

RK VIGYAN PG COLLEGE KALWAR,
JAIPUR, RAJ.

SEMESTER – I

B.Sc. I YEAR PHYSICS

S.N.	Paper & Name	Unit	TOPIC	Video Link
1.	PAPER – 1 (Mechanics)	UNIT – 1	inertial and non inertial frames transformation of displacement velocity acceleration	https://youtu.be/owAbYXe8J0I?si=c7VfYfbzo_j22zm3
2.			inertial and non inertial frame and transformation of displacement velocity and acceleration	https://youtu.be/PLgBeJ5o2qo?si=M7ViUpVJ7Cn91Mr2
3.			co-ordinate transformation	https://youtu.be/pjp9NSTPTG4?si=fs8eQkgIhoH-4PxD
4.			co-ordinate transformation in rotating frame	https://youtu.be/iI_MRdznqjM?si=Tixd3CMUhlg_8mS
5.			galilean transformation	https://youtu.be/5pugqPUze4o?si=qwPWnvdveJ47g-Fv
6.			invariance of Newton's law	https://youtu.be/JdQ_9J5p35M?si=Bpj-bmtd4C2plE94
7.			invariance of momentum conservation and energy conservation	https://youtu.be/Sc31Wix3Vjg?si=4GDdm_EyOKbWIp-1
8.			pseudo forces	https://youtu.be/YyC04oCnQIs?si=p15aEaA14_SupVCW
9.			transformation in rotating frame of reference	https://youtu.be/OAW7Hok66Ac?s_i=jlzJ6NUA8w8_dDAC

10			coriolis force	https://youtu.be/82cVkIsT6hU?si=39GCxMERdrgEOnDa
11			application of coriolis force	https://youtu.be/tEnKs8V7Ma4?si=7YRPPBrcIoFLsevh
12			coriolis force on freely falling body	https://youtu.be/cWE1gubRn58?si=DtcFdECqFTTBLfSE
13			coriolis force for body moving upward	https://youtu.be/r0mVup9yHyg?si=qUgvJiQzR8vsZ6Xr
14			effect on gravity due to the rotation of earth	https://youtu.be/CPBWEJhgMyQ?si=NGJTwyzQQn1wiKIf
15			focult pendulum	https://youtu.be/UgEyistqf3s?si=BtXrLtR95Y5idTq3
16		UNIT – 2	introduction about centre of mass	https://youtu.be/KFgMRNyxXh8?si=AE9fdrxhNgjRymnP
17			motion of centre of mass	https://youtu.be/kPrRNOorWSv0?si=I3Q1qII-6WRev6pc
18			collision of two particle in one dimension	https://youtu.be/cn1DslrF8d4?si=xKStL25puWEoXg7p
19			collision of particle in one dimension	https://youtu.be/r4ha69r-7D0?si=W44zTok1NSQn3DEr
20			collision of particle in two dimension	https://youtu.be/OLigQztY8Jc?si=qI0Mn0ymSt1Zli8p
21			slowing down of a neutron in a moderator	https://youtu.be/ciLCBW-rTfk?si=5k3FPJMny7eOGhqF

22			motion of a system with varying mass	https://youtu.be/5Ytwy3SblrA?si=A27OQTmTjYeZR3w
23			angular momentum concept	https://youtu.be/dOJ1ODm_WBY?si=qLXEtE1nkxrr-EWX
24			conservation of angular momentum	https://youtu.be/DEJHtpTUhRs?si=Vh9WhFd9pmGYhn4m
25			charge particle scattering by A nucleus	https://youtu.be/tuqTT6Ah010?si=l_yqvlaNCb5AgNVI
26			equation of motion of a rotating body	https://youtu.be/NL7MuKJe1ls?si=UxscgXxU7PID_kb
27			inertial coefficient ,case of j not parallel to omega and principal axis	https://youtu.be/kIUa541nFOc?si=auhZ9Yoy08p99sSb
28			precessional motion of the spinning top	https://youtu.be/yKfRq1dReaE?si=BQa9pESH2QgFhhLo
29		UNIT – 3	motion under Central forces	https://youtu.be/lsvCU7H8yaU?si=OqlHu6ZH7tY4b3dP
30			equation of motion under Central forces	https://youtu.be/Vv80D612fJU?si=ug6jxfbe0b2x21tr
31			gravitational interaction inertia and gravitational mass	https://youtu.be/RA4EUkCVmo0?s_i=t3qkcf52ORAYG4pR
32			general solution under gravitational interaction	https://youtu.be/L2q8AcVsMII?si=eKKYxISwT5CaKS3i
33			equation of eccentricity	https://youtu.be/jF3jLcHsTqc?si=N6WFZ0JQuEu_9_8

34			kepler's law	https://youtu.be/wLujGfI1bck?si=ygWcH5KYcltqAr_1
35			rutherford scattering	https://youtu.be/z1JDAmqONJw?si=NTamb-dQMA_i7c-9
36			simple harmonic motion and its equation and solution	https://youtu.be/JtkBVT4pubk?si=8zyh5WkEARBHvOEn
37			damped force and motion under damping	https://youtu.be/bYNNa07iYG8?si=W11fR6xSqLxYFhNY
38			damped simple harmonic oscillator	https://youtu.be/RU8i3n1fKdQ?si=EI_PCqXbgcP1xUmd
39			harmonic oscillator and its equation	https://youtu.be/ri28aW793u0?si=g6iLoBdtL5zP1XBa
40			energy in damped harmonic oscillator	https://youtu.be/HwTBT4PbsUQ?si=0vghhZX2F5CZMh6i
41			anharmonic oscillator	https://youtu.be/AlgIkARNuXM?si=bwqjhWxH4EX3J_sp
42		UNIT – 4	driven harmonic oscillator	https://youtu.be/8vvFWXyGcl0?si=veZJ9MZSpBLX-fmv
43			equation of motion of two couples simple harmonic	https://youtu.be/CC8PdDDAq5E?si=byhsVjj_A6TEuAUB
44			mixed mode in couple oscillator	https://youtu.be/txcZ2FrRo80?si=uuw3a_iVSwy1JLG

