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प्रोजेक्ट रॉपिक वितरण 2021-22  
 एवं प्रोजेक्ट निर्माण एवं जमा करना  
 M.Sc.-III सेमेस्टर पेपर-I  
 Subject - Functional Analysis 14-11-2022

| क्र.सं. | छात्र का नाम     | रोल नंबर    | हस्ताक्षर      |
|---------|------------------|-------------|----------------|
| ①       | भावतावर्मा       | 20305081001 | Bhaw           |
| ②       | चौदानी           | 20305081002 | chemelni       |
| ③       | चंद्रशेखर        | 20305081003 | chandrashankar |
| ④       | धनेश्वर प्रसाद   | 20305081004 | Daneshwar      |
| ⑤       | धनेश्वरी चौहान   | 20305081005 | Dhach          |
| ⑥       | धुलेश्वरी बाबु   | 20305081006 | Dhuleshwari    |
| ⑦       | हिमानी चंडावर    | 20305081007 | Himani         |
| ⑧       | हिमानी देवीगन    | 20305081008 | Himani         |
| ⑨       | कुंदन कुमार साहू | 20305081009 | Kundan         |
| ⑩       | मंजू पटेल        | 20305081010 | Manju          |
| ⑪       | मोहनीश कुमार     | 20305081011 | Mohani         |
| ⑫       | मोक्ष साहू       | 20305081012 | Moksh          |
| ⑬       | त्रिधि वर्मा     | 20305081013 | Tridhi         |
| ⑭       | निशा             | 20305081014 | Nisha          |
| ⑮       | पंकज कुमार       | 20305081015 | Pankaj         |
| ⑯       | रमण              | 20305081017 | Raman          |
| ⑰       | रमाशंकर          | 20305081018 | Ramashankar    |
| ⑱       | रंजना वर्मा      | 20305081019 | Ranjana        |
| ⑳       | रुखमणी           | 20305081020 | Rukmani        |
| ㉑       | सईद ऐजाज खान     | 20305081021 | Said           |
| ㉒       | सत्यम ठाकुर      | 20305081022 | Satyam         |
| ㉓       | श्रद्धा साहू     | 20305081023 | Shraddha       |
| ㉔       | सुनील कुमार      | 20305081024 | Sunil          |

14-11-21

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प्रोजेक्ट रॉपिक वितरण  
 एवं प्रोजेक्ट निर्माण तथा जमा करना  
 M.Sc.-III सेमेस्टर पेपर-I  
 Subject - Paper I - Functional Analysis  
 14-11-2021

क्र.सं. छात्र का नाम "रॉपिक" के अंक सेल नं. हस्ताक्षर

- 1-Signal Measure
- 2-Hahn decomposition theorem
- 3-Radon-Nikodym Theorem
- 4-Product Measures
- 5-Baire Set
- 6-Lax-Milgram theorem
- 7-Regularity of Measure
- 7-Dual space
- 8-Lebesgue decomposition
- 9-Baire sets
- 10-Weak convergence
- 11-Lebesgue Stieltjes
- 12-Riesz Lemma
- 13-Baire Measure
- 14-Minkowski's schwanz inequality
- 15-Fubini's Theorem
- 16-Banach space
- 17-Equivalent Norms
- 18-Normed linear space
- 19-Extension Theorem
- 20-Quotient space
- 21-Riesz-Markoff Theorem
- 22-continuous Function with compact support
- 23-Bounded Linear Transformation

14-11-21

विभागाध्यक्ष  
 प्रमुख विभाग  
 शांति, बन्धुलाल चन्दाकर  
 कला एवं विज्ञान महाविद्यालय  
 पाटन जि. बुरग (उ.प्र.)

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प्रोजेक्ट रॉपिक वितरण एवं  
प्रोजेक्ट निर्माण एवं जमा करना  
Misc-III सेमेस्टर पेपर-II  
Subject - Paper-II (PDE & Mechanics)

2021-22  
Given Date  
16-11-2021

PAGE: [ ]  
DATE: [ ]

| क्र.0 | छात्र का नाम     | रोल नंबर    | हस्ताक्षर   |
|-------|------------------|-------------|-------------|
| 1     | भावना वर्मा      | 20305081001 | RB          |
| 2     | चाँदनी           | 20305081002 | Chandni     |
| 3     | अरुण             | 20305081003 | Chandni     |
| 4     | दोनेव लखार       | 20305081004 | Domesthoran |
| 5     | धनेश्वरी चौधरी   | 20305081005 | dash        |
| 6     | शुक्लेश्वरी गहुर | 20305081006 | Dhuleshwari |
| 7     | हिमानी राजाकर    | 20305081007 | Himani      |
| 8     | हिमानी देवतान    | 20305081008 | Himani      |
| 9     | कुबल कुमारी साधु | 20305081009 | Kumari      |
| 10    | मनु पटेल         | 20305081010 | Manoj       |
| 11    | मोहनीष कुमार     | 20305081011 | Mohani      |
| 12    | मोक्ष साहू       | 20305081012 | Moksh       |
| 13    | निधि वर्मा       | 20305081013 | Nidhi       |
| 14    | निष्ठा मस्कण्डे  | 20305081014 | Nishtha     |
| 15    | पंकज कुमार       | 20305081015 | Pankaj      |
| 16    | रुतम गहुर        | 20305081017 | Rutim       |
| 17    | रुमानात          | 20305081018 | Rumana      |
| 18    | रेणुका वर्मा     | 20305081019 | Renuka      |
| 19    | रुचमणी           | 20305081020 | Ruchmani    |
| 20    | रुचमणी           | 20305081021 | Ruchmani    |
| 21    | सव्यम गहुर       | 20305081022 | Savvam      |
| 22    | श्रीधर साहू      | 20305081023 | Shridhar    |
| 23    | सनील             | 20305081024 | Sunil       |

16-11-2021

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प्रोजेक्ट रॉपिक वितरण एवं  
प्रोजेक्ट निर्माण एवं जमा करना  
Misc-III II पेपर-II (PDE & Mechanics)  
Subject - Fuzzy Set Theory & Application  
Given Date - 16-11-2021 Project Submitted Date 13-11-21

PAGE: [ ]  
DATE: [ ]

रॉपिक वितरण (PDE & Mech.)

- 1-Transport Equation
- 2-Hamilton principle and variabile
- 3-Wave Equation
- 4-Hamilton Jacobi Equation
- 5-Hamilton's principle
- 6-Poisson bracket
- 7-Non-homogeneous Equation
- 8-Non-Linear First order PDE
- 9-Poisson Identity
- 10-Brachistochrone Problem
- 11-Heat equation
- 12-Euler's equation
- 13-Mean Value Formula
- 14-Liouville's theorem (Poincare integral invariant)
- 15-Complete Integrals
- 16-Hamilton Canonical equation
- 17-Energy equation
- 18-PDE Complex integrals
- 19-Green Function
- 20-Envelopes
- 21-Lagrange's equations of second kind
- 22-Generalized coordinates
- 23-Energy Method

16-11-2021

विभागाध्यक्ष  
पुस्तक विभाग  
राज. प्रौद्योगिकी संस्थान  
कला एवं विज्ञान परिसर  
पटन जि. दुर्ग (छ.ग.)

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प्रोजेक्ट हॉपक वितरण, प्रोजेक्ट - 2021-22  
निर्माण एवं प्रोजेक्ट जमा करना

Msc-III सेमेस्टर पेपर-III 28-11-22  
Subject - ~~Operational Research~~  
25-11-2021 Fuzzy Set Theory & Application

| क्र० | छात्र का नाम     | रोल नंबर    | हस्ताक्षर   |
|------|------------------|-------------|-------------|
| 1    | भावना वर्मा      | 20305081001 | Bhavna      |
| 2    | चौधरी            | 20305081002 | Chandini    |
| 3    | चंद्रकांत        | 20305081003 | Chandrakant |
| 4    | दत्तेश्वर झा     | 20305081004 | Datteshwar  |
| 5    | धुलेश्वरी चौरा   | 20305081005 | Dhuleshwari |
| 6    | धुलेश्वरी शंकर   | 20305081006 | Dhuleshwari |
| 7    | हिमानी चन्दाकर   | 20305081007 | Himani      |
| 8    | हिमानी देवांगन   | 20305081008 | Himani      |
| 9    | कुन्दल कुमर साहू | 20305081009 | Kundam      |
| 10   | महेश पटेल        | 20305081010 | Mahesh      |
| 11   | मौनीष कुमार      | 20305081011 | Mounish     |
| 12   | मोक्ष झा         | 20305081012 | Moksh       |
| 13   | निधि वर्मा       | 20305081013 | Nidhi       |
| 14   | निशा मोरकण्डे    | 20305081014 | Nisha       |
| 15   | पंकज कुमार       | 20305081015 | Pankaj      |
| 16   | रूतम ठाकुर       | 20305081017 | Rutam       |
| 17   | रमाकांत          | 20305081018 | Ramakant    |
| 18   | रेणुका वर्मा     | 20305081019 | Renuka      |
| 19   | रश्मिणी          | 20305081020 | Rashmi      |
| 20   | सर्वद एजाज खान   | 20305081021 | Sarved      |
| 21   | संजय ठाकुर       | 20305081022 | Sanjay      |
| 22   | सुरेश रानडे      | 20305081023 | Suresh      |
| 23   | सुशी             | 20305081024 | Sushi       |

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प्रोजेक्ट हॉपक वितरण,  
प्रोजेक्ट निर्माण एवं जमा करना

Topic Given on Date  
28-11-2021

Msc-III सेमेस्टर पेपर-VII  
Subject - Graph Theory Fuzzy Set Theory  
Project work submitted on 13-12-2021

| क्र०             | छात्र का नाम | रोल नंबर | हस्ताक्षर                                       |
|------------------|--------------|----------|---|
| हॉपक (Fuzzy Set) |              |          |   |
| 1                |              |          | 1-Convex Fuzzy Set                              |
| 2                |              |          | 2-Fuzzy decision making.                        |
| 3                |              |          | 3- $\tau$ -norms and $\tau$ -conorms            |
| 4                |              |          | 4-Algebraic Products                            |
| 5                |              |          | 5-The extension principle                       |
| 6                |              |          | 6-Fuzzy Numbers                                 |
| 7                |              |          | 7-Elements of Fuzzy arithmetic                  |
| 8                |              |          | 8-Composition of Fuzzy relation                 |
| 9                |              |          | 9-Mean-Max composition                          |
| 10               |              |          | 10-Fuzzy equivalence relation                   |
| 11               |              |          | 11- $\alpha$ -level sets                        |
| 12               |              |          | 12-Fuzzy Compatibility relation                 |
| 13               |              |          | 13-Fuzzy relation equation                      |
| 14               |              |          | 14-Fuzzy implications                           |
| 15               |              |          | 15-Fuzzy Graphs                                 |
| 16               |              |          | 16-Fuzzy Measures                               |
| 17               |              |          | 17-Evidence Theory                              |
| 18               |              |          | 18-Fuzzy Relation on fuzzy set                  |
| 19               |              |          | 19-Necessity Measure                            |
| 20               |              |          | 20-possibility measure                          |
| 21               |              |          | 21-possibility distribution                     |
| 22               |              |          | 22-possibility theory versus probability theory |
| 23               |              |          | 23-Types of Fuzzy set                           |
| 25-11-21         |              |          | 28-11-2021                                      |

विभागाध्यक्ष  
महेश शिवाय  
शास. क. प्रशासन प्रशासक  
कला एवं विज्ञान महाविद्यालय  
पाटन वि. युव. (उ.ग.)

प्रोजेक्ट दौषिक वितरण, 2021-22

दौषिक पर प्रोजेक्ट निमनि, जमा करनी

M.Sc-III कोमे एडल Paper-IV

Subject - Operation Research

Given Date - 26-11-2021

| क्र० | छात्र का नाम      | रोल नंबर    | दस्तावेज    |
|------|-------------------|-------------|-------------|
| 1    | भाबना वर्मा       | 20305081001 | Bh          |
| 2    | चौहानी            | 20305081002 | Chandini    |
| 3    | चंद्रकांत         | 20305081003 | Chandrakant |
| 4    | दुसेख जवाद        | 20305081004 | Dusekh      |
| 5    | धनरवी चौहान       | 20305081005 | Dhanu       |
| 6    | धुलेखरी गंकर      | 20305081006 | Dhulekhar   |
| 7    | हिमानी चव्हाकर    | 20305081007 | Himani      |
| 8    | हिमानी देवगान     | 20305081008 | Himani      |
| 9    | कुन्दन कुमार साहू | 20305081009 | Kundan      |
| 10   | संजु पटेल         | 20305081010 | Manju       |
| 11   | मीनवीष कुमार      | 20305081011 | Meenavishu  |
| 12   | मीनू खाडू         | 20305081012 | Meenu       |
| 13   | निधि वर्मा        | 20305081013 | Nidhi       |
| 14   | निशा मारकण्डे     | 20305081014 | Nisha       |
| 15   | पंकज कुमार        | 20305081015 | Pankaj      |
| 16   | पुनम ठापुर        | 20305081016 | Punam       |
| 17   | रमाकांत           | 20305081017 | Ramakant    |
| 18   | रेणुका वर्मा      | 20305081018 | Renuka      |
| 19   | रुमेश्वरी         | 20305081019 | Rumeshwari  |
| 20   | सर्वदे लजाजखान    | 20305081020 | Sarvede     |
| 21   | सव्यम खडूर        | 20305081021 | Savayam     |
| 22   | सौम्य खाडू        | 20305081022 | Soumya      |
| 23   | सुप्रिया देवी     | 20305081023 | Supriya     |

प्रकाशन संस्थान, जयपुर  
प्रकाशन संस्थान, जयपुर  
(प.स.) इ.जी.ए.डी.

26-11-21

Project Submission Date 13-12-2021

दौषिक (O.R.)

