UNIVERSITY OF MYSORE
UGC-HUMAN RESOURCE DEVELOPMENT CENTRE

Prof. S.S. Malini
Director

MANASAGANGOTRI
MYSURU – 570 006
KARNATAKA, INDIA

2021-2022

(ONLINE MODE)

Report of the 9th Refresher Course in Mathematical Science

The 9th Refresher Course in Mathematical Science was conducted by the UGC-Human Resource Development Centre, University of Mysore from 25-08-2021 to 07-09-2021. The theme of the Refresher Course was "Graph Theory and Allied Topics". The Course Coordinator was Dr. Veena Mathad, Associate Professor, Department of Studies in Mathematics, University of Mysore, Mysore. A total of 29 participants attended the refresher course.

The two week Refresher Course was started with the registration on 25.08.2021 at 10. AM followed by instructions to Teacher-Participants. The lecture session commenced in the Afternoon by Prof. B. Basavanagoud, Department of Mathematics, Bangalore University, Bangalore addressed on "Theory of Graphs", followed by Prof. H.S. Ramane, Department of Mathematics, Karnatak University, Dharwad spoke on "Spectra of Graphs". On the second day, first session Prof. B. Basavanagoud, delivered lecture on "Theory of graphs", second session Prof. B. Chaluvaraju, Department of Mathematics, Bangalore University, Bangalore gave talk on "Role of Graphs Theory in Descrete Structures", third session Prof. H.S. Ramane, spoke on "Energy of Graphs", fourth session Prof. V. Lokesha, Department of Mathematics, VSK University, Bellary gave lecture on "Topological Indices Origin-Present and Future Scenario". On the third day, morning, Prof. T. Tamizh Chelvam, Emiritus Professor, Department of Mathematics, Manonmaniam Sundarnar University, Tirunelveli, Tamil Nadu explained on "Graphs from Algebraic Structures". Afternoon, Prof. B. Chaluvaraju, discussed on "Significance of Domination Theory", followed by Prof. V. Lokesha, addressed on "Topological Indices Origin-Present and Future Scenario". On the fourth day, first session Prof. Samir K Vaidya, Department of Mathematics, Saurashtra University Campus, Rajkot, Gujarat addressed on "Theory of Graphs- An Emerging Filed of Research". Second session Prof. B. Sooryanarayana, Department of Mathematics, Dr. Ambedkar Institute of Technology, Bangalore explained on "Hamitonicity and Matchings in Graphs". Afternoon, Prof. Tarakeshwar Singh, Department of Mathematics, BITS Palani, Zuarinagar, Goa gave talk on "Local Antimagic and Local Distance Antimagic Coloring of Graphs-1". On the fifth day, first session Prof. Samir Vaidya, gave lecture on "Theory of Graphs- An Emerging Filed of Research", second session Prof. B. Sooryanarayana, spoke on "Hamitonicity and Matchings in Graphs", third session Prof. Mukti Acharya, Department of Mathematics,

Bangalore explained on "Exploration in the Study of Cordial Labeling of Graphs and Signed Graphs", fourth session Dr. Medha Itagi Huilgol, Assistant Professor, Department of Mathematics, Bangalore University, Bangalore gave talk on "Set Distance in Graphs". On the sixth day, first session Prof. Tarkeshwar Singh, explained on "Local Antimagic and Local Distance Antimagic Coloring of Graphs", second session Dr. Medha Itagi Huilgol, discussed on "Set Distance in Graphs", third session Prof. Mukti Acharya, demonstrated on "Exploration in the Study of Cordial Labeling of Graphs and Signed Graphs", fourth session Prof. Deepa Sinha, Department of Mathematics, South Asian University, Akbar Bhavan, New Delhi spoke on "Application of Signed Network in Cryptography".

On the second week, first day, first session Prof. S. Ravi, Department of Studies in statistics, University of Mysore, Mysore addressed on "On Randam Graphs", second session Dr. Ruby Salestina, Associate Professor, Department of Mathematics, Yuvaraja's College, University of Mysore, Mysore gave information on "A Walk in the Mathematical Domain", third session Prof. A. Muthusamy, Department of Mathematics, Periyar University, Periyar, Tamil Nadu gave talk on "Oberwolfach Problem and Its Variations", fourth session Prof. Deepa Sinha, spoke on "Application of Signed Network in Social Network". On the second day, first session Prof. D.S. Guru, Department of Studies in Computer Science, University of Mysore, Mysore delivered lecture on "Small Eigen Value in Preserving Geometrical Properties of Points in Digital Plane", second session Prof. H.B. Walikar, Former Vice-Chancellor, Department of Mathematics, Karnatak University, Dharwad gave lecture on "Egyptian Unit Fractions", third session Prof. A. Muthusamy addressed on "Frames", fourth session Prof. Venkanagouda M. Goudar, Department of Mathematics, Sri Siddhartha Institute of Technology, Tumkur explained on "Graphs Theory and Its Applications". On the third day, first session Prof. D.S. Guru,gave talk on "Graphs in Data Clustering", second session Prof. H. B. Walikar, spoke on "Mahaveeracharya's Unit Fractions and Erdos-Straus Conjecture", third session Prof. S. Ravi, explained on "On Randam Graphs", fourth session Prof. Venkanagouda M. Goudar, addressed on "Graphs Theory and Its Applications". On the fourth day, first session Prof. Suresha, Department of Studies in Computer Science, University of Mysore, Mysore gave talk on "Searching: A Philosophical Thought", second and third session Dr. Shivashankar. K, Department of Mathematics, Yuvaraja's College, University of Mysore, Mysore evaluated the "Participants Seminar-1 and 2". On the fifth day, first and third session Prof. K.R. Vasuki, Department of Studies in Mathematics, University of Mysore, Mysore moderated the "Participants Seminar-3 and 4", second and fourth session Dr. B. Sharada, Department of Studies in Computer Science, University of Mysore, Mysore evaluated the "Participants Seminar-5 and 6". On the last day, morning, Prof. G. Suresh Singh, Department of Mathematics, University of Kerala, Trivandrum, Kerala gave talk on "Relationships between Graph Theory and Other Fields" and "Information Theory".