**RK VIGYAN PG COLLEGE KALWAR,
JAIPUR, RAJ.**

SEMESTER – I

B.Sc. I YEAR CHEMISTRY

S.N.	Paper & Name	Unit	TOPIC	Video Link
1.	PAPER – 1 structure- bonding mathematical concept and states of matter	UNIT – 1 Ionic solid, metallic bond, weak interaction	General characteristics of ionic bond	https://youtu.be/ICiuZ6cLQuM?si=pbb3Fc7y9IkXmQBo
2.			Ionic structure	https://youtu.be/gYPJNfkTvnU?si=FSRhDgVE13nlLF2g
3.			Radius ratio effect and coordination number	https://youtu.be/yPIDpODzIqw?si=aTPxCy5YHliALm9C
4.			Limitations of radius ratio rule	https://youtu.be/9TRF5s6N8OU?si=5Q99On-MAsH1i7HJ
5.			Lattice enthalpy and lattice Enthalpy calculation	https://youtu.be/Nls15rsza54?si=V3mykJ0MGbBsSEOV
6.			Born Haber cycle and it's application	https://youtu.be/DQXs83CIIsY?si=_NvmjRHAD0YAIDAU
7.			Born-Lande equation for calculation of lattice Enthalpy	https://youtu.be/8t_yK4VMJ0w?si=Kb38cv7b2TjmQkvD
8.			Solvation enthalpy and solubility of ionic solids	https://youtu.be/aN2cEp1Em-s?si=eZ2xJfBUr0wQPCFN

9.			Polarizing Power and polarizability	https://youtu.be/npNkgZfSVoM?si=9vtU2-I6KkLEX3vu
10			Fajans rule	https://youtu.be/nXsk0-8bWec?si=jJR6c3WS9EF08ygD
11			Lattice defects	https://youtu.be/zkHmtMr7pg0?si=JQVbJ5ppfQu5Zen1
12			Semiconductor	https://youtu.be/-uCs53yi_SU?si=aupF1gZxFMIBVEZp
13			Metallic bond	https://youtu.be/kIJ_HlaPiCQ?si=h1zqkyek24WTQFXb
14			Weak introduction Hydrogen bonding	https://youtu.be/7DhiGRPlc0U?si=9nuru79E5SC43hD7
15			Van dar Waals forces	https://youtu.be/ukgQ0RJmzyQ?si=U-0zFQOFWgHwllcd
16		UNIT – 2 Covalent bond and molecular orbital theory	Valence band theory	https://youtu.be/jJDiAPE6mZw?si=sn4kNHlbLoPOxAOs
17			Valence band theory	https://youtu.be/b30eQ9hx_T4?si=DpVV2g9EI3_h4TF6
18			Limitations of VBT	https://youtu.be/WFvxVssh-DE?si=wSU-oac4w4PS5S9d
19			Directional character	https://youtu.be/1CZyn-jkbfU?si=SqWLGm1jENkkJEIP

20			Hybridization balance and electron pair repulsion (VSPER)theory	https://youtu.be/4wIfs6Q7Lag?si=K mzCYTyXLINWYnD2
21		Molecular orbital theory	Lcao method bonding non bonding and antibonding molecular orbitals	https://youtu.be/ak9hU5y0-bQ?si=bEjw_3URNnqPSLx8
22			Homonuclear diatomic molecule energy level diagram MOT diagram	https://youtu.be/QRPO9gkeSdQ?si=Ghmo7ZJ_k94ZdnSI
23			MOT diagram of CO	https://youtu.be/gQnno2Quj54?si=2J-qgIlgMERU9YpX
24			MOT diagram of NO	https://youtu.be/gKxzUfEJyNA?si=tvKxQOUAAMZTC1TT
25			Comparison of vbt and mot	https://youtu.be/yedCEkdOarQ?si=OKaw2b65C5zgQd4T
26			Bond strength and bond energy	https://youtu.be/LAG8HHuv_aQ?si=ihAu49Edl0DqGxyn
27			Ionic character in covalent compound	https://youtu.be/Sd-z1yb7YBI?si=We-OHCydUgxKLWAR
28			Dipole moment	https://youtu.be/PSCFSU7xNeU?si=J-ccewGwSt45UOg1
29			Calculation of percentage ionic character	https://youtu.be/ZLqLatBXaXI?si=qmCF2sSDLQNbUmEf
30			Electronegativity difference	https://youtu.be/YZkhVr1OHzk?si=jygJvngU-beQi8Ll
31		UNIT – 3 Liquid state	Intramolecular forces	https://youtu.be/h8RFUL2KtiA?si=ASoUn1vxiHUS-Hj1

32			Structure of liquid	https://youtu.be/IMITJty-724?si=4EZu_BUybeHueVi9
33			Structure different solid liquid and gas	https://youtu.be/G1nP0buaTX8?si=HboIXOyrCbdiZgxJ
34			Liquid crystal	https://youtu.be/64A2F4XXaDI?si=xEUyjIWdHucfw4Yf
35		Solid State	Definition of specialist and unit cell and types of lattice	https://youtu.be/SDomOHTvn1U?si=QAju0mAkRroEX6QA
36			Law of crystallography-1 law of constancy of interfacial angles	https://youtu.be/NoKN8SqeZZI?si=JZ3kQirkOT6fqJga
37			Low of crystallography and low of rationality of indices	https://youtube.com/watch?v=zX6xXL5m5ec&feature=shared
38			Law of symmetry. symmetry element in crystal	https://youtu.be/911nwgumXps?si=Y-ykc42llKmExdTh
39			Basic concept of X-Ray deflection	https://youtu.be/UxNWy3EqZIE?si=efKd-esldmrT7jUK
40			Derivation of Bragg's equation	https://youtu.be/-MuUOCorY94?si=Zeks8OrH7RUFe5yC
41			Determination of crystal structure laues method	https://youtu.be/1gVgPW9gJRo?si=uvBYB563lnivtfnv
42			Powder method	https://youtu.be/_IGjbLLk5Q4?si=IBkhIm0GoNYQZSZD
43			Defects in solid	https://youtu.be/zkHmtMr7pg0?si=o8_jiYMWwLjJmnZd

