



ST. JOSEPH'S DEGREE & PG COLLEGE

Autonomous

Affiliated to Osmania University

Re-accredited by NAAC with 'A' Grade.

| S.No | Course | Topic | E Resources/ Links |
|------|-------------------------|--|--|
| 1 | Real Analysis | 1. Sequences and limits 2. Test for Convergence and Divergence 3. Geometric Series and P- Test 4. Monotonic Sequences 5. Uniform Convergence 6. Riemann Integration | 1. https://www.khanacademy.org/math/ap-calculus-bc/bc-series-new/bc-series-optional/v/definition-of-limit-of-a-sequence-and-sequence-convergence 2. https://www.youtube.com/watch?v=XdkoTb8PEGO 3. NPTEL: nptel.ac.in 4. VIDEO LECTURES: videolectures.net 5. INTERACTIVE REAL ANALYSIS: mathcs.org |
| 2 | Real Analysis Practical | 1. Sequences and limits 2. Test for Convergence and Divergence 3. Geometric Series and P- Test 4. Monotonic Sequences 5. Uniform Convergence 6. Riemann Integration | 1. https://www.khanacademy.org/math/ap-calculus-bc/bc-series-new/bc-series-optional/v/definition-of-limit-of-a-sequence-and-sequence-convergence 2. https://www.youtube.com/watch?v=XdkoTb8PEGO 3. NPTEL: nptel.ac.in 4. VIDEO LECTURES: videolectures.net 5. INTERACTIVE REAL ANALYSIS: mathcs.org |
| 3 | Algebra | 1. Groups and subgroups 2. cyclic groups and permutation groups 3. Isomorphisms 4. cosets and normal subgroups 5. Rings, subrings, Integral domains and fields | <ul style="list-style-type: none"> • https://en.wikipedia.org/wiki/Subgroup • http://ksuweb.kennesaw.edu/~plaval/math436_1/groups_cyclic.pdf • https://en.wikipedia.org/wiki/Group_isomorphism • https://www.youtube.com/watch?v=TCcSZEL_3CQ • https://en.wikibooks.org/wiki/Ring_Theory/Subrings • http://sites.millersville.edu/bikenaga/abstract-algebra-1/integral-domains-and-fields/integral-domains-and-fields.html |

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| 4 | Algebra practical | <ol style="list-style-type: none"> 1. Groups and subgroups 2. cyclic groups and permutation groups 3. Isomorphisms 4. cosets and Lagranges theorem 5. Rings ,subrings, Integral domains and fields | <ul style="list-style-type: none"> • https://en.wikipedia.org/wiki/Subgroup • http://ksuweb.kennesaw.edu/~plaval/math4361/groups_cyclic.pdf • https://en.wikipedia.org/wiki/Group_isomorphism • https://www.youtube.com/watch?v=TCcSZEL_3CQ • https://en.wikibooks.org/wiki/Ring_Theory/Subrings • http://sites.millersville.edu/bikenaga/abstract-algebra-1/integral-domains-and-fields/integral-domains-and-fields.html |
| 5 | Integral Calculus | <ol style="list-style-type: none"> 1.Line Integrals 2.Double Integrals 3.Triple Integrals | <ul style="list-style-type: none"> • https://www.whitman.edu/mathematics/calculus_online/section16.02.html • https://www.youtube.com/watch?v=0q3Ob0RiBZc • https://www.whitman.edu/mathematics/calculus_online/section15.05.html |
| 6 | Integral Calculus Practicals | <ol style="list-style-type: none"> 1.Line Integrals 2.Double Integrals 3.Triple Integrals | <ul style="list-style-type: none"> • https://www.whitman.edu/mathematics/calculus_online/section16.02.html • https://www.youtube.com/watch?v=0q3Ob0RiBZc • https://www.whitman.edu/mathematics/calculus_online/section15.05.html |
| 7 | Solid Geometry | <ol style="list-style-type: none"> 1.Sphere 2.Cone 3.Cylinder | <ul style="list-style-type: none"> • http://egyankosh.ac.in/bitstream/123456789/11986/1/Unit-2.pdf • https://byjus.com/maths/cone/ • https://en.wikipedia.org/wiki/Cylinder |
| 8 | Solid Geometry Practical | <ol style="list-style-type: none"> 1.Sphere 2.Cone 3.Cylinder | <ul style="list-style-type: none"> • http://egyankosh.ac.in/bitstream/123456789/11986/1/Unit-2.pdf • https://byjus.com/maths/cone/ • https://en.wikipedia.org/wiki/Cylinder |