# DON BOSCO ARTS & SCIENCE COLLEGE

## ANGADIKADAVU

*(Affiliated to Kannur University Approved by Government of Kerala)*

**ANGADIKADAVU P.O., IRITTY, KANNUR – 670706**

# COURSE PLAN

# M Sc MATHEMATICS

**(2018 – 20)**

## SEMESTER - IV

## ACADEMIC YEAR - (2019-20)

| IV Semester M Sc MATHEMATICS (2018 - 20) | | | |
|---|---|---|---|
| SL. No. | Name of Subjects with Code | Name of the Teacher | Duty Hours per week |
| 1. | MAT4C15 Operator Theory | Athulya P. | 5 |
| 2. | MAT4C16 Differential Geometry | Ajeena Joseph | 5 |
| 3. | MAT4E06 Operations Research | Ajeena Joseph + Riya Baby + Noble Philip | 5 |
| 4. | MAT4D01 Project Work | | 10 |
| | Name of Class Incharge | Ajeena Joseph | |

## TIME TABLE

| Day | 09.50 Am - 10.45 Am | 10.45 Am - 11.40 Am | 11.55 Am - 12.50 Pm | 01.40 Pm - 02.35 Pm | 02.35 Pm - 03.30 Pm | 3.35 Pm- 04.30 Pm |
|---|---|---|---|---|---|---|
| 1 | Noble Philip MAT4E03 | Ajeena Joseph MAT4C16 | Athulya. P. MAT4C15 | Najumunnisa K. MAT4D01 | Prija V. MAT4V01 | Ajeena Joseph MAT4C16 |
| 2 | Athulya. P. MAT4C15 | Najumunnisa K. MAT4D01 | Athulya. P. MAT4C15 | Noble Philip MAT4E03 | Ajeena Joseph MAT4C16 | Sebin Abraham MAT4V01 |
| 3 | Ajeena Joseph MAT4E03 | Najumunnisa K. MAT4D01 | Ajeena Joseph MAT4E03 | Prija V. MAT4V01 | Athulya. P. MAT4C15 | Najumunnisa K. MAT4D01 |
| 4 | Ajeena Joseph MAT4C16 | Athulya. P. MAT4C15 | Sebin Abraham MAT4V01 | Riya Baby MAT4E03 | Najumunnisa K. MAT4D01 | Ajeena Joseph MAT4V01 |
| 5 | Riya Baby MAT4E03 | Ajeena Joseph MAT4C16 | Ajeena Joseph MAT4C16 | Athulya. P. MAT4C15 | Najumunnisa K. MAT4D01 | Sebin Abraham MAT4V01 |

| | |
|---|---|
| **Subject Code:** | **MAT4C15** |
| **Subject Name:** | **Operator Theory** |
| **No. of Credits:** | **4** |
| **No. of Contact Hours:** | **90** |
| **Hours per Week:** | **5** |
| **Name of the Teacher:** | **Athulya P.** |

**Module –I:**

Spectrum of a Bounded Operator-Spaces of Bounded Linear Functionals; Duals and Transposes Weak and Weak* Convergence (Chapter-3 Section-12; Chapter-4 Sections 13; 13.1 to 13.6 and Sections 15; 15.1 to 15.4)

**Module – II:**

Spaces of Bounded Linear Functionals; Reflexivity, Compact Operators on Normed Spaces: Compact Linear Maps, Spectrum of a Compact Operator. (Chapter-4, Section 16; Chapter-5, Sections 17,18)

**Module – III:**

Bounded Operators on Hilbert Spaces; Bounded Operators and Adjoints, Normal, Unitary and Self Adjoint Operators, Spectrum and Numerical Range, Compact Self Adjoint Operators. (Chapter-7; Section 25, 26(omit 26.6) and 27and 28; 28.1 to 28.4 and 28.5 Statement only)

**Prescribed Textbook**

Balmohan V Limaye; Functional Analysis(2nd Edition); New Age International Publishers

**Books for Reference**

1. E.Kreyszig; Introductory Functional Analysis with Applications, John Wiley
2. Walter Rudin; Functional Analysis, TMH Edtion 1978.
3. M.T Nair: Functional Analysis A First Course: Prentice Hall of India
4. Chaudhary and Sudarsan Nanda: Functional Analysis with Applications, Wiley Eastern Ltd.
5. Walter Rudin: Introduction to Real and Complex Analysis, McGraw Hill International Edition
6. J.B Conway: Functional Analysis, Narosa Publishing Company
7. Bachman and Narici; Functional Analysis.