44	UNIT – 4 Gaseous state	Kinetic theory of gases and it's postulate	https://youtu.be/KEuIpgM2ZMQ?si=Pky1grmdLQfsS7DQ
45		Deviation from ideal behavior	https://youtu.be/W0EOTMNmIkE?si=iMrgGGg256Iv4tHR
46		Van der Waals equation of state	https://youtu.be/6YvDGbWn4-k?si=7Mpe-z0WrETFry15
47	Critical phenomenon	PV isothermal of real gases	https://youtu.be/zfgs-vz2Me8?si=UUOL0H8JtmWSrQ2g
48		Continuity of state	https://youtu.be/CiSKDnO6bp0?si=OhM7FRNZBCN-2hFql
49		The isotherm of van der waals equation	https://youtu.be/oG00iEPGGQM?si=lyjoJ55m2Z6lohKT
50		Relationship between critical constant and van der waals constant	https://youtu.be/WDsMGojIEw?si=6j5GFOe96HbjCQHJ
51		The law of corresponding state and reduced equation of state	https://youtu.be/R1E6-MC9Ngw?si=Qn-vgkSCyVodGIO3
52	Molecular Velocities	Root main square average and most probable velocities	https://youtu.be/fGDLYWR5YRA?si=DX49FCVZ4xXrGcAp
53		Qualitative discussion of the Maxwell distribution molecular velocities	https://youtu.be/9X4mdCfFVPM?si=aNZBaEAIQ4Qd3ify
54		Collision number and Mean free path and collision diameter	https://youtu.be/Cb_lqGr1pcA?si=mOPoBaTtmzEw8c54
55		Liquid fication of gases based on Joule-Thomson effect	https://youtu.be/8y2KgkqeRn8?si=eY2INAvvuwcU7IJX

56		Colloidal State	Definition of colloids	https://youtu.be/s8aL8JDNFPA?si=z9zAYd875m8r9S2p
57			Classification of colloids	https://youtu.be/S4XyGzv0nNg?si=dHY5ZW_MiLAEKYeX
58			Solid in liquid sole properties kinetic ,optical, and electrical properties	https://youtu.be/kwyYF2qjR4g?si=SjJ_WdXA6OD60CF4
59			Stability of colloids And protective action	https://youtu.be/KMcwepurvV4?si=aTnVmfOeGwP4v7Om
60			Hardy schulze low	https://youtu.be/zKzI7OwHeJE?si=OWRT_1_mEY_-wsZH
61			Gold number	https://youtu.be/-OxvHz8TbJw?si=xCOfE91N1cEZ_uB-0
62			Liquid in solid gels classification preparation and properties general application of colloid	https://youtu.be/yRbonthM7zs?si=WlIttKI7QVxCiYdC7
63			Liquid in liquid emulsions type of emulsion preparation emulsifier	https://youtu.be/Cec62UUx7G0?si=EhO6AstggRKuFeD-
64	PAPER – 2 Reaction mechanism stereochemistry aromatic hydrocarbon and chemical kinetics	UNIT – 1 Introduction concept and mechanism of organic reactions	IUPAC nomenclature of organic compound	https://www.youtube.com/live/xP1eq1HaL88?si=r2CiPvv_w02S6B32
65			Dipol moment	https://youtu.be/PSCFSU7xNeU?si=2USXC3_eHZDmbuWZ

66		Inductive and field effect electromagnetic effect	https://youtu.be/256RhZJEUv8?si=LcaWQVezJOsbKxCl
67		Conjugation resonance and resonance energy	https://youtu.be/SeN0LZdYX9s?si=o3cVdn1pxnSt3rwi
68		Hyperconjugation	https://youtu.be/gG-xO8kKPrs?si=0edtirRUYKlw_XVq
69		Homolytic and heterolytic bond cleavages	https://youtu.be/tBa8nIKJShI?si=0B3yV8zlayO53ens
70		Type of reagents electrophile and nucleophile	https://youtu.be/R4iTrdVZ-g0?si=6s-X1tC6Oqy0u0so
71		Reactive intermediate carbocation	https://youtu.be/1512AHYtBtI?si=DRoboTIQ65aOVHU5
72		Free radicals	https://youtu.be/wdTstLZLZmw?si=ZstBbHbTAy6XdUyD
73		Carbanion	https://youtu.be/0F-SgMeqjTg?si=QPRjhDejmtneLQzg
74		Carbenes	https://youtu.be/YOZHVRXZfX0?si=2r9OqkpbvLNe-0g1
75		Arynes and nitrenes	https://youtu.be/s1RP6ll1pqq?si=W4kLLO12qZOjZ
76		Type of organic reaction	https://youtu.be/YliJmH_BXvA?si=wWQATeAwH24ZEKqH
77		Markovnikov rule	https://youtu.be/tdVNhCVAd8U?si=AsiC0CNfrN4O857b

78		Peroxide effect	https://youtu.be/iOCD4CpuEKA?si=qceZCmgJcrjP-tEv
79		Anit markonikovs rule	https://www.youtube.com/live/wRm4hVnU9M4?si=Bl-v2iZUnwjGFoRW
80		Saytzeffs rule	https://youtu.be/s1QI8MqeELs?si=7jDTzGZcM4LhbxNj
81		Hafmann elimination reaction	https://youtu.be/n8M0-GZ_IKU?si=QaFLFZ62Gb7QJBj7
82		Energy consideration	https://youtu.be/cEGgL2fcH8k?si=7Ehor5v-3JZMDTfa
83		Method of Determination of reaction mechanism	https://youtu.be/95bmo6GCCMQ?si=ESQhjfG_mNpn3xN3
84		Isotope effect	https://youtu.be/mUui3enT8FQ?si=TNhbbLmrSxcYsaEJ
85	UNIT – 2 Stereochemistry of organic compound	Concept of isomerism	https://youtu.be/ATW3eYu6sLY?si=60Mbs9IXWIMTve_p
86		Types of isomerism	https://youtu.be/6JtaLf1nEMQ?si=udMs0NIRIb4db0T0
87		Difference between configuration and conformation	https://youtu.be/BRqccTbaqzM?si=yYWA1z2_sn12LmQD
88		Flying wedge Fischer projection formula	https://youtu.be/5fAntopwIZY?si=vn9CDtK62PovVhqm
89	Optical isomerism	Elements of symmetry	https://youtu.be/pfHTUeRnkYg?si=VSnk6rbBn89cK6w4