- 1- Operation research and its Scope
- 2- Explanation of operation Research
- 3- Necessity operation research
- 4- LPP - Simplex method (theory)
- 5- Simplex method
- 6- Dual & Simplex method
- 7- Parametric Linear programming
- 8- Upper Bound Technique
- 9- Interior point theorem algorithm
- 10- Linear Goal programming
- 11- Duality and Sensitivity Analysis
- 12- Transportation Problem
- 13- Assignment Problems
- 14- Branch and Bound method
- 15- Shortest path problem
- 16- Maximum flow problem
- 17- Minimum Cost Flow problem
- 18- minimum Spanning Tree
- 19- Network simplex method
- 20- Project planning and Control
- 21- PERT
- 22- CPM
- 23- Network Analysis

विभागाध्यक्ष  
श्रीमती विद्या  
श्रीमती. कल्याण चव्हाकर  
जयपुर विश्वविद्यालय  
प्रकाशन संस्थान, जयपुर

प्रोजेक्ट दौर्गिक वितरण 2021-22

प्रोजेक्ट निर्माण एवं प्रमा करना Expected Date

M.Sc. III सेमेस्टर Paper-V of Computer

Subject- Graph Theory 10-12-2021

Date 26-11-2021

क्र. सं. छात्र का नाम रोल नंबर इनाम

|    |                  |             |              |
|----|------------------|-------------|--------------|
| 1  | भाबना वर्मा      | 20305081001 | Abha         |
| 2  | चांदनी           | 20305081002 | chandni      |
| 3  | चंद्रकांत        | 20305081003 | Chandrakant  |
| 4  | दामोदर प्रजाप    | 20305081004 | Damodar      |
| 5  | धनेश्वरी चौहान   | 20305081005 | Dhaneshwari  |
| 6  | दुलेश्वरी काकुर  | 20305081006 | Dulleshwari  |
| 7  | हिमानी चंडाकर    | 20305081007 | Himani       |
| 8  | हिमानी देवांगन   | 20305081008 | Himani       |
| 9  | कुंदन कुमार साहू | 20305081009 | Kundan       |
| 10 | मंजु परेल        | 20305081010 | Manju        |
| 11 | मोहनीष कुमार     | 20305081011 | Mohनीष कुमार |
| 12 | मोक्ष साहू       | 20305081012 | Moksh        |
| 13 | निधि वर्मा       | 20305081013 | Nidhi        |
| 14 | निशा मारकोड      | 20305081014 | Nisha        |
| 15 | पंज कुमार        | 20305081015 | Pankaj       |
| 16 | पूज्य शंकर       | 20305081016 | Pooja        |
| 17 | रमाकांत          | 20305081017 | Ramakant     |
| 18 | रोजूका वर्मा     | 20305081018 | Roojuka      |
| 19 | राजेश्वरी        | 20305081019 | Rajeshwari   |
| 20 | रविशंकर राजा     | 20305081020 | Ravishankar  |
| 21 | सवाम ठाकुर       | 20305081021 | Savam        |
| 22 | सुष्मा साहू      | 20305081022 | Sushma       |
| 23 | सुनील            | 20305081023 | Sunil        |

प्रमाणित किया गया  
निदेशिका के अनुसार  
(..सं) 10/12/2021

10/12/2021

Project Submission Date 13-12-2021

दौर्गिक का नाम

- 1- Operation on Graphs
- 2- Abscency and incidence matrix
- 3- Topological Operation
- 4- Homeomorphism
- 5- Metric and vector space
- 6- Graph feasibility system
- 7- Derived Graphs
- 8- Binary Operations
- 9- The determinant and the spectrum
- 10- Spectrum Properties
- 11- Chromatic Number
- 12- Vertex coverings
- 13- Graph colouring
- 14- Mengers Theorem
- 15- Critical Graphs
- 16- Girth and chromatic number
- 17- Uniquely Colourable graphs
- 18- Adjacency matrix
- 19- Face colourings and Beyond
- 20- perfect Graph
- 21- Permutation Graphs
- 22- Split graphs
- 23 Weakly triangulated graph

प्रमाणित किया गया  
निदेशिका के अनुसार  
कक्षा एवं विज्ञान महाविद्यालय  
फाटन जि. कुर्ग (छ.उ.)

**MSc-I सेमेस्टर (गणित)**

प्रोजेक्ट वितरण एवं निमिष, <sup>2021-22</sup> expected Date of complete  
 प्रोजेक्ट कापी सौम्यता 13-12-2021  
 Paper-I (Advanced Abstract Algebra-I)

| क्र० | छात्र का नाम     | रोल नंबर    | हस्ताक्षर    |
|------|------------------|-------------|--------------|
| 1    | आरती             | 21305081001 | Aarti        |
| 2    | चिंतन            | 21305081002 | Chintan      |
| 3    | देवप्रकाश        | 21305081003 | Devprakash   |
| 4    | दुष्यंत दास      | 21305081005 | Dushyant     |
| 5    | हेमलता           | A           | A            |
| 6    | लक्ष्मीकांत      | 21305081007 | Lakshmi Kant |
| 7    | ममता             | 21305081008 | Mamta        |
| 8    | नेहा वर्मा       | 21305081009 | Neeta Verma  |
| 9    | पल्लवी केशर      | 21305081010 | Pallavi      |
| 10   | परमेश्वरी        | 21305081011 | Parvati      |
| 11   | पीयूष कुमार लाल  | 21305081012 | Piyush       |
| 12   | रमा निषाद        | 21305081013 | Rama Nishad  |
| 13   | जगति यादव        | 21305081014 | Jagati Yadav |
| 14   | प्रीति           | 21305081015 | Preeti       |
| 15   | पुष्पेंद्र कुमार | 21305081016 | Pushpendra   |
| 16   | शैली             | 21305081017 | Shaili       |
| 17   | शिवानी देवीगन    | 21305081018 | Shivani      |
| 18   | श्वेता लाल       | 21305081019 | Shweta       |
| 19   | सुधा             | 21305081020 | Sudha        |
| 20   | राकेश्वर         | 21305081021 | Rakeshwar    |
| 21   | रुद्रि           | 21305081022 | Rudri        |
| 22   | वंदना देवीगन     | 21305081023 | Vandana      |

13-12-2021

विभागाध्यक्ष  
 गणित विभाग  
 विश्वविद्यालय  
 (प.स.) इ.प.सी.संस्क.

Project Submission Date 13-12-2021

हस्ताक्षर का नाम (Paper-I)

- 1) uniqueness of splitting field.
- 2) चिंतन Galois extension
- 3) Normal and Subnormal Series
- 4) Composition series of group.
- 5) ABST X
- 6) Fundamental theorem of Galois theory
- 7-ममता; Composition Series
8. Jordan - Holder Theorem
9. Jordan - Holder Theorem
- 10 - Nilpotent group
- 11 - Automorphism of Extension.
- 12 - Group Normal and subnormal series
- 13 - Radical extension.
- 14 - Separable Extension
- 15 - Group normal and sub normal series
- 16 - Separable and inseparable extensions
- 17 - Jordan Holder Theorem.
- 18 - Solvable group.
- 19 - Splitting field.
- 20 - Algebraic extensions
- 21 - Normal Extension
- 22) वंदना Nilpotent Group.

विभागाध्यक्ष  
 गणित विभाग  
 विश्वविद्यालय  
 (प.स.) इ.प.सी.संस्क.

M.Sc. - ~~Part I~~ **सैमिनर**

2021-22

प्रोजेक्ट सॉफ्ट कवरेज, निर्माण एवं नामा

Paper - II (Real Analysis) 13-12-2021

13

Roll No. Date

14

Roll No. Date

M.Sc-I (Project Submission Date 13-12-2021)

सॉफ्ट (Paper II)

| क्र. | छात्र का नाम     | रोल नंबर    | हस्ताक्षर  |
|------|------------------|-------------|------------|
| 1    | आरती             | 21305081001 | Aarti      |
| 2    | चिहरीमन          | 21305081002 | Chikriyan  |
| 3    | देव उकाश         | 21305081003 | Devprakash |
| 4    | दुष्यन्त दास     | 21305081005 | Dushyant   |
| 5    | हेमलता           | ABST        | A          |
| 6    | लक्ष्मीकांत      | 21305081007 | Laxmikant  |
| 7    | ममता साहू        | 21305081008 | Mamta      |
| 8    | नेहा वर्मा       | 21305081009 | Neel       |
| 9    | पल्लवी अन्डोर    | 21305081010 | Pallavi    |
| 10   | परमेश्वरी        | 21305081011 | Permeswari |
| 11   | पीयूष कुमार साहू | 21305081012 | Piyush     |
| 12   | पूजा निषाद       | 21305081013 | Pooja      |
| 13   | प्रमोद यादव      | 21305081014 | Prmod      |
| 14   | प्रति            | 21305081015 | Prati      |
| 15   | पुलक कुमार       | 21305081016 | Pulak      |
| 16   | शीली             | 21305081017 | Shilpi     |
| 17   | शिल्पी देवांगन   | 21305081018 | Shilpi     |
| 18   | श्वेता साहू      | 21305081019 | Shweta     |
| 19   | सुधा             | 21305081020 | Sudha      |
| 20   | शंकर शर्मा       | 21305081021 | Shankar    |
| 21   | तृपति            | 21305081022 | Tripati    |
| 22   | वर्षा देवांगन    | 21305081023 | Varsha     |

- 1- Riemann's theorem
- 2- Implicit function theorem.
- 3- Cauchy's general principle of uniform convergence.
- 4- Uniform convergence of Power series.
- 5- ABST
- 6- Jacobian.
- 7- ममता - Stokes Theorem
- 8- Weierstrass Approximation theorem.
- 9- Taylor's Theorem
- 10- Stokes theorem
- 11- Langrange's Multiplier Method.
- 12- Power series
- 13- Jacobian of implicit functions
- 14- Partial derivatives
- 15- Tauber's theorem
- 16- Partition of unity
- 17- Taylor's Theorem
- 18- Abel's theorem
- 19- Abel test
- 20- Inverse function theorem
- 21- Green's theorem
- 22- वर्षा - Jacobian

विभागाध्यक्ष  
गणित विभाग  
शास. चन्द्रमाल स्नातकोत्तर  
कक्षा एवं विज्ञान महाविद्यालय  
पाटन जि. बुर्ग (उ.प्र.)

13-12-21

विभागाध्यक्ष  
गणित विभाग  
शास. चन्द्रमाल स्नातकोत्तर  
कक्षा एवं विज्ञान महाविद्यालय  
पाटन जि. बुर्ग (उ.प्र.)

M.Sc-I सोमेटल (विभाग) 2021-22

उद्देश्य - डॉ. विद्या विरला, शिक्षिका, जमा करना  
 Paper-III (Topology) 13-12-2021

| क्र. | छात्र का नाम       | सूचना दोल नंबर | हस्ताक्षर              |
|------|--------------------|----------------|------------------------|
| 1    | आरुषी              | 21305081001    | Aarushi Chakravarty    |
| 2    | चित्ररत्न          | 21305081002    |                        |
| 3    | वेपुकाश            | 21305081003    | Dheeravanshi Duttgupta |
| 4    | शुभनदास            | 21305081005    | A                      |
| 5    | हमलता              | ABST           | A                      |
| 6    | वसुधा              | 21305081007    | Jasmin Khat            |
| 7    | ममता साहू          | 21305081008    | Mamata                 |
| 8    | नेहा वर्मा         | 21305081009    | Neelam                 |
| 9    | पल्लवी अक्षर       | 21305081010    | Pallavi                |
| 10   | पार्वती            | 21305081011    | Pooja                  |
| 11   | प्रीतुष कुमार साहू | 21305081012    | Priyush                |
| 12   | सुजा निषाद         | 21305081013    | Sujana                 |
| 13   | प्रणति चंद्र       | 21305081014    | Pranati                |
| 14   | प्रीति             | 21305081015    | Preeti                 |
| 15   | पुष्पलु कुमर       | 21305081016    | Puspala                |
| 16   | शिल्पी देवांगन     | 21305081017    | Shilpi                 |
| 17   | शिल्पी देवांगन     | 21305081018    | Shilpi                 |
| 18   | श्वेता साहू        | 21305081019    | Shweta                 |
| 19   | सुधा               | 21305081020    | Sudha                  |
| 20   | तैक्ष्णिक साहू     | 21305081020    | Taishnik               |
| 21   | हार्दिक            | 21305081022    | Hardik                 |
| 22   | वर्षा देवांगन      | 21305081023    | Varsha                 |

13-12-2021

विभागाध्यक्ष  
 डॉ. विद्या विरला  
 जमा करना  
 (13.12.2021)

Project Submission Date 13-12-2021

सूचना, (Paper-III)

- 1- Compactness
- 2- Components locally connected space  
Lindelof theorem
- 3- The fundamental theorem of algebra
- 4- Separation Axioms
- 5- ABST - X
- 6- Connected Space
- 7- ममता - Compactness
- 8- Tietze Extension Theorem
- 9- Schroeder-Bernstein Theorem
- 10- Uryson's lemma
- 11- Hausdorff space
- 12- Components locally connected space
- 13- Cantor's theorem
- 14- Metric space
- 15- Zorn's lemma
- 16- Lindelof's theorem
- 17- Tietze Extension Theorem
- 18- Heine Borel theorem
- 19- contour theorem
- 20- separable space Real
- 21- Taylor series
- 22- वर्षा - Locally connected space

विभागाध्यक्ष  
 डॉ. विद्या विरला  
 जमा करना  
 (13.12.2021)



Msc-I सेमेस्टर (गणित) 2021-22

पेपर-IV (Complex Analysis) 13/12-21

| क्र. | छात्र का नाम          | रोल नंबर    | परिणाम      |
|------|-----------------------|-------------|-------------|
| 1    | उमरती                 | 21305081001 | Aarti       |
| 2    | मितीका                | 21305081002 | (Chitank)   |
| 3    | देव प्रकाश            | 21305081003 | Devprakash  |
| 4    | अमृत दास              | 21305081005 | Amrut       |
| 5    | हेमलता X              | ABST        | ABST        |
| 6    | बसमीका                | 21305081007 | Basmika     |
| 7    | प्रमता साहू           | 21305081009 | Prmata      |
| 8    | नीता वर्मा            | 21305081009 | Nita        |
| 9    | पद्मवी पन्डोर         | 21305081010 | Hellor      |
| 10   | परमेश्वरी             | 21305081011 | Permeswari  |
| 11   | पीपूष कुमार साहू      | 21305081012 | Pipush      |
| 12   | सुजा निषाद            | 21305081013 | Sujana      |
| 13   | प्रगति यादव           | 21305081014 | Pragati     |
| 14   | प्रीति                | 21305081015 | Preeti      |
| 15   | पुरुषोत्तम कुमार शीला | 21305081016 | Purushottam |
| 16   | शिल्पी देवांगन        | 21305081017 | Shilpi      |
| 17   | श्वेता साहू           | 21305081019 | Shweta      |
| 18   | सुधा                  | 21305081020 | Sudha       |
| 20   | हार्दिक साहू          | 21305081021 | Hardik      |
| 21   | लुसि                  | 21305081022 | Lusi        |
| 22   | वंदना देवांगन         | 21305081023 | Vandana     |
| 23   | अक्षय                 |             |             |

13/12-2021

संयोजक प्राध्यापक, एम.एस.एस. विभाग, राजस्थान विश्वविद्यालय, जयपुर (रा.स.)

Project Submitted Date 13/12-2021

गणित (Paper-4)

- 1-Open mapping theorem
- 2-मितीका - Definition and example of Conformal mapping
- 3-Special linear transformation
- 4-The Riemann mapping theorem
- 5-हेमलता- ABST X
- 6- Poisson Integral formula
- 7-प्रमता Meromorphic function
- 8- Cauchy's Theorem
- 9-Laurent's Theorem
- 10- Cauchy residue theorem
- 11-Hurwitz's Theorem
- 12-space a Analysis function
- 13- Cauchy integral formula
- 14- Cross Ratio
- 15-Montel's theorem
- 16-Schwarz's Lemma
- 17-Contour Theorem
- 18-Riemann mapping theorem
- 19-Conformal mapping sufficient condition for etc
- 20- Cauchy Integral
- 21- Maximum principle theorem
- 22-वंदना Evaluation of integrals

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विभागाध्यक्ष  
गणित विभाग  
एम.एस.एस. विभाग  
उत्तरा एवं विज्ञान महाविद्यालय  
जयपुर वि. युनि. (रा.स.)

