| **Weeks** | **Contents/Topics** | **Exercises** |
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| **Week 1** | Interval, Inequality, Relation and Functions, One-One and onto function. | Appendix E (Q23-44)  Appendix F (Q17-36) |
| **Week 2** | Vertical line test, Piecewise, Absolute value, Introduction to functions, Domain and Range, Symmetry, Even/odd function, Asymptote | **0.1**(1-04, 7-10, 27,28)  **0.2**(5-18,27-34,53-63,66,67)  **0.4**(9-16) |
| **Week 3** | Concepts of limit. Evaluation of limits. Continuity and points of discontinuity. Types of discontinuity.  **Assignment 1** | **1.1** (1-16)  **1.2** (1,2-32)  **1.5** (1-6, 11-22,  29, 30, 35, 36) |
| **Week 4** | Rules and techniques of differentiation. Product and quotient rule. Derivative of trigonometric and logarithm function  **Quiz 1** | **2.3** (1-24, 41-47)  **2.4** (1-24)  **2.5** (1-24) |
| **Week 5** | Chain rule  Implicit differentiation.  Indeterminate forms, L’ Hospital Rule | **2.6** (7-40)  **2.7** (3-18,27-30)  **6.5** (7-43) |
| **Week 6** | **Sessional Exam - 1** | |
| **Week 7** | Application of derivatives, Role’s and Mean Value’s Theorem  **Assignment 2** | **2.8** (10-20)  **3.8** (1-8) |
| **Week 8** | Concavity, Increasing and Decreasing. Relative Extreme (1st and 2nd derivative test) Absolute Maxima and Minima | **3.1** (15-26)  **3.2** (7-12, 25-32) |
| **Week 9** | Riemann sums  **Quiz 2** | **4.4** (35-48) |
| **Week 10** | Techniques of integration, Basic Integration, Integration by parts Reduction formula, Trigonometric substitution | **7.1** (1-30),  **7.2** (1-30, 69-71)  **7.4** (1-25, 37-48) |
| **Week 11** | **Sessional Exam - II** | |
| **Week 12** | Area bounded by the curves. Volume by Disk and washer method | **6.1** (1-18)  **6.2** (1-26) |
| **Week 13** | Integration of Rational function by Partial fraction, u= tan(x/2) substitution, Improper integrals.  **Assignment 3** | **7.5** (9-30)  **7.6** (65-70)  **7.8** (3-32) |
| **Week 14** | Infinite Sequences and Series, Introduction to Sequences  Infinite series, The integral test | **9.1** (1,7-30)  **9.3** (1-14)  **9.4** (3-24) |
| **Week 15** | Comparison tests, Absolute convergence, The ratio and root test  **Quiz 3** | **9.5** (25 to 49) |
| **Week 16** | **Revision** |  |