90			Molecular chirality	https://youtu.be/MG8j8FdXaN0?si=DclwyJK_880ECH
91			Diastereomers thero and erythro isomers meso compound	https://youtu.be/r894msGI4Xc?si=eclXXGF70taMtemF
92			Enantiomers stereogenic centre	https://youtu.be/qKpLPbG07mU?si=QyOX0mmsNuu6m8C3
93			Optical activity	https://youtu.be/4rbuSRBF0h4?si=Htaf33KMP18VTdGk
94			Resolution of enantiomers inversion retention and racemization	https://youtu.be/_wuU5eeN0BQ?si=0OSwIFWCQvte6VCo
95			Relative and absolute configuration sequence rule D/L and R/S configuration	https://youtu.be/sl5ALGX-W34?si=JiWq9YqNvlecbQav
96		Geometrical isomerism	Determination of configuration of geometrical isomerism	https://youtu.be/Pc5tcj_JbPA?si=CvuWwFQuZ_9_97ph
97			E/Z system of nomenclature	https://youtu.be/whySv_rXhgg?si=JKMTPO4N83ldY6DW
98			Geometrical isomerism in oximes	https://youtu.be/3bpRNT7EWjw?si=Hn1ytDwdWuUuPDEp
99			Geometrical isomerism in oximes and alicyclic compound	https://youtu.be/5o6dmYYpBf8?si=UtE1zizl8mw29LJS
10		Conformational isomerism	Newman projection and sawhorse formulae	https://youtu.be/U7KqeZSnKng?si=l2bfTAwb6nw-5HYm
10		UNIT – 3 Arenes and aromaticity	nomenclature of benzene derivatives	https://youtu.be/2t1I76gotRU?si=2IPJxVk3QIW6Fs6e

10			the aryl group aromatic nucleus and side chain	https://youtu.be/TcNH6P-iOb4?si=SBPqdoaBWB-ARxvH
10			structure of benzene molecular formula and kekule structure	https://youtu.be/AwmzMkTE450?si=Bu4SiCr6-tV0tKWU
10			stability and carbon carbon bond length of benzene	https://youtu.be/5w1Im-zAHLg?si=7m-wQapitjLN8eea
10			benzene resonance structures mo diagram	https://youtu.be/h9QYtpgesyw?si=BC_KVwb0tb6oVF7w
10			aromatic electrophilic substitution general pattern of the mechanism	https://youtu.be/7Ni13TPj6k0?si=qW_A7D29n-9xbcZx
10			role of sigma and pi complexes in aromatic electrophilic substitution	https://youtu.be/odeHeOPtpck?si=zLI9JcE6-YDXrE_y
10			mechanism of nitration halogenation sulphonation	https://youtu.be/yilPXMnbVEE?si=AV6ecNriJqWMMngu
10			energy profile diagram for aromatic electrophilic substitution	https://youtu.be/kefHhrv2rrl?si=toCQ-g5uTRxIK_X5
11			activating and deactivating substituents	https://youtu.be/u7NL0JgEmWk?si=37S9hmEwvk771XhC
11			directive influence orientation and ortho/para ratio	https://youtu.be/dODM6PU9Pil?si=B20R70AAI3fXStgQ
11			side chain reaction of benzene derivatives	https://youtu.be/zFEA7RtoEt0?si=AyF8FLe3Mw7GUvfw
11			birch reduction	https://youtu.be/90ftvaJniVg?si=uzVEjWD311ZJT7A

11		UNIT – 4 Chemical kinetics	chemical kinetics and its scope	https://youtu.be/aRBVT1oltmk?si=DBIPDL1ykJclOZCC
11			rate of reaction	https://youtu.be/WQ4nOQR-1K8?si=aGRklxsWflE5gAqf
11			factors influencing the rate of reaction (Concentration temperature pressure solvent light catalyst)	https://www.youtube.com/live/70CZgerSJNY?si=ftsrlqsYMQ9dYtTz
11			concentration dependence of rates	https://youtu.be/zmwZ1dUxoDw?si=yNBtUOb_7pvNzwYr
11			Mathematical characteristics of simple chemical reactions zero order	https://youtu.be/thcDIUcaSwA?si=2YAGLqaz65V0XH6Q
11			First' order	https://youtu.be/mjiU6fgBN_Y?si=pXpnPk1XKAH4TNHs
12			Second order	https://youtu.be/clznNBkgEuw?si=l97wTznq6DliPG3h
12			pseudo order	https://youtu.be/w6tvHI4bNdE?si=iVa3xeWcJRhGcJov
12			half life and mean life	https://youtu.be/iUxtNzVfJh8?si=sNCFLBbPKBp5leAo
12			method of determination of the order of reaction differential method	https://youtu.be/xSwF0nKBhHc?si=tzQ7z8KXtrE87KyY
12			method of half life period and isolation method	https://youtu.be/C2NDPtg9e8E?si=f3wqHNRpctqX1hU
12			radioactive decay as a first order phenomenon	https://youtu.be/bP9TIba_vJ0?si=LHHUCXH3xvnmka

12			experiment method of chemical kinetics (Conductimetric, potentiometric, optical methods and spectrophotometric method)	https://youtube.com/watch?v=k0NFQ9BLYIM&feature=shared
12			theories of chemical kinetics	https://youtu.be/MnHgpLG63WU?si=KEeRLYsYUht5sYxA
12			effect of temperature on rate of reaction arrhenius equation	https://youtu.be/Y1A7LKA60Rw?si=zTsEBwVPv_J4Esat
12			concept of activation energy	https://youtu.be/fA0i4n_LQQ?si=tW4UOOuWxh8cxX47
13			simple collision theory based on hard sphere model	https://youtu.be/6wi1iz_Ja4s?si=80-mfp-GzVTaC3iS
13			expression for the rate constant based on equilibrium constant and thermodynamic aspects	https://youtu.be/DpjU1qsR1Yg?si=kVDURmxkR9INAuZV

