

SUBJECT: TH:4(a)- REFRIGERATION AND AIR CONDITIONING				SEMESTER: 4th			BRANCH: MECHANICAL ENGINEERING		
LECTURE NO.	CO	BT L	TOPIC TO BE COVERED	BOOK NAME. /CHAPT. NO./PAGE NO.	WEB REFERENCE IF ANY	TEACHING LEARNING METHOD	PLAN DATE	ACTION DATE	REVIEW BY HOD
1	1	2	Introduction to Refrigeration: Definition of Refrigeration	R.S KHURMI & J.K GUPTA PAGE NO-38	https://www.youtube.com/shorts/snihMOXq_8l?feature=share	1- Introduction to Msc&E-5 min 2- Prerequisites for M sc &E - PPT/Smart board-10 min 3-Syllabus & CO discussion-10 min 4-Lecturer-35 min	05-01-2026		
2	1	2	Refrigerating effect-unit of refrigeration- Coefficient of performance	R.S KHURMI & J.K GUPTA PAGE NO-39	https://youtu.be/M_S76alxyiQ	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	06-01-2026		
3	1	2	Types of Refrigeration- Ice, dry ice, Steam jet,	R.S KHURMI & J.K GUPTA PAGE NO-41	https://youtu.be/M6JwN-295Pk	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	07-01-2026		
4	1	2	Throttling, Liquid nitrogen refrigeration	R.S KHURMI & J.K GUPTA PAGE NO-42	https://youtu.be/eM-Mis2YBEg	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	08-01-2026		
5	1	2	Carnot refrigeration Cycle; ;	R.S KHURMI & J.K GUPTA PAGE NO-126	https://www.youtube.com/shorts/TiilkRdu2xc?feature=share	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	19-01-2026		

6	1	2	Air refrigeration- Bell - Coleman cycle	R.S KHURMI&J.K GUPTA PAGE NO-128	https://youtu.be/yNmUQalljyw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	10-01-2026		
7	1	2	Simple problems on finding number of atoms for a unit cell.	R.S KHURMI&J.K GUPTA PAGE NO-134	https://youtu.be/cWopMScKEt8	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	12-01-2026		
8	1	2	PV& TS diagram; Advantage and disadvantages in air refrigeration;	R.S KHURMI&J.K GUPTA PAGE NO-137	https://youtu.be/2VCZR3KRgr0	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-4-Doubts & Assignment-10 min	13-01-2026		
9	1	2	PV& TS diagram; Advantage and disadvantages in air refrigeration;	R.S KHURMI&J.K GUPTA PAGE NO-146	https://youtu.be/gV2Np_ulm7A	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	15-01-2026		
10	1	2	Simple problems	R.S KHURMI&J.K GUPTA PAGE NO-147	https://youtu.be/vJm2Hqv14-U	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	16-01-2026		
11	2	2	Refrigeration systems: Basic Components, Flow diagram of working of Vapour compression cycle;	R.S KHURMI&J.K GUPTA PAGE NO-349	https://youtu.be/1IPT7flvka0	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	17-01-2026		
12	2	2	Representation of the vapour compression cycle on P-H, T-S & P-V Diagram	R.S KHURMI&J.K GUPTA PAGE NO-350	https://youtu.be/vUyXiJFckOE	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 4-Doubts & Assignment-10 min	19-01-2026		
13	2	2	Expression for Refrigerating effect, work done and power required	R.S KHURMI&J.K GUPTA PAGE NO-351	https://youtu.be/oclgDmwEfZY?list=PLdolhVhbPQV4IU0Qzm9DZSS3n48RoZS1E	1-Previous class topic Review-5 min 2-Lecturer-45 3-Doubts & Assignment-10 min	20-01-2026		
14	2	2	Types of Vapour Compression cycle; Effects of super heating and under cooling,	R.S KHURMI&J.K GUPTA PAGE NO-274	https://youtu.be/P_YlwtY1984	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	21-01-2026		

15	2	2	its advantages and disadvantages	R.S KHURMI&J.K GUPTA PAGE NO-275	https://youtu.be/m9BMjfnMSGI	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer- 4-Doubts & Assignment-10 min	22-01-2026		
16	2	2	Simple Vapour absorptions cycle and its flow diagram	R.S KHURMI&J.K GUPTA PAGE NO-278	https://youtu.be/lx4c7JVacLw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	24-01-2026		
17	2	2	Simple Electrolux system for domestic units;	R.S KHURMI&J.K GUPTA PAGE NO-279	https://youtu.be/U9cB7JksNCI	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	27-01-2026		
18	2	2	Comparison of Vapour absorption and vapour compression system	R.S KHURMI&J.K GUPTA PAGE NO-318	https://youtu.be/l8KFjWdK00s	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	28-01-2026		
19	2	2	Simple problems on vapour compression cycle.	R.S KHURMI&J.K GUPTA PAGE NO-348	https://youtu.be/l8KFjWdK00s	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts & Assignment-10 min	29-01-2026		
20	3	2	Simple problems on vapour compression cycle.	R.S KHURMI&J.K GUPTA PAGE NO- 350	https://youtu.be/_Vp6pelYo3s	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer- 4-Doubts & Assignment-10 min	30-01-2026		
21	3	2	Refrigeration equipment	R.S KHURMI&J.K GUPTA PAGE NO-347	https://youtu.be/mZSa80Y3cYo	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	31-01-2026		
22	3	2	Compressor - types of compressors;	R.S KHURMI&J.K GUPTA PAGE NO-358	https://youtu.be/MY9vCFI3KyA?list=PLdolhVhbPQV6DraAc5sSehftAaQ2d1oOf	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	02-02-2026		

