

Smt Sindhutai Jadhao Arts and Science Mahavidyalaya, Mehkar
B.Sc. II SEMESTAR III
MATHS

Topic	Link for Material
Paper 5	
Unit 1	
sequences: definition of sequence	https://youtu.be/rSZ_kg2vSaY
uniqueness of limit of sequence	https://youtu.be/xxcM_fNUydo
algebra of limits of a sequence	https://youtu.be/QxCAOCEWngU
positivity theorem	https://youtu.be/QxCAOCEWngU
sandwich theorem	https://youtu.be/G8uQKLW6o
Monotonic and bounded sequence	https://youtu.be/ZtDNtrohSyM
Cauchy sequence	https://youtu.be/MQHwPgSjB2w
Unit 2	
series: series of nonnegative terms	https://youtu.be/Kvj28C1hINQ
convergence of geometric series	https://youtu.be/yOlpSOyGe-k
Series - Direct Comparison Test	https://youtu.be/L-6JrktAsfE
Cauchy's integral test	https://youtu.be/lJr_OWlgfc0
Ratio test	https://youtu.be/9sLsX9DV5Fs
Root test	https://youtu.be/tF4vDQ6X7Kq
Absolute convergent	https://youtu.be/EX6zkLpHlec
conditional convergent	https://youtu.be/HVrFbxKbZ6I
Leibnitz rule	https://youtu.be/6yMaL859Hp8
Abel's test	https://youtu.be/Lm2g3aZ9pAU
Dirichlet's test	https://youtu.be/MFARWa9ZwnA
Unit 3	
Limit & continuity of function of two variables	https://youtu.be/LSbO_46oQN8
algebra of limit & continuity	https://youtu.be/ygfVutDpg9o
intermediate value property	https://youtu.be/crMxhe4OaD8
fixed point property	https://youtu.be/fQOEPhmml6o
Taylor's theorem for function of two variables	https://youtu.be/aNWbzINLgqk
Unit 4	
maxima & minima of two variables	https://youtu.be/dodoqu6zvMw
Lagrange's multipliers method	https://youtu.be/3MRlly0PKKQ
Jacobians	https://youtu.be/hJ0FMHVZVSc
Unit 5	
Double integral	https://youtu.be/PzydVW0Ehmc
change of order of double integral	https://youtu.be/l8M2cEZ_AeM
triple integral	https://youtu.be/F9DGN_ijnw0
Gauss theorem	https://youtu.be/PNsPatRNVA
Stoke's theorem	https://youtu.be/gu08BWK6cv8
Paper 6	
Unit 1	
1 Divisibility	https://youtu.be/ep695eRaAyU
Division algorithm	https://youtu.be/TyGRWv_9drA
The greatest common divisor	https://youtu.be/SrwYG_jw43g
Greatest common divisor of more than two integers	https://youtu.be/4fQUBMkiJg
Euclidean algorithm	https://youtu.be/DBeiP2I6D2Y
Least common multiple	https://youtu.be/4HcLDt7kbh4
Unit 2	
2 prime numbers	https://youtu.be/kFfk7nin1xc

the fundamental theorem of arithmetic	https://youtu.be/225OqpQnLJ8
Fermat numbers	https://youtu.be/5NmSvKtaDAs
Linear Diophantine equation	https://youtu.be/ag-0i4woMqs
Unit 3	
3 Congruence	https://youtu.be/Ggj8sGpEcyE
properties of congruence	https://youtu.be/iJoWe_7_RUU
Special divisibility test	https://youtu.be/V6lwaPMwrbQ
Linear congruences	https://youtu.be/JNMXYjoR2qM
Chinese remainder theorem	https://youtu.be/IGJsrP0sfNE
Unit 4	
4 Arithmetic functions	https://youtu.be/Z1ES4CK8o_Y
Eulers theorem	https://youtu.be/26BpN2XFacc
Mobius functions	https://youtu.be/0k_P2vN4umw
Unit 5	
5 primitive roots	https://youtu.be/3W91U-aNclQ
primitive roots for prime	https://youtu.be/Sp7hq1xGEHA
polynomial congruences	https://youtu.be/lkbZ_PdLoVM
the congruence $x^2 \equiv a \pmod{p}$	https://youtu.be/pIPcxz3K1eQ
General quadratic congruence	https://youtu.be/dipz1U-748U
Quadratic residues	https://youtu.be/jUSGaQsjglc