**RK VIGYAN PG COLLEGE KALWAR,
JAIPUR, RAJ.**

SEMESTER – I

B.Sc. I YEAR MATHEMATICS

S.N.	Paper & Name	Unit	TOPIC	Video Link
1.	PAPER –1 DISCRETE MATHEMATICS & LPP	UNIT – I	Set introduction	https://youtu.be/b_VYv12q-RY?si=bS_-4FVt_NFCcRpv
2.			Set introduction	https://www.youtube.com/live/fiV0uWu1UxU?si=_28vV7MQOrwjh3WI
3.			Relation on a set	https://www.youtube.com/live/xKMm6mzx3Tk?si=8QkLPgnAUIJgD65X
4.			Equivalence class	https://youtu.be/zqJ0_eqiRcs?si=ZigcLUrPNQU7kKsx
5.			Partial order relation	https://youtu.be/qC2reWAo2mc?si=gIscNRBtm2nmbZv7
6.			Chains and antichains	https://youtu.be/cZqJiZrOyb8?si=QFQs7qv3Hpn6ig-R
7.			Lattices	https://youtu.be/i1i_tAk61R8?si=WbsjVGG3DDMihKZz
8.			Distributive lattices	https://youtu.be/S-CeW_w3mlQ?si=EFo4Kt4E0pZTaoNz

9.			Complemented lattices	https://youtu.be/iDJjxMW3oGI?si=smlLThisyc4WWBi-
10.			Boolean algebra – 1	https://youtu.be/HJ31R-ZWIMo?si=zwcptti6gLfn4SDz
11.			Boolean algebra – 2	https://youtu.be/rRRi_Yp_8o?si=7U9cXtTB1JPsEQ95
12.			Boolean algebra – 3	https://youtu.be/eGC0iTBuQfM?si=PU6dniZZazRX2vu9
13.			CNF and DNF	https://youtu.be/m0di3A0JN0w?si=QS2eTn661PUjh232
14.			Pigeon hole principle	https://www.youtube.com/live/F1gg2twbsQE?si=z9W4C_kKZE8js6nY
15.			Principle of inclusion and exclusive – 1	https://youtu.be/u1UBv5q6G44?si=Ou89Rk6WKLx0x37I
16.			Principle of inclusion and exclusive – 2	https://youtu.be/LX0t6U81-MU?si=A8v6UPwHKxtaDqvT
17.			Propositional calculus	https://youtube.com/playlist?list=PLEjRWorvdxL6xpvIHb-cN8VrRi2B2bzj2&si=6vory_t2a4SARane
18.			Basic logical operations	https://youtu.be/dvOyzYIMu-8?si=dBpKR_GBWjvyyPr
19.			Truth tables	https://youtu.be/Q4pQA58ee14?si=E7Nkw92HOEGUV0Sk

20.			Tautologies and contradictions	https://youtu.be/H2PeXcqpXA0?si=Oe17ztw8SPNrxAsu
21.		UNIT – 2	Discrete numeric function and generating function	https://youtu.be/nvH7kVIyEw4?si=AIWMI3oItN-XOM2G
22.			Linear recurrence relation and their solution	https://youtu.be/Pf-EpOPqTSw?si=bQ_mZkPBb2cH49Ur
23.			Solution of recurrence relation	https://youtu.be/0qytXOZsb9g?si=AdJ_WvirO7ZFZIVm
24.			Generating function	https://youtu.be/Y7HidL_LmhA?si=nYpaLnDiEeoDTmlS
25.			Basic concept of graph theory	https://youtu.be/LAPqOO0yMmk?si=ivng1liLyKfTlwfY
26.			Types of graphs – 1	https://youtu.be/t6aB856YIq4?si=26fVaqZ2TdJENJRL
27.			Types of graphs – 2	https://youtu.be/Txr-0Ay14sI?si=QPi2ZxnBHQ8f6Bzn
28.			Types of graphs – 3	https://youtu.be/nOga6kt9n3A?si=AouuLaFuqKsNcxb8
29.			Walk path circuit	https://youtu.be/8_G7Hg7CoNs?si=gMJ-ld2QFKHNncG3
30.			Shortest path problem	https://youtu.be/4UMlxaAFGSA?si=oRNyI7vzt5xnDclH
31.		UNIT – 3	Planar graphs	https://youtu.be/Z4eT4W1FS6A?si=Qm6TUd7OLS6e3xPI

32.			Operations on graphs – 1	https://youtu.be/snCBhlwBzcM?si=DiaoBRbfmVu7r-xK
33.			Operations on graphs – 2	https://youtu.be/o5U2CHsoSsq?si=0J7u9y-7rSAPbpa
34.			Product of two graphs	https://youtu.be/61E9qAMiqn8?si=wq0BFgSnZEO4Vgtr
35.			Adjacency matrix	https://youtu.be/lkzWJBI5Vgs?si=76aptnIKFWscvEqk
36.			Incidence matrix	https://youtu.be/17erhldpZ8E?si=R6VO8bKINUeLAPBC
37.			Hamiltonian and Eulerian graphs	https://youtu.be/tuitCMLwPAE?si=wKRxejPtDWdNgpTa
38.			Tree	https://youtu.be/XH7Jub1PRuw?si=ctGYGiWv2oKknpCe
39.			Spanning tree	https://youtu.be/zLanI-T3qAE?si=7AUtinQcNhy3j3MN
40.			Minimum spanning tree	https://youtu.be/ToACXUBwouc?si=Z-yliZyK2w1-LjUk
41.			Distance , center of tree	https://youtu.be/MgUjkQkBRH0?si=h6EzHUzsuOEIUKxI
42.			Binary tree	https://youtu.be/0iGsOdnPNag?si=-CZMslbupYkgLBvC
43.			Rooted tree	https://youtu.be/QUzo6a_iE3s?si=aTR7Uv48kQtkAuJa

44.		UNIT – 4	Linear programming problem	https://youtu.be/kQMdWM5dpSU?si=i4uZoo4vboa7YDF1
45.			Basic solution	https://youtu.be/4FOsZbGsev0?si=JUN8F6asLhdGHazQ
46.			Convex set	https://youtu.be/tOOgv5iBk3Q?si=Uy_bi9e1BeptDcnc
47.			Simplex method – 1	https://youtu.be/gcC9nZ3gnzM?si=aizMU_98fpZQBOjV
48.			Simplex method – 2	https://youtu.be/ytwnrs6pj-4?si=1NK9qjctcyHVubvN
49.			Simplex method – 3	https://youtu.be/wBMwK1eF4M8?si=2zd7e3v4GxIVkoya
50.			Examples of simplex method	https://youtu.be/M8POtpPtQZc?si=wC5ciP6FpAdxi-4x
51.			Duality	https://youtu.be/H0sBZdjuego?si=fcEmjfsDYCNoDtUJ
52.			Transportation problem – 1	https://youtu.be/tvNNKorAWog?si=nDb-H2ZrraggKhsi
53.			Transportation problem – 2	https://youtu.be/kiDZjlSSIFw?si=A55zNQkAIV6Y0Eus
54.			Transportation problem – 3	https://youtu.be/GE52LzWhzsM?si=t8jBPfByo49dF2UL
55.			Assignment problem	https://youtu.be/I3CNzKUFINY?si=-bmh1IHphVVVczwy