MSc- I सेमेस्टर (गणित) 2021-22

प्रोजेक्ट = टॉपिक विवरण, प्रिनसिपल जमा करनी  
 Paper-5 ~~सम~~ (डिस्क्रीट गणित) Discrete

| क्र. | छात्र का नाम     | रोल नंबर    | हस्ताक्षर      |
|------|------------------|-------------|----------------|
| 1    | आरती             | 21305081001 | Arati Chhabra  |
| 2    | मितलजन           | 21305081002 |                |
| 3    | देव प्रकाश       | 21305081003 | Devprakash     |
| 4    | कुपत देव         | 21305081005 | Dudhant        |
| 5    | हेमलता X         | ABSENT      | ABST           |
| 6    | सखमीकांत         | 21305081007 | Saxmikant      |
| 7    | ममता साहू        | 21305081008 | Mamta          |
| 8    | नेहा वर्मा       | 21305081009 | Neha           |
| 9    | पल्लवी अन्धोर    | 21305081010 | Pallavi        |
| 10   | अमेठीवरी         | 21305081011 | Amiti          |
| 11   | पिपूष कुमार साहू | 21305081012 | Pipush         |
| 12   | पूजा मिश्रा      | 21305081013 | Pooja Mishra   |
| 13   | प्रकृति यादव     | 21305081014 | Prakriti Yadav |
| 14   | प्रीति           | 21305081015 | Preeti         |
| 15   | सुधीन्द्र कुमार  | 21305081016 | Sudhinder      |
| 16   | शिवी             | 21305081017 | Shree Saha     |
| 17   | शिवी देवांगन     | 21305081018 | Shree          |
| 18   | श्वेता साहू      | 21305081019 | Shweta         |
| 19   | सुधा             | 21305081020 | Sudha          |
| 20   | तकेश्वर झा       | 21305081021 | Takeshwar      |
| 21   | तुषार            | 21305081022 | Tushar         |
| 22   | वदना देवांगन     | 21305081023 | Vadana         |

15-12-2021

सहायक  
 प्रमुख  
 डिप्टी प्रिंसिपल  
 प्रमुख  
 डिप्टी प्रिंसिपल  
 (गणित) इ. ए. ए. ए.

Project Submitted Date 12-12-2021

टॉपिक (Paper-5 डिस्क्रीट)

- 1- statement, symbolic representation
- 2- Tautology - Definition & example.
- 3- मितलजन - Components locally branched space.
- 4- Boolean algebra
- 5- Lattice.
- 6- ABST X
- 7- Algebra of preparation - Idempotent law.
- 8- Monoids
- 9- Pumping Lemma and Kleen's Theorem.
- 10- sub semi group, sub monoid, Fundamental theorem of lattice
- 11- Lattice as a partially ordered set
- 12- Partially ordered relation - Def<sup>n</sup> example.
- 13- Lattice as partially ordered set isotonic distributive commutative Associative Absorption law Def<sup>n</sup>. of these property.
- 14- Sum of Products (canonical forms)
- 15- Sub-semi group, sub monoid, fundamental theorem of homomorphism
- 16- Lattice as Algebraic system sub-lattice Direct product and Homomorphism theorem
- 17- Semi group, sub monoid
- 18- Karnaugh map method, Examples of two, three and four variable
- 19- Minterm Boolean forms - Definition, example, theorem.
- 20- Lattice as Algebraic system sub lattice.
- 21- Boolean algebra
- 22- वदना - what Polish notation

सहायक  
 प्रमुख  
 डिप्टी प्रिंसिपल  
 प्रमुख  
 डिप्टी प्रिंसिपल  
 (गणित) इ. ए. ए. ए.

प्रोजेक्ट टॉपिक विवरण 2021-22  
 एवं प्रोजेक्ट निर्माण एवं अंमल करण  
 सेमिस्टर चैप्टर - I

M.Sc - II

Subject - Advance Abstract Algebra

Date 05-05-2022

| क्र | छात्र का नाम      | रोल नं      | हस्ताक्षर         |
|-----|-------------------|-------------|-------------------|
| 1   | आरती              | 21305081001 | Arati             |
| 2   | CHITARANJAN       | 21305081002 | Chitranjan        |
| 3   | देववर्मा          | 21305081003 | Devprakash        |
| 4   | Dushyant Das      | 21305081005 | Dushyant          |
| 5   | हेमलता            | X           | X                 |
| 6   | Laxmikant         | 21305081007 | Laxmikant         |
| 7   | Mamta Sahu        | 21305081008 | Mamta             |
| 8   | Neha verma        | 21305081009 | Neha              |
| 9   | Pallavi Banchha   | 21305081010 | Pallavi Banchha   |
| 10  | Parvatheswari     | 21305081011 | Parvathi          |
| 11  | Pooja Kumari Sahu | 21305081012 | Pooja             |
| 12  | पूजा निषाद        | 21305081013 | पूजा निषाद        |
| 13  | प्रतिपादक         | 21305081014 | प्रतिपादक         |
| 14  | प्रीति            | 21305081015 | Preethi           |
| 15  | प्रियंका झा       | 21305081016 | Princy            |
| 16  | शिवी साहू         | 21305081017 | Shivika           |
| 17  | शिवी देवीगन       | 21305081018 | Shivika           |
| 18  | श्वेता साहू       | 21305081019 | Shweta            |
| 19  | सुधा              | 21305081020 | Sudha             |
| 20  | हार्दिक साहू      | 21305081021 | Harshwardhan Sahu |
| 21  | हार्दिक           | 21305081022 | Harshwardhan      |
| 22  | VADANA DEWANGAN   | 21305081023 | Vadana            |

संयोजक  
 प्राध्यापक, कक्षा  
 आर्य समाज, दिल्ली  
 (ए.ए.) एच.डी. साहू

टॉपिक का नाम

Hirbert - basis theorem  
 ALGEBRA OF LINEAR TRANSFORMATION  
 Linear transformation and Canonical forms.  
 Decomposition Theorem  
 Noetherian and Artinian modules and Rings.  
 Modules  
 Singular and Non singular transformation  
 Canonical - Nilpotent Transformation  
 Wedderburn Artin theorem  
 Rational Canonical Form.  
 Modules cyclic simple modules  
 Primary Decomposition theorem.  
 Not Noetherian and Artinian Modules  
 Linear transformation  
 Matrices and Linear Transformation  
 Abelian Group  
 The primary decomposition theorem.  
 Jordan canonical form.  
 Minimal Polynomial  
 Wedderburn Artin theorem  
 Schur's Theorem / Lemma

संयोजक  
 प्राध्यापक  
 शास्. चन्द्रशेखर प्रसाद  
 कक्षा एवं विज्ञान महाविद्यालय  
 पाटन जि. पुन (छ.प्र.)

प्रोजेक्ट टॉपिक [वि० 20] 2021-22  
 एवं प्रोजेक्ट निम्न एवं अंश करना  
M.Sc II सेमेस्टर पेपर = II

Subject - Real Analysis date 5-5-2022

| क्र | छात्र का नाम         | रोल नं.     | हस्ताक्षर       |
|-----|----------------------|-------------|-----------------|
| 1   | आरती                 | 21305081001 | Aarti           |
| 2   | CHITRANJAN देवप्रकाश | 21305081002 | Chitranshu      |
| 3   | द्वेषप्रकाश          | 21305081005 | Duprakash       |
| 4   | Dushyant-Das         | 21305081000 | Dushyant        |
| 5   | X                    | X           | X               |
| 6   | Laxmikant            | 21305081007 | Laxmikant       |
| 7   | Mamta Sahu           | 21305081008 | Mamta           |
| 8   | Neha verma           | 21305081009 | Neha            |
| 9   | pallavi Ranchar      | 21305081010 | Pallavi Ranchar |
| 10  | Pamreshwari          | 21305081011 | Pamreshwari     |
| 11  | Piyush kumar Sahu    | 21305081012 | Piyush          |
| 12  | पूना निषाद           | 21305081013 | Puna Nishad     |
| 13  | प्रशान्त साहू        | 21305081014 | Prashant Sahu   |
| 14  | बीबी                 | 21305081015 | Beel            |
| 15  | पुष्पक कुमार         | 21305081016 | Pushpak         |
| 16  | शिवी साहू            | 21305081017 | Shivika         |
| 17  | शिवी देवीगन          | 21305081018 | Shivika         |
| 18  | श्वेता साहू          | 21305081019 | Shweta          |
| 19  | सुधा                 | 21305081020 | Sudha           |
| 20  | शोभा साहू            | 21305081021 | Shobha Sahu     |
| 21  | हृति                 | 21305081022 | Hriti           |
| 22  | VANDANA DEWANGAN     | 21305081023 | Vandana         |

विभागाध्यक्ष  
 गणित विभाग  
 प्रकाश साहू  
 कला एवं विज्ञान महाविद्यालय  
 (ए.ए.) कटक-751007

टॉपिक का नाम

- 1 Definition and existence of Riemann-Stieltjes
- 2 PROPERTIES OF THE RIEMANN-STIELTJES INTEGRAL
- 3 Integration and differentiation
- 4 Outer measure and measure space
- 5 X
- 6 Measurable set
- 7 Measurable function
- 8 Borel and Lebesgue measurability
- 9 Integration of series
- 10 measurable and outer measurable
- 11 Extension of Measure
- 12 Riemann stieljes integral
- 13 Riemann and Lebesgue integrals
- 14 Limit derivatives (The four derivatives)
- 15 Lebesgue differentiation theorem
- 16 The bounded variation of function
- 17 L<sup>p</sup> - Space
- 18 Jensen's inequality
- 19 Completeness of  $\mathbb{R}^n$
- 20 The Hader and Minkowski's Inequalities for L<sup>p</sup>-space
- 21 Almost uniformly convergence
- 22 Rectifiable curve

विभागाध्यक्ष  
 गणित विभाग  
 प्रकाश साहू  
 कला एवं विज्ञान महाविद्यालय  
 (ए.ए.) कटक-751007

पुजेकर हापिक (वि.स. 2021-22)  
एवं पुजेकर निर्माण एवं मीमांसा  
B.Sc - II सेमेस्टर पुर - III  
Subject - Topology. Date 05-5-2022

| क्र. | छात्र का नाम      | रोल नं.     | हस्ताक्षर         |
|------|-------------------|-------------|-------------------|
| 1    | आरती              | 21305081001 | Arati             |
| 2    | CHITARANJAN       | 21305081002 | Chitranjan        |
| 3    | देविका            | 21305081003 | Devika            |
| 4    | Dusyant Das       | 21305081005 | Dusyant           |
| 5    | X                 | X           | X                 |
| 6    | Laxmikant         | 21305081007 | Laxmikant         |
| 7    | Mamta Sahu        | 21305081008 | Mamta             |
| 8    | Neha verma        | 21305081009 | Neha              |
| 9    | Pallavi Barchha   | 21305081010 | Pallavi Barchha   |
| 10   | Parimeshwari      | 21305081011 | Parimeshwari      |
| 11   | Piyush kumar sahu | 21305081012 | Piyush            |
| 12   | पूजा निषाद        | 21305081013 | पूजा निषाद        |
| 13   | प्रगति यादव       | 21305081014 | प्रगति यादव       |
| 14   | प्रीति            | 21305081015 | Preeti            |
| 15   | पुष्पा कुमारी     | 21305081016 | Puspa             |
| 16   | शैली शर्मा        | 21305081017 | Shaili            |
| 17   | शिल्पी देवांगन    | 21305081018 | Shilpi            |
| 18   | श्वेता साहू       | 21305081019 | Shweta            |
| 19   | सुधा              | 21305081020 | Sudha             |
| 20   | हार्दिक साहू      | 21305081021 | Harshvardhan Sahu |
| 21   | ललित              | 21305081022 | Lalita            |
| 22   | VANDANA DEWANGAN  | 21305081023 | Vandana           |

| Topic Name                                   |
|--|
| 1- Projection maps                           |
| 2- Tychonoff product topology                |
| 3- Product space                             |
| 4- Tychonoff's theorem                       |
| 5- X   |
| 6- countability and product spaces.          |
| 7- Fundamental Group                         |
| 8- Embedding Lemma and Tychonoff Embedding   |
| 9- Urysohn's Metrization Theorem             |
| 10- metrization theorem & paracompact        |
| 11- The Nagata Smirnov Metrization Theorem.  |
| 12- paracompactness Locally finite           |
| 13- The Smirnov Metrization theorem.         |
| 14- Net and Filter                           |
| 15- Convergence of net.                      |
| 16- Compactness and ultra filter             |
| 17- Filter                                   |
| 18- The fundamental group and covering space |
| 19- Covering space Homotopy of path          |
| 20- The fundamental group of the circle      |
| 21- Fundamental Group of Algebra             |
| 22- The Urysohn metrization Theorem          |

विभागाध्यक्ष  
गणित विभाग  
रा.स. प्रद्युम्न लाल प्रसाद  
कला एवं विज्ञान महाविद्यालय  
पाटन वि. दुर्ग (उ.प्र.)

प्रोजेक्ट हापिकु विवरण एवं प्रोजेक्ट निर्माण एवं प्रस्तुत कर-11

17.5C-II समेकित प्रश्न-IV Date: 05.5.2022

Subject: Complex Analysis

| क्र. | छात्र का नाम          | रोल नं.     | हस्ताक्षर       |
|------|-----------------------|-------------|-----------------|
| 1    | आरती                  | 21305081001 | Arati           |
| 2    | CHITARANJAN देवप्रकाश | 21305081002 | Chitranjan      |
| 3    |                       | 21305081003 | Devparkash      |
| 4    | Divyanshu-Das         | 21305081005 | Divyanshu       |
| 5    | X                     | X           | X               |
| 6    | Laxmikant             | 21305081007 | Laxmikant       |
| 7    | Mamta Sahu            | 21305081008 | Mamta           |
| 8    | Neha Verma            | 21305081009 | Neha            |
| 9    | Pallavi Parthiv       | 21305081010 | Pallavi Parthiv |
| 10   | Kamleshwari           | 21305081011 | Kamleshwari     |
| 11   | Piyush Kumar Sahu     | 21305081012 | Piyush          |
| 12   | प्रिया निषाद          | 21305081013 | प्रिया निषाद    |
| 13   | प्रमिता राव           | 21305081014 | प्रमिता राव     |
| 14   | प्रीति                | 21305081015 | Preeti          |
| 15   | पुष्पा कुमर           | 21305081016 | Puspa           |
| 16   | शैली शर्मा            | 21305081017 | Shaili          |
| 17   | शिल्पी देवांगन        | 21305081018 | Shilpi          |
| 18   | स्वेता साहू           | 21305081019 | Sweta           |
| 19   | सुधा                  | 21305081020 | Sudha           |
| 20   | शर्मिष्ठा साहू        | 21305081021 | Sharmista Sahu  |
| 21   | सृष्टि                | 21305081022 | Sruti           |
| 22   | VANDANA DEWANAN       | 21305081023 | Vandana         |

विभागाध्यक्ष  
महर्षि विश्वविद्यालय  
प्रशासनिक विभाग  
(P.O.) इ.प. 751 005

Topic Name

- 1 mean value theorem for harmonic function
- 2 PROPERTIES OF THE INTEGRAL
- 3 Gamma function
- 4 The jensen's and poisson jensen formula.
- 5 X
- 6 Gamma function
- 7 X
- 8 Mittag-Leffler's theorem
- 9 Weierstrass Factorization Theorem
- 10 Mittag-Leffler theorem
- 11 The Dirichlet Problem.
- 12 Green function
- 13 Rung's Theorem.
- 14 The Little Picard Theorem.
- 15 Harmonic function.
- 16 The Riemann Zeta function
- 17 Gamma function
- 18 Monodromy theorem
- 19 Green's function
- 20 Bloch's Theorem
- 21 Haddamard's factorization theorem
- 22 Bloch's Theorem

विभागाध्यक्ष  
महर्षि विश्वविद्यालय  
शास्. चन्द्रलाल चन्दाकर  
कला एवं विज्ञान महाविद्यालय  
प्रारंभ वि. इ.प. (स.ग.)

