painter, photographer, social worker, and philanthropist were conferred with Honorary Doctorate Degrees

ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ

ಸಂಖ್ಯೆ:ಎಸ್‌ವೈಎನ್/ಎಸ್‌1/ ಶೈಕ್ಷಣಿಕ ಅಭಿವೃದ್ಧಿ /2020-21

ಬ್ಯಾಚುಲರಿ,
ಬೆಂಗಳೂರು- 560 056
ದಿನಾಂಕ: 02.02.2021

ಅಧಿಸೂಚನೆ

ವಿಷಯ: ಶೈಕ್ಷಣಿಕ ಅಭಿವೃದ್ಧಿ ಸಮಿತಿಗೆ ಅಧ್ಯಕ್ಷರನ್ನು ನಾಮನಿರ್ದೇಶನ ಮಾಡುವ ಬಗ್ಗೆ.

- ಉಲ್ಲೇಖ: 1. 151ನೇ ಸಿಂಡಿಕೇಟ್ ಸಭೆಯ ನಿರ್ಣಯ ದಿನಾಂಕ 12.02.2020
2. 155ನೇ ಮುಂದೂಡಿದ ಸಿಂಡಿಕೇಟ್ ಸಭೆಯ ನಿರ್ಣಯ ದಿನಾಂಕ 05.01.2021
3. ಮಾನ್ಯ ಕುಲಪತಿಗಳ ಅನುಮೋದನೆ ದಿನಾಂಕ 01.02.2021

ದಿನಾಂಕ 05.01.2021 ರಂದು ನಡೆದ 155ನೇ ಮುಂದೂಡಿದ ಸಿಂಡಿಕೇಟ್ ಸಭೆಯ ನಿರ್ಣಯದನುಸಾರ ಪ್ರೊ.ಟಿ.ವಿ. ರಾಜು, ಸಿಂಡಿಕೇಟ್ ಸದಸ್ಯರು, ಇವರನ್ನು ತಕ್ಷಣದಿಂದ ಜಾರಿಗೆ ಬರುವಂತೆ ಹಾಗೂ ಮುಂದಿನ ಆದೇಶದವರೆಗೆ ಶೈಕ್ಷಣಿಕ ಅಭಿವೃದ್ಧಿ ಸಮಿತಿಗೆ ಅಧ್ಯಕ್ಷರನ್ನಾಗಿ ನಾಮನಿರ್ದೇಶನ ಮಾಡಲಾಗಿದೆ.

ಆದೇಶದ ಮೇರೆಗೆ,

U. Srinivas
ಕುಲಸಚಿವರು

ಗೆ,
ಸಂಬಂಧಪಟ್ಟ ಸದಸ್ಯರಿಗೆ,

- ಪ್ರತಿಗಳು:
1. ಅಧ್ಯಕ್ಷರು, ಸದಸ್ಯರು ಹಾಗೂ ಸಂಚಾಲಕರು, ಶೈಕ್ಷಣಿಕ ಅಭಿವೃದ್ಧಿ ಸಮಿತಿ, ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಂಗಳೂರು
 2. ಕುಲಪತಿಗಳ/ಕುಲಸಚಿವರ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳಿಗೆ/ವಿತ್ತಾಧಿಕಾರಿಗಳ ಆಪ್ತಸಹಾಯಕ, ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಂಗಳೂರು-560 056.

No. DEV/D2a/BU-RP/2020-21

Dated: 05.11.2022

NOTIFICATION

Sub: Re- Constitution of Academic Development Committee reg.-

Ref: 1. Notification No. SYN/ADC/2019-20 dated 28.02.2020.

2. ಅಧಿಸೂಚನೆ ಸಂಖ್ಯೆ/ಎಸ್ ವೈಎನ್/ಎಸ್/ ಶೈಕ್ಷಣಿಕ/ಅಭಿವೃದ್ಧಿ/2020-21 ದಿನಾಂಕ 02.02.2021.

3. Orders of the Vice-Chancellor Dated 05.11.2022

The Academic Development Committee constituted vide order dated 28.02.2020 is reconstituted with the following members to suggest measures for Academic Development of the University.

1	Prof. T.V. Raju, Member of the Syndicate, BUB	Chairman
2	The Registrar, Bangalore University, Bengaluru	Member
3	Dr. C.R Mahesh, Member of the Syndicate, BUB	Member
4	Sri. M. Raghavendra Baliga, Member of the Academic Council, BUB	Member
5	Deans of the all the faculties, BUB	Members
6	Dr. G. Govindaraju, Development Officer, BUB	Member
7	Director, IQAC, BUB	Member Secretary

All the members are requested to serve on the Committee.

BY ORDER

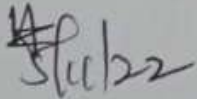

REGISTRAR

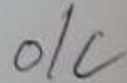
To,

All the members concerned.

Copy to:

1. The PS to VC/Reg/Finance Officer, BUB for information.
2. Office copy.





Bangalore University Teachers sabbatical Leave 2017 -2022

Sl. No.	Department	Names of the teacher	sabbatical leave period	Title	
1.	Physics	Dr.Ramakrishna Damle Professor	01.04.2017 to 18.03.2018	'Polymer Nano Composites for Energy Storage Devices	
2.	Performing Arts,	Dr.S.N.Susheela, Professor,	20.05.2017 to 19.04.2018	Folk Music of Karnataka"	
3.	Centre for Kannada Studies	Dr.H.L.Nataraj, Professor,	01.10.2017 to 30.04.2018	ಡಾ.ಬಿ.ಆರ್.ಅಂಬೇಡ್ಕರ್ ಮತ್ತು ರಾಮಮನೋಹರ ಲೋಹಿಯ ಅವರ ಪ್ರಭಾವ	
4.	Sociology	Dr.Samata B Dcshmane, Professor,	01.12.2017 to 30.11.2018	"Shri Gurudev Narayana Guru"	
5.	Political Science	Dr.Ramanna.P Professor,	29.01.2018 to 28.01.2019	Governement and politics in Modren Karnataka	
6.	MCA	Dr.Muralidhara.B.L, Professor,	01.04.2018 to 31.03.2019	"Digital Divide"	
7.	Physics	Dr.M.K.Kokila, Professor.	01.08.2018 to 31.07.2019	Cheminformatics.	
8.	History	Dr.M.V.Ushadevi, Profess	02.11.2018 to 31.10.2019	"Socio-Economic History of Modern Mysore"	
9.	History,	Dr.M.Shashidhar, Professor.	01.10.2020 to 30.09.2021	Caste in colonial Mysore-An analysis of census and selective ethnological data "	
10.	M.C.A	Dr.M.Hanumanthappa, Professor.,	01.10.2020 to 30.09.2021	"Dataware Housing and Business Intelligence"	
11.	Physics	Dr.Viajayakumar H Doddamani, Professor, Department of,	31.08.2021 to 31.05.2022	up to 31 st May 2022 to carry out research on "Active Galaxies"	
12.	Law	Dr.V.Sudesh	01.01.2022 to 31.12.2022	"Dr.B.R.Ambedkar and his contributions towards labour rights jurisprudence"	
13.	Mathematics	Dr.H.G.Nagaraj	23.04.2022 to 22.04.2023	"Fluid Flow, Heat and Mass Transfer in different geometries"	✓
14.	Economics	Dr.S.R.Keshava	23.04.2022 to 22.04.2023	Ambedkar Economic thoughts and its Relevance to present Indian Economic context"	✓

BANGALORE UNIVERSITY

Jnanabharathi, Bangalore-560 056



Sub: Sanction of Sabbatical leave to Dr.Ramakrishna Damle,
Professor, Department of Physics, BUB.

Ref : 1. Representation of Dr.Ramakrishna Damle, Professor,
Dept. of Physics, BUB, dated:26.11.2016.
2. Syndicate Resolution dated: 22.12.2016.

U.O.NO:EST-II:E5:APT:SAB-LEV:2016-17,

DATED: 16.01.2017

Dr.Ramakrishna Damle, Professor. Department of Physics, Bangalore University, Bangalore, is granted Sabbatical leave from 01.04.2017 to 18.03.2018 (352 days) to work on **"Polymer Nano Composites for Energy Storage Devices"**. The Leave is sanctioned with the following conditions:

1. He shall execute a Bond with proper surities as in the case of study leave, that after expiry of sabbatical leave he will return to the service of the University and serve there after atleast for five years, failing which he will refund to the University, the leave salary and allowances and the expenses, if any, spent on him or paid to his behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. He shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to him immediately prior to his proceeding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture of the benefit of pay and allowances.
3. He shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, he is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided he rejoins the University on expiry of his leave.
5. On return from leave, he shall report to the University within one month, the nature of studies and research work undertaken during the period of leave.

To,
Dr.Ramakrishna Damle,
Professor,
Department of Physics, BUB.

Copy to:

1. The Chairman, Department of Physics, BUB
2. The Finance Officer/The Govt. Auditor, BUB
3. The Development Officer, BUB.
4. The Dy. Registrar, Syndicate, BUB
5. The Finance Branch-5, BUB

BY ORDER

Gm m 90
REGISTRAR *20/1*
H

Received on
23/1/2017
Ramle

BANGALORE UNIVERSITY
Jnana Bharathi, Bengaluru-560 056

- Sub: Sanction of Sabbatical leave to Dr. S.N. Susheela,
Professor, Dept. of Performing Arts, BUB.
Ref: Representation of Dr. S.N. Susheela, Professor,
Dept. of Performing Arts, BUB, dated: 01.04.2017/
31.03.2018/01.04.2017
2. Syndicate Resolution dated: 24.04.2017.
3. Syndicate Resolution dated: 24.05.2017.

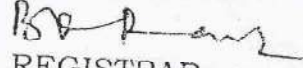
U.O.EST-II:E5:APT:SAB-LEV:-2016-17.