RK VIGYAN PG COLLEGE KALWAR,
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SEMESTER – I

B.Sc. I YEAR ZOOLOGY

S.N.	Paper & Name	Unit	TOPIC	Video Link
1.	PAPER – 1 Animals Diversity	Section – A Lower invertebrates	protozoa characters & classification	https://youtu.be/_zOL3gnNS_4?feature=shared
2.			protozoa locomotion types – 01	https://youtu.be/WXO4Se0FfGk?feature=shared
3.			protozoa locomotion types – 02	https://youtu.be/CMfSI1sq-mc?feature=shared
4.			protozoa locomotion types – 03	https://youtu.be/TWvsTcGr_NA?feature=shared
5.			porifera classification & characters	https://youtu.be/JKp9XowD9U0?feature=shared
6.			canal system in porifera – 01	https://youtu.be/VaMuRVgbXS0?feature=shared
7.			canal system in porifera – 02	https://youtu.be/eDDEk8O09GY?feature=shared
8.			coelenterata characters & classification	https://youtu.be/rrnJJxE0y1U?feature=shared
9.			polymorphism in coelenterates	https://youtu.be/4znSWx_352Q?feature=shared

10.			platyhelminthes characters	https://youtu.be/IHFaJlO8nCl?feature=shared
11.			Platyhelminthes Classification	https://youtu.be/AbJkZ-SagaE?feature=shared
12.			life cycle in taenia solium	https://youtu.be/gFklfsUawb4?feature=shared
13.			section a parasitic adaption in helminthes	https://youtu.be/UEpzqJskFK8?feature=shared
14.			nemathelminthes characters & classification	https://youtu.be/PELIg8VFRyg?feature=shared
15.			helminthes its parasitic adptions	https://youtu.be/orkOvy_TcZU?feature=shared
16.			life cycle in ascaris	https://youtu.be/ltcclGafBvM?feature=shared
17.			life cycle of ascarislumbricoides	https://youtu.be/613rkuxRFn0?feature=shared
18.		Section – B Higher invertebrates	annelida characters & classification	https://youtu.be/BCbl6nA411I?feature=shared
19.			metamerism in annelida	https://youtu.be/0KyOLFCJrf0?feature=shared
20.			metamerism in annelida	https://youtu.be/0KyOLFCJrf0?feature=shared
21.			arthropoda characters & classification	https://youtu.be/uwlg-wkkD7g?feature=shared

22.			larval forms in arthropoda	https://youtu.be/PZjpeGGOz04?feature=shared
23.			metamorphosis in insects	https://youtu.be/rPXjliagKIM?feature=shared
24.			mollusca characters & classification	https://youtu.be/v7qGKU5YYyQ?feature=shared
25.			mollusca torsion & detorsion in gastropoda	https://youtu.be/AWnMGHsFcM4?feature=shared
26.			pearl formation	https://youtu.be/ya75cqiUz8s?feature=shared
27.			echinodermata general characteristics	https://youtu.be/YWr2aOBmMUI?feature=shared
28.			echinodermata classification	https://youtu.be/m9LcBGjw5ok?feature=shared
29.			water vascular system in asteroidean	https://youtu.be/vk8e6jJ2pT4?feature=shared
30.		Section – C Lower vertebrates	protochordata general characteristics & classification	https://youtu.be/KjpWVpYAgWA?feature=shared
31.			retrogressive metamorphosis	https://youtu.be/aZAk2m1Plc?feature=shared
32.			amphibia characters	https://youtu.be/GxoipIVrc-8?feature=shared
33.			ammocoete larva	https://youtu.be/5DniiLd2KI?feature=shared

34.			cyclostomes up to classes	https://youtu.be/f5JHnEkMzqo?feature=shared
35.			pisces characters & classification	https://youtu.be/304Q7e7bKp8?feature=shared
36.			parental care in fishes	https://youtu.be/xdAqmaHE67Q?feature=shared
37.			migration in fishes	https://youtu.be/dfAlgv1KTQM?feature=shared
38.			scales & fin in fishes	https://youtu.be/oY40wUHdSNc?feature=shared
39.			osmoregulation in fishes	https://youtu.be/_ePex17vdAM?feature=shared
40.		Section – D Higher vertebrates	amphibia characters & classification	https://youtu.be/xRkZvrG85Zl?feature=shared
41.			Neotany	https://youtu.be/p0Pgg3rNmTk?feature=shared
42.			parental care in amphibian	https://youtu.be/dszdE_TVvRA?feature=shared
43.			reptilia characters	https://youtu.be/CvtestBD6HA?feature=shared
44.			reptilia characters & classification	https://youtu.be/r7U_g6dHosq?feature=shared
45.			identification poisonous & non poisonous snakes	https://youtu.be/vtl8_75CCuo?feature=shared

46.			biting mechanism in snakes	https://youtu.be/cm3N1JNVcDM?feature=shared
47.			aves characters & classification	https://youtu.be/JcqfHrMGm-U?feature=shared
48.			aves flight adaptions	https://youtu.be/C-8RqWVwcNo?feature=shared
49.			migration in aves	https://youtu.be/TrcA6oK014k?feature=shared
50.			mammals general charcters & classification	https://youtu.be/9pUQWCDsBfI?feature=shared
51.			dentition in mammals	https://youtu.be/-OF2_E-aPas?feature=shared
52.			adaptive radiation in mammals	https://youtu.be/3wm5FdpFE5w?feature=shared