# TEACHING SCHEDULE

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| 1 | 21-10-2019 To 25-10-2019 | 1 | Spectrum of a Bounded Operator-Properties |
| | | 2 | Definitions |
| | | 3 | Definitions |
| | | 4 | Theorem |
| | | 5 | Theorem |
| | | 6 | Theorem |
| | | 7 | Definitions |
| | | 8 | Definitions |
| 2 | 28-10-2019 To 01-11-2019 | 9 | Theorem |
| | | 10 | Gelfand-Mazur theorem |
| | | 11 | Spectral radius formula |
| | | 12 | Duals and Transposes- Theorem |
| | | 13 | Theorem |
| | | 14 | Transpose of an operator |
| | | 15 | Theorem |
| 3 | 04-11-2019 To 08-11-2019 | 16 | Theorem |
| | | 17 | Theorem |
| | | 18 | Theorem |
| | | 19 | Weak and Weak* Convergence- Definitions |
| | | 20 | Bolzano-Weierstrass Property |
| | | 21 | Theorem |
| 4 | 11-11-2019 To 15-11-2019 | 22 | Theorem |
| | | 23 | Theorem |
| | | 24 | Examples |
| | | 25 | Examples |
| | | 26 | Examples |
| | | 27 | Theorem |
| | | 28 | **Class Test** |
| 5 | 18-11-2019 To 23-11-2019 | 29 | Spaces of Bounded Linear Functionals; Reflexivity |
| | | 19 Nov | Union Inauguration |
| | | 30 | Theorem, Lemma |
| | | 31 | Corollary |
| | | 32 | **Weak sequentially compact** |
| | | 33 | Examples |
| | | 34 | Examples |

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| | | 23 Nov | Sports Day |
| 6 | 25-11-2019 To 29-11-2019 | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
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| | | | Semester Break |
| 7 | 01-12-2019 To 05-12-2019 | | Semester Break |
| | | | Semester Break |
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| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| 8 | 09-12-2019 To 13-12-2019 | 35 | Theorem |
| | | 36 | Compact Operators on Normed Spaces: Compact Linear Maps |
| | | 37 | Definitions & Examples |
| | | 38 | Theorem |
| | | 39 | Theorem |
| | | 12 Dec | Arts Day |
| | | 13 Dec | Arts Day |
| 9 | 16-12-2019 To 20-12-2019 | 16 Dec | First Internal IV Semester PG |
| | | 17 Dec | First Internal IV Semester PG |
| | | 18 Dec | First Internal IV Semester PG |
| | | 40 | Theorem |
| | | 41 | Theorem |
| | | 20 Dec | Christmas Celebration |
| 10 | 23-12-2019 To 28-12-2019 | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| | | | **Christmas – Holiday** |
| **11** | **30-12-2019 To 03-01-2020** | 42 | Spectrum of a Compact Operator. |
| | | 43 | Lemma |
| | | 44 | Lemma |
| | | 45 | Theorem |
| | | **02 Jan** | **Mannam Jayanthi – Holiday** |
| | | 46 | Theorem |
| **12** | **06-01-2020 To 10-01-2020** | 47 | Theorem |
| | | 48 | Theorem |
| | | 49 | Lemma |
| | | 50 | Lemma |
| | | 51 | Examples |
| | | 52 | Examples |
| | | 53 | Class Test |
| | | 54 | Bounded Operators on Hilbert Spaces- Bounded Operators and Adjoints-Definitions & Examples |
| | | 55 | Theorem |
| **13** | **13-01-2020 To 17-01-2020** | 56 | Theorem |
| | | 57 | Examples |
| | | 58 | Theorem |
| | | 59 | Theorem |
| | | 60 | Normal, Unitary and Self Adjoint Operators- Definitions |
| | | 61 | Examples |
| **14** | **20-01-2020 To 24-01-2020** | 62 | Seminar |
| | | 63 | Seminar |
| | | 64 | Seminar |
| | | 65 | Seminar |
| | | 66 | Seminar |
| | | 67 | Seminar |
| | | 68 | Seminar |
| | | 69 | Theorem |
| | | 70 | Theorem |
| **15** | **27-01-2020 To 31-01-2020** | 71 | Definitions |
| | | 72 | Positive operators |
| | | 73 | Generalized Schwartz Inequality |
| | | 74 | Spectrum and Numerical Range |
| | | 75 | Definitions |
| | | 76 | Theorem |