Dated: 30.05.2017

Dr. S.N. Susheela, Professor, Dept. of Performing Arts, Bangalore University, Bangalore, is granted Sabbatical leave from 20.05.2017 to 19.04.2018 (365 days) to work on "FOLK MUSIC OF KARNATAKA". The Leave is sanctioned with the following conditions:

1. She shall execute a Bond with proper surities as in the case of study leave, that after expiry of sabbatical leave she will return to the service of the University and serve there after atleast for five years, failing which she will refund to the University, the leave salary and allowances and the expenses, if any, spent on her or paid to her behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. During the period of sabbatical leave she shall be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to her immediately prior to her proceeding on sabbatical leave. She shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture of the benefit of pay and allowances.
3. She shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, she is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided she rejoins the University on expiry of her leave.
5. On return from leave, she shall report to the University within one month the nature of studies and research work undertaken during the period of leave.

BY ORDER


REGISTRAR
3/6/2017

To,

Dr. S.N. Susheela, Professor, Dept. of Performing Arts, BUB.

Copy to:

1. The Chairman, Department of Performing Arts, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, BUB.
4. The Dy. Registrar, Syndicate, BUB.
5. The Finance Branch-5, BUB.

BANGALORE UNIVERSITY
Jnanabharathi, Bangalore-560 056

Sub: Sanction of Sabbatical leave to Dr.Nataraj H.L.,
Professor, Centre for Kannada Studies, BUB.
Ref:1.Representation of Dr.Nataraj H.L., Professor,
Centre for Kannada Studies, BUB, dated: 20.09.2017.
2.Syndicate Resolution dated: 21.11.2017.

* * *

U.O.NO:EST-II:E9:SAB-LEV:SOCIOLOGY:2017-18,BANGALORE, DATED: 20.12.2017

Dr.Nataraj H.L., Professor, Centre for Kannada Studies, Bangalore University, Bengaluru, is granted Sabbatical leave for Seven Months from 01.10.2017 to 30.04.2018(as per rules & as requested by the teacher), to study on "ದಿ. ಬಿ.ಆರ್. ಅಂಬೇಡ್ಕರ್ ಮತ್ತು ರಾಮಮನೋಹರ ಲೋಹಿಯ ಅವರ ಪ್ರಭಾವ". The Leave is sanctioned with the following conditions:

1. He shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave he will return to the service of the University and serve thereafter atleast for five years, failing which he will refund to the University, the leave salary and allowances and the expenses, if any, spent on his or paid to his behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. He shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to his immediately prior to his proceeding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture the benefit of pay and allowances.
3. He shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, He is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided He rejoins the University on expiry of his leave.
5. On return from leave, He shall report to the University within one month, the nature of studies and research work undertaken during the period of leave.

BY ORDER


REGISTRAR 22/12/2017

To,

Dr.Nataraj H.L., Professor, Centre for Kannada Studies, BUB.

Copy to:

1. The Director, Centre for Kannada Studies, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bengaluru.
4. The Asst. Registrar, Syndicate, BUB.
5. GF/OC/Spare.

Received
Two Letter
Timing 11-30 AM
Dated 22/12/2017
Box
SAVANNA

BANGALORE



UNIVERSITY

Jnanabharathi. Bangalore-560 056

Sub: Sanction of Sabbatical leave to Dr.Samata B. Deshmane, Professor, Department of Sociology, BUB.

Ref:1.Representation of Dr.Samata B. Deshmane, Professor, Department of Sociology, BUB, dated: 23.10.2017.

2.Syndicate Resolution dated: 21.11.2017.

U.O.NO:EST-II:E9:SAB-LEV:SOCIOLOGY:2017-18,BANGALORE, DATED: 09.12.2017

Dr.Samata B. Deshmane, Professor. Department of Sociology, Bangalore University, Bengaluru, is granted Sabbatical leave for One year from 01.12.2017 to 30.11.2018 to study on "Shri. Gurudev Narayana Guru". The Leave is sanctioned with the following conditions:

1. She shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave she will return to the service of the University and serve thereafter atleast for five years, failing which she will refund to the University, the leave salary and allowances and the expenses, if any, spent on her or paid to her behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. She shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to her immediately prior to her proceeding on sabbatical leave. She shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture the benefit of pay and allowances.
3. She shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, she is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided she rejoins the University on expiry of her leave.
5. On return from leave, she shall report to the University within one month, the nature of studies and research work undertaken during the period of leave.

BY ORDER

[Signature]
REGISTRAR 9/12/2017

To,

Dr.Samata B. Deshmane, Professor, Department of Sociology, BUB.

Copy to:

1. The Chairman, Department of Sociology, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bengaluru.
4. The Asst. Registrar, Syndicate, BUB.
5. GF/OC/Sparc.

12-12-17

12-12-17
Dev/pt Sec

12/12/17

21-01-2019

BANGALORE



UNIVERSITY

Jnanabharathi, Bangalore-560 056.

Sub: Sanction of Sabbatical leave to Dr. P.Ramanna,
Professor, Political Science, BUB.

Ref: 1. Representation of Dr. P.Ramanna, Professor,
Political Science, BUB, dated: 15.11.2017.

2. Approval of Vice Chancellor dated: 01.02.2018

* * *

U.O.NO:EST-II:E9:SAB-LEV:Pol. Sci.:2017-18,BANGALORE, DATED: 02.02.2018

Pending ratification by the Syndicate, Dr. P.Ramanna, Professor, Political Science, Bangalore University, Bengaluru, is granted Sabbatical leave for one year from 29.01.2018 to 28.01.2019 as per rules & as requested by the teacher, to study on "Government and Politics in Modern Karnataka". The Leave is sanctioned with the following conditions:

1. He shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave he will return to the service of the University and serve thereafter atleast for five years, failing which he will refund to the University, the leave salary and allowances and the expenses, if any, spent on him or paid on his behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. He shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to his immediately prior to his proceeding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture of the benefit of pay and allowances.
3. He shall not take up any appointment of any kind during this leave period.
4. During the period of sabbatical leave, he is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided he rejoins the University on expiry of his leave.
5. On return from leave, he shall report to the University within one month, the nature of studies and research work undertaken during the period of leave.

BY ORDER


REGISTRAR
2/2/2018

To,

✓ Dr. P.Ramanna, Professor, Political Science, BUB.

Copy to:

1. The Chairman, Political Science, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bengaluru.
4. The Asst. Registrar, Syndicate, BUB.
5. GF/OC/Sparc.



Sub: Sanction of Sabbatical leave to Dr.Muralidhara.B.L,
Professor, M.C.A Programme, BUB.

Ref: 1. Representation of Dr.Muralidhara.B.L, Professor,
M.C.A Programme, BUB, dated: 09.12.2017.

2. Approval of Vice Chancellor dated: 23.03.2018.

U.O.NO:EST-II:E9:SAB-LEV:MCA:2018-19, BANGALORE, DATED: 26.03.2018

Pending ratification by the Syndicate, **Dr.Muralidhara.B.L, Professor, M.C.A Programme**, Bangalore University, Bengaluru, is granted Sabbatical leave for one year from 01.04.2018 to 31.03.2019 as per rules & as requested by the teacher, to study on "Digital Divide". The Leave is sanctioned with the following conditions:

1. He shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave he will return to the service of the University and serve thereafter atleast for five years, failing which he will refund to the University, the leave salary and allowances and the expenses, if any, spent on him or paid on his behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. He shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to his immediately prior to his proceeding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture of the benefit of pay and allowances.
3. He shall not take up any appointment of any kind during this leave period.
4. During the period of sabbatical leave, he is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided he rejoins the University on expiry of his leave.
5. On return from leave, he shall report to the University within one month, the nature of studies and research work undertaken during the period of leave.

Further, **Dr. M.Hanumanthappa, Professor, M.C.A Programme** is placed as in-charge Co-ordinator for the above period of sabbatical leave by **Dr. B.L.Muralidhar**.

Draft approved by the Registrar.

BY ORDER

N.S. Koley 28/3/18
DEPUTY REGISTRAR

To,

1. Dr.Muralidhara.B.L, Professor, M.C.A Programme, BUB.
2. Dr.M.Hanumanthappa, Professor, M.C.A Programme, BUB.

Copy to:

1. The Co-ordinator, M.C.A Programme, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, BUB/ The Asst. Registrar, Syndicate, BUB.
4. GF/OC/Spare.

BANGALORE UNIVERSITY
Jnanabharathi, Bangalore-560 056



Sub: Sanction of Sabbatical leave to Dr.M.K.Kokila, Professor,
Department of Physics, BUB.

- Ref : 1. Representation of Dr.M.K.Kokila, Professor,
Department of Physics, BUB, dated:14.11.2017.
2. Proceedings of the 141st meeting of the Syndicate held
on 27.06.2018.
3. Approval of the Vice-Chancellor's dated: 17.07.2018.

U.O.NO:EST-II:E9:S.L:2018-19

BANGALORE,

DATED: 18.07.2018

Dr.M.K.Kokila, Professor. Department of Physics, Bangalore University, Bengaluru, is granted Sabbatical leave for one year from **01.08.2018 to 31.07.2019** to work on Cheminformatics. The Leave is sanctioned with the following conditions:

1. She shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave he will return to the service of the University and serve thereafter atleast for five years, failing which he will refund to the University, the leave salary and allowances and the expenses, if any, spent on him or paid to his behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. She shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to him immediately prior to his preceding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture the benefit of pay and allowances.
3. She shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, she is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided she rejoins the University on expiry of his leave.
5. On return from leave, she shall report to the University within one month, the nature of studies and research work undertaken during the period of leave.

BY ORDER

Bop...

REGISTRAR

20/7/2018

To,

Dr.M.K.Kokila, Professor, Department of Physics, BUB.