As a part of the Refresher Course, the Online test was conducted in the afternoon followed by Interaction with Course Coordinator and feedback from the participants.

In support to this report, the following Documents are attached.

1. Resource Persons' List

2. Teacher Participants' List

3. Seminar Schedule

4. Time Table

5. Photo's

(**Prof. S.S. Malini**)
Director
UGC-Human Resource Development Centre
University of Mysore,
Manasagangotri, Mysore-570006.

Allotment of courses for 2021-22-reg.

1 message

Archana Thakur <archana.ugc@nic.in>   Fri, Jun 25, 2021 at 3:18 PM
To: asc_au@yahoo.com, hrdcuoh@gmail.com, hrdcou@gmail.com, hrdcsvutpt@gmail.com, rama_jaypee@rediffmail.com, directorhrdcjntuh@jntuh.ac.in, gkviswanadh@jntuh.ac.in, Shakeel_du@yahoo.com, ugchrdmannuhyd@gmail.com, ugcascgu@rediffmail.com, subodhpankhu@gmail.com, rkjha51266@gmail.com, ascpatna@yahoo.com, c.singh.vmpu@gmail.com, hrdcprsu@gmail.com, akguptarsu@gmail.com, ratnesh1975@gmail.com, Ratnesh Singh <directorhrdc@ggu.ac.in>, Du.cpdhe@gmail.com, geetanjali1908@gmail.com, dir.ascjmi@rediffmail.com, asc.jnu@gmail.com, MGOVIND MGOVIND <m_govind@mail.jnu.ac.in>, asc@unigoa.ac.in, curivonkar@unigoa.ac.in, asc@ascgujarat.org, joshijagdish@yahoo.com, kaladhar@ascrajkot.org, kaladharaya@gmail.com, mkayagnik@yahoo.co.in, director@hrdcspu.ac.in, ugcasc_kuk@yahoo.co.in, ugcascbps@rediffmail.com, hrdcgjuhisar@gmail.com, hrdcshimla@gmail.com, ashokchoudhary.ru@gmail.com, ugcascjammu@gmail.com, jpsjoord@gmail.com, asc@kashmiruniversity.ac.in, hrdc@uok.edu.in, shivakumarais@gmail.com, ugchrdc.kud@gmail.com, hrdcmysore@gmail.com, asc.uoc@gmail.com, hrdcunike@yahoo.com, drsvsudheer@hotmail.com, kannurasc@gmail.com, ugcascindore@gmail.com, hrdcsagar@gmail.com, ugcasc@gmail.com, /hrdcjabalpur@gmail.com, asclnipe@reddifmail.com, martin_evcity@yahoo.com, director.hrdc@bamu.ac.in, ugchrdc@mu.ac.in, asc_ngpnu@yahoo.co.in, cgdethe@gmail.com, ascpune7@gmail.com, directorhrdc@sgbau.ac.in, dirasc@manipuruniv.ac.in, hrdcnehu@gmail.com, asc@nehu.ac.in, sarro@nehu.ac.in, lalundunga@rediffmail.com, asc.utkal@gmail.com, akdm.2002@gmail.com, ugcascsu@gmail.com, HRDC_PU <director.asc@pondiuni.edu.in>, hrdcgndu@yahoo.com, krjsingh@gmail.com, hryograj@yahoo.com, hrdcjnvu@gmail.com, directorhrdc@gmail.com, vijayvir@hotmail.com, ascmdsu@gmail.com, mathi_principal@yahoo.co.in, richardpaulv@gmail.com, asc@bdu.ac.in, ugcasc@uom.ac.in, ugcascuom@yahoo.com, mkuascdirector@gmail.com, asc_amu@yahoo.com, ugcascau@rediffmail.com, pksahooald@rediffmail.com, ac_staff@rediffmail.com, ascddugkp@gmail.com, nutan_tyagi@yahoo.com, asclko@rediffmail.com, hrdcnainital@gmail.com, divyavj@gmail.com, Pabitra_c@hotmail.com, anjaneco@gmail.com, office@hrdc.buruniv.ac.in, dirhrdc@jadavpuruniversity.in, rajat.acharya@gmail.com, ascnbu@gmail.com, hrdcnbu@gmail.com
Cc: archana ugc2012 <archana.ugc2012@gmail.com>, kundlaugc <kundlaugc@gmail.com>, hrdcsection <hrdcsection@gmail.com>

TO ALL THE DIRECTORS OF 66 HRDCs

Sir/Madam,

Kindly find attached herewith Allotment of courses for the year 2021-22 in respect of all 66 HRDCs.