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| | | 77 | Theorem |
| 16 | 03-02-2020 To 07-02-2020 | 78 | Theorem |
| | | 79 | Theorem |
| | | 80 | Theorem-Ritz method |
| | | 81 | Theorem |
| | | 82 | Finite dimensional operators |
| | | 83 | Compact Self Adjoint Operators. |
| | | 84 | Compact Self Adjoint Operators.-Definitions |
| 17 | 10-02-2020 To 14-02-2020 | 85 | Theorem |
| | | 86 | Class Test |
| | | 87 | Theorem |
| | | 88 | Theorem |
| | | 89 | Discussion & Revision |
| | | 90 | Discussion & Revision |
| 18 | 17-02-2020 To 22-02-2020 | 17 Feb | Second Internal IV Semester PG |
| | | | Second Internal IV Semester PG |
| | | | Second Internal IV Semester PG |
| | | | Second Internal IV Semester PG |
| | | 21 Feb | Mahasivaratri – Holiday |
| | | | Second Internal IV Semester PG |
| 19 | 24-02-2020 To 28-02-2020 | 24 Feb | College Day |
| | | | Study Leave |
| | | | Study Leave |
| | | | Study Leave |
| | | | Study Leave |
| 20 | 02-03-2020 To 06-03-2020 | | Study Leave |
| | | | Study Leave |
| | | 04 Mar | University Exam IV Semester PG |

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|---|---|
| **Subject Code:** | **MAT4C16** |
| **Subject Name:** | **Differential Geometry** |
| **No. of Credits:** | **4** |
| **No. of Contact Hours:** | **90** |
| **Hours per Week:** | **5** |
| **Name of the Teacher:** | **Ajeena Joseph** |

## Module –I:

Graphs and Levels Sets, Vector Fields, The Tangent Space, Surfaces, Vector fields on Surfaces, Orientation (Chapter 1,2,3,4,5)

## Module – II:

The Gauss map, Geodesics, Parallel Transport, The Weingarten Map, Curvature of Plane Curves. (Chapter 6,7,8,9,10)

## Module – III:

Are Length and Line Integrals, Curvature of Surfaces, Parameterized Surfaces, and Local Equivalence of Surfaces and Parameterized Surfaces. (Chapter 11,12,14,15)

## Prescribed Textbook

John A Thorpe: Elementary Topics in Differential Geometry, Springer Verlag NY Heidelberg, Berlin

## Books for Reference

1. W I Burko: Applied Differential Geometry, Cambridge University Press (1985)
2. M.De Carmo: Differential Geometry of Curves, Surfaces (Prentice Hall Inc. Englewood cliffs N.J (1976)
3. V. Grilleman and Pollack: Differential Topology, Prentice Hall, Inc Englewood cliffs N.J (1974)
4. Singer and J.A Thorp: Lecture notes on elementary Topology and Geometry CUTM Springer Verlag, New York (1967)
5. R. Millmen and Parker: Elements of Differential Geometry (Prenice Hall Inc. Englewood cliffs N.J (1977)
6. M Spivak: A Comprehensive Introduction to Differential Geometry, Vol 1 to 5, Perish Boston (1970-75)