Copies for Information and necessary action to:

1. The Chairman, Department of Physics, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bangalore
4. The Dy. Registrar, Syndicate, BUB.
5. The Superintendents/Academic Section-II/Finance Branch-7, BUB.
6. GF/OC/Spare

BANGALORE



UNIVERSITY

Jnanabharathi, Bangalore-560 056

Sub: Sanction of Sabbatical leave to Dr.M.V.Usha Devi, Professor,
Department of History, BUB.

Ref: 1. Representation of Dr. M.V.Usha Devi, Professor, Department
of History, BUB, dated: 30.07.2018 & 26.10.2018.
2. Syndicate Resolution dated: 24.09.2018.
3. Approval of the Vice-Chancellor dated: 26.10.2018.

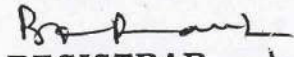
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U.O.NO:EST-II:E9:SAB-LEV:HISTORY:2018-19,BANGALORE, DATED: 27.10.2018

Dr. M.V.Usha Devi, Professor. Department of History, Bangalore University, Bengaluru, is granted Sabbatical leave for One year from 02.11.2018 to 31.10.2019 to study on "Socio-Economic History of Modern Mysore". The Leave is sanctioned with the following conditions:

1. She shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave she will return to the service of the University and serve thereafter at least for five years, failing which she will refund to the University, the leave salary and allowances and the expenses, if any, spent on her or paid to her behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. She shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to her immediately prior to her proceeding on sabbatical leave. She shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture the benefit of pay and allowances.
3. She shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, she is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided she rejoins the University on expiry of her leave.
5. On return from leave, she shall report to the University within one month, the nature of studies and research work undertaken during the period of leave.

BY ORDER


REGISTRAR 27/10/2018

To,

Dr.M.V.Usha Devi, Professor, Department of History, BUB.

Copy to:

1. The Chairman, Department of History, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bengaluru.
4. The Asst. Registrar, Syndicate, BUB.
5. GF/OC/Spore.

BANGALORE UNIVERSITY
Jnanabharathi, Bangalore-560 056



Sub: Sanction of Sabbatical leave to Dr.M.Shashidhar, Professor,
Department of History, BUB.

- Ref: 1. Representation dated:09.01.2020 received from Dr.M.Shashidhar,
Professor, Department of History, BUB.,
2. Proceedings of the Department Council meeting held on 13.03.2020.
3. Proceedings of the 153rd meeting of the Syndicate held on 20.08.2020.
4. Approval of the Hon'ble Vice-Chancellor on 19.09.2020.

U.O.NO:EST-II:E9:Sabbtical Leave:2020-21 BANGALORE,

DATED: 22.09.2020

Pursuant to the resolution of the Syndicate held on 20.08.2020 Dr.M.Shashidhar, Professor,
Department of History, Bangalore University, Bengaluru, is granted Sabbatical leave for one year w.e.f
01.10.2020 to 30.09.2021 to carry out research on "*Caste in colonial Mysore-An analysis of census and
selective ethnological data*" with the following conditions:

1. He shall execute a Bond with proper sureties as in the case of study leave, that after expiry
of sabbatical leave he will return to the service of the University and serve thereafter at least
for five years, failing which he will refund to the University, the leave salary and allowances
and the other expenses, if any, spent on him or paid on his behalf together with interest at
the rate of 6% per annum to be calculated from the date of such payment.
2. He shall, during the period of sabbatical leave, be paid full pay and allowances (subject to
prescribed conditions being fulfilled) at the rate applicable to him immediately prior to his
proceeding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave
period. Any violation of this provision will imperil forfeiture the benefit of pay and
allowances.
3. He shall, not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, he is allowed to draw the increment on the due date.
The period of leave shall also count as service for purpose of Pension, PF, provided he rejoins
the University on expiry of his leave.
5. He shall report back to the duty on 01.10.2021 and submit the Research Progress Report
within one week to place before the Academic Development Committee for evaluation.

To,

Dr.M.Shashidhar, Professor, Department of History, BUB.

BY ORDER

K. Jyothi
REGISTRAR

25/9/2020

Copies for Information and necessary action to:

1. The Chairman, Department of History, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bangalore
4. The Dy. Registrar, Syndicate Section, BUB.
5. The Superintendents/Academic Section-II/Finance Branch-7, BUB.
6. GF/OC/Spare.

Ref: 1. Representation dated:19.02.2020 received from Dr.M.Hanumanthappa,
Professor, Department of M.C.A, BUB.,

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DATED: 22.09.2020

1. He shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave he will return to the service of the University and serve thereafter at least for five years, failing which he will refund to the University, the leave salary and allowances and the other expenses, if any, spent on him or paid on his behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. He shall, during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to him immediately prior to his proceeding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture the benefit of pay and allowances.
3. He shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, he is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided he rejoins the University on expiry of his leave.
5. He shall report back to the duty on **01.10.2021** and submit the Research Progress Report within one week to place before the Academic Development Committee for evaluation.

REGISTRAR

Dr.M.Hanumanthappa, Professor, Department of M.C.A, BUB.

1. The Chairman, Department of MCA, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bangalore
4. The Dy. Registrar, Syndicate Section, BUB.
5. The Superintendents/Academic Section-II/Finance Branch-7, BUB.
6. GF/OC/Spare.

BANGALORE UNIVERSITY
Jnanabharathi, Bangalore-560 056

Sub: Sanction of Sabbatical leave to Dr. Viajayakumar H Doddamani, Professor,
Department of Physics, BUB.

Ref: 1. Representation dated: 06.04.2021 received from Dr. Viajayakumar H Doddamani,
Professor, Department of Physics, BUB.

2. Proceedings of the Department Council meeting held on 11.02.2021.
3. Proceedings of the 159th meeting of the Syndicate held on 04.08.2021.
4. Approval of the Hon'ble Vice-Chancellor on 26.08.2021.

U.O.NO:EST-II:E9:Sabbtical Leave:2021-22 BANGALORE,

DATED: 31.08.2021

Pursuant to the resolution of the Syndicate held on 04.08.2021 Dr. Viajayakumar H Doddamani, Professor, Department of Physics, Bangalore University, Bengaluru, is granted Sabbatical leave with immediate effect up to 31st May 2022 to carry out research on "Active Galaxies" as per Statutes governing the granting of sabbatical leave dated: 28.07.1987 with the following conditions:

1. He shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave he will return to the service of the University and serve thereafter at least for five years, failing which he will refund to the University, the leave salary and allowances and the other expenses, if any, spent on him or paid on his behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. He shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to him immediately prior to his proceeding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture the benefit of pay and allowances.
3. He shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, he is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided he rejoins the University on expiry of his leave.
5. He shall report back to the duty on 1st June 2022 and submit the Research Progress Report within one week to place before the Academic Development Committee for evaluation.

BY ORDER

REGISTRAR

To,

Dr. Viajayakumar H Doddamani, Professor, Department of Physics, Bangalore University, Bengaluru, ✓

Copies for Information and necessary action to:

1. The Chairperson, Department of Physics, BUB. ✓
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bangalore
4. The Dy. Registrar, Syndicate Section, BUB. ✓
5. The Superintendents/Academic Section-II/Finance Branch-7, BUB. ✓

GF/OC/Spare.

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4/9/2021
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4/9/2021

4/9/21

BANGALORE UNIVERSITY

Jnanabharathi, Bangalore-560 056

Sub: Sanction of Sabbatical leave to Dr.V.Sudesh, Professor, University Law College, BUB.

Ref: 1. Representation dated: 29.07.2021 & 08.12.2021 received from

Dr.V.Sudesh, Professor, University Law College, BUB.

2. Proceedings of the Department Council meeting held on 28.07.2021.

3. Proceedings of the 161st meeting of the Syndicate held on 17.11.2021.

4. Approval of the Hon'ble Vice-Chancellor on 22.12.2021.

U.O.NO:EST-II:E3:Sabbtical Leave:2021-22 BANGALORE,

DATED:23.12.2021

Pursuant to the resolution of the Syndicate held on 17.11.2021 Dr.V.Sudesh, Professor, University Law College, Bangalore University, Bengaluru, is granted Sabbatical leave for one year from 01.01.2022 to 31.12.2022 to carry out research on "Dr.B.R.Ambedkar and his contributions towards labour rights jurisprudence" as per Statutes governing the granting of sabbatical leave dated: 28.07.1987 with the following conditions:

1. He shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave he will return to the service of the University and serve thereafter at least for five years, failing which he will refund to the University, the leave salary and allowances and the other expenses, if any, spent on him or paid on his behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. He shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to him immediately prior to his proceeding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil for future benefit of pay and allowances.
3. He shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, he is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided he rejoins the University on expiry of his leave.
5. He shall report back to the duty on 1st January 2023 and submit the Research Progress Report within one week to place before the Academic Development Committee for evaluation.

BY ORDER


REGISTRAR

To,
✓ Dr.V.Sudesh, Professor, University Law College Bangalore University, Bengaluru,

Copies for Information and necessary action to:

1. The Principal & Chairman, University Law College, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bangalore
4. The Dy. Registrar, Syndicate Section, BUB.
5. The Superintendents/Academic Section-II/Finance Branch-7, BUB.
6. GF/OC/Spare.

BANGALORE UNIVERSITY

Jnanabharathi, Bangalore-560 056

Sub: Sanction of Sabbatical leave to Dr.H.G.Nagaraja, Professor,
Department of Mathematics, BUB.

Ref: 1. Representation dated: 21.10.2021 received from Dr.H.G.Nagaraja,
Professor, Department of Mathematics, BUB.