प्रोजेक्ट लॉपिठ विगत एवं  
 प्रोजेक्ट के निर्माण एवं जीए (उ-1)  
 M.Sc - II सेमेस्टर  
 Subject - Advance discrete Mathematics  
 Date 05-5-2022

| क्र | छात्र का नाम     | रोल नं.     | हस्ताक्षर        |
|-----|------------------|-------------|------------------|
| 1   | आरति             | 21305081001 | Arati            |
| 2   | CHANDAN          | 21305081002 | Chandan          |
| 3   | देवकाश           | 21305081003 | Devkash          |
| 4   | Duliyant Das     | 21305081005 | Duliyant         |
| 5   | X                | X           | X                |
| 6   | Lamikan          | 21305081007 | Lamikan          |
| 7   | Mamta Sahu       | 21305081008 | Mamta            |
| 8   | Neha verma       | 21305081009 | Neha             |
| 9   | Pallavi Banerjee | 21305081010 | Pallavi Banerjee |
| 10  | Parmeshwari      | 21305081011 | Parmeshwari      |
| 11  | Pooch kumar Sahu | 21305081012 | Pooch            |
| 12  | प्रजा निवार      | 21305081013 | प्रजा निवार      |
| 13  | प्रजा निवार      | 21305081014 | प्रजा निवार      |
| 14  | प्रीति           | 21305081015 | Preeti           |
| 15  | प्रविण्ड झा      | 21305081016 | Pravin           |
| 16  | शैली झा          | 21305081017 | Shaili           |
| 17  | शिवानी देवांगन   | 21305081018 | Shivani          |
| 18  | श्वेता झा        | 21305081019 | Shweta           |
| 19  | सुधा             | 21305081020 | Sudha            |
| 20  | शिवानी झा        | 21305081021 | Shivani          |
| 21  | सविता            | 21305081022 | Savitri          |
| 22  | VANDANA DEWANGAN | 21305081023 | Vandana          |

Topic Name

| क्र | Topic   |
|-----|---|
| 1   | Conigsber bridge problem unticity graph Some important definition of Graph theory with example Turing machine |
| 2   | Incidence matrix, handshaking lemma, Adjacency matrix finite state machine and Example                        |
| 3   | Isomorphic graph with example. The pro. of isomorphic   |
| 4   | Planar graphs and their properties.   |
| 5   | X   |
| 6   | connected, disconnected & strongly connected graph, distance in graph max                                     |
| 7   | Component, simple graph, Euler's formula Theorem  |
| 8   | Dijkstra Algorithm example on it.   |
| 9   | Euler path, circuit, Petersen graph, Planar graph, Theorem, Hamiltonian                                       |
| 10  | EULER theorem Hamilton Graph Hamilton circuit   |
| 11  | Hamilton circuit, Prims' Algo with  |
| 12  | These are $(n-1)/2$ edges-disjoint Hamiltonian Graph theory   |
| 13  | operations of graph union, intersection, Ring sum, Decomposition  |
| 14  | Adjacency matrix, Incidence matrix for directed graph and undirected graph                                    |
| 15  | Tree, spanning tree, maximal spanning tree  |
| 16  | Properties of tree, theorems on tree.   |
| 17  | Trees & Algebraic Expression  |
| 18  | Kruskal algorithm, prims algorithm, rank and nullity of graph matrix  |
| 19  | Search tree, polish notation, finite state Automata   |
| 20  | Finite state machine  |
| 21  | DEFA & NDEFA & defn & ex. transition dia.   |
| 22  | Travelling salesman problem   |

विद्यापीठ  
 सविता विद्यापीठ  
 शास. चन्द्रलाल बनर्जी  
 कला एवं विज्ञान महाविद्यालय  
 पाटन जि. बुन (उ.प्र.)

प्रीजेक्टर ऑफिस वितरण 2021-22  
एवं जमा करना

MSc IV  
Subject - Functional Analysis  
05-5-2022

Date: / /

| क्र. | छात्र नाम         | रोल नं.     | हस्ताक्षर   |
|------|-------------------|-------------|-------------|
| 1    | भाबना वर्मा       | 20305081001 | Bha         |
| 2    | चौधरी             | 20305081002 | Chaudhri    |
| 3    | चंद्रकांत         | 20305081003 | Chandrakant |
| 4    | दानेश्वर प्रसाद   | 20305081004 | Daneshwar   |
| 5    | प्रवेश्वरी चौतान  | 20305081005 | Bachch      |
| 6    | पुलेश्वरी ठाकुर   | 20305081006 | Dhuleshwari |
| 7    | स्मिानी चंद्रकांत | 20305081007 | Himani      |
| 8    | स्मिानी देवांगन   | 20305081008 | Himani      |
| 9    | हुन्दन कुमार साहू | 20305081009 | Kundan      |
| 10   | मंजु परेल         | 20305081010 | Manju       |
| 11   | मोहनवीर कुमार     | 20305081011 | Mohanvir    |
| 12   | मोक्ष साहू        | 20305081012 | Moksh       |
| 13   | निधि वर्मा        | 20305081013 | Nidhi       |
| 14   | निशा मारखडे       | 20305081014 | Nisha       |
| 15   | पंकज कुमार        | 20305081015 | Pankaj      |
| 16   | पूनम ठाकुर        | 20305081016 | Poonam      |
| 17   | रमंजोत            | 20305081017 | Ramjot      |
| 18   | रेणुका वर्मा      | 20305081018 | Renuka      |
| 19   | स्वरामणी          | 20305081019 | Swarmani    |
| 20   | सईद खान खान       | 20305081020 | Said        |
| 21   | सत्यम ठाकुर       | 20305081021 | Satyam      |
| 22   | साइल साहू         | 20305081022 | Saijal      |
| 23   | सुनील साहू        | 20305081023 | Sunil       |
| 24   | सुनील साहू        | 20305081024 | Sunil       |

प्रधानाचार्य, एम.एस. विभाग, दिल्ली विश्वविद्यालय (ए.ए.) ब्लॉक, एन.ए. हॉल

Date: / /

| क्र. | टॉपिक   |
|------|---|
| 1    | a) Uniformly bounded theorem (b) open mapping theorem |
| 2    | Operator theory                                       |
| 3    | Hilbert space   |
| 4    | Operator theory                                       |
| 5    | Hilbert space and projection theorem                  |
| 6    | (a) Riesz-Fischer theorem (b) Lax-Milgram theorem     |
| 7    | Inner product space                                   |
| 8    | projection mapping                                    |
| 9    | Generalized Lax-Milgram Theorem                       |
| 10   | Hilbert space   |
| 11   | compact operators                                     |
| 12   | Hahn Branch   |
| 13   |   |
| 14   | Minkowski's, Schwarz inequality                       |
| 15   | Compact operator and closed range theorem             |
| 16   | Inner product space                                   |
| 17   | (a) open mapping (b) closed graph                     |
| 18   | Riesz representation theorem.                         |
| 19   | Riesz Fischer Theorem                                 |
| 20   | Hahn Branch   |
| 21   | Metric Linear space & normed Linear space             |
| 22   | closed range theorem                                  |
| 23   | Bessel's inequality                                   |

विभागाध्यक्ष  
गणित विभाग  
शास. चन्द्रलाल बनर्जी  
कला एवं विज्ञान महाविद्यालय  
दिल्ली विश्वविद्यालय (ए.ए.) ब्लॉक, एन.ए. हॉल



प्रौद्योगिकी विभाग 2021-22  
 पीएचडी विभाग एवं अथा अरना  
 पेपर - II 05-5-22  
 MSc - II  
 Subject - PDE & Mechanics

| क्र. | छात्र का नाम      | रोल नं.     | हस्ताक्षर     |
|------|-------------------|-------------|---------------|
| 1    | भावना वर्मा       | 20305081001 | Rhe           |
| 2    | जौली              | 20305081002 | Chenelvi      |
| 3    | चंद्रशेखर         | 20305081003 | Chandrasekhar |
| 4    | गणेश्वर प्रसाद    | 20305081004 | Darshan       |
| 5    | यनेश्वरी चौधन     | 20305081005 | Chachach      |
| 6    | धुलेश्वरी बहुर    | 20305081006 | Dhulashwari   |
| 7    | हिमानी चन्दाकर    | 20305081007 | Himani        |
| 8    | हिमानी देवांगन    | 20305081008 | Himani        |
| 9    | कुन्तल कुमार साहू | 20305081009 | Kuntal        |
| 10   | मनु परेल          | 20305081010 | Manu          |
| 11   | मोहनवीर कुमार     | 20305081011 | Mohanvir      |
| 12   | मोक्ष साहू        | 20305081012 | Moksh         |
| 13   | निधि वर्मा        | 20305081013 | Nidhi         |
| 14   | निशा मारछण्डे     | 20305081014 | Nisha         |
| 15   | पंकज कुमार        | 20305081015 | Pankaj        |
| 16   | पूनम बहुर         | 20305081017 | Poonam        |
| 17   | रमाकांत           | 20305081018 | Ramakant      |
| 18   | रेणुका वर्मा      | 20305081019 | Renuka        |
| 19   | करवमणी            | 20305081020 | Karvamani     |
| 20   | अरुण स्वाम स्वाम  | 20305081021 | Arjun         |
| 21   | सत्यम बहुर        | 20305081022 | Satyam        |
| 22   | मधु साहू          | 20305081023 | Madhur        |
| 23   | सुनील             | 20305081024 | Sunil         |

- सिद्धांत
- 1) Hamilton Jacobi Equation (b) Euler Lagrange Equation
  - Asymptotic
  - Hamilton's Jacobi equation
  - Variational principles
  - Riemann Problem.
  - (a) Principle of least action (b) Lagrange and Poisson bracket
  - Routh equation of motion.
  - Hamilton canonical transformation
  - Cauchy - Kovalevskaya Theorem
  - Lagrange Bracket
  - Equipotential surface
  - Hahn Branch theorem / uniqueness theorem.
  - Riesz Fischer Poisson Bracket.
  - Liouville's theorem.
  - Hamilton Jacobi Equation & Jacobi theorem.
  - (a) principle of least action (b) Jacobi theorem (part)
  - Fourier and Laplace transformation.
  - Zero person Two person Zero sum Games Generating function
  - Hamilton principle.
  - Separation of variables
  - Cauchy - Kovalevskaya theorem.
  - Substituted part equation

विभागाध्यक्ष  
 प्रमुख विभाग  
 शास. प्रौद्योगिकी विभाग  
 कला एवं विज्ञान महाविद्यालय  
 पिन कोटा (उ.प्र.)

पोलिटेक्निक वितरण 2021-22  
पुणे विभाग एवं जमा जात।

M.Sc. IV  
पेपर - III 05-5-22  
Subject - Fuzzy Set Theory & Application

| क्र. | क्षेत्र जा नाम  | रोल नं.     | हस्ताक्षर    |
|------|-----------------|-------------|--------------|
| 1    | भाक्ता वमा      | 20305081001 | Bha          |
| 2    | चौदनी           | 20305081002 | Chaudhary    |
| 3    | चंद्रशेखर       | 20305081003 | Chandrasekar |
| 4    | पानेश्वर प्रसाद | 20305081004 | Paneshwar    |
| 5    | शशिधर जोलम      | 20305081005 | Shashidhar   |
| 6    | मुलेखरी बाबुर   | 20305081006 | Muleshwari   |
| 7    | हिमानी प्रभाकर  | 20305081007 | Himani       |
| 8    | हिमानी देवांगन  | 20305081008 | Himani       |
| 9    | कुन्दा कुमार    | 20305081009 | Kundan       |
| 10   | मंजु परेल       | 20305081010 | Manju        |
| 11   | मोहनीष कुमार    | 20305081011 | Mohani       |
| 12   | मोक्ष साहू      | 20305081012 | Moksh        |
| 13   | निधि वमा        | 20305081013 | Nidhi        |
| 14   | निशा मारुणे     | 20305081014 | Nisha        |
| 15   | पंखज कुमार      | 20305081015 | Pankaj       |
| 16   | पूनम बाबुर      | 20305081017 | Poonam       |
| 17   | आशांत           | 20305081018 | Ashant       |
| 18   | ब्रह्मराज वमा   | 20305081019 | Brahmaraj    |
| 19   | रुक्मिणी        | 20305081020 | Rukmini      |
| 20   | अरुंधती लक्ष्मी | 20305081021 | Arundhati    |
| 21   | मयम बाबुर       | 20305081022 | Mayam        |
| 22   | शशांता साहू     | 20305081023 | Shashanta    |
| 23   | सुनील           | 20305081024 | Sunil        |

रॉफे

- 1) Fuzzy system (b) Inference form conditional and qualified for Decision making
- 2
- 3 Fuzzy implication
- 4 Decision making in fuzzy environment
- 5 Fuzzy logic
- 6 (a) Fuzzy control system (b) Fuzzy expert system
- 7 Fuzzy Quantifiers.
- 8 Linguistic Hedges
- 9 Fuzzy Linear Programming Problem.
- 10 Fuzzy control system
- 11 multiperson decision making
- 12 Fuzzy Proposition.
- 13 Fuzzy inference Engine.
- 14 Fuzzy implication
- 15 Decision Making in fuzzy Environment
- 16 (a) multistage decision making (b) fuzzy proposition
- 17 fuzzy set theory / Fuzzy relation.
- 18 Fuzzy set implication (17) Fuzzy theorem
- 19 Fuzzy control system.
- 20 Linguistic variables and hedges
- 21 fuzzy proposition
- 22 Ranking method
- 23