# TEACHING SCHEDULE

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| 1 | 21-10-2019 To 25-10-2019 | 1 | Graphs |
| | | 2 | Examples |
| | | 3 | Examples |
| | | 4 | Examples |
| | | 5 | Levels Sets |
| | | 6 | Levels Sets |
| | | 7 | Levels Sets |
| | | 8 | Class Test |
| 2 | 28-10-2019 To 01-11-2019 | 9 | Vector Fields |
| | | 10 | Vector Fields |
| | | 11 | Examples |
| | | 12 | Examples |
| | | 13 | Parametrized curve |
| | | 14 | Parametrized curve |
| | | 15 | Examples |
| 3 | 04-11-2019 To 08-11-2019 | 16 | Examples |
| | | 17 | Examples |
| | | 18 | Assignment |
| | | 19 | The Tangent Space |
| | | 20 | The Tangent Space |
| | | 21 | The Tangent Space |
| 4 | 11-11-2019 To 15-11-2019 | 22 | Theorems |
| | | 23 | Theorems |
| | | 24 | Theorems |
| | | 25 | Examples |
| | | 26 | Examples |
| | | 27 | Surfaces |
| | | 28 | Surfaces |
| 5 | 18-11-2019 To 23-11-2019 | 29 | Vector fields on Surfaces |
| | | 19 Nov | Union Inauguration |
| | | 30 | Vector fields on Surfaces |
| | | 31 | Class Test |
| | | 32 | Orientation |
| | | 33 | Orientation |

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| | | 34 | Question paper discussion |
| | | 23 Nov | Sports Day |
| 6 | 25-11-2019 To 29-11-2019 | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| 7 | 01-12-2019 To 05-12-2019 | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| 8 | 09-12-2019 To 13-12-2019 | 35 | Class Test |
| | | 36 | The Gauss map |
| | | 37 | The Gauss map |
| | | 38 | The Gauss map |
| | | 39 | Examples |
| | | 12 Dec | Arts Day |
| | | 13 Dec | Arts Day |
| 9 | 16-12-2019 To 20-12-2019 | 16 Dec | First Internal IV Semester PG |
| | | 17 Dec | First Internal IV Semester PG |
| | | 18 Dec | First Internal IV Semester PG |
| | | 40 | Geodesics |
| | | 41 | Assignment |
| | | 20 Dec | Christmas Celebration |
| 10 | 23-12-2019 To 28-12-2019 | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| | | | **Christmas – Holiday** |
| **11** | **30-12-2019 To 03-01-2020** | 42 | Geodesics |
| | | 43 | Geodesics |
| | | 44 | Problems |
| | | 45 | Examples |
| | | **02 Jan** | **Mannam Jayanthi – Holiday** |
| | | 46 | Class Test |
| **12** | **06-01-2020 To 10-01-2020** | 47 | Parallel Transport |
| | | 48 | Parallel Transport |
| | | 49 | Theorem |
| | | 50 | Theorem |
| | | 51 | Theorem |
| | | 52 | The Weingarten Map |
| | | 53 | The Weingarten Map |
| | | 54 | Problems |
| | | 55 | Problems |
| **13** | **13-01-2020 To 17-01-2020** | 56 | Examples |
| | | 57 | Curvature of Plane Curves |
| | | 58 | Curvature of Plane Curves |
| | | 59 | Assignment |
| | | 60 | Class Test |
| | | 61 | Question paper discussion |
| **14** | **20-01-2020 To 24-01-2020** | 62 | Arc length and line integrals |
| | | 63 | Arc length and line integrals |
| | | 64 | Arc length and line integrals |
| | | 65 | Examples |
| | | 66 | Examples |
| | | 67 | Problems |
| | | 68 | Class Test |
| | | 69 | Curvature of Surfaces |
| | | 70 | Curvature of Surfaces |
| **15** | **27-01-2020 To 31-01-2020** | 71 | Curvature of Surfaces |
| | | 72 | Theorem |
| | | 73 | Theorem |
| | | 74 | Examples |
| | | 75 | Parameterized Surfaces |
| | | 76 | Parameterized Surfaces |