**RK VIGYAN PG COLLEGE KALWAR,
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SEMESTER – I

B.Sc. I YEAR BOTANY

S.N.	Paper & Name	Unit	TOPIC	Video Link
1.	PAPER – 1 Diversity of Plant Kingdom	UNIT – 1	General character's of algae	https://youtu.be/8ui0zEuOjas?si=cWQ1pVEuXZi6D0cq
2.			Classification of algae by Fritsch	https://youtu.be/M6mMh5Kj3k4?si=fPSJX1HB9wPd9tOJ
3.			Range of thallus Structure	https://youtu.be/AiKdrroOKhM?si=dPzz1J7u93vvvRj6
4.			Vegetative reproduction in algae	https://youtu.be/j6Gz9PcUx88?si=-B3N-WeK2nyC1rO
5.			Asexual reproduction in algae	https://youtu.be/yjLkOoRnBvE?si=7RQF_DIOKDiy1HZ3
6.			Sexual reproduction in algae	https://youtu.be/ITpYv_2tJKE?si=mgJqzLMmHjjapf17
7.			Types of the life cycle	https://youtu.be/oAkKxYOH1EY?si=O554N4n2WQcwhcwM
8.			Algae Nostoc	https://youtu.be/kjuJiT5dc7k?si=hBz9qzMjEHetrmCA
9.			Economic importance of algae	https://youtu.be/viuZtoyYt9o?si=WK5Vk12k-i6BMbfW

10.			Chara	https://youtu.be/gdkYQwF593A?si=zDI9X7bSQwuCSr84
11.			MCQ question of algae	https://youtu.be/FMw_zRINXes?si=06gDGL6_yU55CPb3
12.			Polysiphonia	https://youtu.be/bcxaVlxRuqA?si=XJIS3-1AIokOXumv
13.		Fungi	General character's	https://youtu.be/zQOqWZ_BAQY?si=XiOPHDy1sXShEEWg
14.			Reproduction in fungi	https://youtu.be/adrIPfPQ0Dk?si=N97buNEeRNS-gIJv
15.			Fungi rhizopus	https://youtu.be/6u4p3qELzXs?si=-JPvH7K45xEoIxQH
16.			Thallus organization	https://youtu.be/UUnJ4ePRpW0?si=7USwyhc1khNTJXcx
17.			Nutrition in fungi	https://youtu.be/8YW1KtMO5K8?si=fy9B9U5N8sMCdKQ7
18.			Classification of fungi	https://youtu.be/NS3-8Pr835Y?si=fYBRuFSr3Q6YZ0fc
19.			Agaricus	https://youtu.be/8zJk2kgmxgQ?si=y95A4HfJLxmb9H3V
20.			Albugo	https://youtu.be/RMN1IWKmUNc?si=P2raS514b9xbT2CG
21.		Lichens	Lichens	https://youtu.be/ttJOyl_PCc0?si=ZYaGRIIT7OsN2qup

22.			General character's	https://youtu.be/kg1dCW_yO1w?si=VnrHTMwGERECZb3l
23.		UNIT – 2	General character's of bryophyta	https://youtu.be/02eCfyOvOSA?si=MHJEhdYTiFD2WpS8
24.			Special of bryophyta	https://youtu.be/zGsjI5tec3o?si=DYuOtmtnX4uxYUcc
25.			Thallus organization in bryophyta	https://youtu.be/rtiRqWxwsXs?si=QY083ZR3rPYZ4WBs
26.			Reproduction	https://youtu.be/hgffQvHnpj0?si=JvlyzaiTLAid42Ib
27.			Alternation of generations	https://youtu.be/IFA_QIfwT-A?si=hyaDxU0QAq5DkmXU
28.			Funaria sexual vegetative reproduction – 1	https://youtu.be/NQgtLanRgQ?si=5INZRkpKvxnjveNW
29.			Funaria sexual vegetative reproduction – 2	https://youtu.be/BkB8YLa-1gc?si=Q_4pTMLFVmBUS7dE
30.			Funaria sexual vegetative reproduction – 3	https://youtu.be/H9h0SCfzXzU?si=X5SKPoMCc9yI6sUc
31.			Funaria sexual vegetative reproduction – 4	https://youtu.be/rdt2HH_k8JU?si=h9oOT-MKme3-g2pV
32.			Funaria sexual vegetative reproduction – 5	https://youtu.be/QXX_NZBf1Zs?si=IXVYrI436_-PIXR4
33.			Marchantia	https://youtu.be/AQjiHWb7de4?si=WMJ7WQCbV_3oncq9

34.			Marchantia sexual reproduction	https://youtu.be/dpfmoCEsWOQ?si=NXtFfMYzAMXh51t3
35.			Marchantia vegetative reproduction	https://youtu.be/JBBstEhw6vU?si=NimdL1qiKRgK1mAC
36.			External internal features in marchantia – 1	https://youtu.be/6TjC0QACKpI?si=3AiJO4wJsUbj4iPk
37.			External internal features in marchantia – 2	https://youtu.be/X8BgvfMdkBc?si=Jv8rrn5w8Wg5jFd
38.		UNIT – 3 Pteridophytes	Reproduction in pteridophytes	https://youtu.be/twt5j_jleUs?si=H adq7KgJ11RnhhnL
39.			Internal structure of pteridophyta	https://youtu.be/VWozZHnyN90?si=8drBcM3Es9WBrvUt
40.			Selaginella reproduction	https://youtu.be/DbiIJDgBs_c?si=l PqLyMF0Blg2uH91
41.			Reproduction in selaginella	https://youtu.be/vzxrBgv-OvQ?si=QpxHhKNXjbZ58YZZ
42.			External morphology of selaginella	https://youtu.be/8lQRp053c-E?si=z0MLuO3rKRFFW4sI
43.			Economic importance of pteridophyta	https://youtu.be/-dwrH_qtM4A?si=-U11sfAxMWhoK2o8
44.			Stelar system of pteridophyta	https://youtu.be/Zv5PNjMQu4M?si=kWUIbN_7rtANECzC
45.			Heterospory and seed habit	https://youtu.be/nVZs2E_JfZA?si=-JBK7zbq4b4Lm1HL-

