

V.S.B. ENGINEERING COLLEGE, KARUR

(An autonomous Institution)

DEPARTMENT OF CHEMISTRY

ACADEMIC YEAR 2024-25 (ODD SEMESTER)

23CYT101 ENGINEERING CHEMISTRY (R 2023)

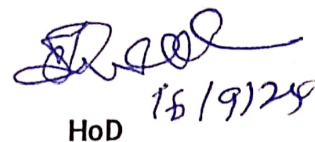
UNIT WISE CONCEPT EXPLAINING ANIMATION/SHORT VIDEOS (TOPICS WITH LINK)

S.NO.	TOPICS	LINKS
Unit-I Universal Solvent (Water) and Corrosion		
1.	Municipal water treatment	https://www.youtube.com/watch?v=KMP9-49I1U4
2.	Reverse osmosis	https://www.youtube.com/watch?v=4RDA_B_dRQ0
3.	Ion-exchange process	https://www.youtube.com/watch?v=ctIHNf1s6RM
4.	Electrochemical corrosion	https://youtu.be/KdYWfaUS4uA?si=jinx6jzV-n_1CG2m
5.	Corrosion inhibitors	https://youtu.be/ziGcS_W62Pk?si=pF1Ko5auBI6J1nKs
Unit-II Surface Chemistry and Phase Rule		
1.	Adsorption of gases on solids	https://youtu.be/BQ5N-T7paXE?si=BrM2NnfS06jeL3rX
2.	Langmuir' s adsorption isotherm	https://youtu.be/ahmTDioeBoE?si=NAEEGsU674xVi4VT
3.	Enzyme catalysis	https://youtu.be/yk14d0OvwMk?si=5hUtVP8wwDzs1R7j
4.	Pattinson' s process	https://www.youtube.com/watch?v=xCogXwsqsY8
5.	Thermal analysis	https://youtu.be/qIFdQNXjJ7k?si=R8gl0hoVNW-2JJOE
Unit-III Alloys and Polymers		
1.	Heat treatment of steel	https://youtu.be/HRZpwNpopEg?si=YFdYjugG5xTEfEBU
2.	Non-ferrous alloys – Brass & Bronze	https://youtu.be/n1shlO6TUho?si=ju4_a-0xZWpolwG9
3.	Thermoplastic & Thermosetting Polymers	https://youtu.be/qEHWjJa380I?si=N_n9jpIXBKEIWZ8J
4.	Free radical polymerization	https://youtu.be/HpPHN7fcLHI?si=7AhGFPKnDaZkv2ww
Unit-IV Batteries and Energy Sources		
1.	Types of batteries	https://youtu.be/m-WX4ulLv44?si=kKe78T0PYfpmn5yh
2.	H ₂ -O ₂ fuel-cell	https://www.youtube.com/watch?v=a4pXAmIjdUA
3.	Microbial fuel-cell	https://www.youtube.com/watch?v=bEClalnLmRw
4.	Super capacitors	https://youtu.be/WUZqgAtKMJg?si=jDL6KTJf6tE6szq1
Unit-V Analytical Chemistry and Shock Wave		
1.	Ultimate analysis of coal	https://youtu.be/0K4aKIZC84w?si=wZ-ZPbGO90YgXISs

2.	Types of errors	https://youtu.be/pXAITjP3w_8?si=L7kYvnoS7dsvvJyy
3.	Description of a shock wave and its applications	https://youtu.be/-DiyLIT0BeI?si=3Ae8kFa-BhCw0ouB
4.	Reddy shock tube	https://youtu.be/S88WAZvrY_M?si=RM2UKpuuSzCdNR0W



SIGNATURE OF THE FACULTY MEMBER



HoD



V.S.B. ENGINEERING COLLEGE, KARUR-639 111
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DEPARTMENT OF PHYSICS

23PHT101- ENGINEERING PHYSICS

Academic Year: 2024-2025 -ODD Semester

Unit-wise Concept explaining Animation/ Short Videos (Topic with link)