With regards,

Dr. Archana Thakur, Joint Secretary, UGC

📄 **Allotment of courses for 2021-22 to 66 HRDCs.pdf**
2260K

UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI – 110002

	Allotted for 2020-21	Demanded/Allotted for 2021-22: *Carry Forward is allowed from previous allocation, if the programs could not be organized or generated much interest in participants as evidenced from Feedback.*
01	**ANDHRA UNIVERSITY** **1. Faculty Induction Programme - 04** **2. Refresher Courses: Theme-LEARNING OUTCOMES AND COMPETENCES** i) Life Science ii) Languages, Literature & Cultural Studies (Indian, English & foreign Languages). iii) Commerce & Management iv) Human Rights **Refresher Courses: Inter/Multi-disciplinary:** v) Environmental Sciences vi) Computational Social Sciences vii) Teacher Educators: Learning outcomes and educational reform – Pedagogy, Assessment and Quality Assurance. viii) Home Science (Food & Nutrition) **3. Short Term Courses** i) Professional Development Programme for Non Academic Staff ii) Women Studies **iii) Research Methodology** **iv) Applied Statistics for Teachers & Research Scholars** **4. Workshop.** **i)** Leadership Development Programme 02 **ii)** MOOCs, Online Courses &Open Educational Resources **iii)** E-content Development and Online Pedagogy **iv)** Webinars can be frequently organized on the topics ranging from Leadership, Ethics, Climate change, Artificial Intelligence, machine learning, Data analytics, Language, Research Methodology, MOOCs development and delivery, Yoga and Wellness, Disaster management post COVID etc	**ANDHRA UNIVERSITY** **1. Faculty Induction Programme-04-06** **2. Refresher Courses: Theme-LEARNING OUTCOMES AND COMPETENCES** i. Computer Science ii. Indian Language & Literature iii. Commerce & Management iv. Teacher Education (B.Ed. & Physical Education) **Refresher Courses: Inter/Multi-disciplinary:** i. Human Rights ii. Home Sciences (Food & Nutrition) iii. Disaster Management iv. Environmental Sciences **3. Short Term Courses** i. Applied Statistics for Teachers & Research Scholars ii. Research Methodology iii. Professional Development Programme for Non Academic Staff iv. Women Studies **4. Workshop on Leadership Development Programme** **5. E-content Development and Online Pedagogy** **6.** Webinars can be frequently organized on the topics ranging from Leadership, Ethics, Climate change, Artificial Intelligence, machine learning, Data analytics, Language, Research Methodology, MOOCs development and delivery, Yoga and Wellness, Disaster management post COVID etc **7. Thematic popularization of NEP2020**
02	**UNIVERSITY OF HYDERABAD** **1. Faculty Induction Programme - 04** **2. Refresher Courses: Theme-LEARNING OUTCOMES AND COMPETENCES** i) Commerce & Management ii) Social Sciences iii) Experimental Physics iv) Life Sciences **Refresher Courses: Inter/Multi-disciplinary:** v) Research Methodology vi) Quantitative Biology vii) Chemistry: Synthetic Biology viii) English Language Studies	**UNIVERSITY OF HYDERABAD** **1. Faculty Induction Programme– 04-06** **2. Refresher Courses: Theme-LEARNING OUTCOMES AND COMPETENCES** **i) Commerce & Management** **ii) Experimental Physics** **iii) Mathematics** **iv) Chemistry** **v) English Language Studies** **Refresher Courses: Inter/Multi-disciplinary**

	and educational reform – Pedagogy, Assessment and Quality Assurance. ix) Life Sciences **Summer/Winter School** x) Winter School: Science and Technology of Yoga and Meditation xi) Summer School: Quantum Biology **3. Short Term Courses.** i) Gender Sensitization ii) Communication Skills and computer Applications iii) Research Methodology iv) Disaster Management v) Workshop on MOOC's e-content development and open education Resources vi) Non-Academic Staff Training **4. Workshop.** **i)** Leadership Development Programme 02 **ii)** MOOCs, Online Courses & Open Educational Resources **iii)** E-content Development and Online Pedagogy **iv)** Interaction Programme for Ph.D. Research Scholars/Post-Doctoral Fellows **v)** Webinars can be frequently organized on the topics ranging from Leadership, Ethics, Climate change, Artificial Intelligence, machine learning, Data analytics, Language, Research Methodology, MOOCs development and delivery, Yoga and Wellness, Disaster management post COVID etc	x) Information and Communication Technology **3. Workshops** i) MOOCs, E-content Development and Open Educational Resources **ii)** Disaster Management **iii)** Gender Sensitization **iv)** Research Methodology **4. Short Term Courses.** i) Non-Technical Staff Training ii) Principal Workshop on Leadership Development iii) Counseling and guidance iv) Yoga and Spirituality **5. Webinars** can be frequently organized on the topics ranging from Leadership, Ethics, Climate change, Artificial Intelligence, machine learning, Data analytics, Language, Research Methodology, MOOCs development and delivery, Yoga and Wellness, Disaster management post COVID etc **6. Thematic popularization of NEP2020**
27	**KARNATAK UNIVERSITY, DHARWAD** **1. Faculty Induction Programme - 04** **2. Refresher Courses: Theme-LEARNING OUTCOMES AND COMPETENCES** i) Sociology ii) Kannada iii) Life Sciences iv) Social Sciences **Refresher Courses: Inter/Multi-disciplinary:** i) Research Methodology in Social Sciences ii) Indian Languages iii) Research Methodology in Sciences iv) Teacher Education v) Business Studies vi) Environmental Sciences vii) Physical Education viii) ICT Applications **3. Short Term Courses –** i) Non-Teaching staff Training ii) Computer Training iii) Gender Sensitization iv) Academic Leadership v) Webinars can be frequently organized on the topics ranging from Leadership, Ethics, Climate change, Artificial Intelligence, machine learning, Data analytics, Language, Research Methodology, MOOCs development and delivery, Yoga and Wellness, Disaster management post COVID etc	**KARNATAK UNIVERSITY, DHARWAD** **1. Faculty Induction Programme – 04-06** **2. Refresher Courses: Theme-LEARNING OUTCOMES AND COMPETENCES** i) Economics **ii) Commerce and Management** **iii) Life Sciences** **iv) Library & Information Science** **Refresher Courses: Inter/Multi-disciplinary:** i) Research Methodology in Social Sciences ii) Indian Languages iii) Research Methodology in Sciences iv) Teacher Education v) Physical Education vi) ICT Applications **3. Short Term Courses.** i) Research Methodology ii) Non-Teaching Staff Training iii) Computer Training for non-teaching staff iv) Workshop for Principal's v) Gender Sensitization vi) Academic Leadership vii) Teacher's Educator viii) Webinars- Leadership, Ethics, Disaster Management, Data Analysis, Language, Research Methodology, MOOC's Development & Delivery, Yoga and Wellness **4. Thematic popularization of NEP2020**
28	**UNIVERSITY OF MYSORE** **1. Faculty Induction Programme - 04.** **2. Refresher Courses: Theme-LEARNING OUTCOMES AND COMPETENCES 10** **i)** Commerce. **ii)** Languages, Literature & Cultural Studies	**UNIVERSITY OF MYSORE** **1. Faculty Induction Programme - 04.** **2. Refresher Courses: Theme-LEARNING OUTCOMES AND COMPETENCES** i) Commerce