2. Proceedings of the Department Council meeting held on 21.10.2021.

3. Proceedings of the Special meeting of the Syndicate held on 11.04.2022.

4. Approval of the Hon'ble Vice-Chancellor on 21.04.2022.

* * * * *

U.O.NO:EST-II:E3:Sabbtical Leave:2022-23 BANGALORE, DATED: 23.04.2022

Pursuant to the resolution of the Special Syndicate held on 11.04.2022 Dr.H.G.Nagaraja, Professor, Department of Mathematics, Bangalore University Bengaluru, is granted Sabbatical leave for one year from the date of this order to carry out research on "Fluid Flow, Heat and Mass Transfer in different geometries" as per Statutes governing the granting of sabbatical leave dated: 28.07.1987 with the following conditions:

1. He shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave he will return to the service of the University and serve thereafter at least for five years, failing which he will refund to the University, the leave salary and allowances and the other expenses, if any, spent on him or paid on his behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. He shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to him immediately prior to his proceeding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil for future benefit of pay and allowances.
3. He shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, he is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided he rejoins the University on expiry of his leave.
5. He shall report back to the duty on completion of one year and submit the Research Progress Report within one week to place before the Academic Development Committee for evaluation.

BY ORDER

REGISTRAR

To,

Dr.H.G.Nagaraja, Professor, Department of Mathematics, BUB.

Copies for Information and necessary action to:

1. The Chairperson, Department of Mathematics, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bangalore
4. The Dy. Registrar, Syndicate Section, BUB.
5. The Superintendents/Academic Section-II/Finance Branch-7, BUB.
6. GF/OC/Spare.

BANGALORE UNIVERSITY

Jnanabharathi, Bangalore-560 056

Sub: Sanction of Sabbatical leave to Dr.S.R.Keshava, Professor,
Department of Economics, BUB.

Ref: 1. Representation dated: 07.01.2022 received from Dr.S.R.Keshava,
Professor, Department of Economics, BUB.

2. Proceedings of the Department Council meeting held on 10.01.2022.

3. Proceedings of the Special meeting of the Syndicate held on 11.04.2022.

4. Approval of the Hon'ble Vice-Chancellor on 21.04.2022.

* * * * *

U.O.NO:EST-II:E3:Sabbtical Leave:2022-23 BANGALORE, DATED: 23.04.2022

Pursuant to the resolution of the Special Syndicate held on 11.04.2022 Dr.S.R.Keshava, Professor, Department of Economics, Bangalore University, Bengaluru, is granted Sabbatical leave for one year from the date of this order to carry out research on "Ambedkar Economic thoughts and its Relevance to present Indian Economic context" as per Statutes governing the granting of sabbatical leave dated: 28.07.1987 with the following conditions:

1. He shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave he will return to the service of the University and serve thereafter at least for five years, failing which he will refund to the University, the leave salary and allowances and the other expenses, if any, spent on him or paid on his behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. He shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to him immediately prior to his proceeding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil for future benefit of pay and allowances.
3. He shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, he is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided he rejoins the University on expiry of his leave.
5. He shall report back to the duty on completion of one year and submit the Research Progress Report within one week to place before the Academic Development Committee for evaluation.

BY ORDER

REGISTRAR

To,

Dr.S.R.Keshava, Professor, Department of Economics, BUB.

Copies for Information and necessary action to:

1. The Chairperson, Department of Economics, BUB.
2. The Finance Officer/The Govt. Auditor, BUB.
3. The Development Officer, Bangalore University, Bangalore
4. The Dy. Registrar, Syndicate Section, BUB.
5. The Superintendents/Academic Section-II/Finance Branch-7, BUB.
6. GF/OC/Spare.

129ನೇ ಸಿಂಡಿಕೇಟ್ ಸಭೆಯ ನಡವಳಿಕೆಗಳು
ದಿನಾಂಕ 14.06.2016

**Proceedings of 129th Syndicate Meeting
14-06-2016**



ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ
ಜ್ಞಾನಭಾರತಿ, ಬೆಂಗಳೂರು - 560 056
BANGALORE UNIVERSITY
Jnana Bharathi, Bengaluru-560 056

ಕಾಲೇಜ್ ಆಫ್ ಎಜುಕೇಷನ್, ಮುಳಬಾಗಿಲಾ ಮತ್ತು ಡಾ: ಬಿ.ಎ. ಅನುರಾಧ ಪ್ರತಾಪ್, ಪ್ರಾಂಶುಪಾಲರು, ಆರ್-ಆರ್ಮಿನ್ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಮ್ಯಾನೇಜ್‌ಮೆಂಟ್, ಬೆಂಗಳೂರು, ಇವರುಗಳನ್ನು ಆತ್ಮೀಯವಾಗಿ ಸ್ವಾಗತಿಸಿ ಸಭೆಗೆ ಪರಿಚಯಿಸಿದರು. ನಂತರ ಕಾರ್ಯಸೂಚಿಯನ್ನು ಪರಿಗಣನೆಗೆ ತೆಗೆದುಕೊಳ್ಳಲಾಯಿತು.

Proceedings of the 129th meeting of the Syndicate held on 14.06.2016

ವಿಷಯ ಸಂಖ್ಯೆ 1: ದಿನಾಂಕ: 12.05.2016 ರಂದು ಜರುಗಿದ 128ನೇ ಸಿಂಡಿಕೇಟ್ ಸಭೆ ಯ ನಡಾವಳಿಗಳನ್ನು ಸ್ಥಿರೀಕರಿಸುವ ಬಗ್ಗೆ.

ದಿನಾಂಕ: 12.05.2016 ರಂದು ಜರುಗಿದ 128ನೇ ನಡಾವಳಿಗಳನ್ನು ಈ ಕೆಳಕಂಡ ಚರ್ಚೆಯೊಂದಿಗೆ ಸಿಂಡಿಕೇಟ್ ಸ್ಥಿರೀಕರಿಸಿತು.

ವಿಷಯ ಸಂಖ್ಯೆ 7 ಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಶ್ರೀಮತಿ ಬಿ. ಜಿ. ಶಿವಕುಮಾರಿ ಅವರಿಗೆ ವೃತ್ತಿಪ್ರಗತಿ ಯೋಜನೆಯಡಿ ನೀಡಿರುವ ಬಡ್ತಿ ದಿನಾಂಕದಲ್ಲಿ ತಿದ್ದುಪಡಿ ಮಾಡಿರುವ ಬಗ್ಗೆ ಶ್ರೀ ಬಿ.ಜಿ. ರವಿಕುಮಾರ್ ಅವರು ಸ್ಪಷ್ಟೀಕರಣ ಕೋರಿದರು. ಕುಲಪತಿಗಳು ಉತ್ತರಿಸಿ ದಿನಾಂಕದಲ್ಲಿ ಬೆರಳಚ್ಚು ಮುದ್ರಣ ತಪ್ಪಿನಿಂದಾಗಿದ್ದುದರಿಂದ ತಿದ್ದುಪಡಿ ಮಾಡಲಾಗಿದೆ. ಇದರ ಮೂಲ ದಾಖಲೆಯ ವಿವರಗಳನ್ನು ಒದಗಿಸುವುದಾಗಿ ತಿಳಿಸಿದರು.

Proceedings of the 129th meeting of the Syndicate held on 14.06.2016

ವಿಷಯ ಸಂಖ್ಯೆ 2: ದಿನಾಂಕ: 12.05.2016 ರಂದು ಜರುಗಿದ 128ನೇ ಸಿಂಡಿಕೇಟ್ ಸಭೆಯ ನಡಾವಳಿಗಳಿಗೆ ಕ್ರಮ ಜರುಗಿಸಿರುವ ಬಗ್ಗೆ.

ದಿನಾಂಕ: 12.05.2016 ರಂದು ಜರುಗಿದ 128ನೇ ಸಿಂಡಿಕೇಟ್ ಸಭೆಯ ನಡಾವಳಿಗಳಿಗೆ ಕ್ರಮ ಜರುಗಿಸಿರುವುದನ್ನು ಮುಂದಿನ ಸಭೆಯಲ್ಲಿ ಮಂಡಿಸುವುದಾಗಿ ತಿಳಿಸಿರುವುದನ್ನು ಸಿಂಡಿಕೇಟ್ ಗಮನಿಸಿ ಅನುಮೋದಿಸಿತು.

Proceedings of the 129th meeting of the Syndicate held on 14.06.2016

ವಿಷಯ ಸಂಖ್ಯೆ 3: ಡಾ: ಪ್ರದೀಪ್ ಜಿ. ಸಿದ್ದೇಶ್ವರ್, ಪ್ರಾಧ್ಯಾಪಕರು, ಗಣಿತಶಾಸ್ತ್ರ ವಿಭಾಗ ಮತ್ತು ಡಾ: ಎ.ಆರ್. ಉಷಾದೇವಿ, ಸಹ ಪ್ರಾಧ್ಯಾಪಕರು, ಭೌತಶಾಸ್ತ್ರ ವಿಭಾಗ, ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಂಗಳೂರು ಇವರುಗಳಿಗೆ ಸಬಾಟಿಕಲ್ ರಜೆಯನ್ನು ಮಂಜೂರು ಮಾಡುವ ಬಗ್ಗೆ.

ನಿರ್ಣಯ:

ಡಾ: ಪ್ರದೀಪ್ ಜಿ. ಸಿದ್ದೇಶ್ವರ್ ಅವರು ತಮ್ಮ ಸಬಾಟಿಕಲ್ ರಜೆಯ ಕೋರಿಕೆಯನ್ನು ಹಿಂಪಡೆದಿರುವುದಾಗಿ ತಿಳಿಸಲಾಯಿತು. ಹಾಗಾಗಿ ಅವರ ಮನವಿಯನ್ನು ಕೈಬಿಡಲಾಯಿತು.

