<u>I – Academic Planner</u>

A. Teaching Plan (Year: 2020 Semester: Odd)

Teacher's Name: Ms. Savitri Sharma Department: STATISTICS

| S. No. | UPC | Paper Name | Core/AEC C/GE/SE C | Topic/Unit | Start Date | EndDate |
|-----------|----------|---------------------------|--------------------------|--|------------|------------|
| 1 | 32371303 | Mathematical Analysis | Core | Real Analysis: Representation of real numbers as points on the line and theset of real numbers as complete ordered field. Bounded and unbounded sets,neighbourhoods and limit points, Supremum and infimum, derived sets,open and closed sets | 11/08/2020 | 02/09/2020 |
| | | | | Sequences and their convergence, limits of some special sequences and Cauchy's general principle of convergence, Cauchy's first theorem on limits, | 04/09/2020 | 16/09/2020 |
| | | | | Monotonic sequences, limit superior and limit inferior of a bounded sequence. | 18/09/2020 | 23/09/2020 |
| | | | | Series: Infinite series, positive termed series and their convergence, Comparison test, D'Alembert's ratio test, Cauchy's nth root test, Raabe'stest. Gauss test, Cauchy's condensation test and integral test | 25/09/2020 | 20/10/2020 |
| | | | | Absolute convergence of series, Leibnitz's test for the convergence of alternating series, Conditional convergence | 24/10/2020 | 28/10/2020 |
| | | | | Review of limit, continuity and differentiability, uniform Continuity andboundedness of a function. | 30/10/2020 | 13/11/2020 |
| | | | | Rolle's and Lagrange's Mean Value theorems. Taylor's theorem withLagrange's and Cauchy's form of remainder (without proof). Taylor's andMaclaurin's series expansions | 17/11/2020 | 19/11/2020 |
| | | | | Difficulties and Presentations | 20/11/2020 | 24/11/2020 |
| 2 | 32371101 | Descriptive Statistics | Core | Definition and scope of Statistics, concepts of statistical population and sample. Data: quantitative and qualitative, attributes, variables, scales of measurement-nominal, ordinal, interval and ratio. | 20/11/2020 | 05/12/2020 |
| | | | | Tabular and graphical presentation, including histogram and Ogives. | 07/12/2020 | 11/12/2020 |
| | | | | Theory of attributes, consistency and independence of data with specialreference to attributes. Mathematical and positional measures of Central Tendency, Partition values. | 12/12/2020 | 26/12/2020 |
| | | | | Measures of Dispersion: range, quartile deviation, mean deviation, standarddeviation, coefficient of variation. Moments, absolute moments, factorial moments, skewness and kurtosis, Sheppard's corrections. | 28/12/2020 | 09/01/2021 |

| | | | | Probability introduction, random experiments, sample space, events and algebra of events. | 11/01/2021 | 06/02/2021 |
|----|----------|---------------------------|------|---|------------|------------|
| | | | | Classical, statistical, and axiomatic definitions of Probability, ConditionalProbability. Addition and multiplication theorem of probability, independent events,Theorem of Total probability. Two dimensional random variables: Joint, marginal and conditional pmf/pdf. | 08/02/2021 | 27/02/2021 |
| | | | | Bayes' theorem and its applications. Discrete and continuous random variables, illustrations and properties of random variables. pmf, pdf and cdf. | 01/03/2021 | 13/03/2021 |
| | | | | Independence of random variables. Univariate transformations. Expectation of random variables and its properties | 15/03/2021 | 22/03/2021 |
| 3 | 32371303 | Mathematical Analysis | Core | Practical:Formation of difference table, fitting of polynomial and missing terms for equal interval of differencing. | 25/08/2020 | |
| | | | | Practical: Newton's Gregory forward difference interpolation formula. Newton's backward difference interpolation formula. Newton's divided difference and Lagrange's interpolation formula. | | |
| | | | | Practical: Gauss forward, Gauss backward central difference interpolation formula. Stirling's central difference interpolation formula. | То | |
| | | | | Practical: Lagrange's Inverse interpolation formula. Method of successive approximation or iteration. Method of reversion of series. | | |
| | | | | Practical: Trapezoidal Rule, Simpson's one-third rule, Simpson's three-eighth rule, Weddle's rule. | | |
| | | | | Practical: sum by Euler-Maclaurin summation formula. | | 10/11/2020 |
| 4. | 32371101 | Descriptive Statistics | Core | Practicals | 05/12/2020 | 27/03/2021 |

B. FDP/Seminar/Workshops/Lectures to be attended and/or to be conducted by Teachers

| Event Topic | | | Google classroom, Microsoft Teams- Conducting online classes, Microsoft Teams-Conducting online classes series II, Microsoft Teams session | | | | |
|---|-------------------------------------|-------------|--|------|----------------------|--|--|
| Type / Nat | ure (FDP/Webinar/Workshop etc.) | Webinar | Webinar | | | | |
| Organizing | In-charge | Kirori Mal | Kirori Mal College | | | | |
| Details rega | rding invited Resource Person | Google Te | Google Team | | | | |
| Nature of Participation (e.g. Invited Speaker, Participant etc.) | | Participant | Participant | | | | |
| Date/s | Date/s 08/08/2020 | | 10:30 to 1:30 | Mode | Online/ Hand - on | | |
| Event Topic | | Conducting | Conducting online classes series & Microsoft Teams session | | | | |
| Type / Nat | ure (FDP/Webinar/Workshop etc.) | Webinar | Webinar | | | | |
| Organizing | In-charge | Kirori Mal | Kirori Mal College | | | | |
| Details rega | rding invited Resource Person | Microsoft T | Microsoft Teams | | | | |
| Nature of Participation (e.g. Invited Speaker, Participant etc.) | | Participant | | | | | |
| Date/s | 21/08/2020, 04/09/2020 & 12/09/2020 | Timing/s | 3:00 pm – 4:00pm, 3:00 pm – 4:00pm, 11 am- 12:30 pm respectively | Mode | Online | | |

C. Internal Assessment: House Exam (Test/Presentation etc.)&Assignment*

| Course Code | Course Name | Unique Paper Code | Topic Name | Day and Date | Date/s of Exhibiting the Assessment Sheet to students, Discussing the marks, Returning/Retaining |
|-------------|---------------------------|----------------------|-------------------------------|-------------------------|--|
| 568 | B.Sc (Hons) Statistics | 32371303 | (TEST) Infinite Series | Friday 23/10/2020 | 30/10/2020 |
| 568 | B.Sc (Hons) Statistics | 32371303 | (TEST) Mean Value thm | Wednesday 04/11/2020 | 10/11/2020 |
| | | | | | |
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| 568 | B.Sc (Hons) Statistics | 32371101 | (TEST) Measures of Dispersion | Monday 07/12/2020 | 14/12/2020 |
| 568 | B.Sc (Hons) Statistics | 32371101 | (TEST) Probability theory | Saturday 16/11/2021 | 23/01/2021 |

^{*}Marks of the Internal Assessment to be submitted to the College 15 days before the last working day of every semester

D. Organization of Department/College Society Meetings by Staff Advisor/Convener

| Department/Society | Meeting Date | Purpose |
|--------------------|--------------|---------|
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E. College Functions

| College Function | Function Date | Role to be played | | |
|------------------|---------------|-------------------|--|--|
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