पोलिटेक्निक वितरण 2021-22  
 पोलिटेक्निक विभाग एवं सामाजिक सेवा  
 MSc. IV Sem  
 Subject - Operation Research  
 Date 05-5-2022

| क्र. | दस्तावेज नाम     | रोल नं.     | दस्तावेज     |
|------|------------------|-------------|--------------|
| 1    | भास्वती वर्मा    | 20305081001 | Bha.         |
| 2    | चौदनी            | 20305081002 | chudni       |
| 3    | चंद्रकांत        | 20305081003 | Chandrakant  |
| 4    | जनेश्वर प्रसाद   | 20305081004 | Janeshwar    |
| 5    | धनेश्वरी पौडान   | 20305081005 | Dhaneshwari  |
| 6    | पुलेश्वरी बहुर   | 20305081006 | Pulashwari   |
| 7    | स्मिती चंद्रकांत | 20305081007 | Smriti       |
| 8    | स्मिती देवांगन   | 20305081008 | Smriti       |
| 9    | कुन्तल कुमार     | 20305081009 | Kuntal       |
| 10   | मनु पटेल         | 20305081010 | Manu         |
| 11   | मोहनीष कुमार     | 20305081011 | Mohनीष कुमार |
| 12   | मोक्ष साहू       | 20305081012 | Moksh        |
| 13   | निधि वर्मा       | 20305081013 | Nidhi        |
| 14   | निशा मारखडे      | 20305081014 | Nisha        |
| 15   | पंकज कुमार       | 20305081015 | Pankaj       |
| 16   | पुनम बहुर        | 20305081017 | Punam        |
| 17   | रमाकांत          | 20305081018 | Ramakant     |
| 18   | रेणुका वर्मा     | 20305081019 | Renuka       |
| 19   | रुचयमणी          | 20305081020 | Ruchaymani   |
| 20   | सर्वद स्वामि खल  | 20305081021 | Sarved       |
| 21   | सात्मम बहुर      | 20305081022 | Satyam       |
| 22   | साहा साहू        | 20305081023 | Saha         |
| 23   | सुनील            | 20305081024 | Sunil        |

| क्र. | टापक  |
|------|---|
| 1    | 1) Quadratic programming problem.                     |
| 2    | Dynamic programming problem.                          |
| 3    | Or Game theory  |
| 4    | Non linear programming                                |
| 5    | linear programming problem                            |
| 6    | (a) Kuhn-Tucker Method (b) Dynamic programming theory |
| 7    | Geometry cut method.                                  |
| 8    | Quadratic programming problem                         |
| 9    | Integer programming problem                           |
| 10   | Economic Interpretation of Duality L.P.P.             |
| 11   | Solution by linear programming                        |
| 12   | Game Theory.  |
| 13   | Geometry cut method                                   |
| 14   |   |
| 15   | Branch and Bound.                                     |
| 16   | Integer programming.                                  |
| 17   | (a) Input output analysis                             |
| 18   | Dominance theory                                      |
| 19   | Two-person zero-sum Games                             |
| 20   | Game theory   |
| 21   | Integer programming                                   |
| 22   | separable programming zero sum game                   |
| 23   | Leontief system                                       |

पुस्तकालय  
 राजकीय प्रशासन विभाग  
 राजकीय प्रशासन विभाग  
 राजकीय प्रशासन विभाग

विभागध्यक्ष  
 गणित विभाग  
 प्रमुख प्रशासन प्रशासन  
 कला एवं विज्ञान महाविद्यालय  
 पुणे (म.प्र.)

पॉलिमर एपिड बिहार 2021-22  
 पॉलिमर निर्माण एवं जमाकरण  
 Ms. IV Sem. पपर. V  
 Subject - Graph Theory 05-05-2022

| क्र. | दात्र का नाम   | रोल नं.     | हस्ताक्षर     |
|------|----------------|-------------|---------------|
| 1    | भाषना वर्मा    | 20305081001 | Bk            |
| 2    | चैदनी          | 20305081002 | chancelni     |
| 3    | अंशुकांत       | 20305081003 | chandrakant   |
| 4    | दामोदर प्रसाद  | 20305081004 | Damodar       |
| 5    | धनेश्वरी चौहान | 20305081005 | Dheshu        |
| 6    | धुलेश्वरी बहुर | 20305081006 | Dhuleshwari   |
| 7    | हिमानी अंशु    | 20305081007 | Himani        |
| 8    | हिमानी देवांगन | 20305081008 | Himani        |
| 9    | हुन्मन कुमार   | 20305081009 | Hunman        |
| 10   | मंजु पटेल      | 20305081010 | Manju         |
| 11   | मोहनीष कुमार   | 20305081011 | Mohaniyeshwar |
| 12   | मोक्ष साहू     | 20305081012 | Moksh         |
| 13   | निधि वर्मा     | 20305081013 | Nidhi         |
| 14   | निशा मारुछे    | 20305081014 | Nisha         |
| 15   | पंकज कुमार     | 20305081015 | Pankaj        |
| 16   | पुनम बहुर      | 20305081016 | Punam         |
| 17   | रमाकांत        | 20305081017 | Ramakant      |
| 18   | रेणुका वर्मा   | 20305081018 | Renuka        |
| 19   | रुक्मिणी       | 20305081019 | Rukmini       |
| 20   | संदिप एवाण खान | 20305081020 | Sandip        |
| 21   | सत्यम बहुर     | 20305081021 | Satnam        |
| 22   | साइ साहू       | 20305081022 | Sai           |
| 23   | सुनील          | 20305081023 | Sunil         |

| क्र. | विषय  |
|------|---|
| 1    | (a) labeled and unlabeled problems (b) Ramsey thl for complete  |
| 2    | (a) let G be a k-regular and t-transitive graph with  |
| 3    | Ford Fulkerson theorem  |
| 4    | Enumeration of graphs   |
| 5    | Menger's theorem, Frucht theorem  |
| 6    | (a) Gales feasibility theorem (b) Menger's theorem  |
| 7    | (a) $\delta(G, x) = (-1)^k \sum_{T \in \mathcal{T}(G, x)} \text{sgn}(T)$ (b) Sit. an n-vertex graph is bipartite if its chromatic polynomial is $P_G(x) = x(x-1)^{n-1}$ |
| 8    | (a) Bivinside lemma (b) sketch a proof $R(k, 1) \leq (k-1)^2$   |
| 9    | Hall's Marriage Theorem.  |
| 10   | Menger's theorem  |
| 11   | Ramsey theory - Ramsey number   |
| 12   | Basic Ramsey Theory   |
| 13   | prove that $R(3, 3) = 6$ and $R(4, 4) = 18$ .   |
| 14   | Menger's Theorem  |
| 15   | Basic Ramsey Theorem.   |
| 16   | (a) Konig's theorem (b) permutation group   |
| 17   | network flow  |
| 18   | Permutation graph   |
| 19   | (1) Hoffman Theorem (2) Chromatic Polynomials   |
| 20   | State and prove Cayley Theorem.   |
| 21   | Max flow & min cut Theorem.   |
| 22   | simple labeled graph. (b) perfect elimination scheme.   |
| 23   | dischromatic  |

विद्यार्थी का नाम  
 पत्रिका संख्या  
 पत्रिका संख्या

विद्यार्थी का नाम  
 पत्रिका संख्या  
 पत्रिका संख्या

M.Sc. I Sem Project - 2022-23  
Paper - I (Adv. Abst. Algebraic)  
Subject - Maths.

Date - 05/10/2022

| S.N. | Students Name       | Roll No.     | Signature       |
|------|---------------------|--------------|-----------------|
| 01   | Anamika Jena        | 233050810001 | Anamika         |
| 02   | Digeshwar Kumar     | 233050810002 | Digeshwar       |
| 03   | Chaitanyasi Sinha   | 233050810003 | Chaitanyasi     |
| 04   | Kanchan Dewangan    | 233050810004 | Kanchan         |
| 05   | Khushi Chandrakar   | 233050810005 | Khushi          |
| 06   | Kelechna Kumari     | 233050810006 | Kelechna        |
| 07   | Kunal               | 233050810007 | Kunal           |
| 08   | Lakshya Sarmah      | 233050810008 | Lakshya         |
| 09   | Mahnish             | 233050810009 | Mahnish         |
| 10   | Neelima Patel       | 233050810010 | Neelima         |
| 11   | Nikita Dewangan     | 233050810011 | Nikita          |
| 12   | Pragati             | 233050810012 | Pragati         |
| 13   | Prashant Kumar Sahu | 233050810013 | Prashant        |
| 14   | Pratima Sethi       | 233050810014 | Pratima         |
| 15   | Ritu Sahu           | 233050810015 | Ritu            |
| 16   | Rupesh Dewangan     | 233050810016 | Rupesh          |
| 17   | Tanish Sahu         | 233050810017 | Tanish          |
| 18   | Vaseem Quraishi     | 233050810018 | Vaseem Quraishi |

05/10/2022

प्रधानाचार्य  
गणित विभाग  
शा.स. चन्द्राल चन्द्राकर  
कला एवं विज्ञान महाविद्यालय  
पाटन, जि. - दुर्ग (उ.प्र.)

| Topics  |
|---|
| nilpotent Group.                                |
| normal and separable extension                  |
| Extension field                                 |
| Polynomial                                      |
| Taylor series                                   |
| Algebraic number and Transcendental             |
| Splitting fields                                |
| Algebraically closed fields                     |
| isolvability of general equation of degree by 7 |
| Embedding and Kronecker.                        |
| Perfect fields                                  |
| Solvable group                                  |
| Galois theory                                   |
| Primitive element.                              |
| Normal subnormal subgroup, composition series   |
| Automorphism of Extension                       |
| Finite Field                                    |
| Radicals  |

शा.स. चन्द्राल चन्द्राकर  
कला एवं विज्ञान महाविद्यालय  
पाटन, जि. - दुर्ग (उ.प्र.)

M.Sc. 3 Sem. Project topic - 2022-23  
Paper - II (Real Analysis - I)  
Subject - Maths.

Date - 05/12/2022

| Sr. No. | Students Name       | Roll No.     | Sign    |
|---------|---------------------|--------------|---------|
| 01      | Anamika Jena        | 233050810001 | Anamika |
| 02      | Digeshwar kumar     | 233050810002 | Prabhu  |
| 03      | Ghritkumari Sinha   | 233050810003 | Ghritu  |
| 04      | Kanchan Dewangan    | 233050810004 | Kanchan |
| 05      | Khushi Chandrakar   | 233050810005 | Khushi  |
| 06      | Kaifchna Kumari     | 233050810006 | Prabhu  |
| 07      | Kunal               | 233050810007 | Sandeep |
| 08      | Leetshwaramand      | 233050810008 | Babu    |
| 09      | Mohnish             | 233050810009 | Hitesh  |
| 10      | Neelima Patel       | 233050810010 | Neelima |
| 11      | Nikita Dewangan     | 233050810011 | Nikita  |
| 12      | Pragati             | 233050810012 | Pragati |
| 13      | Prashant Kumar Sahu | 233050810013 | Babu    |
| 14      | Pratima Sethu       | 233050810014 | Pratima |
| 15      | Ritu Sahu           | 233050810015 | Ritu    |
| 16      | Rupesh Dewangan     | 233050810016 | Rupesh  |
| 17      | Temesh sahu         | 233050810017 | Temesh  |
| 18      | Vaseem Buraishi     | 233050810018 | Vaseem  |

| Topic  |
|--|
| Lagrange's multiplier                        |
| Jacobian                                     |
| Inverse function theorem                     |
| Sequence and Series                          |
| Power series                                 |
| Partition of unity                           |
| Interchange of The order of Differentiation  |
| Extremum problems with constraints           |
| Weierstrass approximation Theorem            |
| Differentiation and Integration              |
| Rearrangement of terms of a series           |
| Implicite function                           |
| Derivative of Higher order, Taylor's theorem |
| Tauber's theorem                             |
| Abel & Dirichlet test                        |
| Stokes theorem                               |
| Extreme Point                                |
| Abel's Theorem (1) & (2)                     |

05/12/2022

विभागाध्यक्ष  
मणित विभाग  
शास. चन्द्राल चन्द्राकर  
कला एवं विज्ञान महाविद्यालय  
पाटन, जि. - दुर्ग (छ.ग.)

M.Sc. I Sem. Project - 2022-23  
 Paper: III (Topology)  
 Subject - Maths

Date - 05/12/2022

| S.N. | Name of Students     | Roll NO.     | Sign        |
|------|----------------------|--------------|-------------|
| 01   | Anamika Jena         | 233050810001 | Anamika     |
| 02   | Digeshwar kumar      | 233050810002 | Digeshwar   |
| 03   | Ghritkumari Sinha    | 233050810003 | Ghritkumari |
| 04   | Kanchan Dewangan     | 233050810004 | Kanchan     |
| 05   | Khushi chandrakar    | 233050810005 | Khushi      |
| 06   | Krishna Kumari sahu  | 233050810006 | Krishna     |
| 07   | Pratima              | 233050810007 | Pratima     |
| 08   | Lokeshwari           | 233050810008 | Lokeshwari  |
| 09   | Mohnish              | 233050810009 | Mohnish     |
| 10   | Neelima Patel        | 233050810010 | Neelima     |
| 11   | Nikita Dewangan      | 233050810011 | Nikita      |
| 12   | Pragati              | 233050810012 | Pragati     |
| 13   | Prashant Kumari Sahu | 233050810013 | Prashant    |
| 14   | Pratima Sahu         | 233050810014 | Pratima     |
| 15   | Ritu sahu            | 233050810015 | Ritu sahu   |
| 16   | Rupesh Dewangan      | 233050810016 | Rupesh      |
| 17   | Topology             | 233050810017 | Topology    |
| 18   | Vaseem Banaishi      | 233050810018 | Vaseem      |
| 1    |                      |              |             |

Topics

Separation - Bernstein theorem  
 separation axioms  
 Cardinal number and its Arithmetic  
 Continuous Function and Homeomorphism  
 sub bases, bases, and relative topology  
 Topological space interior point and set  
 Lindelof's theorem  
 Kuratowski closure functions  
 Tietze extension theorem  
 Well-Ordered set and Zorn's Lemma  
 Continuous function and compact set  
 First and Second countable  
 Sequentially and Countably Compact set  
 Stone-ech compactification  
 Topological space type of topology, open set, closed set  
 Urysohn's Lemma  
 Cantor theorem  
 Locally connected space.

Signature: [Signature]  
 05/12/2022  
 विभागाध्यक्ष  
 गणित विभाग  
 शास. चन्द्रलाल चन्द्राकर  
 कला एवं विज्ञान महाविद्यालय  
 पाटन, जि. - दुर्ग (उ.प्र.)

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M.Sc.I Sem. project - 2022-23  
Paper: IV (Complex Analysis)  
Subject - Mathe.