S.NO	TOPIC NAME	LINK
<u>UNIT-I MECHANICS</u>		
1.	Centre of mass	https://youtu.be/ikyXZEp78?si=h9Kbus47l6HQQQuJ6
2.	Moment of Inertia	https://youtu.be/lwO0V5FitAo?si=Ctmu4CgtjsvAQ8Xy
3.	Gyroscope	https://youtu.be/V6XSsNAWg00?si=TesBy40fg_2dn409
4.	Torsional Pendulum	https://drive.google.com/file/d/1oynrPVhMeGU1xlUtmDiab1KGkklxnk90/view?usp=sharing
5.	Non Linear oscillations	https://www.slideserve.com/iden/nonlinear-oscillations
<u>UNIT-II ELECTRO MAGNETIC WAVES</u>		
6.	Maxwell's Equation	https://youtu.be/K40INL3KsJ4?si=Cqulaob5Obl2rmpy
7.	Plane electromagnetic wave equation in vacuum	https://youtu.be/nEVIWCEIDIA?si=MiZX8mkQRAGQ5Xdg
8.	Polarization	https://www.britannica.com/science/polarization-physics
9.	Energy and momentum in EM waves	https://youtu.be/EPrW3n7WX6U?si=cNnqLsJEM4AilWQ-
10.	Cell Phone reception	https://youtu.be/1JZG9x_VOwA?si=OOruilWTgRSCLu_f
<u>UNIT-III OSCILLATIONS, OPTICS AND LASERS</u>		
11.	Simple harmonic motion	https://youtu.be/jxstE6A_CYQ?si=IcrSIFxHraqeSuZ3
12.	Doppler effect	https://youtu.be/h4OnBYrbCjY?si=hEJWIwZ3BsbHmXz
13.	Air wedge	https://drive.google.com/file/d/1eWs4A8F_mwfnJt0HqP1MAuYSDaJJbNd9/view?usp=sharing
14.	Einstein's Theory	https://drive.google.com/file/d/1VdWBAwAHO2esqi0eY3GumlPmVm3Xhe8g/view?usp=sharing
15.	Principle of laser action	https://drive.google.com/file/d/1E00j58pJoHMSn2Pxsvvq89O4PyZlJke9/view?usp=sharing
<u>UNIT-IV BASIC QUANTUM PHYSICS</u>		
16.	Photon and Light waves	https://youtu.be/Y-E_ONz9JE8?si=1m8cKoI2KMjCBfq3
17.	Electron and Matter waves	https://www.youtube.com/watch?v=bhyq9drJ0a8
18.	Schroedinger wave equation	https://www.youtube.com/watch?v=bhyq9drJ0a8
19.	Compton Effect	https://drive.google.com/file/d/1LkTZ37vfqHcbE1Cy3AbKMHiojvcCTu1A/view?usp=sharing
20.	Particle in a one dimensional potential box	https://drive.google.com/file/d/1k-oppGi7apjz0UJLflt8iMAvWsAWGCN/view?usp=sharing
21.	Correspondence principle	https://youtu.be/1Pd9iyD26i8?si=DorB8b6McpSqMUMW
<u>UNIT-V APPLIED QUANTUM PHYSICS</u>		
22.	The harmonic oscillator	https://youtu.be/kLWXLbciobw?si=snxEnvXqD5Qb7YpH
23.	Scanning Tunnelling Microscope	https://youtu.be/MPQK0E31L8Q?si=ddNVnFSLsBVEQA21
24.	Kronig penney model	https://youtu.be/itOlhNe5KHU?si=opyeMBpzj87iwFHR
25.	Resonant Tunelling Diode	https://rcet.org.in/uploads/academics/regulation2021/rohini_98345770665.pdf
26.	Blocks Theorem	https://www.youtube.com/watch?v=Bj2rNT5fa9s

Signature of the Faculty

HOD

V.S.B. ENGINEERING COLLEGE, KARUR
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DEPARTMENT OF MATHEMATICS
23MAT101– MATRICES AND CALCULUS

S.No	Unit	Topic	Link
1.	I	Eigen value and Eigen vectors	https://www.youtube.com/watch?v=8F0gdO643Tc&v1=en
2.		QF to CF Reduction through orthogonal transformation	https://www.youtube.com/watch?v=zbaLfkXCQNw
3.	II	Differential Calculus	https://www.youtube.com/watch?v=YFwDVViULiA
4.		Maxima and Minima	https://www.youtube.com/watch?v=UfPEtBrNjA0
5.	III	Partial Derivative	https://www.youtube.com/watch?v=AXqhWeUEtQU
6.		Maxima and Minima	https://www.youtube.com/watch?v=hby7wFjcMTk
7.	IV	Define integrals	https://www.youtube.com/watch?v=cRWxioj-aVs
8.		Indefinite Integral	https://www.youtube.com/watch?v=o75AqTInKDU
9.	V	Double Integrals	https://www.youtube.com/watch?v=db7d_a0wiUg
10.		Volume integrals	https://www.youtube.com/watch?v=OEulPUmEGAw

Signature of the faculty

HOD

Professional English-I

Sl.No	Topic	Link
<u>1</u>	<u>Verbal Communications</u>	<u>Communications</u> https://nptel.ac.in/courses/109104031/2 https://nptel.ac.in/courses/109104031/3 https://nptel.ac.in/courses/109104031/4
<u>2</u>	<u>Non verbal communications</u>	https://nptel.ac.in/courses/109104031/5 https://nptel.ac.in/courses/109104031/6 https://nptel.ac.in/courses/109104031/7 https://nptel.ac.in/courses/109104031/8 https://nptel.ac.in/courses/109104031/9
<u>3</u>	<u>Listening skills</u>	https://nptel.ac.in/courses/109104031/10 https://nptel.ac.in/courses/109104031/11 https://nptel.ac.in/courses/109104031/12
<u>4</u>	<u>Business letter writing</u>	https://nptel.ac.in/courses/109104031/13 https://nptel.ac.in/courses/109104031/14 https://nptel.ac.in/courses/109104031/15 https://nptel.ac.in/courses/109104031/16
<u>5</u>	<u>Report writing</u>	https://nptel.ac.in/courses/109104031/17 https://nptel.ac.in/courses/109104031/18

Programming in C

Sl.No	Topic	Link
1	C basics	https://nptel.ac.in/courses/117106113/1 https://nptel.ac.in/courses/117106113/2
2	control statements	https://nptel.ac.in/courses/117106113/3 https://nptel.ac.in/courses/117106113/4
3	scripting	https://nptel.ac.in/courses/117106113/34 https://nptel.ac.in/courses/117106113/39
4.	data structures	https://nptel.ac.in/courses/117106113/41 https://nptel.ac.in/courses/117106113/40
5	files	https://nptel.ac.in/courses/117106113/35 https://nptel.ac.in/courses/115107095/11