46.			Rhynia	https://youtu.be/OrKxDzhXuxw?si=SauBYEeKata4MIEW
47.			General character's	https://youtu.be/bfe0tMxmY5Y?si=SyZ5gZf8bCOMDGDn
48.			MCQ question	https://youtu.be/9WCSuSq9hOY?si=mMkSSNHIMxTrgzUT
49.			MCQ question	https://youtu.be/rcno25HEB8g?si=Fu2hErYmxC3cfha4
50.			MCQ question	https://youtu.be/9FqQYbKbILc?si=cuuKGWqpT1g7jWGe
51.		UNIT – 4 Gymnosperms	General character's	https://youtu.be/IB0MFsA-ffQ?si=qw3OPE5xUTBDFyfL
52.			Classification of gymnosperm	https://youtu.be/JQtxP6SDoT4?si=kPC4UbaATRIgJUGJ
53.			Cycas sexual reproduction	https://youtu.be/dmv5HIjCL2Q?si=ZJnRiFdr4-C-m0rq
54.			Internal structure cycas	https://youtu.be/kb_KmY5E1KI?si=HAzFphYrErCtWYdt
55.			Morphology cycas	https://youtu.be/5b-nfWDy4Aw?si=ELBb9ecATRgK9-oK
56.			Ephedra male female	https://youtu.be/cI_CxXEFC9s?si=CbOZOKBiYPt68t3Z
57.			External morphology ephedra	https://youtu.be/OzEsaSr63uk?si=rAu_2jXjQofZCl7h

58.			Ephedra general character's	https://youtu.be/meDt18aF14k?si=nGjmNTgimwf-RCgZ
59.			Economic importance of gymnosperm	https://youtu.be/YH3AORhVk4E?si=-Xv7K0zI_ZBo0OFS
60.			Economic importance of gymnosperm – 2	https://youtu.be/9IJ8KHRRpM0?si=JV5PrSyYQb6SM5SQ
61.			General character's of angiosperms	https://youtu.be/gI7wlAQWAP0?si=t_DYyYWQC7qeWbH2
62.			Monocotyledons and dicotyledons	https://youtu.be/rTCiVI3rPAM?si=xFv2jDN6P2LfsF-G
63.			Life cycle of angiosperms	https://youtu.be/A0qs_44k9pk?si=C2T7xh34S2CPaUbz

**RK VIGYAN PG COLLEGE KALWAR,
JAIPUR, RAJ.**

SEMESTER – I

B.A./B.Sc. I YEAR GEOGRAPHY

S.N.	Paper & Name	Unit	TOPIC	Video Link
1.	PAPER – 1 भौतिक भूगोल - I	UNIT – I	भौतिक भूगोल का अर्थ ,परिभाषा एवं विषय ,क्षेत्र	https://youtu.be/_lyRuwkq4jU
2.			बिग बैंग सिद्धांत – 1	https://youtu.be/8SgHQ8-255M?si=6vkEEJx9NUcelC2u
3.			बिग बैंग सिद्धांत – 2	https://youtu.be/JIJ0DTpinjk?si=xiZe6pDU1m7xzqQY
4.			ऑटो सीमट की अंतर तारक धूल परिकल्पना	https://youtu.be/bnF_ggnbuq0?si=HPj5DS3musBarQh
5.			प्रथ्वी का भूगर्भिक इतिहास	https://youtu.be/jklP6DGx79Q
6.			वेगनर का महाद्वीपीय विस्थापन / प्रवाह का सिद्धांत	https://youtu.be/R0gQeoKUe0s
7.			प्लेट विवर्तनिकी	https://youtu.be/N4QX6M8ueyA
8.		UNIT – II	पृथ्वी की आंतरिक जानकारी के स्रोत पृथ्वी की आंतरिक जानकारी	https://youtu.be/xdpk9gGCb2Y
9.			पृथ्वी की आंतरिक संरचना भूकंप पर आधारित	https://youtu.be/sCZ2y2ImkAk

10.			पृथ्वी की सतह पर परिवर्तनकारी आंतरिक और बाह्य शक्तियाँ अन्तर्जात बल और बहिर्जात बल	https://youtu.be/99JIVy1uV98
11.			वलन / FOLDING एवं वलन के प्रकार	https://youtu.be/MM7bjh22mHA
12.			भ्रंशन एवं भ्रंशन के प्रकार	https://youtu.be/PsFA4VqYEWM
13.			भू-संतुलन एयरी व प्रोट	https://youtu.be/FLkQ9zBf5sQ
14.			ज्वालामुखी परिभाषा व प्रकार	https://youtu.be/ZoA2-wGhkZs?si=bpC5t3vt5IHg-H4E
15.			ज्वालामुखी स्थलाकृतियाँ	https://youtu.be/ZcOflyII-CQ?si=FZL_tkUOY3nsGzZl
16.			ज्वालामुखी वितरण	https://youtu.be/PRbq3rzQ4O4?si=YMv8uSiTo1m8WRiE
17.			भूकंप	https://youtu.be/SGeyVGEV-s8?si=tlQNYZIDZjdDX7Pc
18.			भूकंपीय छाया क्षेत्र	https://youtu.be/JgFoi1Wd9R0?si=LipXG_AwOJHP_Hiu
19.			भूकंप का वितरण	https://youtu.be/_L3UmKVwxsU?si=xKCjDg7msNwOYXgN
20.		UNIT – III	पर्वत निर्माण के सिद्धांत - कोबर और प्लेट थियरी	https://youtu.be/nToIjy_ZAyk
21.			पर्वत निर्माण होम्स का संवन तरंग सिद्धांत	https://youtu.be/nbqkaWow1Mc

22.			चट्टान / चट्टानों के प्रकार	https://youtu.be/ysK_0dON6gg
23.			अनाच्छादन, अपक्षय और अपरदन	https://youtu.be/RxJnmv-gSpY
24.			डेविस का अपरदन चक्र सिद्धांत	https://youtu.be/ReEPPSNNjVQ
25.			पैंक का भूदृश्य विकास सिद्धांत (अपरदन चक्र सिद्धांत)	https://youtu.be/i7u8Gb2SNUk
26.			अपवाह तंत्र + प्रतिरूप	https://youtu.be/oExXoXwHqio?si=iP-RICwie1lhptWV
27.		UNIT - IV	नदी अपरदन से निर्मित स्थलाकृतियां	https://youtu.be/Im2s6Nbli5U
28.			पवन अपरदन और स्थलाकृतियां	https://youtu.be/mc7Tferk-VQ
29.			चुनापत्थर (कार्स्ट) स्थलाकृतियाँ	https://youtu.be/nwcDeghO4Hk
30.			हिमनद के कार्य (स्थलाकृतियां)	https://youtu.be/dfWpWOp7tDI
31.			समुंद्री तरंग के कार्य	https://youtu.be/h9qkacLt7dQ