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| | | 77 | Parameterized Surfaces |
| 16 | 03-02-2020 To 07-02-2020 | 78 | Examples |
| | | 79 | Examples |
| | | 80 | Examples |
| | | 81 | Assignment |
| | | 82 | Class Test |
| | | 83 | Local equivalence of surfaces and parameterized surfaces |
| | | 84 | Local equivalence of surfaces and parameterized surfaces. |
| 17 | 10-02-2020 To 14-02-2020 | 85 | Local equivalence of surfaces and parameterized surfaces. |
| | | 86 | Examples |
| | | 87 | Question paper discussion |
| | | 88 | Revision |
| | | 89 | Revision |
| | | 90 | Revision |
| 18 | 17-02-2020 To 22-02-2020 | 17 Feb | Second Internal IV Semester PG |
| | | | Second Internal IV Semester PG |
| | | | Second Internal IV Semester PG |
| | | | Second Internal IV Semester PG |
| | | 21 Feb | Mahasivaratri – Holiday |
| | | | Second Internal IV Semester PG |
| 19 | 24-02-2020 To 28-02-2020 | 24 Feb | College Day |
| | | | Study Leave |
| | | | Study Leave |
| | | | Study Leave |
| | | | Study Leave |
| 20 | 02-03-2020 To 06-03-2020 | | Study Leave |
| | | | Study Leave |
| | | 04 Mar | University Exam IV Semester PG |

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|---|---|
| **Subject Code:** | **MAT4E03** |
| **Subject Name:** | **Operations Research** |
| **No. of Credits:** | **4** |
| **No. of Contact Hours:** | **90** |
| **Hours per Week:** | **5** |
| **Name of the Teacher:** | **Ajeena Joseph + Riya Baby + Noble Philip** |

**Module –I:** Markov Analysis, Decision Analysis, Simulation
(Chapter-15; All Sections; Chapter-16; All Sections; Chapter-22; Section 22.1 to 22.9)

**Module – II:** Reliability and System failure rates, Inventory Control
(Chapter-18; Section 18.6, Chpater-19; All Sections, expect 19.8 and 19.9)

**Module – III:** Information Theory (Chpater-30; Section 30.1 to 30.10)

**Prescribed Textbook**

Kanti Swarup, P.K Gupta, Man Mohan; Operations Research; Sultan Chand & Sons. New Delhi (2007)

**Books for Reference**

1.KVMittal; Optimization methods on Operations Research and System Analysis, New Age International (P) Ltd. New Delhi
2. J.K Sharma; Operations Research-Theory and Applications, Macmillan, New Delhi
3. R.K Gupta; Operations Research, Krishna Prakashan Mandir II, Shivaji Road, Meerat-2,
4. L.R Potti; Operations Research, Yamuna Publications, Sreekanteswaram, Thiruvananthapuram
5. Premkumar Gupta and D.S Hira; Operations Research, S.Chand & Company Ltd. Ram Nagar New Delhi 1995.
6. B.S Goel and S.K Mittal; Operations Research, Pragti Prakashan Meerat-2

# TEACHING SCHEDULE

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| 1 | 21-10-2019 To 25-10-2019 | 1 | Markov Analysis |
| | | 2 | Markov Analysis |
| | | 3 | Markov Analysis |
| | | 4 | Markov Analysis-Special cases |
| | | 5 | Markov Analysis-Special cases |
| | | 6 | Markov Analysis-Special cases |
| | | 7 | Markov Analysis-Special cases |
| | | 8 | Decision Analysis |
| 2 | 28-10-2019 To 01-11-2019 | 9 | Decision Analysis |
| | | 10 | Method to find decision |
| | | 11 | Method to find decision |
| | | 12 | Method to find decision |
| | | 13 | Decision under risk |
| | | 14 | Decision under risk |
| | | 15 | Decision under risk |
| 3 | 04-11-2019 To 08-11-2019 | 16 | Decision under uncertainty |
| | | 17 | Decision under uncertainty |
| | | 18 | Decision under uncertainty |
| | | 19 | Different methods |
| | | 20 | Different methods |
| | | 21 | Different methods |
| 4 | 11-11-2019 To 15-11-2019 | 22 | Simulation |
| | | 23 | Simulation |
| | | 24 | Simulation |
| | | 25 | Processes of simulation |
| | | 26 | Processes of simulation |
| | | 27 | Processes of simulation |
| | | 28 | Algorithm for simulation |
| 5 | 18-11-2019 To 23-11-2019 | 29 | Theory of simulation |
| | | 19 Nov | Union Inauguration |
| | | 30 | Test paper |
| | | 31 | Failure rate |
| | | 32 | Instantaneous failure rate |
| | | 33 | Mean time between failures |
| | | 34 | Mean time between failures |