23	3	2	Hermetically sealed and Semi hermetically sealed compressor	R.S KHURMI&J.K GUPTA PAGE NO-359	https://youtu.be/ANEI7KA05EU	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	03-03-2026		
24	3	2	Condensers - Air Cooled, water cooled	R.S KHURMI&J.K GUPTA PAGE NO-360	https://youtu.be/L-xAz1ZeCEA	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	04-02-2026		
25	3	2	natural and forced draught cooling system	R.S KHURMI&J.K GUPTA PAGE NO-371	https://youtu.be/1y_KN6chqpg	1-Previous class topic Review-5 min 2-Lecturer-3-Doubts & Assignment-10 min	05-02-2026		
26	3	2	Advantages and disadvantages of air cooled and water cooled condensers	R.S KHURMI&J.K GUPTA PAGE NO-377	https://www.youtube.com/shorts/LG49uZwigZI?feature=share	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	06-02-2026		
27	3	2	Evaporators -natural, convection	R.S KHURMI&J.K GUPTA PAGE NO-382	https://youtu.be/h53MdQmEs7o	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	07-02-2026		
28	3	2	Evaporators -natural, convection, forced convection types.	R.S KHURMI&J.K GUPTA PAGE NO-383,384,385	https://www.youtube.com/shorts/e0zE6UGADl8?feature=share	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	08-02-2026		
29	4	2	Refrigerant flow controls	R.S KHURMI&J.K GUPTA PAGE NO-295,306	https://youtu.be/iW_Kyz0nWkw	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	09-02-2026		
30	4	2	Capillary tube; Automatic Expansion valve	R.S KHURMI&J.K GUPTA PAGE NO-399	https://youtu.be/HqH1MSWakgo	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	10-02-2026		
31	4	2	Thermo- static expansion valve;	R.S KHURMI&J.K GUPTA PAGE NO-399	https://youtu.be/T6B5vikNnaY	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-4-Doubts & Assignment-10 min	11-02-2026		

32	4	2	High side and low side float valve	R.S KHURMI&J.K GUPTA PAGE NO-401	https://youtu.be/UZUD33gwwBA	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	12-02-2026		
33	4	2	Solenoid valve; Evaporator pressure regulator.	R.S KHURMI&J.K GUPTA PAGE NO-402	https://youtu.be/oSLOHCow3yg	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	13-02-2026		
34	4	2	Application of refrigeration: Slow and quick freezing;	R.S KHURMI&J.K GUPTA PAGE NO-294	https://youtu.be/2i5IERg2v38	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	14-02-2026		
35	4	2	Cold storage and Frozen storage; Dairy refrigeration;	R.S KHURMI&J.K GUPTA PAGE NO-295	https://youtu.be/b0MtkeHACsl	1-Previous class topic Review-5 min 2-Lecturer-3-Doubts & Assignment-10 min	16-02-2026		
36	4	2	Ice making industry Water coolers.	R.S KHURMI&J.K GUPTA PAGE NO-	https://youtu.be/ipXOXw7qKX0	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-4-Doubts & Assignment-10 min	17-02-2026		
37	4	2	Air conditioning: Introduction to Air conditioning	R.S KHURMI&J.K GUPTA PAGE NO-311	https://youtu.be/x_clffG5s4	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	18-02-2026		
38	5	2	Factors affecting Air conditioning;	R.S KHURMI&J.K GUPTA PAGE NO-306	https://youtu.be/1bUSJUVKICY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	19-02-2026		
39	5	2	Psychometric chart and its use; Psychometric process-sensible heating and cooling, Humidifying and dehumidifying	R.S KHURMI&J.K GUPTA PAGE NO-309	https://youtu.be/gwEJ71ezY94	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	20-02-2026		
40	5	2	Adiabatic saturation process; Equipment used in air conditioning cycle	R.S KHURMI&J.K GUPTA PAGE NO-303	https://youtu.be/vTcOE0xWYyQ	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	21-02-2026		

41	5	2	Air conditioning units and plants.	R.S KHURMI&J.K GUPTA PAGE NO-304	https://youtu.be/zAEocwW1NVI	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	23-02-2026		
42	5	2	Refrigeration and Air-conditioning tools	R.S KHURMI&J.K GUPTA PAGE NO-740	https://youtu.be/2n7LHucal8M	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	24-02-2026		
43	5	2	Tools used in refrigeration and Air conditioner installation;	R.S KHURMI&J.K GUPTA PAGE NO-738	https://youtu.be/OGWyyvL48WME	1-Previous class topic Review-5 min 2-Lecturer-3-Doubts & Assignment-10 min	25-02-2026		
44	5	2	Installation procedure; Faults in refrigeration and air conditioning system;	R.S KHURMI&J.K GUPTA PAGE NO-731	https://youtu.be/7NwxMyqUyJw	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts & Assignment-10 min	26-02-2026		
45	5	2	Faults in refrigeration and air conditioning system; Servicing procedure.	R.S KHURMI&J.K GUPTA PAGE NO-38	https://www.youtube.com/shorts/snihMOXq_8l?feature=share	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts & Assignment-10 min	27-02-2026		

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