**Ch. Bansi Lal Govt. College for Women, Tosham (Bhiwani)**

**Lesson Plan (2020-21)**

**Name of Assistant Professor: Dr. Raj Kumar**

**Class: B.Sc. 3rd Year (5th Sem.)**

**Subject: Real Analysis.**

| Sr. No. | Months | Topics |
|---|---|---|
| 1. | August | Riemann Integral, Integrability of continuous and monotonic functions. |
| 2. | September | The Fundamental theorem of integral Calculus, Mean value theorems of Integral Calculus. |
| 3. | October | Improper integrals and their convergence, Comparison tests, Abel's test and Dirichlet's test, Frullani's Integral. |
| 4. | November | Definition and examples of Metric spaces, neighborhoods, limit points, interior points, open sets and closed sets, closure and interior, boundary points, subspaces of metric spaces. |
| 5. | December | Continuous functions, Uniform continuity, compactness for metric spaces. |
| 6. | January | Connectedness for metric spaces. |
| 7. | February | Revision and Test |

**Ch. Bansi Lal Govt. College for Women, Tosham (Bhiwani)**

**Lesson Plan (2020-21)**

**Name of Assistant Professor: Dr. Raj Kumar**

**Class: B.Sc. 2nd Year (3rd Sem.)**

**Subject: Advanced Calculus**

| Sr. No. | Months | Topics |
|---|---|---|
| 1. | August | Chapter 1: Continuous functions<br>Chapter 2: The derivative and mean value theorems |
| 2. | September | Chapter 3: Indeterminate forms<br>Chapter 4: Limit and continuity of functions of two variables |
| 3. | October | Chapter 5: Partial Differentiation |
| 4. | November | Chapter 6: Differentiability of functions of two variables<br>Chapter 7: Maximum and minimum of functions of two variables |
| 5. | December | Chapter 8: Curves in Space<br>Chapter 9: Circle of Curvature and spherical curvature |
| 6. | January | Chapter 10: Involutes and evolutes |
| 7. | February | Chapter 11: Concept of a surface and envelopes<br>Revision and Test |

**Ch. Bansi Lal Govt. College for Women, Tosham (Bhiwani)**

**Lesson Plan (2020-21)**

**Name of Assistant Professor: Dr. Raj Kumar**

**Class: B.Sc. 1st Year (1st Sem.)**

**Subject: Calculus.**

| Sr. No. | Months | Topics |
|---|---|---|
| 1. | October | Chapter 1: Limit, continuity, differentiability<br>Chapter 2: Successive differentiation, Leibnitz theorem. |
| 2. | November | Chapter 2: Successive differentiation, Leibnitz theorem.<br>Chapter 3: Some general theorems on differentiable functions and expansions (Maclaurin's theorem and Taylor series expansions) |
| 3. | December | Chapter 4: Asymptotes<br>Chapter 5: Curvature<br>Chapter 6: Singular Points |
| 4. | January | Chapter 7: Curve Tracing<br>Chapter 8: Reduction Formulae<br>Chapter 9: Rectification |
| 5. | February | Chapter 10: Quadrature<br>Chapter 11: Volumes and surfaces of Solids of Revolution<br>Revision |

**Ch. Bansi Lal Govt. College for Women, Tosham (Bhiwani)**

**Lesson Plan (2020-21)**

**Name of Assistant Professor: Mrs. Sarita**

**Class: B.A. 2nd year**

**Subject: Advanced Calculus**

| Months | Topics |
|---|---|
| November 2020 | Chapter 1: Continuous functions<br>Chapter 2: The derivative and mean value theorems |
| December 2020 | Chapter 3: Indeterminate forms<br>Chapter 4: Limit and continuity of functions of two variables<br>Chapter 5: Partial Differentiation |
| January 2021 | Chapter 6: Differentiability of functions of two variables<br>Chapter 7: Maximum and minimum of functions of two variables |
| February 2021 | Chapter 8: Curves in Space<br>Chapter 9: Circle of Curvature and spherical curvature<br>Chapter 10: Involutes and evolutes<br>Chapter 11: Concept of a surface and envelopes |

**Ch. Bansi Lal Govt. College for Women, Tosham (Bhiwani)**

**Lesson Plan (2020-21)**

**Name of Assistant Professor: Mrs. Sarita**

**Class: B.A. 3rd year/ B.Sc 3rd year**

**Subject: Numerical Analysis**

| Months | Topics |
|---|---|
| November 2020 | Chapter 1: Finite difference operators and their relations<br>Chapter 2: Interpolation with equal intervals |
| December 2020 | Chapter 3: Interpolation with unequal intervals<br>Chapter 4: Central differences interpolation formulae<br>Chapter 5: Probability distributions with random variables<br>Chapter 6: Numerical differentiation |
| January 2021 | Chapter 7: Eigen Value problems<br>Chapter 8: Numerical Integration |
| February 2021 | Chapter 9: Numerical solution of Ordinary differential equations |