Date- 05/12/2022

| S.N. | Name of Students    | Roll No.     | Sign             |
|------|---------------------|--------------|------------------|
| 01   | Anamika Jena        | 233050810001 | Anamika          |
| 02   | Digeshwar Kumar     | 233050810002 | Digeshwar        |
| 03   | Ghritkumari Sinha   | 233050810003 | Ghritkumari      |
| 04   | Kunshan Dewangan    | 233050810004 | Kunshan          |
| 05   | Khushi Chandrakar   | 233050810005 | Khushi           |
| 06   | Kaishik Kumar       | 233050810006 | Kaishik          |
| 07   | Kunal               | 233050810007 | Kunal            |
| 08   | Lokeshwaranand      | 233050810008 | Lokeshwaranand   |
| 09   | Mohish              | 233050810009 | Mohish           |
| 10   | Neelima Patel       | 233050810010 | Neelima          |
| 11   | Nikita Dewangan     | 233050810011 | Nikita           |
| 12   | Pragati             | 233050810012 | Pragati          |
| 13   | Prashant Kumar Sahu | 233050810013 | Prashant         |
| 14   | Pratima Sahu        | 233050810014 | Pratima          |
| 15   | Ritu Sahu           | 233050810015 | Ritu Sahu        |
| 16   | Rupesh Dewangan     | 233050810016 | Rupesh           |
| 17   | Tevesh Sahu         | 233050810017 | Tevesh           |
| 18   | Vaiveen Quraishi    | 233050810018 | Vaiveen Quraishi |

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| Topics   |
|--|
| Rouche's theorem   |
| Montel theorem   |
| Maximum Modulus Principal                                    |
| Residue  |
| Jordan Holder theorem  |
| Weierstrass Theorem  |
| The Argument principle                                       |
| Spaces of continuous functions                               |
| meromorphic functions  |
| Cauchy-Riemann Preservation of Cauchy-Riemann Under Bilinear |
| Poisson's integral formula                                   |
| Necessary and sufficient conformal mapping                   |
| Hurwitz's theorem  |
| Riemann mapping theorem                                      |
| Cauchy's Goursat theorem                                     |
| Inverse Function   |
| Isolated Singularity   |
| Bilinear transformation                                      |

05/12/2022  
 विभागाध्यक्ष  
 गणित विभाग  
 शास. चन्द्रलाल खन्नाकर  
 कला एवं विज्ञान महाविद्यालय  
 पाटन, जि.- दुर्ग (छ.प्र.)



M.Sc. I Sem. Project  
Paper - V (Adv.  
Subject - Maths

2022-23  
Discrete Mathematics

Date - 05/12/2022

| Sr. | Name of Students    | Roll No.     | Sign        |
|-----|---------------------|--------------|-------------|
| 01  | Anamika Jena        | 233050810001 | Anamika     |
| 02  | Digvijay Kumar      | 233050810002 | Digvijay    |
| 03  | Ghoshkumari Saha    | 233050810003 | Ghoshkumari |
| 04  | Kanchan Dewangan    | 233050810004 | Kanchan     |
| 05  | Khushi chandrakar   | 233050810005 | Khushi      |
| 06  | Krishna Kumari      | 233050810006 | Krishna     |
| 07  | Kunal               | 233050810007 | Kunal       |
| 08  | Lokeshwarmand       | 233050810008 | Lokeshwar   |
| 09  | Mahnish             | 233050810009 | Mahnish     |
| 10  | Neelima Patal       | 233050810010 | Neelima     |
| 11  | Nikita Dewangan     | 233050810011 | Nikita      |
| 12  | Pragati             | 233050810012 | Pragati     |
| 13  | Prashant Kumar Sahu | 233050810013 | Prashant    |
| 14  | Pratima Sahu        | 233050810014 | Pratima     |
| 15  | Ritu Sahu           | 233050810015 | Ritu        |
| 16  | Rupesh Dewangan     | 233050810016 | Rupesh      |
| 17  | Temesh Sahu         | 233050810017 | Temesh      |
| 18  | Vaseem Quraishi     | 233050810018 | Vaseem      |

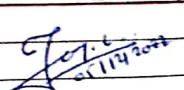
| Topic  |
|--|
| Lattice as Poset                                   |
| Boolean Lattice and Boolean algebra                |
| Algebraic Lattice                                  |
| Boolean function & Boolean expression              |
| Lattice  |
| Monoid group                                       |
| Regular Expressions, Kleene theorem, Pumping lemma |
| Boolean Algebra as lattice (various tasks)         |
| Design and implementation of digital networks      |
| Homomorphism of Semigroup (E and H <sup>m</sup> )  |
| Argument Valid & Invalid rule of inference         |
| Switching circuit                                  |
| Basic Logical Operation                            |
| semigroup, Properties of Semi-group                |
| Context free grammar - context free language       |
| Disjunction and conjunction Normal Forms           |
| Homomorphism of semigroup and Monoid               |
| Algebra of proposition & logic gate                |

Topic: \_\_\_\_\_  
Date: 05/12/2022  
विभागाध्यक्ष  
गणित विभाग  
शास्त्र चन्द्रलाल चन्द्राकर  
कला एवं विज्ञान महाविद्यालय  
पाटन, जि. - दुर्ग (उ.प्र.)

Date - 01/10/2022

| Sr. | Name of Student   | Roll No.    | Sign         |
|-----|-------------------|-------------|--------------|
| 1   | Mande Sahu        | 21305081008 | Mande        |
| 2   | Susha Dasgupta    | 21305081020 | Susha        |
| 3   | Shweta Sahu       | 21305081019 | Shweta       |
| 4   | Parneshwari       | 21305081011 | Parneshwari  |
| 5   | Tripti            | 21305081022 | Tripti       |
| 6   | Takshana          | 21305081021 | Takshana     |
| 7   | Lamikan           | 21305081007 | Lamikan      |
| 8   | NIHA VIMA         | 21305081009 | Niha         |
| 9   | Pallavi Banerjee  | 21305081010 | Pallavi      |
| 10  | Beebi             | 21305081015 | Beebi        |
| 11  | Rajati Yadav      | 21305081014 | Rajati       |
| 12  | Aarti             | 21305081001 | Aarti        |
| 13  | VANDANA DEWANGAN  | 21305081003 | Vandana      |
| 14  | Shilpee Dewangan  | 21305081013 | Shilpee      |
| 15  | Shailee I         | 21305081017 | Shailee Saha |
| 16  | Puspodra          | 21305081016 | Puspodra     |
| 17  | Bojia Nishad      | 21305081005 | Bojia        |
| 18  | ASTARADAN         | 21305081002 | Astaradan    |
| 19  | Piyush kumar Sahu | 21305081012 | Piyush       |
| 20  | Diprakash         | 21305081003 | Diprakash    |
| 21  | Dibyajit Das      | 21305081005 | Dibyajit     |

| Topic                                       |
|---|
| Riesz Markov Theorem                        |
| Normed vector space                         |
| Bounded linear transformation               |
| Jordan decomposition theorem                |
| Normed linear Transformation and Banach     |
| Real Simplex method                         |
| Weak convergence                            |
| Fubini's theorem Differential Integration   |
| Radon Nikodym Theorem                       |
| Hahn decomposition theorem                  |
| Jordan Decomposition Theorem                |
| Contraction mapping theorem                 |
| Lebesgue - Stieltjes Integral               |
| Product Measure and Fubini's Theorem        |
| Riesz Representation Theorem                |
| Acot's Theorem                              |
| The Banach Fixed Theorem                    |
| Example of Convex function                  |
| Banach Fixed point Theorem                  |
| Banach Fixed point as a source of existence |
| Normed linear space                         |

  
 01/10/2022  
 निमांकित  
 पत्रिका विभाग  
 शासक प्रकाशक विभाग  
 काशी विश्वविद्यालय  
 काशी - 221 005

Date - 05/12/2022

| Srl. | Name of Students  | Roll No.    | Sign        |
|------|-------------------|-------------|-------------|
| 1    | Manta Sahu        | 21305081008 | Manta       |
| 2    | Sudha Dewangan    | 21305081020 | Sudha       |
| 3    | Shweta Sahu       | 21305081019 | Shweta      |
| 4    | Parmeshwari       | 21305081011 | Parmeshwari |
| 5    | Tripti            | 21305081022 | Tripti      |
| 6    | Takeshwar         | 21305081021 | Takeshwar   |
| 7    | Laxmikant         | 21305081007 | Laxmikant   |
| 8    | Neha VERMA        | 21305081009 | Neha        |
| 9    | Pallavi Banchher  | 21305081010 | Pallavi     |
| 10   | Breeti            | 21305081025 | Breeti      |
| 11   | Pragati Yadav     | 21305081014 | Pragati     |
| 12   | Aarti             | 21305081001 | Aarti       |
| 13   | VANDANA DEWANGAN  | 21305081023 | Vandana     |
| 14   | Shilpee Dewangan  | 21305081018 | Shilpee     |
| 15   | Shailee           | 21305081017 | Shailee     |
| 16   | Ashwini           | 21305081016 | Ashwini     |
| 17   | Rajni Nishad      | 21305081013 | Rajni       |
| 18   | CHITARANJAN       | 21305081002 | Chitranjan  |
| 19   | Piyush Kumar Sahu | 21305081012 | Piyush      |
| 20   | Diprakash         | 21305081003 | Diprakash   |
| 21   | Dhyan - Das       | 21305081005 | Dhyan       |

| Topic  |
|--|
| Cauchy Kovalevskaya Theorem                              |
| Hamilton Jacobi Equation                                 |
| Euler-Lagrange equation                                  |
| LAX OLEINIC Formula                                      |
| Similarity Solution                                      |
| EXTENSION PRINCIPLE for Fuzzy set                        |
| Fourier Transform  |
| Laplace  |
| Wave equation and homogeneous wave equation              |
| Green's function   |
| Heat equation and fundamental soln of mean value formula |
| fundamental solutions of Laplace's equation              |
| Heat equation for mean value formula                     |
| Characteristic   |
| Laplace Equation   |
| Laplace Transformation Half-Cele Transformation          |
| Engel's method Green function                            |
| Real Analytic function                                   |
| Hodograph and Legendre transformation                    |
| Singular perturbation and Laplace's method               |
| Hamilton's ODE   |

For 4  
05/12/2022

विभागाध्यक्ष  
गणित विभाग  
श्याम चन्द्र लाल घन्टा  
कला एवं विज्ञान महाविद्यालय  
मदन, जिला - दुरी

M.Sc. III Sem. Project - Dec-2022-23  
 Paper - III (Fuzzy Set)  
 Subject - Maths

Date - 01/10/2022

| Sr. | Name of Students  | Roll No.    | Sign        |
|-----|-------------------|-------------|-------------|
| 1   | Manda Sahu        | 21305081008 | Manda       |
| 2   | Sudha Chakraborty | 21305081020 | Sudha       |
| 3   | Shweta Sahu       | 21305081019 | Shweta      |
| 4   | Padmashwari       | 21305081011 | Padmashwari |
| 5   | Tripti            | 21305081022 | Tripti      |
| 6   | Tanushree         | 21305081021 | Tanushree   |
| 7   | Lamikaant         | 21305081007 | Lamikaant   |
| 8   | Neha              | 21305081009 | Neha        |
| 9   | Pallavi Banerjee  | 21305081010 | Pallavi     |
| 10  | Breeti            | 21305081015 | Breeti      |
| 11  | Pragati Yadav     | 21305081014 | Pragati     |
| 12  | Aarti             | 21305081001 | Aarti       |
| 13  | VANDANA DEWANGAN  | 21305081023 | Vandana     |
| 14  | Shilpee Dewangan  | 21305081018 | Shilpee     |
| 15  | Shilpee           | 21305081017 | Shilpee     |
| 16  | Pushpadra         | 21305081016 | Pushpadra   |
| 17  | Bojia Nishad      | 21305081013 | Bojia       |
| 18  | CHITARANJAN       | 21305081002 | Chitranjan  |
| 19  | Piyush kumar Sahu | 21305081012 | Piyush      |
| 20  | Dimplekumar       | 21305081005 | Dimple      |
| 21  | Duljan - Das      | 21305081005 | Duljan      |

Operation on fuzzy set  
 Max - Min composition  
 Characterization theorem of  $t$ -norms  
 Fuzzy Number  
 Characterization theorem of fuzzy Complement  
 HEAT - Evaluation theorem  
 T-norms and T-conorms  
 the extension principle the zadeh's  
 Fuzzy set Basic definition, level set, convex set, Cartesian product  
 Fuzzy relations on fuzzy sets. Homomorphism  
 Decreasing Generator  
 Decomposition theorem  
 Fuzzy relation  
 Comparability Relation  
 Fuzzy relation equation  
 Evidence Theory  
 The zadeh's extension  
 Possibility theory probability theory  
 Main - Max composition & its property  
 Fuzzy arithmetic  
 Possibility theory - Fuzzy measures

Seen  
 Signature  
 विभागाध्यक्ष  
 गणित विभाग  
 रामसुब्रह्मण्यन चन्द्राकर  
 कला एवं विज्ञान महाविद्यालय  
 पाण्डुरंगी - दुर्ग (छ.ग.)

(57)

M.Sc. III Sem. Project - 2022-23  
paper - IV (Operation Research)  
Subject - Maths

Date - 05/12/2022

| S.N. | Name of Student   | Roll No.    | Subject |
|------|-------------------|-------------|---------|
| 1    | Mamta Sahu        | 21305081008 | Maths   |
| 2    | Sudha Dewangan    | 21305081020 | Maths   |
| 3    | Shweta Sahu       | 21305081019 | Maths   |
| 4    | Parmeshwari       | 21305081011 | Maths   |
| 5    | Tripti            | 21305081022 | Maths   |
| 6    | Takeshwar         | 21305081022 | Maths   |
| 7    | Laxmikant         | 21305081007 | Maths   |
| 8    | Neha Verma        | 21305081009 | Maths   |
| 9    | Pallavi Banerjee  | 21305081010 | Maths   |
| 10   | Preeti            | 21305081015 | Maths   |
| 11   | Pragati Yadav     | 21305081014 | Maths   |
| 12   | Aarti             | 21305081001 | Maths   |
| 13   | VANDANA DEWANGAN  | 21305081023 | Maths   |
| 14   | Shilpee Dewangan  | 21305081018 | Maths   |
| 15   | Shalpee           | 21305081017 | Maths   |
| 16   | Pushpendra        | 21305081016 | Maths   |
| 17   | Bojan Nishad      | 21305081013 | Maths   |
| 18   | CHITABANJAN       | 21305081002 | Maths   |
| 19   | Piyush kumar Sahu | 21305081012 | Maths   |
| 20   | Durprakash        | 21305081003 | Maths   |
| 21   | Dushyant Das      | 21305081005 | Maths   |

(58)

Topic

Two Phase Method  
 Minimum spanning Trees  
 Operation research  
 Network Analysis  
 PERT (Programming Evaluation Review Technique)  
 Dijkstra's Algorithm  
 Linear Goal programming  
 Parametric Problem  
 Critical path method  
 Theory of the simplex method  
 Reduction theorem  
 Big M method and Two phase method  
 Assignment problem  
 Operation Research and its scope  
 Duality and sensitivity analysis  
 Dual simplex method  
 PERT/CPM  
 minimum cost flow  
 Network simplex Method  
 Maximum flow problem  
 Parametric Linear Programming

Date: 05/12/2022

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मणित विभाग  
शास. चन्द्राल. यादव  
कला एवं विज्ञान महाविद्यालय  
पाटन, बि. - 824101

Misc. III Sem. Project - 2022-23  
 Paper - V (Group Theory)  
 Subject - Math.