ಡಾ: ಎ. ಆರ್. ಉಷಾದೇವಿ, ಸಹ ಪ್ರಾಧ್ಯಾಪಕರು, ಭೌತಶಾಸ್ತ್ರ ವಿಭಾಗ ಅವರಿಗೆ ಆದೇಶದ ದಿನದಿಂದ ಒಂದು ವರ್ಷದ ಅವಧಿಗೆ ಸಬಾಟಿಕಲ್ ರಜೆಯನ್ನು ಮಂಜೂರು ಮಾಡಲು ಸಿಂಡಿಕೇಟ್ ಅನುಮೋದನೆ ನೀಡಿತು.

Proceedings of the 129th meeting of the Syndicate held on 14.06.2016

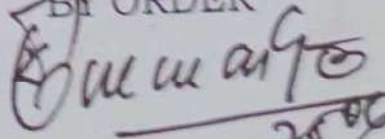
ವಿಷಯ ಸಂಖ್ಯೆ 4: ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯದ ವಾರ್ಷಿಕ ಘಟಿಕೋತ್ಸವದಲ್ಲಿ ಗೌರವ ಡಾಕ್ಟರೇಟ್ ಪ್ರಧಾನ ಮಾಡುವ ಕುರಿತಾದ ಕರಡು ಪರಿನಿಯಮಗಳ ಅನುಮೋದನೆ ಬಗ್ಗೆ.

Sub: Associate Professor, Department of Physics, BUB.
Ref: 1. Representation of Dr.A.R.Ushadevi, Associate Professor,
Department of Physics, BUB, dated:29.02.2016.
2. Syndicate Resolution dated: 14.06.2016.

U.O.NO:EST-II:E5:APT:SAB-LEV:PHY:2016-17 BANGALORE, DATED: 25.06.2016

Dr.A.R.Ushadevi, Associate Professor, Department of Physics, Bangalore University, Bengalure, is granted Sabbatical leave for One year a period of w.e.f 25.06.2016 to 24.06.2017 to work on "Visiting Indian Statistical Institute, Delhi to carry on discussions with the renowned Mathematician, Statistician, Professor K.R.Parthasarathi for around 6-8 months and also visit Professor Konrad Banaszek of the Institute of Theoretical Physics, Department of Quantum Optics and Atomic Physics, University of Warsaw for four months". The Leave is sanctioned with the following conditions:

1. She shall execute a Bond with proper sureties as in the case of study leave, that after expiry of sabbatical leave she will return to the service of the University and serve thereafter atleast for five years, failing which she will refund to the University, the leave salary and allowances and the expenses, if any, spent on her or paid on her behalf together with interest at the rate of 6% per annum to be calculated from the date of such payment.
2. She shall during the period of sabbatical leave, be paid full pay and allowances (subject to prescribed conditions being fulfilled) at the rate applicable to her immediately prior to her preceding on sabbatical leave. He shall not extend the leave beyond the Sabbatical Leave period. Any violation of this provision will imperil forfeiture the benefit of pay and allowances.
3. She shall not take up any appointment of any kind during the period of this leave.
4. During the period of sabbatical leave, she is allowed to draw the increment on the due date. The period of leave shall also count as service for purpose of Pension, PF, provided she rejoins the University on expiry of her leave.
5. On return from leave, she shall report to the University within one month, the nature of studies and research work undertaken during the period of leave.

BY ORDER

REGISTRAR
H

Copies for Information and necessary action to:

- ✓ Dr.A.R.Ushadevi, Associate Professor, Department of Physics, BUB.
- 2 The Chairperson, Department of Physics, BUB.
- 3 The Finance Officer/The Govt. Auditor, BUB.
- 4 The Development Officer, BUB.
- 5 The Asst. Registrar, Syndicate, BUB.
- 6 The Superintendents, Syndicate/Academic Section-II/Finance Branch-7, BUB.

Report of Research Work Undertaken During 25th June 2015 to 24th June 2017 of Sabbatical Leave

During the period of my Sabbatical Leave I visited Indian Statistical Institute, Delhi Center, Delhi to work with **Professor K. R. Parthasarathy** on Quantum Stochastic Dynamics. I have written four research articles (of which three are already published in reputed international journals and one more manuscript is yet to be submitted for publication) during this one year period, details of which are given below:

1. **Title:** Biseparability of noisy pseudopure, W and GHZ states using conditional quantum relative Tsallis entropy,
Authors: Anantha S Nayak, Sudha, **A. R. Usha Devi**, A.K. Rajagopal, **Journal:** Quantum Inf Process (2017)
<https://doi.org/10.1007/s11128-016-1491-9>,
arXiv:1610.04540 [quant-ph].
2. **Title:** N term pairwise correlation inequalities, steering and joint measurability,
Authors: H. S. Karthik, **A. R. Usha Devi**, J. Prabhu Tej, A. K. Rajagopal, Sudha, A. Narayanan,
Journal: Phys. Rev. A 95, 052105 (2017)
arXiv:1610.04540 [quant-ph].
3. **Title:** From quantum stochastic differential equations to Gisin-Percival state diffusion,
Authors: K. R. Parthasarathy and **A. R. Usha Devi**,
Journal: J. Math. Phys. 58, 082204 (2017)
arXiv:1705.00520 [quant-ph].
4. **Title:** Asymptotic spectral stability of the Gisin-Percival state diffusion,
Authors: K. R. Parthasarathy and **A. R. Usha Devi**,
Pre-print: arXiv:1707.08157 [quant-ph].

I have participated and presented invited talks at the following international conferences during the period under report:

1. Thermodynamic state-to-state transformation and work extraction, **A. R. Usha Devi**, A. K. Rajagopal and H. S. Karthik, ,Invited talk presented at the International Conference on Quantum Foundations (ICQF) 2016, held at Panache Hotel, Patna, India, during 17-21 October, 2016
2. Quantum leaps in precision measurements, **A. R. Usha Devi**, Invited talk presented at the International Conference on Mathematics and Applications (ICMA) 2017, Department of Mathematics, Ramjas College, University of Delhi, Delhi, April, 26-28, 2017.

**(Copies of the papers/pre-prints and abstracts of invited talks at the
international conferences enclosed)**

From quantum stochastic differential equations to Gisin-Percival state diffusion

K. R. Parthasarathy^{1,a)} and A. R. Usha Devi^{2,3,b)}

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Starting from the quantum stochastic differential equations of Hudson and Parthasarathy [Commun. Math. Phys. **93**, 301 (1984)] and exploiting the Wiener-Itô-Segal isomorphism between the boson Fock reservoir space $\Gamma(L^2(\mathbb{R}_+) \otimes (\mathbb{C}^n \oplus \mathbb{C}^n))$ and the Hilbert space $L^2(\mu)$, where μ is the Wiener probability measure of a complex n -dimensional vector-valued standard Brownian motion $\{\mathbf{B}(t), t \geq 0\}$, we derive a non-linear stochastic Schrödinger equation describing a classical diffusion of states of a quantum system, driven by the Brownian motion $\mathbf{B}$. Changing this Brownian motion by an appropriate Girsanov transformation, we arrive at the Gisin-Percival state diffusion equation [N. Gisin and J. Percival, J. Phys. A **167**, 315 (1992)]. This approach also yields an explicit solution of the Gisin-Percival equation, in terms of the Hudson-Parthasarathy unitary process and a randomized Weyl displacement process. Irreversible dynamics of system density operators described by the well-known Gorini-Kossakowski-Sudarshan-Lindblad master equation is unraveled by coarse-graining over the Gisin-Percival quantum state trajectories. *Published by AIP Publishing.* [<http://dx.doi.org/10.1063/1.4998714>]

I. INTRODUCTION

Irreversible dynamics of states and observables of a quantum system S is usually described by a one parameter semigroup $\{T_t, t \geq 0\}$ of unital completely positive maps on the algebra $\mathcal{B}(\mathcal{H}_S)$ of all bounded operators on the associated system Hilbert space $\mathcal{H}_S$. Such a semigroup is called a *quantum dynamical semigroup*. When this semigroup is uniformly continuous, its infinitesimal generator was completely described by Gorini, Kossakowski, and Sudarshan¹ when $\mathcal{H}_S$ is finite dimensional and by Lindblad² in the general case. We call it the GKSL generator, usually denoted by $\mathcal{L}$. The form of this generator $\mathcal{L}$ becomes meaningful even when the operators entering the description of $\mathcal{L}$ may be unbounded^{3–6} and can give rise to dynamical semigroups, which are not necessarily uniformly continuous. Since the discovery of the form of the generator $\mathcal{L}$, there have been attempts to understand the stochastic processes from which $\mathcal{L}$ arises. This has mainly given rise to two different approaches of constructing processes leading to the generator $\mathcal{L}$.

Starting with the 1984 paper⁷ of Hudson and Parthasarathy (HP), there has evolved a boson Fock space stochastic calculus for operator-valued processes in $\mathcal{H}_S \otimes \mathcal{H}_R$, where $\mathcal{H}_R$ is an appropriate boson Fock space associated with a reservoir R (also called *bath* or *noise*). Such a stochastic calculus is equipped with a *quantum Itô formula*^{7,8} leading to a theory of *quantum stochastic differential equations*. This enables, in particular, the construction of *unitary operator-valued processes* $\{U(t), t \geq 0\}$ satisfying a quantum stochastic differential equation in $\mathcal{H}_S \otimes \mathcal{H}_R$. It turns out that for a given GKSL

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Then, $\mathbf{B}'$ is also a standard Brownian motion in the probability space (Ω, μ_G) , where (Girsanov's theorem³⁴)

$$\begin{aligned}\mu_G(d\mathbf{B}) &= \exp \left\{ \sum_{k=1}^n \int_0^t 2\text{Re}[\langle L_k \rangle_{\Psi_s} dB_k(s)] - 2 \int_0^t |\langle L_k \rangle_{\Psi_s}|^2 ds \right\} \mu(d\mathbf{B}) \\ &= \langle \psi_t | \psi_t \rangle_S \mu(d\mathbf{B})\end{aligned}\quad (102)$$

for every finite time interval $[0, t]$.