(Kannada & Indian Languages). **iii)** History. **iv)** .Library & Information Science. **v)** Physical Education. **Refresher Courses: Inter/Multi-disciplinary:** **vi)** Cognitive Economics. **vii)** Quantum Biology. **viii)** Human Rights. **ix)** Materials Science. **x)** Teacher Educators: Learning outcomes and educational reform – Pedagogy, Assessment and Quality Assurance. **3. Short Term Courses.** **i)** "Research Methodology" **ii)** 'Gender Sensitization'. **iii)** 'Disaster Management'. **iv)** "Soft Skills'. **4. Workshop.** **i)** Leadership Development Programme 02 **ii)** MOOCs, Online Courses & Open Educational Resources **iii)** E-content Development and Online Pedagogy **iv)** Interaction Programme for Ph.D. Research Scholars/Post-Doctoral Fellows **v)** Webinars can be frequently organized on the topics ranging from Leadership, Ethics, Climate change, Artificial Intelligence, machine learning, Data analytics, Language, Research Methodology, MOOCs development and delivery, Yoga and Wellness, Disaster management post COVID etc	ii) Economics iii)English iv) History v) Kannada vi) Library & Information Science vii) Physical Education viii) Political Science **Inter/Multi-disciplinary:** i) Mathematical Science ii) Human Rights. iii)Materials Science iv) Life Sciences v) Indian Literature vi) Teacher Educator **3. Short Term Courses** i)Gender Sensitization' **ii)** Disaster Management' **iii)** Information Communication Technology **iv)** Soft Skills **v)** Principal Meet' **4. Workshop.** i) Academic Administrator ii) MOOCs, Online Courses & Open Educational Resources iii) Administrative Staff **5. Webinars** can be frequently organized on the **topics** ranging from Leadership, Ethics, Climate change, Artificial Intelligence, machine learning, Data analytics, Language, Research Methodology, MOOCs development and delivery, Yoga and Wellness, Disaster management post COVID etc **6. Thematic popularization of NEP2020**

29   **UNIVERSITY OF CALICUT**
1. Faculty Induction Programme – 04.
2. Refresher Courses: Theme-LEARNING OUTCOMES AND COMPETENCES 11.
   i) Languages, Literature & Cultural Studies (Indian, English & foreign Languages).
   ii) Hindi Language & Literature.
   iii) Art & Culture (Humanities & Languages).
  Refresher Courses: Inter/Multi-disciplinary:
   viii) Material Sciences: Recombinant Memetics (Chemistry, Nano Science/Technology, Physics, Biological Sciences).
   ix) Malayalam & Kerala Studies (Anthropology, History, Malayalam, Sociology).
   x) Development Studies (Commerce, Management & Economics).
  Winter/Summer School
   xi) Experimental Techniques for Biological Sciences (Agricultural Science, Biotechnology, Botany, Environmental Science, Veterinary Science, Zoology).
3. Short Term Courses (1 week)
   i) Soft Skills Development for Asstt./Associate Professors.
   ii) E-content Development and
	UNIVERSITY OF CALICUT
	1. Faculty Induction Programme– 04-06
	2. Refresher Courses: Theme-LEARNING OUTCOMES AND COMPETENCES
	i) Material Science
	ii) Life Sciences
	iii) Mathematical Science
	iv) Development Studies
	v) English Language & Literature
	vi) Hindi Language & Literature
	vii) Arabic Language & Literature
	viii) E-content Development and Online Pedagogy in Social Science Teaching
	ix) Physical Education
	x) Library and Information Science
	xi) Biotechnology (Botany, Zoology, Bioinformatics, Biochemistry, Microbiology, Aquatic Biology, Animal Husbandry, Aquaculture, Fisheries)
	xii) Computer Science/Computer Application
	xiii) Chemistry
	xiv) Physics
	  Refresher Courses: Inter/Multi-disciplinary:
	i) Environmental Science
	ii) ICT-enabled Teaching
	iii) Malayalam & Kerala Studies
	iv) Cultural Studies

Address List of Resource Persons of the 9th Refresher Course in Mathematical Science (Online)
From : 25.08.2021 To 07.09.2021

S.N	Name & Address of the Resource Persons	Contact No. & E-mail
1.	**Prof. S.J. Manjunath** Director, UGC-Human Resource Development Centre, University of Mysore, Manasagangotri, Mysore-570006.	Off : Res : Cell : Email : sjmanjunath@gmail.com
2.	**Prof. B. Chaluvaraju** Dept. of Mathematics, Bangalore University, Jnana Bharathi Campus, Bangalore-560056.	Off : Res : Cell : 94492 70389 Email : bchaluvaraju@gmail.com
3.	**Prof. B. Basavanagoud** Dept. of Mathematics, Karnatak University, Pavatenagar, Dharwad-580003.	Off : Res : Cell : 94491 77029 Email : b.basavanagoud@gmail.com
4.	**Prof. H.S. Ramane** Dept. of Mathematics, Karnatak University, Pavatenagar, Dharwad-580003.	Off : Res : Cell : 94491 77029/99450 31752 Email : hsramane@yahoo.com
5.	**Prof. T. Tamizh Chelvam** Emiritus Professor, Dept. of Mathematics, Manonmaniam Sundarnar University, Tirunelveli, Tamil Nadu-627012.	Off : Res : Cell : 94434 55244/94879 03000 Email : tamche59@gmail.com/ tamizhchelvam@msuniv.ac.in
6.	**Prof. V. Lokesha** Dept. of Mathematics, VSK University, Jnana Sagara Campus, Cantonment, Bellary-583105.	Off : Res : Cell : 88925 31820 Email : v.lokesha@gmail.com
7.	**Prof. Samir K Vaidya** Dept. of Mathematics, Saurashtra University Campus, Munjka, Rajkot, Gujarat-360005.	Off : Res : Cell : 98252 92539 Email : samirkvaidya@yahoo.co.in
8.	**Prof. B. Sooryanarayana** Dept. of Mathematics, Dr. Ambedkar Institute of Technology, BDA, Outer Ring Road, Near Jnana Bharathi, Bangalore-560056.	Off : Res : Cell : 98442 36450 Email : dr_bsnrao.mat@drait.edu.in/ dr_bsnrao@yahoo.co.in