Date - 05/11/2022

| Sr. No. | Name of Students  | Roll No.    | Sign        |
|---------|-------------------|-------------|-------------|
| 1       | Mamta Sahu        | 21305081008 | Mamta       |
| 2       | Sudha Dewangan    | 21305081020 | Sudha       |
| 3       | Shweta Sahu       | 21305081019 | Shweta      |
| 4       | Parmeshwari       | 21305081011 | Parmeshwari |
| 5       | Tripti            | 21305081022 | Tripti      |
| 6       | Takeshwar         | 21305081021 | Takeshwar   |
| 7       | Laxmikant         | 21305081007 | Laxmikant   |
| 8       | Neha Vasa         | 21305081004 | Neha        |
| 9       | Pallavi Banerjee  | 21305081010 | Pallavi     |
| 10      | Beehi             | 21305081015 | Beehi       |
| 11      | Pragati Yadav     | 21305081014 | Pragati     |
| 12      | Aarti             | 21305081001 | Aarti       |
| 13      | VANDANA DEWANGAN  | 21305081023 | Vandana     |
| 14      | Shikha Dewangan   | 21305081018 | Shikha      |
| 15      | Shalini Sahu      | 21305081017 | Shalini     |
| 16      | Rushendra         | 21305081016 | Rushendra   |
| 17      | Pooja Nishad      | 21305081013 | Pooja       |
| 18      | ANJANANJAN        | 21305081002 | Anjan       |
| 19      | Piyush Kumar Sahu | 21305081012 | Piyush      |
| 20      | Durprakash        | 21305081003 | Durprakash  |
| 21      | Durjant - Das     | 21305081005 | Durjant     |

Topic

Cycle Graph, Cycle Space  
 operations on Graph and Binary Operation  
 & circular arc graph, split graph, triangulated graph  
 Colouring packing and covering  
 Colouring packing and covering  
 GRAPH colouring  
 Binary operations on graphs  
 Combinational formulation  
 Radon Vertex coloring, Critical graph & chromatic  
 Setting up of combinations for formulation  
 combinatorial formulation  
 operation graph & binary operation  
 Perfect graph  
 Comparability graph  
 matrix and vertex space  
 click parameter, Resentfield  
 Face coloring, belyud chromatic  
 Homomorphism, Construction, Derived graph  
 Graph chromatic Number, Uniquely colorable  
 matrices and vector spaces of a graph and adjacency  
 Matrices and vector spaces

Signature  
 05/11/2022  
 विभागाध्यक्ष  
 गणित विभाग  
 शा.स. चन्द्रलाल चन्द्राकर  
 कला एवं विज्ञान महाविद्यालय  
 पाटन, जि. - दूर्ग (छ.प्र.)

(61)

MSc-4 Sem (2022-23)

Paper-I Functional Analysis

| SN | Roll No.    | Name of Student  | Father's Name   | Signature     |
|----|-------------|------------------|-----------------|---------------|
| 1  | 21305081001 | Aarti            | kehar singh     | Aarti         |
| 2  | 21305081002 | CHITARANJAN      | MAHADEB         | chitanku      |
| 3  | 21305081003 | Dhanprakash      | mohandel        | De.           |
| 4  |             |                  |                 |               |
| 5  |             |                  |                 |               |
| 6  |             |                  |                 |               |
| 7  | 21305081007 | Laxmikant        | Nitmani         |               |
| 8  | 21305081008 | Manita Sahu      | Tilochan Sahu   | Mani          |
| 9  | 21305081009 | Neha varma       | Sureshkumar     | Neha          |
| 10 | 21305081010 | Pallavi Barchhan | Chandrabhela    | Hallabarchhan |
| 11 | 21305081011 | Parmeshwari      | Rampyari        | Bin           |
| 12 | 21305081012 | Piyush kumar     | Sureshkumar     | Piyush        |
| 13 | 21305081013 | Pooja Nishad     | Meghnath        | Pooja         |
| 14 | 21305081014 | Pragati jadhav   | Radheshyam      | Pragati       |
| 15 | 21305081015 | Preethi          | Parasaram       | Preethi       |
| 16 | 21305081016 | Pushpendrakumar  | Nandkumar       | Push          |
| 17 | 21305081017 | Shailee Sahu     | Darshan Sahu    | Shaillee      |
| 18 | 21305081018 | Shikha Dewangan  | Dinesh          | Shikha        |
| 19 | 21305081019 | Shweta Sahu      | Jayprakash Sahu | Shweta        |
| 20 | 21305081020 | Sudha            | Satish          | Sudha         |
| 21 | 21305081021 | Takeshwar        | Palum Lal       | Takeshwar     |
| 22 | 21305081022 | Tanvi            | Rajendra Kumar  | Tanvi         |
| 23 | 21305081023 | VANDANA DEWANGAN | PRAKASH CHAND   | Vandana       |

Dr. विनायक  
 29  
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Project Copy Submitted

(62)

class-MSc-4 (maths) Date-24-4-2023

| Name of the Topic                                       |
|---|
| open mapping theorem.                                   |
| closed graph theory                                     |
| RIESZ Representation theorem.                           |
|   |
| complete orthonormal sets                               |
| Structure of hilbert space                              |
| Uniform Bounded theorem                                 |
| Riesz - fisher Theorem                                  |
| Complex Linear space and Normed Linear                  |
| Self Adjoint Operation.                                 |
| open mapping and closed graph theorem                   |
| Bessel's Inequality.                                    |
| Riesz representation theorem.                           |
| Adjoint operators                                       |
| Hahn Banach theorem for real linear space normed linear |
| Closed Graph theorem, uniform boundness theorem.        |
| Reflexive Banach spaces.                                |
| Abstract variational boundary value problem             |
| Closed range theorem                                    |
| The Generalized lax milgram theorem.                    |
| Hahn - Banach Theorem                                   |

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| Srl | Roll no     | Name of student  | Father's Name | Sign       |
|-----|-------------|------------------|---------------|------------|
| 1   | 21305081001 | Aarti            | kehar singh   | Aarti      |
| 2   | 21305081002 | CHITARANJAN      | MAHADAS       | Chitranjan |
| 3   | 21305081003 | Durgaprasad      | Mohammed      | D          |
| 4   |             |                  |               |            |
| 5   |             |                  |               |            |
| 6   |             |                  |               |            |
| 7   | 21305081007 | Laxmikant        | Nirman        | L          |
| 8   | 21305081008 | Mantu Sahu       | Tilachand     | Mantu      |
| 9   | 21305081009 | Neha verma       | Sureshkumar   | Neha       |
| 10  | 21305081010 | Pallavi Barchha  | Chandrasekhar | Pallavi    |
| 11  | 21305081011 | Parmeshwari      | Rampal        | P          |
| 12  | 21305081012 | Piyush kumar     | Sureshkumar   | Piyush     |
| 13  | 21305081013 | poora Nishad     | moghnath      | Poora      |
| 14  | 21305081014 | Prachi Saha      | Radheshyam    | Prachi     |
| 15  | 21305081015 | Preeti           | Rameshwar     | Preeti     |
| 16  | 21305081016 | Pushpendra Kumar | Mand Kumar    | P          |
| 17  | 21305081017 | Shikha Sahu      | Devchandan    | Shikha     |
| 18  | 21305081018 | Shilpee Dewangan | Dinesh        | Shilpee    |
| 19  | 21305081019 | Shweta Sahu      | Jayprakash    | Shweta     |
| 20  | 21305081020 | Sudha            | Satish        | Sudha      |
| 21  | 21305081021 | Treshwar         | Radhikal      | Treshwar   |
| 22  | 21305081022 | Tijpti           | Rajendra      | Tijpti     |
| 23  | 21305081023 | VANDANA DEWANGAN | PRAKASH CHAND | Vandana    |

29.4.23

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Principal

(01) C.L.C Arts and Science  
Co-190 Patan, Distt-Durg (C.G.)

Name of the topic

- Generalized co-ordinates
- Holonomic and non-holonomic Constraints, scleronomic R.H.M.S.
- Surface Integral of Normal attraction.
- Hamilton's constant-Routh eqn. Total Energy system
- Poisson Bracket invariant under con.
- Fundamental poisson bracket Jacobi's theorem
- Calculus of Variation of function, shortest distance
- minimum surface of revolution, Brachistochrone prob.
- Principle of Least Action, Poincaron, Whittaker's
- Euler-Lagrange Equation
- Fundamental Lemma of calculus of Variables, Euler's
- Hamilton-Jacobi eqn, Jacobi theorems, Hamilton's principle
- Invariance of Lagrang brackets under canonical trans.
- Canonical transformation and Reciprocity of generating fn
- Work done by self attracting system
- Equipotential surface, solid harmonics
- Lagrangian eqn of motion 1<sup>st</sup> & 2<sup>nd</sup> kind
- Potential of rod, disc, spherical shells
- Attraction of rod, disc, spherical shells
- Hamilton's principle

Pu.

Signature



| Sr | Roll no     | Name of the student | Father's Name    | Sign      |
|----|-------------|---------------------|------------------|-----------|
| 1  | 21305081001 | Aarti               | kehar singh      | Aarti     |
| 2  | 21305081002 | CHITARANJAN         | MAHA DAB         | Chitranjy |
| 3  | 21305081003 | Danprakash          | Mohan Lal        | Dr.       |
| 4  |             |                     |                  |           |
| 5  |             |                     |                  |           |
| 6  |             |                     |                  |           |
| 7  | 21305081007 | Laxmikant           | Nilmani          | Dr        |
| 8  | 21305081008 | Mamta Saha          | Tilochan Saha    | Mamta     |
| 9  | 21305081009 | Nela Veerma         | Ramesh Kumar     | Nela      |
| 10 | 21305081010 | Pallavi Baroth      | Chandrasekhar    | Hemlata   |
| 11 | 21305081011 | Parmeshwar          | Rampasad         | Bijay     |
| 12 | 21305081012 | Piyush Kumar        | Suresh Kumar     | Piyush    |
| 13 | 21305081013 | Pooja Nishad        | Meghnath         | Pooja     |
| 14 | 21305081014 | Pragati Yadav       | Radheshyam Yadav | Pragati   |
| 15 | 21305081015 | Treethi             | Prasanna         | Treethi   |
| 16 | 21305081016 | Pushpendra Kumar    | Nand Kumar       | Dr        |
| 17 | 21305081017 | Shanteo Sahu        | Deocharan Sahu   | Shanteo   |
| 18 | 21305081018 | Shilpee Dewangan    | Dinesh Dewangan  | Shilpee   |
| 19 | 21305081019 | Shweta Sahu         | Jayprakash sahu  | Shweta    |
| 20 | 21305081020 | Sudha               | Latish           | Sudha     |
| 21 | 21305081021 | Takeshwar           | Padma Lal        | Takeshwar |
| 22 | 21305081022 | Tripti              | Rajendra Kumar   | Tripti    |
| 23 | 21305081023 | VANDANA DEWANGAN    | PRAKASH CHAND    | Vandana   |

29-4-23  
HOD

श्री. विद्यालय  
शांति विभाग  
शांति चन्द्राल चन्द्राकर  
एन. विज्ञान महाविद्यालय  
पटन. जि. - दुर्ग (छ.ग.)

| Name of the topic   |
|---|
| Fuzzy logics, Three valued and many-valued fuzzy Quantifiers. |
| Fuzzy linear programming with ex.                             |
| fuzzy inference & proposition                                 |
| Fuzzy implication and axioms                                  |
| Approximation and plausible reasoning and fuzzy language      |
| fuzzy Neural Network and fuzzy automata                       |
| Individual Decision making                                    |
| Defuzzification.  |
| Reflexive space and Hilbert space                             |
| Multiperson decision making with example                      |
| Fuzzy rule based systems & their examples.                    |
| Fuzzy logic Controller fuzzification                          |
| Fuzzy Ranking method with Example                             |
| Knowledge base Component and inference                        |
| Fuzzy control system.   |
| Linguistic Hedges with examples                               |
| Fuzzy Control and fuzzy expert                                |
| Fuzzification and defuzzification.                            |
| Multiconditional Approximate Reasoning                        |

Principal

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| Sl. No. | Roll No.    | Student's Name | Father's Name   | Sign       |
|---------|-------------|----------------|-----------------|------------|
| 1       | 21305081001 | Aarti          | Kehar Singh     | Aarti      |
| 2       | 21305081002 | CHITARANJAN    | MAHARAJ         | Chitranjan |
| 3       | 21305081003 | Durgaprasad    | Maharaj         | D.         |
| 4       |             |                |                 |            |
| 5       |             |                |                 |            |
| 6       |             |                |                 |            |
| 7       | 21305081007 | Laxmikant      | Mihirani        | L.         |
| 8       | 21305081008 | Manish Sahu    | Tilochan Sahu   | M.S.       |
| 9       | 21305081009 | Nela Venma     | Suresh Kumar    | Nela       |
| 10      | 21305081010 | Ralleu Barabar | Suresh Chandra  | Ralleu     |
| 11      | 21305081011 | Darmeshwari    | Rampasari       | D.         |
| 12      | 21305081012 | Piyush Kumar   | Suresh Kumar    | P.         |
| 13      | 21305081013 | Pooja Nishad   | Meghnath        | P.         |
| 14      | 21305081014 | Pragati Yadav  | Radheshyam      | P.         |
| 15      | 21305081015 | Preeti         | Poojasari       | P.         |
| 16      | 21305081016 | Pushpendra Ram | Rand Kumar      | P.         |
| 17      | 21305081017 | Shilpa Sahu    | Devchandan Sahu | Shilpa     |
| 18      | 21305081018 | Shilpa Deyang  | Dinesh Jaiswal  | Shilpa     |
| 19      | 21305081019 | Shweta Sahu    | Jayprakash Sahu | Shweta     |
| 20      | 21305081020 | Sudha          | Scottish        | S.         |
| 21      | 21305081021 | Takeshwar      | Padum Lal       | Takeshwar  |
| 22      | 21305081022 | Tipti          | Rajendra Kumar  | T.         |
| 23      | 21305081023 | VANDANA DEVI   | PRAKASH CHAND   | V.         |

Topic

Dynamic programming problem.  
Integer programming problem.  
Classification of queuing models.

Probability distribution and queuing system  
Linear programming problem  
Branch and bound method  
Nonlinear programming  
Nonlinear programming one and multi variable  
Mixed integer linear programming  
Dynamic programming - Dynamic programming  
Games with mixed strategies  
Deterministic Queuing system.  
Waiting line model / queuing theory  
Dominance Rules.  
Integer programming, Branch and bound technique  
Zero sum game  
Quadratic programming.  
Kuhn-Tucker condition  
Lagrange multiplier method  
Quadratic programming problem.