Proof. This is immediate from Girsanov's theorem.³⁴ (Second line of (102) follows from (92) and (99)). $\square$

Remark. Note that the factor $\langle \psi_t | \psi_t \rangle_S$, appearing under the Girsanov measure transformation from $\mu(d\mathbf{B})$ to $\mu_G(d\mathbf{B})$, is a continuous time analogue of the discrete time martingale sequence $\{Z_n\}$ of Sec. II.

It is interesting to note that $\{|\Psi_t\rangle, t \geq 0\}$ of (98) is, indeed, an explicit solution of the Gisin-Percival state diffusion equation (100). The system density operator $\rho_t, t \geq 0$ is obtained by coarse-graining over the $\mathcal{H}_S$ state-valued trajectories $\{|\Psi_t(\mathbf{B}')\rangle\}$, i.e.,

$$\begin{aligned}\rho_t &= \mathbb{E}_{\mathbf{B}'}[|\Psi_t\rangle\langle\Psi_t|] \\ &= \int |\psi_t(\mathbf{B})\rangle\langle\psi_t(\mathbf{B})| \mu(d\mathbf{B}) \\ &= \mathbb{E}_{\mathbf{B}}[|\psi_t\rangle\langle\psi_t|].\end{aligned}\quad (103)$$

Evidently, the GKSL master equation (88) obeyed by ρ_t follows as a consequence of this unraveling. In fact, one may realize different forms for state diffusion processes associated with a GKSL master equation (88), when the operator parameters $(\mathbf{L}, H)$ are replaced by $(\mathbf{L}', H')$ corresponding to symmetry transformations discussed in Sec. IV. In other words, a single noisy unitary Schrödinger evolution driven by a quantum stochastic differential equation (82) of the HP type results in various forms of Gisin-Percival state diffusion processes associated with a GKSL generator $\mathcal{L}$ of the one-parameter quantum dynamical semigroup $\{T_t, t \geq 0\}$ describing the irreversible dynamics of the quantum system.

VII. SUMMARY

We have derived a non-linear stochastic Schrödinger equation (97) describing classical diffusive trajectories, with values on the unit sphere of the system Hilbert space $\mathcal{H}_S$, driven by a complex vector-valued standard Brownian motion $\{\mathbf{B}(t), t \geq 0\}$, starting from the quantum stochastic differential equation (82) of the HP type. This is facilitated by making use of the Wiener-Itô-Segal isomorphism between the reservoir boson Fock space and the Hilbert space $L^2(\mu)$ of norm square integrable functions, with respect to the Wiener probability measure μ of a vector-valued Brownian motion. Consequently, the Gisin-Percival state diffusion equation (100) is obtained by changing the Brownian motion with an appropriate Girsanov measure transformation. A striking feature of our approach is that it leads to an explicit solution (98) of the Gisin-Percival equation in terms of the HP unitary process and a randomized Weyl displacement process. It follows that the system density matrix ρ_t , obtained by averaging over the Gisin-Percival diffusive trajectories, obeys a GKSL master equation (88), describing the irreversible dynamics of states and observables of the quantum system. Furthermore, it follows that starting from a single noisy Schrödinger unitary evolution (82) of the HP type, different forms of Gisin-Percival state diffusion processes could be realized, based on the symmetries of the GKSL generator $\mathcal{L}$ of the one-parameter quantum dynamical semigroup $\{T_t, t \geq 0\}$.

ACKNOWLEDGMENTS

We thank Professor John Gough for pointing out a misprint in Eq. (100) of the first version of our manuscript and Professor Harish Parthasarathy for bringing to our notice an error in the

factor multiplying $\mu(d\mathbf{B})$ in Eq. (102). A.R.U. acknowledges the local hospitality of Indian Statistical Institute, Delhi, where this work was carried out during her sabbatical leave period. She also thanks the University Grants Commission (UGC), India, for support under a Major Research Project (Grant No. MRPMAJOR-PHYS-2013-29318).

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Biseparability of noisy pseudopure, W and GHZ states using conditional quantum relative Tsallis entropy

Anantha S. Nayak¹ · Sudha^{1,2} · A. R. Usha Devi^{2,3} ·
A. K. Rajagopal^{2,4,5}

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Abstract We employ the conditional version of sandwiched Tsallis relative entropy to determine $1 : N - 1$ separability range in the noisy one-parameter families of *pseudopure* and *Werner-like* N -qubit W, GHZ states. The range of the noisy parameter, for which the conditional sandwiched Tsallis relative entropy is positive, reveals perfect agreement with *the necessary and sufficient* criteria for separability in the $1 : N - 1$ partition of these one parameter noisy states.

Keywords Bipartite separability criterion · Entropic approach for separability · Noisy pseudopure states · Noisy Werner-like W-, GHZ states · Conditional version of quantum relative Tsallis entropy

1 Introduction

Entropic characterization of separability in mixed composite states has attracted significant attention [1–20]. Nielsen and Kempe [21] brought forth the remarkable feature that the subsystems of an entangled state may exhibit more disorder than the whole system—unlike a separable state, which is emphatically more disordered globally than locally. Consequent to this, the von Neumann conditional entropy $S(B|A) =$

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***N*-term pairwise-correlation inequalities, steering, and joint measurability**H. S. Karthik,¹ A. R. Usha Devi,^{2,3,*} J. Prabhu Tej,² A. K. Rajagopal,^{3,4,5} Sudha,^{3,6} and A. Narayanan¹¹*Raman Research Institute, Bangalore 560 080, India*²*Department of Physics, Bangalore University, Bangalore 560 056, India*³*Inspire Institute Inc., Alexandria, Virginia 22303, USA*⁴*Institute of Mathematical Sciences, CIT Campus, Taramani, Chennai 600 113, India*⁵*Harish-Chandra Research Institute, Chhatnag Road, Jhansi, Allahabad 211 019, India*⁶*Department of Physics, Kuvempu University, Shankaraghatta, Shimoga 577 451, India*

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Chained inequalities involving pairwise correlations of qubit observables in the equatorial plane are constructed based on the positivity of a sequence of moment matrices. When a jointly measurable set of positive-operator-valued measures (POVMs) is employed in the first measurement of every pair of sequential measurements, the chained pairwise correlations do not violate the classical bound imposed by the moment matrix positivity. We find that incompatibility of the set of POVMs employed in first measurements is only necessary, but not sufficient, in general, for the violation of the inequality. On the other hand, there exists a one-to-one equivalence between the degree of incompatibility (which quantifies the joint measurability) of the equatorial qubit POVMs and the optimal violation of a nonlocal steering inequality, proposed by Jones and Wiseman [S. J. Jones and H. M. Wiseman, *Phys. Rev. A* **84**, 012110 (2011)]. To this end, we construct a local analog of this steering inequality in a single-qubit system and show that its violation is a mere reflection of measurement incompatibility of equatorial qubit POVMs, employed in first measurements in the sequential unsharp-sharp scheme.

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I. INTRODUCTION

Conceptual foundations of quantum theory deviate drastically from the classical world view. The prominent counterintuitive features pointing towards the quantum-classical divide are a subject of incessant debate ever since the birth of quantum theory. Pioneering works by Bell [1], Kochen and Specker [2], and Leggett and Garg [3] are significant in bringing forth the perplexing features arising within the quantum scenario, in terms of correlation inequalities, constrained to obey classical bounds. Violation of the inequalities sheds light on the the nonexistence of a joint probability distribution for the measurement outcomes of all the associated observables [4–6].

In fact, noncommutativity of the observables forbids assignment of joint sharp realities to their outcomes in projective-valued (PV) measurements. Subsequently, it is not possible to envisage a bona fide joint probability distribution for the outcomes of PV measurements of noncommuting observables. However, the generalized measurement framework [7] goes beyond the conventional PV measurement scenario, where positive-operator-valued measures (POVMs) are employed. Joint measurability (or compatibility) of a set of POVMs is possible even when they do not commute. To declare that a set of POVMs is jointly measurable there should exist a global POVM, the measurement statistics of which enables one to retrieve that of the set of compatible POVMs. Within the purview of generalized measurements, it is possible to assign fuzzy joint realities (and in turn a valid joint probability distribution) to the statistical outcomes of noncommuting observables when the corresponding POVMs are compatible.

In recent years there has been a surge of research activity dedicated to exploring the notion of measurement incompatibility and its connection with counterintuitive quantum notions such as nonlocality, contextuality, and nonmacrorealism [8–23]. In particular, it is known that measurement incompatibility plays a key role in bringing to the surface the violations of the so-called no-go theorems in the quantum world. Wolf *et al.* [11] proved that a set of two incompatible dichotomic POVMs is necessary and sufficient to violate the Clauser-Horne-Shimony-Holt (CHSH) Bell inequality [24]. However, this result may not hold, in general, for Bell nonlocality tests where more than two incompatible POVMs with any number of outcomes are employed, i.e., it is possible to identify a set of nonjointly measurable POVMs, which fail to reveal Bell-type nonlocality, in general [25]. Interestingly, there exists a one-to-one equivalence [16–18] between measurement incompatibility and quantum steerability (i.e., Alice's ability to nonlocally alter Bob's states by performing local measurements on her part of the quantum state [26]). More specifically, a set of fuzzy POVMs is said to be incompatible if and only if it can be used to show steering in a quantum state.