Address List of Resource Persons of the 9th Refresher Course in Mathematical Science (Online)

From : 25.08.2021 To 07.09.2021

-(2)-

S.N	Name & Address of the Resource Persons	Contact No. & E-mail
9.	**Prof. Mukti Acharya** Dept. of Mathematics, No.22 "Udhava", 10th Cross, 5th Main, Malleshpalya, New Thippasandra Post, Bangalore-560075.	Off : Res : Cell : 98917 22273/73472 08227 Email : mukti1948@gmail.com
10.	**Prof. Tarkeshwar Singh** Dept. of Mathematics, BITS Pilani, KK Birla, Goa Campus, NH-17 B, Zuarinagar, Goa-403726.	Off : Res : Cell : 98230 39869 Email : stsingh@rediffmail.com
11.	**Dr. Medha Itagi Huilgol** Assistant Professor, Dept. of Mathematics, Bangalore University, Jnana Bharathi, Bangalore-560056.	Off : Res : Cell : 98451 07047 Email : medha@bub.ernet.in
12.	**Dr. Ruby Salestina** Associate Professor, Dept. of Mathematics, Yuvaraja's College, University of Mysore, Mysore-570005.	Off : Res : Cell : 99867 60070 Email : ruby.salestina@gmail.com
13.	**Prof. Deepa Sinha** Dept. of Mathematics, South Asian University, Akbar Bhavan, Chanakyapuri, New Delhi-110021.	Off : Res : Cell : 87440 22273 Email : deepa_sinha2001@yahoo.com/ deepasinha@sau.ac.in
14.	**Prof. A. Muthusamy** Dept. of Mathematics, Periyar University, Periyar, Palkalai Nagar, Tamil Nadu-636011.	Off : Res : Cell : 98420 35190 Email : muthusamy@periyaruniversity.ac.in
15.	**Dr. H.B. Walikar** Former Vice-Chancellor, Dept. of Mathematics, Karnatak University, Dharwad-580003	Off : Res : Cell : 6366150955 Email : walikarhb@yahoo.co.in
16.	**Prof. D.S. Guru** Dept. of Studies in Computer Science University of Mysore, Manasagangotri, Mysore-570006.	Off : Res : Cell : 96202 28005 Email : dsg@compsci.uni-mysore.ac.in/ dsguruji@yahoo.com

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S.N	Name & Address of the Resource Persons	Contact No. & E-mail

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17.	**Prof. Sreenivasan Ravi** Dept. of Studies in Statistics, University of Mysore, Mansagangotri, Mysore-570006.	Off : Res : Cell : 87928 44593 Email : ravi@statistics.uni-mysore.ac.in/ stat.ravi@gmai.com
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19.	**Prof. Suresha** Dept. of Studies in Computer Science, University of Mysore, Manasagangotri, Mysore-570006.	Off : Res : Cell : 94498 10894 Email : sureshabm@yahoo.co.in
20.	**Dr. Shivashankar. K** Dept. of Mathematics, Yuvaraja's College, University of Mysore, Mysore-570006.	Off : Res : Cell : 94485 81961 Email : drksshankara@gmail.com
21.	**Prof. K.R. Vasuki** Dept. of Studies in Mathematics, University of Mysore, Manasagangotri, Mysore-570006.	Off : Res : Cell : 99164 50314 Email : vasuki_kr@hotmail.com
22.	**Dr. B. Sharada** Dept. of Studies in Computer Science, University of Mysore, Manasagangotri, Mysore-570006.	Off : Res : Cell : 77601 08720 Email : sharadab21@gmail.com
23.	**Prof. G. Suresh Singh** Dept. of Mathematics, University of Kerala, Kariavattom, Trivandrum-695015 Kerala.	Off : Res : Cell : 94474 71455 Email : gsureshsingh65@gmail.com/ sureshsingh@yahoo.com
24.	**Dr. Veena Mathad** Course Coordinator Dept. of Studies in Mathematics University of Mysore, Manasagangotri, Mysore-570006.	Off : Res : Cell : 97417 70483 Email : veena_mathad@rediffmail.com

Address List of Teacher Participants of the 9th Refresher Course in Mathematical Science (Online) from 25.08.2021 to 07.09.2021

Sl. No.	Name & Address of the Participant	Contact No. & E-mail	Photo
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2.	**Dr. Alfred Yusuf Shaikh** Assistant Professor of Mathematics, Indira Gandhi Kala Mahavidyalaya, Ralegaon-445402. Yavatmal Dist. Maharashtra.	Off : 9373778210 Res : Cell : 9850000784 Email : shaikh2324ay@gmail.com	
3.	**Dr. Gavirangaiah K.** Assistant Professor of Mathematics, Government First Grade College, Tumkuru-572102.	Off : 9449638862 Res : Cell : 7829545315 Email : gavirangayya@gmail.com	
4.	**U. Basavaraj** Asst. Professor of Computer Science, Government First Grade College, Thenkanidiyur, Udupi-576106.	Off : 08202583275 Res : Cell : 9448701018 Email : ub7kottur@gmail.com	
5.	**Dr. V. Raja** Assistant Professor of Mathematics, Mannai Rajagopalaswamy Government Arts College, Mannargudi-614001. Thiruvarur Dist. Tamil Nadu.	Off : 04367255440 Res : Cell : 9786580503 Email : drvrmaths2020@gmail.com	
6.	**Dr. S. Vijay** Assistant Professor of Mathematics, Government Art's College, Udhagamandalam, The Nilgiris-643002. Tamil Nadu.	Off : 04232443981 Res : Cell : 9486285184 Email : svijay.spv@gmail.com	
7.	**A.M. Shahul Hameed** Assistant Professor of Mathematics, The New College (Autonomous), Royapettah, Chennai-600014. Tamil Nadu.	Off : 04428351469 Res : Cell : 9094705990 Email : shahuljas2009@gmail.com	
8.	**Dr. Mahesh K.B.** Assistant Professor of Mathematics, Dr. P. Dayananda Pai - P. Satisha Pai Government First Grade College, Mangalore-575001. Dakshina Kannada Dist.	Off : 08242491073 Res : Cell : 9845702346 Email : mathsmahesh@gmail.com	
9.	**Dr. V. Rajendran** Assistant Professor of Mathematics, Aringar Anna Government Arts College, Musiri-621211. Tiruchirappalli Dist Tamil Nadu	Off : 04326260230 Res : Cell : 8248550986 Email : vrmaths123@gmail.com	