Dr.   
29-4-23

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J.P.S.

| Sr | Roll No     | Student's Name  | Father's Name   | Sign       |
|----|-------------|-----------------|-----------------|------------|
| 1  | 21305081001 | Aarti           | Kehar Singh     | Aarti      |
| 2  | 21305081002 | CHITARANJAN     | MAHADEB         | Chitranjay |
| 3  | 21305081003 | Deprakesu       | Mohan Lal       | Deprakesu  |
| 4  |             |                 |                 |            |
| 5  |             |                 |                 |            |
| 6  |             |                 |                 |            |
| 7  | 21305081007 | Laxmi Kant      | Nizmani         | Laxmi      |
| 8  | 21305081009 | Mamta Sahu      | Tilochan Ran    | Mamta      |
| 9  | 21305081009 | Neha Verma      | Suresh Kumar    | Neha       |
| 10 | 21305081010 | Pallavi Barchha | Chandrabhaktin  | Pallavi    |
| 11 | 21305081011 | Parmeshwar      | Rampersad       | Parmeshwar |
| 12 | 21305081012 | Piyush Kumar    | Suresh Kumar    | Piyush     |
| 13 | 21305081013 | Pooja Nishad    | Praghnath       | Pooja      |
| 14 | 21305081014 | Pragati Dada    | Radhishyam yada | Pragati    |
| 15 | 21305081015 | Preethi         | Prasanna        | Preethi    |
| 16 | 21305081016 | Pushendra Kumar | Rind Kum        | Pushendra  |
| 17 | 21305081017 | Shrilee Sahu    | Devcharan Sahu  | Shrilee    |
| 18 | 21305081018 | Shilpa Dewangan | Dinesh Dewangan | Shilpa     |
| 19 | 21305081019 | Shweta Sahu     | Jayprakash Sahu | Shweta     |
| 20 | 21305081020 | Sudha           | Satish          | Sudha      |
| 21 | 21305081021 | Takeshwar       | Rajm Lal        | Takeshwar  |
| 22 | 21305081022 | Tripti          | Rajendrakumar   | Tripti     |
| 23 | 21305081023 | NANDANADEWANGAN | PARAKASHCHAND   | Nandan     |

29-4-23  
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 कला एवं विज्ञान महाविद्यालय  
 पाटन, जि.- दुर्ग (क.ग.)

Topic

Network flow, Definition and theorem.  
 Menger's Theorem's  
 Max flow min cut theorem.  
 digraph connectivity & Distance concept  
 Chromatic polynomial  
 digraph tournament strong and weak digraph  
 Bivariate Colouring polynomial of Tilted digramic  
 Ramsey Theory And Ramsey Number of some ex  
 Ramsey Number & Ramsey theory  
 Chemical unique graph  
 automorphism groups & properties and Example  
 Automorphism group and Ramsey graphs properties  
 Co-chromatic (dichromatic) group  
 Co-chromatic graphs and chromatically Unique graph  
 Degree Sequence  
 Perfectness preserving operations  
 Forbidden subgraph  
 Symmetry concept: pseudo-similar  
 spectral studies of the automorphism  
 Connectedness in connected graph.

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29-4-23

(71)

M.Sc. II Sem (2022-23) Project Copy Submitted

(72)

Paper - I (Advanced Abstract Algebra - II)

Class - M.Sc. II Sem (Maths) 25/04/23

| S.No. | Roll No.     | Name of Students    | Father Name      | Sign |
|-------|--------------|---------------------|------------------|------|
| 01    | 233050810001 | Anamika Jena        | Amitabh Jena     |      |
| 02    | 233050810002 | Digeshwar Kumar     | Ramesh Singh     |      |
| 03    |              |                     |                  |      |
| 04    | 233050810004 | Kanchan Dewangan    | Nutan Lal        |      |
| 05    | 233050810005 | Khushi Chandrakar   | Amarsingh        |      |
| 06    | 233050810006 | Kushna Kumar        | tulanam          |      |
| 07    |              |                     |                  |      |
| 08    | 233050810008 | Lakshmananand       | Ramanand         |      |
| 09    | 233050810009 | Mohnish             | Ishu Kumar       |      |
| 10    | 233050810010 | Neelima Patel       | Ramgulal         |      |
| 11    | 233050810011 | Nikita Dewangan     | Virendra         |      |
| 12    | 233050810012 | Pragati Sahu        | Leela Ram        |      |
| 13    | 233050810013 | Prashant Kumar Sahu | Leela Ram        |      |
| 14    | 233050810014 | Pratima Sahu        | Balkrishna       |      |
| 15    | 233050810015 | Ritu Sahu           | Mr. Babulal Sahu |      |
| 16    | 233050810016 | Pupush Dewangan     | Jayaram          |      |
| 17    | 233050810017 | Tevesh Sahu         | Kanwal Singh     |      |
| 18    | 233050810018 | Vaseem Anaisi       | Shamim           |      |

Name of the topics

Noetherian and Artinian module.  
linear transformation

Noether - Lasker Theorem  
Invariant subspace  
finitely generated modules over a PID.

Module - cyclic modules simple modules  
Smith normal form over a PID and rank.  
Free - Modules.

Hilbert basis Theorem

Nilpotent Transformation

Decomposition theorem

Fundamental structure theorem for  
finitely generated modules over

Jordan Canonical form

Wedderburn - Artin Theorem

Rational Canonical form

Maximal Ideals and the great  
theorem

The Primary Decomposition

29-4-23

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पाटन, जि. - दुर्ग (ओ.ग.)

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[Signature]

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| S.No. | Roll No.     | Name of Students   | Fathers Name      | Sign    |
|-------|--------------|--------------------|-------------------|---------|
| 01    | 233050810001 | Anamika Jena       | Amitabh Jena      | Anamika |
| 02    | 233050810002 | Sigeshwar Kumar    | Ramon Singh       | Patan   |
| 03    |              |                    |                   |         |
| 04    | 233050810004 | Kunchan            | Nutanlal          | Kunchan |
| 05    | 233050810005 | Khushi             | Amarsingh         | Khushi  |
| 06    | 233050810006 | Krushna Kumar      | telaram           | Sahy    |
| 07    |              |                    |                   |         |
| 08    | 233050810008 | Lokeshwar          | Ramamand          | Babu    |
| 09    | 233050810009 | Mahnish            | Ishu Kumar        | Hitesh  |
| 10    | 233050810010 | Neelima            | Rangulal Patil    | Neelima |
| 11    | 233050810011 | Nikita Dewangan    | Vishendra         | Nikita  |
| 12    | 233050810012 | Pragati Sahu       | leela Ram         | Pragati |
| 13    | 233050810013 | Rishant Kumar Sahu | Joela Ram         | Babu    |
| 14    | 233050810014 | Pratima            | Balkrishna        | Pratima |
| 15    | 233050810015 | Ritu Sahu          | Mr. Babu Lal Sahu | Ritu    |
| 16    | 233050810016 | Rupesh Dewangan    | Debarajam         | Rupesh  |
| 17    | 233050810017 | Tevesh Sahu        | Kanwal Singh      | Tevesh  |
| 18    | 233050810018 | Vaseem Anwar       | Shanwar Anwar     | Vaseem  |

29.4.23

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गणित विभाग  
शास. चन्द्राल. चन्द्राकर  
कला एवं विज्ञान महाविद्यालय  
पाटन, जि. दुर्ग (ओ.प्र.)

Topics

- Extension of Measure uniqueness of extension
- Integration and differentiation The fundamental theorem of calculus
- Compactness of  $L^p$  Norm, Convergence to Measure
- Borel And measurable of sets
- Rectifiable Curves
- Lebesgue outer measure
- Non measurable sets
- Measures and Outer measures.
- The  $L^p$  spaces, convex fun<sup>n</sup>, Jensen's inequality
- Integral of non-negative measurable function
- Function of Bounded variation
- The General Integral
- Properties of integral
- Reimann Stieltjes Integral
- Measure space Integration, with respect to measure
- Four derivative, Lebesgue differential theorem.

Principal

Govt. C.L.C Arts and Science  
College Patan, Distt -Durg (C.G.)

Pat.

Jay...

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MSc-II Sem

Paper-III (Topology-II)

DATE

| S.No. | Roll No.     | Name of Students    | Fathers Name     | Sign     |
|-------|--------------|---------------------|------------------|----------|
| 01    | 233050810001 | Anamika Jena        | Amidebn          | Anamika  |
| 02    | 233050810002 | Digvijay Kumar      | Raman singh      | Digvijay |
| 03    |              |                     |                  |          |
| 04    | 233050810004 | Kunshan             | Nutanlal         | Kunshan  |
| 05    | 233050810005 | Khushi              | Amarsingh        | Khushi   |
| 06    | 233050810006 | Kushma Kumar        | tularam          | Rohy     |
| 07    |              |                     |                  |          |
| 08    | 233050810008 | Lakshya             | Ramchand         | Rohy     |
| 09    | 233050810009 | Mahnish             | Ishu kumar       | Mahnish  |
| 10    | 233050810010 | Neelima Patel       | Ramgopal         | Neelima  |
| 11    | 233050810011 | Nikita Dewangan     | Virendra         | Nikita   |
| 12    | 233050810012 | Pragati Sahu        | Leela Ram        | Pragati  |
| 13    | 233050810013 | Prashant Kumar Sahu | Leela Ram        | Rohy     |
| 14    | 233050810014 | Parthiv             | Balrajishna      | Parthiv  |
| 15    | 233050810015 | Ritu sahu           | Mr. Babulal Sahu | Ritu     |
| 16    | 233050810016 | Rupesh Dewangan     | Dertha ram       | Rupesh   |
| 17    | 233050810017 | Jayesh Sahu         | Kanwal Singh     | Jayesh   |
| 18    | 233050810018 | Vaseem Anisaki      | Shamim Anisaki   | Vaseem   |

29-1-23

विभागाध्यक्ष  
गणित विभाग  
शा.स. चन्द्राल चन्द्राकर  
कला एवं विज्ञान महाविद्यालय  
पाटन, जि.- दुर्ग (उ.प्र.)

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Topic

- Ultra filter & compactness
- Product space, Countability in product space
- Para-Compactness, The Sorgenfrey Metrization Thm.
- Nagata Smirnov metrization theorem
- Product spaces, separation axioms-connectedness
- Embedding lemma and Tychonoff embedding
- Continuity and connectedness
- Filters their Convergence.
- The fundamental group & covering space, Homotopy of Net and Filter
- Compactness
- Hausdorffness and nets
- The projection mapping
- Tychonoff product topology
- The fundamental group, covering spaces
- Fundamental theorem of Algebra

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Principal

| S.No. | Roll No.     | Name of Students | Father's Name    | Sig.      |
|-------|--------------|------------------|------------------|-----------|
| 01    | 233050810001 | Anumika          | Anandiben        | Anumika   |
| 02    | 233050810002 | Dijeshwar kumar  | Raman Singh      | Dijeshwar |
| 03    |              |                  |                  |           |
| 04    | 233050810004 | Kanchan          | Nutanlal         | Kanchan   |
| 05    | 233050810005 | Khesu            | Amarsingh        | Khesu     |
| 06    | 233050810006 | Kushna Kumar     | Tularam          | Sahy      |
| 07    |              |                  |                  |           |
| 08    | 233050810008 | Kesheshwararam   | Ramchand         | Babu      |
| 09    | 233050810009 | Mohnish          | Ishu Kumar       | Mohnish   |
| 10    | 233050810010 | Neelima Patel    | Ramgopal Patel   | Neelima   |
| 11    | 233050810011 | Nikita Dewangan  | Vishendra        | Nikita    |
| 12    | 233050810012 | Pragati Sahu     | Leela Ram        | Pragati   |
| 13    | 233050810013 | Purshant kumar   | Leela Ram        | Sahy      |
| 14    | 233050810014 | Pratima Sahu     | Balkrishna       | Pratima   |
| 15    | 233050810015 | Ritu sahu        | Mr. Babulal sahu | Ritu      |
| 16    | 233050810016 | Pupesh Dewangan  | Disha ram        | Pupesh    |
| 17    | 233050810017 | Terresh sahu     | Kanwal Singh     | Terresh   |
| 18    | 233050810018 | Vaseem Anaisi    | Shamim Anaisi    | Vaseem    |

29-4-23

विनायायक  
गणित विभाग  
शा.प.न.लाल चन्द्राकर  
कला एवं विज्ञान महाविद्यालय  
पटन, जि. - डूंग (म.प्र.)

Topic:

- Bloch Theorem
- Hadamard factorization theorem
- Schwarz's Reflection Principle
- 1/4 Theorem
- Jensen formula Poisson series formula
- Runge's Theorem Mittag-Leffler theorem
- Univalent Functions
- Monodromy Theorem and its consequences
- Riemann zeta function
- Harmonic function And Harnack's Theorem
- Little Picard
- Gamma function
- Martel Cartheodory Theorem and the great Picard theorem
- Schottky's theorem
- Borel's Theorem
- The Weierstrass factorization theorem

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College Patan, Distt - Durg (C.G)

[Signature]

| Sr. No. | Roll No.    | Name of Student     | Father's Name       | Sign     |
|---------|-------------|---------------------|---------------------|----------|
| 01      | 23305081001 | Anumika             | Amitabh Kumar Singh | Anumika  |
| 02      | 23305081002 | Digvijay Kumar      |                     |          |
| 03      |             | Chaitanya           |                     |          |
| 04      | 23305081004 | Kanchan             | Nutanlal Amar Singh | Kanchan  |
| 05      | 23305081005 | Kheshti             |                     | Kheshti  |
| 06      | 23305081006 | Krishna Kumar       | Talwar              | Bahy     |
| 07      |             | Kunal               |                     |          |
| 08      | 23305081008 | Lakshmi             | Ramaram             | Bahy     |
| 09      | 23305081009 | Mohnish             | Ishu Kumar          | Mohnish  |
| 10      | 23305081010 | Neelima Patel       | Rangulal Patel      | Neelima  |
| 11      | 23305081011 | Nikita Dehangan     | Vishendra           | Nikita   |
| 12      | 23305081012 | Pooja Sahu          | Leela Ram           | Pooja    |
| 13      | 23305081013 | Prashant Kumar Sahu | Leela Ram           | Bahy     |
| 14      | 23305081014 | Pratibha            | Balkrishna          | Pratibha |
| 15      | 23305081015 | Ritu Sahu           | Mr. Bala Lal Sahu   | Ritu     |
| 16      | 23305081016 | Apuh                | Darha Ram           | Apuh     |
| 17      | 23305081017 | Tevesh              | Kanwal Singh        | Tevesh   |
| 18      | 23305081018 | Vaseem Anwar        | Shamim Anwar        | Vaseem   |

29.11.23

विभागाध्यक्ष  
गणित विभाग  
शास. चन्द्रलाल चन्द्राकर  
कला एवं विज्ञान महाविद्यालय  
पाटन, जि. - दुर्ग (उ.प्र.)

Topic

Directed Graph (Indegree Outdegree of vertex)  
Finite machine, definition, example, making transition diagram from transition table

Finite state Machine of Transition Table.  
Minimum spanning tree travelling salesman problem, tree, spanning tree, cut set, MST, Kruskal Algorithm

Weighted undirected graph Chinese Postman Problem  
Equivalence of FSM, Examples, Reduced of FSM, Ex. on it.  
Equivalence of FSM, Minimization of FSM, Walk, Path and circuits, special & operation graph. Ex.  
Finite state machine Equivalence of FSM Home.

Graph Theory  
Planar graph and its properties complete graph  
finite automata non-deterministic machine change from Moore machine to Mealy machine

DFA and NFA Transition table  
Matrix representation of directed and undirected graph  
Mealy & Moore Machine.

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College Patan, Distt - Durg (C.G.)

Signature

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