From the point of view of an entirely different mathematical perspective, the classical moment problem [22,27–31] addresses the issue of the existence of a probability distribution corresponding to a given a sequence of statistical moments. Essentially, the classical moment problem points out that a given sequence of real numbers qualifies to be the moment sequence of a legitimate probability distribution if and only if the corresponding moment matrix is positive. In other words, the existence of a valid joint probability distribution, consistent with the given sequence of moments, necessitates positivity of the associated moment matrix. A moment matrix constructed in terms of pairwise correlations of observables in the quantum scenario is not necessarily positive [22,30,31] and thus one witnesses violation of Bell, Leggett-Garg,

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Asymptotic spectral stability of the Gisin-Percival state diffusion

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(Dated: July 27, 2017)

Abstract

Starting from the Gisin-Percival state diffusion equation for the pure state trajectory of a composite bipartite quantum system and exploiting the purification of a mixed state via its Schmidt decomposition, we write the diffusion equation for the quantum trajectory of the mixed state of a subsystem S of the bipartite system, when the initial state in S is mixed. Denoting the diffused state of the system S at time t by $\rho_t(\mathbf{B})$ for each $t \geq 0$, where $\mathbf{B}$ is the underlying complex n -dimensional vector-valued Brownian motion process and using Itô calculus, along with an induction procedure, we arrive at the stochastic differential of the scalar-valued moment process $\text{Tr}[\rho_t^m(\mathbf{B})]$, $m = 2, 3, \dots$ in terms of $d\mathbf{B}$ and dt . This shows that each of the processes $\{\text{Tr}[\rho_t^m(\mathbf{B})], t \geq 0\}$ admits a Doob-Meyer decomposition as the sum of a martingale $M_t(\mathbf{B})$ and a non-negative increasing process $S_t(\mathbf{B})$. In turn, this decomposition ensures the existence of $\lim_{t \rightarrow \infty} \text{Tr}[\rho_t^m(\mathbf{B})]$ almost surely with respect to the Wiener probability measure μ of the Brownian motion $\mathbf{B}$, for each $m = 2, 3, \dots$. As a consequence, when S is a finite level system, the spectrum and therefore the entropy of $\rho_t(\mathbf{B})$ converge almost surely to a limit as $t \rightarrow \infty$.

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2nd International Conference on Quantum Foundations 2016 (ICQF16)

(17-21 October, 2016)

Conference Program

Venue: Panache hotel, Patna

17 th October 2016			
Event		Timing (IST)	
Registration		09:00 - 10:00	
Inauguration		10:00 – 10:30	
Tea break		10:30 -11:00	
Name of the speaker	Title of the talk	Timing (IST)	Duration* (min)
Chair: A. Cabello			
P. Grangier**	Contexts, Systems and Modalities: a new ontology for quantum mechanics	11:00-11:50	50
T. Heinossari	Quantum Incompatibility - a review of recent results	11:50-12:30	40
Lunch (12:30-14:00) [#]			
Chair: P. Ghose			
C. Budroni	Causal structures and marginal problems	14:00-14:40	40
U. Sinha	A tale of three slits: From Superposition to Correlated qutrits	14:40-15:20	40
Tea break(15:20-16:00)			
Chair: A. R. Usha Devi			
P. Agrawal	Bell Nonlocality and Entanglement	16:00-16:40	40
J. Kofler	No Fine theorem for macrorealism	16:40-17:20	40
Dinner(19:00 – 21:00) ^{##}			
18 th October 2016			
Chair: D. Home			
A.Cabello**	Approaching Tsirelson's bound from theory and experiment	09:30-10:20	50
S. Ghosh	Study of nonlocal correlations in macroscopic measurement scenario	10:20-11:00	40
Tea Break (11:00-11:30)			

Chair: G. Kar			
Y.-C. Liang	Quantifying quantum steerability and measurement incompatibility using uncharacterized devices	11:30-12:10	40
S. Banerjee	Evolution of coherence, concurrence and Fisher information under global environmental interaction	12:10-12:50	40
Lunch (12:50-14:00)			
Chair: A. Patel			
D. Home**	Unified Treatment of Non-locality in Teleportation and Remote State Preparation	14:00-14:50	50
Y. Shikano	Visualizing Quantum State by Weak Measurement	14:50-15:30	40
Tea break (15:30-16:00)			
Chair: P. Agrawal			
A. R. Usha Devi	Thermodynamic state-to-state transformation and work extraction	16:00-16:40	40
T. Qureshi	Wave-Particle Duality: Going Beyond Two Slits	16:40-17:20	40
Dinner (19:00 – 21:00)			
19th October 2016			
Chair: P. Grangier			
L. Vaidman**	The meaning of weak values	09:30-10:20	50
A. Patel	Weak Measurements, Quantum State Collapse and the Born Rule	10:20-11:00	40
Tea Break (11:00-11:30)			
Chair: U. Sinha			
M. Gramegna	Measuring non-commuting observables of a photon via sequential weak values evaluation	11:30-12:10	40
K. Edamatsu	Quantum measurement and uncertainty relations in photon polarization	12:10-12:50	40
Lunch (12:50 - 14:00)			
Chair: S. Ghosh			
R. Dumke	Superconducting Atom Chips	14:00-14:40	40
U. Sen	Quantum devices using systems with impurities	14:40-15:20	40

POSTER SESSION (15:30-18:00)			
Conference Dinner*# (19:00 – 23:00)			
20th October 2016			
Chair: L. Vaidman			
G.Kar	Nonlocality and its relation with measurement incompatibility and uncertainty	09:30-10:10	40
M. Pawłowski	Detection efficiency loophole in tests of quantumness	10:10-10:50	40
Tea Break (10:50-11:30)			
Chair: T. Qureshi			
P. K. Panigrahi	Uncertainty relation and inseparability	11:30-12:10	40
D. Sarkar	Nonlocality in three qubit systems	12:10-12:50	40
Lunch (12:50 – 14:00)			
Chair: K. Edamatsu			
A. K. Pati	Products of weak values: uncertainty relations, complementarity and incompatibility	14:00-14:40	40
A. Abbott	A bridge from (entropic) preparation uncertainty relations to measurement uncertainty relations	14:40-15:20	40
Tea break (15:20-16:00)			
Chair: Y.-C. Liang			
P. Ghose	Continuous Transitions between Quantum and Classical Motions	16:00-16:40	40
Arvind	Contextuality, foundations of quantum mechanics, and quantum information processing	16:40-17:20	40
Dinner(19:00 – 21:00)			

21 st October 2016			
Chair: M. Pawłowski			
L. P. Garcia-Pintos	How does a continuously measured qubit really evolve?	09:30-10:10	40
S. Bandyopadhyay	Entanglement cost of LOCC state discrimination	10:10-10:50	40
Tea Break (10:50-11:20)			
Chair: Arvind			
R. Rahaman	Quantum digital signatures based on multiparty Hardy type correlations	11:20-12:00	40
E. Haapasalo	Optimal measurements and extreme observables in quantum theory	12:00-12:25	25
S. Bhattacharya	Nonlocal correlations: Fair and Unfair Strategies in Bayesian Game	12:25-12:50	25
Closing remarks (12 :50 - 13 :00)			
Lunch (13:00 - 14:30)			

*Duration includes the time for discussions. The duration of discussions is 10 minutes for keynote speakers and 5 minutes for rest of the speakers.

** Keynote speaker

Lunches will be served in the Conference Hotel (Panache Hotel) for all participants.

Dinners will be served at the same hotel/guest house where the participant is accommodated.

*# Conference Dinner will be served in the Hotel panache. All participants are invited to join.

	in quantum interference experiments. Phys.Rev.Lett.113, 120406 (2014). [2] U.Sinha, C.Couteau, T.Jennewein, R.Laflamme, G.Weihs, Ruling out multi-order interference in quantum mechanics. Science 329, 418-421 (2010). [3] A.Sinha, Aravind H.V., U.Sinha, On the Superposition principle in interference experiments. Scientific Reports 5, 10304 (2015). [4] G.Rengaraj, U.Prathwiraj, Surya N.Sahoo, R.Somashekhar and U.Sinha, Experimental measure of the correction term in the Superposition Principle, to be submitted, (2016) . [5] Surya N. Sahoo, D.Ghosh, E.Kaur, T.Jennewein, P.Kolenderski and U.Sinha, Measuring Spatial Correlations in qutrits, to be submitted,(2016).
Name	Y. Shikano
Affiliation	<i>Institute of Molecular Science, Okazaki, Japan</i>
Title	Visualizing Quantum State by Weak Measurement
Abstract	When we estimate a quantum state, we normally use the quantum state tomography. However, this needs the post-information processing. Here, we propose a new idea on visualizing technique of the quantum state. Under the specific configuration, in which the optical vortex beam is used, we experimentally demonstrate the visualization of the specific two-dimensional quantum state; the polarized state of light by the weak measurement initiated by Yakir Aharonov and his colleagues. The entangled state can be also visualized via the concurrence as the extension of this idea.
Name	A. R. Usha Devi
Affiliation	<i>Bangalore University, India</i>
Title	Thermodynamic state-to-state transformation and work extraction
Abstract	Quantum information theory helps in understanding fundamental principles governing thermodynamics of small number of particles. A clear formulation of statistically allowed state-to-state transformations under thermodynamic operations and the corresponding optimal extractable work is an important step in this direction. Here, we describe two different approaches formulating maximum extractable work in a thermodynamic transformation $\rho \rightarrow \sigma$. We show that the asymptotic activable work per copy W_{act}, achievable in the thermodynamic transformation of ($n \rightarrow \infty$ copies of) a passive state σ_p to a completely passive thermal state τ_β (Alicki et.al., Phys. Rev. E 87, 042123 (2013)), approaches the work distance $W(\sigma_p \rightarrow \tau_\beta)$ (the maximum extractable single-shot work in the transition $\sigma_p \rightarrow \tau_\beta$) of the resource theory framework (Brandão et. al., PNAS 112, 3275 (2015)) in the thermodynamic limit. This identification gives insights in understanding one approach in terms of the other. We also discuss a variational principle, where energy is minimized for a fixed entropy, so as to identify the completely passive states.