Address List of Teacher Participants of the 9th Refresher Course in
Mathematical Science (Online) from 25.08.2021 to 07.09.2021

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Sl. No.	Name & Address of the Participant	Contact No. & E-mail	Photo
10.	**Dr. T. Siva Subramania Raja** Assistant Professor of Mathematics, National College (Autonomous), Tiruchirapalli-620001. Tamil Nadu.	Off : 04312482995 Res : Cell : 9894233747 Email : sivasu@nct.ac.in	
11.	**Prakasha P.** Assistant Professor of Mathematics, Government College for Women's, Maddur- 571428. Mandya Dist.	Off : 08232236867 Res : Cell : 9740121927 Email : profprakasha@gmail.com	
12.	**Dr. Santosh Huggi** Assistant Professor of Mathematics, Government First Grade College, Shahapur-585223. Yadagir Dist.	Off : 9945192535 Res : Cell : 9945192535 Email : huggiss1979@gmail.com	
13.	**Dr. P. Shakila Banu** Assistant Professor of Mathematics, Vellalar College for Women (Autonomous), Erode-638012. Tamil Nadu.	Off : 04242244102 Res : Cell : 9786588877 Email : shakimeeran10@gmail.com	
14.	**Dr. R. Helen** Assistant Professor of Mathematics, Poompuhar College (Autonomous), Melaiyur-609107. Mayiladuthurai Dist. Tamil Nadu.	Off : 04364260827 Res : Cell : 9944066814 Email : denitathomasgeorge@gmail.com	
15.	**Dr. Mahantesh S. Swamy** Assistant Professor of Mathematics, Government College (Autonomous), Kalaburagi-585105.	Off : 08472245064 Res : Cell : 8660970644 Email : mssmaths@gmail.com	
16.	**Mahesh Jamadar** Assistant Professor of Mathematics, Government First Grade College, Shahapur-585223. Yadgir Dist.	Off : 9663633330 Res : Cell : 9916284584 Email : maheshaj81@gmail.com	
17.	**Dr. N.G. Sridhar** Assistant Professor of Mathematics, Government First Grade College, Sedam-585222. Kalaburgi Dist.	Off : 08441276158 Res : Cell : 9448160136 Email : sridhar.ng1@gmail.com	
18.	**Kantharaju H.D.** Assistant Professor of Mathematics, Government First Grade College for Women, K.R. Nagara-571602. Mysore Dist.	Off : 08223262110 Res : Cell : 9008177875 Email : kantharajuhd@gmail.com	

Address List of Teacher Participants of the 9th Refresher Course in
Mathematical Science (Online) from 25.08.2021 to 07.09.2021

-3-

Sl. No.	Name & Address of the Participant	Contact No. & E-mail	Photo
19.	**Dhananjaiah D.S.** Assistant Professor of Mathematics, Government First Grade College, K.R. Pete-571426. Mandya Dist.	Off : 8722594966 Res : Cell : 8722594966 Email : dhanu2614@gmail.com	
20.	**Shilpa Jagadish Mulkeri** Assistant Professor of Mathematics, Government (Autonomous) College, Kalaburgi-585105.	Off : 08472245064 Res : Cell : 8861244248 Email : shilpam052009@gmail.com	
21.	**Dr. S. Sujitha** Assistant Professor of Mathematics, Holy Cross College (Autonomous), Nagercoil-629004. Kanyakumari Dist. Tamil Nadu.	Off : 04652261473 Res : Cell : 9486289412 Email : sujitha.s@holycrossngl.edu.in	
22.	**Pushpa Latha M.** Asst. Professor of Computer Science, Maharani's Science College for Women (Autonomous), JLB Road, Mysuru-570005.	Off : 08212424335 Res : Cell : 9743507464 Email : pushpaasrilatha@gmail.com	
23.	**Dr. D.M. Mahesha** Asst. Professor of Computer Science, Dept. of Studies in Computer Science, Karnataka State Open University, Mukthagangotri, Mysore-570006.	Off : 08212500071 Res : Cell : 9901249102 Email : maheshadm@gmail.com	
24.	**Dr. Kamble Shravan Sambhaji** Assistant Professor of Mathematics, Government First Grade College, Chittapur-585211. Kalaburagi Dist.	Off : 9880687035 Res : Cell : 9880687035 Email : kambles_maths@yahoo.co.in	
25.	**Dr. M. P. Jeyaraman** Assistant Professor of Mathematics, L.N. Government College (Autonomous), Ponneri-601204. Tiruvallur Dist. Tamil Nadu.	Off : 04427972266 Res : Cell : 9444046901 Email : jeyaraman_mp@yahoo.co.in	
26.	**Dr. V.K. Balaji** Assistant Professor of Mathematics, Loganatha Narayanasamy Government College, Ponneri-601204. Tiruvallur Dist. Tamil Nadu.	Off : 04427972266 Res : Cell : 9884311756 Email : balaji@lngovernmentcollege.com	
27.	**Dr. V. Vanitha** Assistant Professor of Mathematics, National College (Autonomous), Trichy-620001. Tamil Nadu.	Off : 04312482995 Res : Cell : 9597373900 Email : rajarajanvani@gmail.com	

Address List of Teacher Participants of the 9ᵗʰ Refresher Course in Mathematical Science (Online) from 25.08.2021 to 07.09.2021