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| | | 23 Nov | Sports Day |
| 6 | 25-11-2019 To 29-11-2019 | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| 7 | 01-12-2019 To 05-12-2019 | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| | | | Semester Break |
| 8 | 09-12-2019 To 13-12-2019 | 35 | Reliability improvement |
| | | 36 | Reliability improvement |
| | | 37 | Problems |
| | | 38 | Problems |
| | | 39 | Class Test |
| | | 12 Dec | Arts Day |
| | | 13 Dec | Arts Day |
| 9 | 16-12-2019 To 20-12-2019 | 16 Dec | First Internal IV Semester PG |
| | | 17 Dec | First Internal IV Semester PG |
| | | 18 Dec | First Internal IV Semester PG |
| | | 40 | Types of inventories |
| | | 41 | Reasons for carrying inventories |
| | | 20 Dec | Christmas Celebration |
| 10 | 23-12-2019 To 28-12-2019 | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |
| | | | Christmas – Holiday |

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| 11 | 30-12-2019 To 03-01-2020 | 42 | Class Test |
| | | 43 | The inventory decisions |
| | | 44 | Objectives of scientific inventory control |
| | | 45 | Assignment |
| | | 02 Jan | Mannam Jayanthi – Holiday |
| | | 46 | Cost associated with inventories |
| 12 | 06-01-2020 To 10-01-2020 | 47 | Cost associated with inventories |
| | | 48 | Factors affecting inventory control |
| | | 49 | The fundamental problem of EOQ |
| | | 50 | The fundamental problem of EOQ |
| | | 51 | Problems |
| | | 52 | Problem of EOQ with finite replenishment |
| | | 53 | Problem of EOQ with instantaneous production and variable order cycle time |
| | | 54 | Problem of EOQ with price breaks |
| | | 55 | Problem of EOQ with price breaks |
| 13 | 13-01-2020 To 17-01-2020 | 56 | Multi-Item deterministic problems |
| | | 57 | Multi-Item deterministic problems |
| | | 58 | Dynamic order quantity |
| | | 59 | Selective inventory control techniques |
| | | 60 | Problems |
| | | 61 | Class Test |
| 14 | 20-01-2020 To 24-01-2020 | 62 | Question paper discussion |
| | | 63 | Information Theory- Introduction |
| | | 64 | A measure of information |
| | | 65 | Examples |
| | | 66 | Axiomatic approach to information |
| | | 67 | Theorem |
| | | 68 | problems |
| | | 69 | Entropy- The Expected information |
| | | 70 | Problem |
| 15 | 27-01-2020 To 31-01-2020 | 71 | Entropy as a measure of uncertainty |
| | | 72 | Problems |
| | | 73 | Some properties of Entropy function |
| | | 74 | The communication system |
| | | 75 | Channel probabilities |
| | | 76 | Assignment |

| No of Weeks | Dates | Session | Topic |
|---|---|---|---|
| | | 77 | Class Test |
| 16 | 03-02-2020 To 07-02-2020 | 78 | Problems |
| | | 79 | Problems |
| | | 80 | Joint and conditional entropies |
| | | 81 | Joint and conditional entropies |
| | | 82 | Mutual information |
| | | 83 | Problems |
| | | 84 | Class Test |
| 17 | 10-02-2020 To 14-02-2020 | 85 | Encoding |
| | | 86 | Encoding |
| | | 87 | Problems |
| | | 88 | Question paper discussion |
| | | 89 | Revision |
| | | 90 | Revision |
| 18 | 17-02-2020 To 22-02-2020 | 17 Feb | Second Internal IV Semester PG |
| | | | Second Internal IV Semester PG |
| | | | Second Internal IV Semester PG |
| | | | Second Internal IV Semester PG |
| | | 21 Feb | Mahasivaratri – Holiday |
| | | | Second Internal IV Semester PG |
| 19 | 24-02-2020 To 28-02-2020 | 24 Feb | College Day |
| | | | Study Leave |
| | | | Study Leave |
| | | | Study Leave |
| | | | Study Leave |
| 20 | 02-03-2020 To 06-03-2020 | | Study Leave |
| | | | Study Leave |
| | | 04 Mar | University Exam IV Semester PG |