INTERNATIONAL CONFERENCE on MATHEMATICS & APPLICATIONS
DEPARTMENT OF MATHEMATICS, RAMJAS COLLEGE
UNIVERSITY OF DELHI
(April 26-28, 2017)



Program Schedule		SPONSORS
APRIL 26, 2017 WEDNESDAY		
TIME	DETAILS	
08:00 AM– 09:30 AM	Registration Venue: New Conference Hall	 National Board for Higher Mathematics NBHM
09:30 AM– 11:00 AM	Inauguration Function Presided over by Professor S G Dani Venue: New Conference Hall	
11:00 AM – 11:20 AM 11:20 AM – 11:30 AM	High Tea Group Photo, Venue: Amphitheatre	
Session I : 11:30 AM – 01:30 PM		
Venue:	New Conference Hall	 Department of Science and Technology (DST)
Chair:	S G Dani	
Co-Chair:	Dinesh Singh	
11:30 AM – 12:00 Noon	R Balasubramanian- The number of factorisation of an integer	
12:00 NOON – 12:30 PM	C S Rajan- The local-global principle in number theory	 DRDO
12:30 PM – 01:00 PM	P K Saxena- Mathematics in Securing Information	
01:00 PM – 01:30 PM	S K Pal- Algebraic Structures, Homomorphism & Cryptography	
01:30 PM – 02:30 PM	Lunch Break	
Session II : 02:30 PM – 04:30 PM		 INSAS
Venue:	New Conference Hall	
Chair:	B K Dass	
Co-Chair:	U Bottazzinni	
02:30 PM – 03:00 PM	S A Katre- Weierstrass Approximation Theorem and Its Application to Font Designing	
03:00 PM – 03:30 PM	J K Verma- Counting solutions of real and complex multivariate polynomial equations	
03:30 PM – 04:00 PM	Krishna Maddaly- Counting the tri-diagonal matrices with given eigenvalues	
04:00 PM – 04:30 PM	Malisa Zizovic- New methods of multi-criteria analysis	
04:30 PM – 04:45 PM	Tea Break	
Session III: 04:45 PM- 07:15 PM		
Venue:	New Conference Hall	
Chair:	V Ravichandran	
Co- Chair:	P Sankaran	
04:45 PM – 05:15 PM	H Dedania- Weights on semi groups and their applications	
05:15 PM– 05:45 PM	Ajay Kumar-Uncertainty Principles on Locally Compact Groups	
05:45 PM – 06:15 PM	A P Singh-Escaping Sets Of Transcendental Entire Functions	
06:15 PM – 06:45 PM	A K Srivastava- On the category of Q-topological spaces	
06.45 PM- 07:15 PM	M Sundari-Uncertainty principles in harmonic analysis on Lie groups	
Session IV: 07:15PM – 8: 15 PM		
Venue:	New Conference Hall	
Chair:	T Parthasarathy	
Co- Chair:	Saeed Bani Hashmi	
07:15 PM – 08:15 PM	Documentary on S Ramanujan by K S Rao	
08:15 PM– 09:30 PM	Cultural Program & Dinner	



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Program Schedule		SPONSORS
APRIL 27, 2017 THURSDAY		
TIME	DETAILS	
Session V: 08:30 AM – 09:30 AM (Parallel Sessions A/B/C)		
Venue:	New Conference Hall/ECA/Seminar Room	 Government of India National Board for Higher Mathematics NBHM
Chair:	A K Vashistha / A K Agarwal / Mahesh Joshi	
Co-Chair:	A K Srivastava/ Kaushik Bose/ U C Gairola	
Session VI : 09:30 AM – 11:30 AM		
Venue :	New Conference Hall	 Government of India National Board for Higher Mathematics NBHM
Chair :	Ajit Iqbal Singh	
Co-Chair:	K S Rao	
09:30 AM – 11:30 AM	Special Session on Late Dr. Manmohan Gupta	
09:30 AM – 10:00 AM	Dinesh Singh-The Hardy-Hilbert Space: A Historical Perspective from Hardy to De Branges	 Government of India National Board for Higher Mathematics DST
10:00 AM – 10:30 AM	S G Dani- Syamadas Mukhopadhyaya and his work in geometry	
10:30 AM – 11:00 AM	A K Agarwal- Rogers-Ramanujan identities-some recent developments	
11:00 AM – 11:30 AM	U Bottazzinni- Riemann Vs Weierstrass: contrasted approaches to complex analysis	
11:30 AM – 11:45 AM	Tea Break	
Session VII : 11:45 AM – 01:15 PM		
Venue :	Venue: New Conference Hall	 Government of India National Board for Higher Mathematics DST
Chair:	Chair: C S Rajan	
Co- Chair:	Co-Chair A P Singh	
11:45 AM – 12:15 PM	Sudhir Ghorpade-Matrices,Polynomials,and Linear Recurrences	
12:15 PM – 12:45 PM	Shiva Kumar K C- M-matrices and some generalizations	 DRDO
12:45 PM – 01:15 PM	P Sankaran- Cohomology of locally symmetric space	
01:15 PM – 02:00 PM	Lunch Break	
Session VIII: 02:00 PM – 04:00 PM		
Venue:	New Conference Hall	 DRDO
Chair:	Sudhir Ghorpade	
Co- Chair:	Shiva Kumar K C	
02:00 PM – 02:30 PM	R K Mohanty-A Two-step Super Stable Implicit Method of Order Four for Second Order Nonlinear Initial Value Problem	
02:30 PM – 03:00 PM	S Dharmaraja- Reliability and Survivability of Vehicular Ad hoc Networks: An Analytical Approach	 INSAS
03:00 PM – 03:30 PM	Kaushik Bose-Applications of Mathematics in Anthropological Studies	
03:30 PM – 04:00 PM	Shobha Bagai-Modelling Infectious Diseases:Childhood Infections	
04:00 PM – 04:15 PM	Tea Break	
Session IX : 04:15 PM– 05:45 PM		
Venue :	New Conference Hall	 INSAS
Chair :	R Balasubramanian	
Co- Chair:	A K Srivastava	
04:15 PM – 04:45 PM	A K Vashishth-Mathematical Modeling of Seismic and Heat Sources in a Multilayered Thermo Elastic Earth Model	
04:45 PM – 05:15 PM	Nada Damjanovic- Additively idempotent semi rings-Relative residuation and application	
05:15 PM – 05:45 PM	Jelena Ignjatovic- One mode and two mode systems of Fuzzy relational inequalities and equations and their interpretations as fuzzy social networks	
Session X : 05:45 PM – 06:45 PM (Parallel Sessions D/E/F)		
Venue:	New Conference Hall/ECA/Seminar	
Chair:	M Sundri / K S Rao/ S Dharmaraja	
Co-Chair:	Nada Damjanovic/ A P Singh/ Jelena Ignjatovic	
7.00 PM - 8.30 PM	Dinner	



INTERNATIONAL CONFERENCE on MATHEMATICS APPLICATIONS
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Program Schedule APRIL 28, 2017 FRIDAY		SPONSORS
TIME	DETAILS	
Session XI : 08:30 AM – 09:30 AM(Parallel Sessions G/H/I)		 NBHM
Venue:	New Conference Hall/ECA/Seminar Room	
Chair:	Saeed Bani Hashmi /H Dedania / U Bottazzinni	
Co-Chair:	R S Kaushal /Malisa Zizovic/ T Parthasarthy	
Session XII : 09:30 AM – 11:30 AM		
Venue:	New Conference Hall	
Chair:	Ajay Kumar	
Co-Chair:	H Dedania	
09:30 AM – 10:00 AM	Sibasish Ghosh- On witnessing arbitrary entanglement	
10:00 AM – 10:30 AM	Ajit Iqbal Singh-Use of Polynomials in quantum entanglements	
10:30 AM – 11:00 AM	A R Usha Devi: Quantum leaps in precision measurements	
11:00 AM – 11:30 AM	Shanta Laisram- Arithmetic of Binary Recurrence Sequences	
11:30 AM – 11:45 AM	Tea Break	
Session XIII : 11:45 AM – 01:15 PM		 DST
Venue :	New Conference Hall	
Chair :	C S Lalitha	
Co- Chair :	Shobha Bagai	
11:45 AM – 12:15 PM	T Parthasarthy-Univalence of maps from R^n to R^n	
12:15 PM – 12:45 PM	Saeed Bani Hashmi- Application of games theory on International relations	
12:45 PM – 01:15 PM	Karmeshu-Stochastic Modeling of Neuronal Systems: Mechanism of Generation of Multimodal ISI Distribution	
01:15 PM – 02:00 PM	Lunch Break	
Session XIV: 02:00 PM – 03:00 PM (Parallel Sessions J/K/)		 DRDO
Venue:	ECA Room/Seminar Room	
Chair:	Ajit Iqbal Singh/ Shobha Bagai	
Co-Chair:	Sibasish Ghosh /A R Usha Devi	
Session XV : 02:00 PM – 04:00 PM		
Venue:	New Conference Hall	
Chair :	K S Rao	
Co- Chair :	Malisa Zizovic	
02:00 PM – 02:30 PM	R S Kaushal- Harmonic Oscillator in an Extended Complex Phase Space: Role of Consciousness in Hand-Held Pendulum	
02:30 PM – 03:00 PM	Hemant Singh- Group Actions on Spaces of Cohomology Type(0,b)	
03:00 PM – 03:30 PM	M C Joshi-Fixed Point Theorem and Metric Completeness	
03:30 PM – 04:00 PM	U C Gairola- Coincidence And Fixed Point Results For Multi - Valued Maps	
04:00 PM – 05:00 PM	Valedictory	 INSAS
Venue:	New Conference Hall	
Chair:	P C Tulsian, Acting Principal	
Co-Chair:	Ruchika Verma, Convener	
05:00 PM – 05:15 PM	High Tea	