-4-

Sl. No.	Name & Address of the Participant	Contact No. & E-mail	Photo
28.	**Dr. P. Chandra Kala** Assistant Professor of Mathematics, Sree Devi Kumari Women's College, Kuzhithurai-629163. Kanyakumari Dist. Tamil Nadu.	Off : 04651260344 Res : Cell : 9655384485 Email : kala.chandra02@gmail.com	
29.	**V. Priyavadhana** Assistant Professor of Mathematics, Vivekananda College, Agasteeswaram-629701. Kanyakumari Dist. Tamil Nadu.	Off : 04652270245 Res : Cell : 8056743891 Email : hellopriya79@gmail.com	

<p align="center" style="color:red">9th REFRESHER COURSE IN MATHEMATICAL SCIENCE (ONLINE)
FROM 25.08.2021 TO 07.09.2021
SEMINAR SCHEDULE</p>

Sl. No.	Name of the Participants	Subject	Title of the Seminar Topic	Date & Time
1.	Dr. R.Vasanthi	Mathematics	Random geometric graphs and their applications in Neuronal Modelling	04.09.2021 11.45 to 01.00
2.	Dr. Alfred Yusuf Shaikh		Trees	
3.	Dr. Gavirangaiah K.		Types of graphs and trees	
4.	V. Raja		Finite Continued Fraction	
5.	S.Vijay		Directed Graphs	

1.	A.M. Shahul Hameed	Mathematics	Dominated colouring of some graph classes	04.09.2021 02.00 to 03.15
2.	Dr. Mahesh K.B.		Chromatic Polynomial of a Graph	
3.	Dr.V. Rajendran		Algebraic Graph Theory	
4.	T. Siva Subramania Raja		Domination in Graph theory	
5.	Prakasha P.		Numerical solutions of system of system linear equations	

1.	Dr. Santosh Huggi	Mathematics	Matrix representation	06.09.2021 10.00 to 11.15
2.	Dr. P. Shakila Banu		Hasse Diagram	
3.	Dr. R. Helen		soft graph	
4.	Dr. Mahantesh S. Swamy		Coloring of Graphs	
5.	Mahesh Jamadar		Mathematical puzzle	

1.	Dr. N.G. Sridhar	Mathematics	Isomorphism	06.09.2021 11.45 to 01.00
2.	Dhananjaiah D.S.		Set Q doesnot have the lub property	
3.	Shilpa Jagadish Mulkeri		Eulerian Graphs and their Characterizations	
4.	Dr. S. Sujitha		Solution of Recurrence relations	
5.	V. Priyavadhana		Minimal dominating set with minimum cardinality.	

1.	Dr. Shravan S. Kamble	Mathematics	Types of Graphs	06.09.2021 02.00 to 03.15
2.	M.P. Jeyaraman		Geometric Function Theory.	
3.	V.K. Balaji		Planar Harmonic Mapping	
4.	Dr. V. Vanitha		Directed edge graceful labeling	
5.	Dr. P. Chandrakala		Real Life Applications in Graph Theory	

1.	Kantharaju H.D.	Mathematics	Network flow- Ford-Fulkerson Algorithm.	06.09.2021 03.45 to 05.00
2.	U. Basavaraj	Computer Science	Introduction to Data Structures	
3.	Pushpalatha M.		An introduction to Kannada Named Entity Recognition	
4.	Dr. D.M. Mahesha		Networking and Communications	

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9th REFRESHER COURSE IN MATHEMATICAL SCIENCE (ONLINE) – TIME TABLE FOR 1st WEEK (25.08.2021 TO 31.08.2021)
THRUST AREA: "GRAPH THEORY AND ALLIED TOPICS"

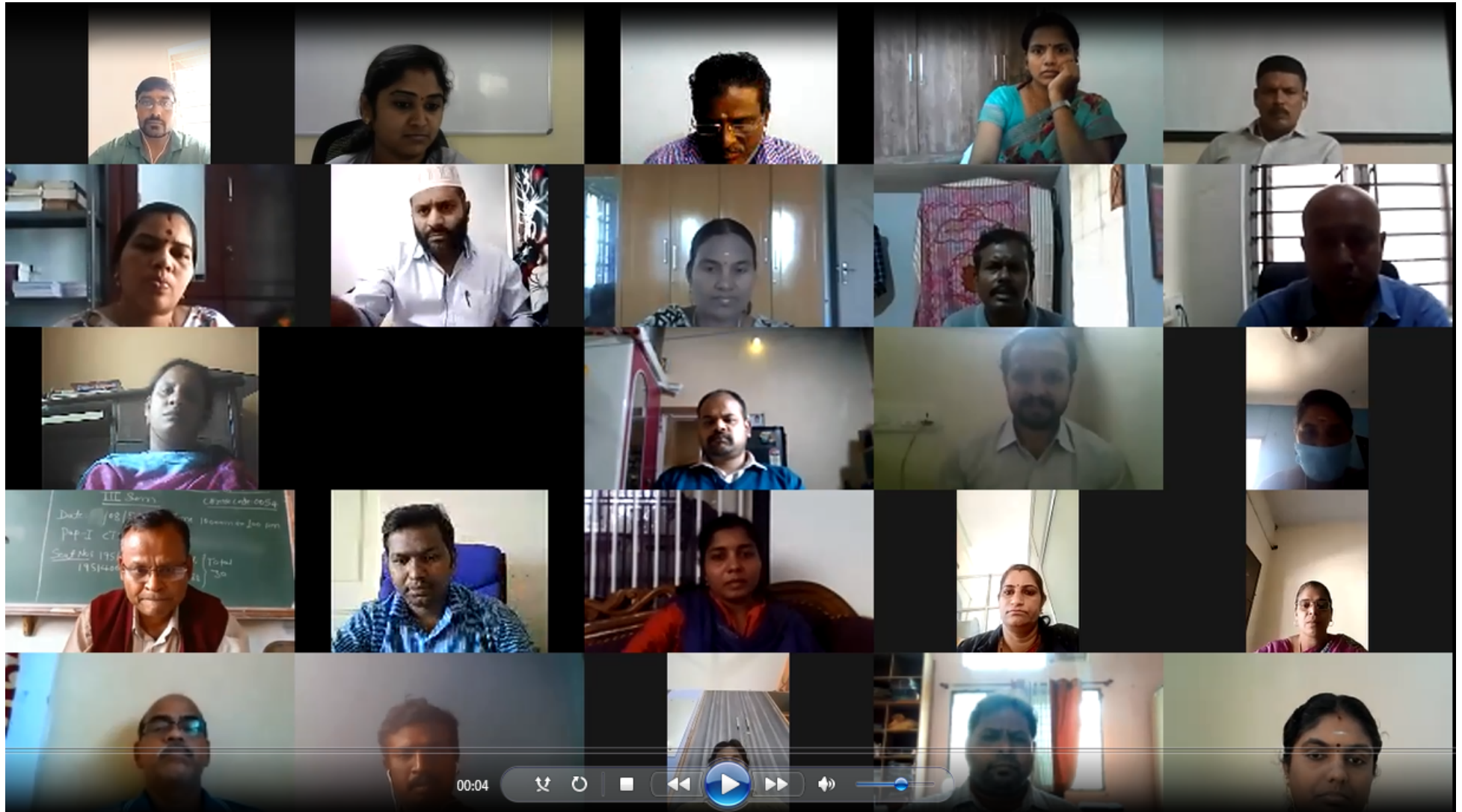| Date and Day	10.00 AM to 11.15 AM	11.45 AM to 1.00 PM	1.00 to 2.00	2.00 PM to 3.15 PM	3.45 PM to 5.00 PM
25.08.2021 Wednesday	Instructions to teacher-Participants		L	Theory of Graphs – I **Prof. B. Basavanagoud**	Spectra of Graphs **Prof. H.S. Ramane**
26.08.2021 Thursday	Theory of Graphs – II **Prof. B. Basavanagoud**	Role of Graphs Theory in Descrete Structures **Prof. B. Chaluvaraju**	U N	Energy of Graphs **Prof. H.S. Ramane**	Topological Indices Origin – Present and Future Scenario – I **Prof. V. Lokesha**
27.08.2021 Friday	Graphs from Algebraic Structures **Prof. T. Tamizh Chelvam**		C	Significance of Domination Theory **Prof. B. Chaluvaraju**	Topological Indices Origin – Present and Future Scenario – II **Prof. V. Lokesha**
28.08.2021 Saturday	Theory of Graphs – An Emerging Filed of Research – I **Prof. Samir Vaidya**	Groups and Graphs **Prof. B. Sooryanarayana**	H	Local Antimagic and Local Distance Antimagic Coloring of Graphs – I **Prof. Tarakeshwar Singh**	**Library Work**
29.08.2021 Sunday	**HOLIDAY**		B R	**HOLIDAY**	
30.08.2021 Monday	Theory of Graphs – An Emerging Filed of Research – II **Prof. Samir Vaidya**	Hamitonicity and Matchings in Graphs **Prof. B. Sooryanarayana**	E A	Exploration in the Study of Cordial Labeling of Graphs & Signed Graphs – I **Prof. Mukti Acharya**	Set Distance in Graphs – I **Dr. Medha Itagi Huligol**
31.08.2021 Tuesday	Local Antimagic and Local Distance Antimagic Coloring of Graphs – II **Prof. Tarakeshwar Singh**	Set Distance in Graphs – II **Dr. Medha Itagi Huligol**	K	Exploration in the Study of Cordial Labeling of Graphs & Signed Graphs–II **Prof. Mukti Acharya**	Application of Signed Network in Cryptography **Prof. Deepa Sinha**

Tea Break : 11.15 AM to 11.45 AM and 3.15 PM to 3.45 PM

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9th REFRESHER COURSE IN MATHEMATICAL SCIENCE (ONLINE) – TIME TABLE FOR 2nd WEEK (01.09.2021 TO 07.09.2021)
THRUST AREA: "GRAPH THEORY AND ALLIED TOPICS"

Date and Day	10.00 AM to 11.15 AM	11.45 AM to 1.00 PM	1.00 to 2.00	2.00 PM to 3.15 PM	3.45 PM to 5.00 PM
01.09.2021 Wednesday	On Randam Graphs – I **Prof. S. Ravi**	A Walk in the Mathematical Domain **Dr. Ruby Salestina**	L U N C H B R E A K	Oberwolfach Problem and Its Variations **Prof. A. Muthusamy**	Application of Signed Network in Social Network **Prof. Deepa Sinha**
02.09.2021 Thursday	Small Eigen Value in Preserving Geometrical Properties of Points in Digital Plane **Prof. D.S. Guru**	Egyptian Unit Fractions **Prof. H.B. Walikar**		Frames **Prof. A. Muthusamy**	Graphs Theory and Its Applications – I **Prof. Venkanagouda M. Goudar**
03.09.2021 Friday	Graphs in Data Clustering **Prof. D.S. Guru**	Mahaveeracharya's Unit Fractions and Erdos-Straus Conjecture **Prof. H.B. Walikar**		On Randam Graphs – II **Prof. S. Ravi**	Graphs Theory and Its Applications – II **Prof. Venkanagouda M. Goudar**
04.09.2021 Saturday	Searching: A Philosophical Thought **Prof. Suresha**	Participants Seminar – 1 **Prof. K. Shivashankara**		Participants Seminar – 2 **Prof. K. Shivashankara**	**Library Work**
05.09.2021 Sunday	**HOLIDAY**			**HOLIDAY**	
06.09.2021 Monday	Participants Seminar – 3 **Prof. K.R. Vasuki**	Participants Seminar – 4 **Dr. B. Sharada**		Participants Seminar – 5 **Prof. K.R. Vasuki**	Participants Seminar – 6 **Dr. B. Sharada**
07.09.2021 Tuesday	Relationships between Graph Theory and Other Fields **Prof. Suresh Singh**	Information Theory **Prof. Suresh Singh**		**Interaction with Course Coordinator**	**Online Test and Feedback Session**

Tea Break : 11.15 AM to 11.45 AM and 3.15 PM to 3.45 PM

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9th Refresher Course in Mathematical Science

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Director   **Co-ordinator**   **Vice-Chancellor**