Waves and Thermodynamics

VIDEO LECTURE INDEX / 8 CHAPTERS

08	289	91:20:43
CHAPTERS	LECTURES	TOTAL VIDEO TIME

Calculated from all 289 listed lecture durations; the workbook overview states 91 hours 10 minutes.

CHAPTER 01 | Thermometry, Thermal Expansion and Calorimetry

#	CH. #	LECTURE / TOPIC	DURATION
1	1	Waves_Ch1_1_Zeroth Law of Thermodynamics and Scales of Temperature	00:12:20
2	2	Waves_Ch1_2_Scales of Temperature	00:22:44
3	3	Waves_Ch1_3_Thermal Expansion p1	00:11:37
4	4	Waves_Ch1_4_Thermal Expansion p2	00:20:15
5	5	Waves_Ch1_5_Thermal Expansion p3	00:23:24
6	6	Waves_Ch1_6_Thermal Expansionp4	00:20:47
7	7	Waves_Ch1_7_Bi-metalic strip	00:14:21
8	8	Waves_Ch1_8_Expansion of Cavity	00:19:12
9	9	Waves_Ch1_9_ Effect of Temperature on the Time Period of a Simple Pendulum	00:19:59
10	10	Waves_Ch1_10_Thermal Stress in Rigidly Fixed Rod	00:13:29
11	11	Waves_Ch1_11_Thermal Stress in Rigidly Fixed Rod Illustrations	00:14:41
12	12	Waves_Ch1_12_Thermal Stress in Rigidly Fixed Rod Illustrations	00:17:57
13	13	Waves_Ch1_13_Apparent Expansion in Liquid	00:26:56
14	14	Waves_Ch1_14_Variation of Density and Upthrust	00:26:28

CHAPTER 01 | Thermometry, Thermal Expansion and Calorimetry · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
15	15	Waves_Ch1_15_Variation of Density and Upthrust illustrations	00:20:34
16	16	Waves_Ch1_16_Anamolus behaviour of Water	00:07:20
17	17	Waves_Ch1_17_Calorimetry	00:23:29
18	18	Waves_Ch1_18_Calorimetry	00:25:59
19	19	Waves_Ch1_19_Water Equivalent	00:08:58
20	20	Waves_Ch1_20_Phase Change and Latent Heat	00:18:24
21	21	Waves_Ch1_21_Heating Curve	00:19:42
22	22	Waves_Ch1_22_Heating Curve Illustrations	00:24:23
SOLVED EXAMPLES			
23	23	Waves_Ch1_1_Thermometry Thermal Expansion and Calorimetry illustration	00:11:05
24	24	Waves_Ch1_2_Linear Expansion, superficial Expansion and Volumetric Expansion illustrations	00:15:49
25	25	Waves_Ch1_3_Calorimetry illustration	00:10:44
26	26	Waves_Ch1_4_Calorimetry illustration	00:14:58
27	27	Waves_Ch1_5_Linear Expansion illustration	00:13:05
28	28	Waves_Ch1_6_Fluid Mechanics and Thermal Expansion illustration	00:18:00
29	29	Waves_Ch1_7_Fluid Mechanics and Thermal Expansion illustration	00:11:12
30	30	Waves_Ch1_8_Calorimetry illustration	00:14:18
31	31	Waves_Ch1_9_Thermal Stress illustration	00:12:28
32	32	Waves_Ch1_10_Mechanics and Calorimetry	00:05:37
33	33	Waves_Ch1_11_Rotational Dynamics and Thermal Expansion illustration	00:08:25

CHAPTER 01 | Thermometry, Thermal Expansion and Calorimetry · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
34	34	Waves_Ch1_12_Fluid Mechanics and Thermal Expansion illustration	00:10:15
35	35	Waves_Ch1_13_Calorimetry illustration	00:15:27
		CHAPTER 01 TOTAL · 35 lectures	**09:34:22**

CHAPTER 02 | Transfer of the Heat

#	CH. #	LECTURE / TOPIC	DURATION
36	1	Waves_Ch2_1_Mode of Heat Transfer and Thermal Conductivity	00:16:35
37	2	Waves_Ch2_2_Thermal Conductivity	00:27:03
38	3	Waves_Ch2_3_Thermal conductivity illustrations	00:17:25
39	4	Waves_Ch2_4_Electrical Analogy of Heat Conduction	00:30:56
40	5	Waves_Ch2_5_Electrical Analogy of Heat Conduction illustrations	00:21:09
41	6	Waves_Ch2_6_Electrical Analogy of Heat Conduction illustrations	00:26:02
42	7	Waves_Ch2_7_Growth of Ice on Lake	00:12:33
43	8	Waves_Ch2_8_Searle's Experiment	00:09:56
44	9	Waves_Ch2_9_Radiation	00:19:30
45	10	Waves_Ch2_10_Perfect black body	00:12:19
46	11	Waves_Ch2_11_Emissive power and absorptive power emissivity	00:35:08
47	12	Waves_Ch2_12_Prevost theory of heat exchange	00:08:05
48	13	Waves_Ch2_13_Kirchoffs law of Radiation	00:11:58

CHAPTER 02 | Transfer of the Heat · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
49	14	Waves_Ch2_14_Stefan Boltzmann Law	00:12:34
50	15	Waves_Ch2_15_Kirchoffs law and Stefan Boltzmann law illustrations	00:15:54
51	16	Waves_Ch2_16_Kirchoffs law and Stefan Boltzmann law illustrations	00:25:44
52	17	Waves_Ch2_17_Newton Law of Cooling	00:30:17
53	18	Waves_Ch2_18_Newton law of Cooling illustrations	00:25:44
54	19	Waves_Ch2_19_Distribution of energy in the spectrum of Black body	00:11:18
55	20	Waves_Ch2_20_Wein's Displacement Law Illustrations	00:31:01
56	21	Waves_Ch2_21_Solar Constant & Temperature of the sun	00:22:37
SOLVED EXAMPLES			
57	22	Waves_Ch2_1_Thermal conductivity and Radiation illustration	00:06:05
58	23	Waves_Ch2_2_Thermal conductivity illustration	00:09:25
59	24	Waves_Ch2_3_Thermal conductivity & Calorimetry illustration	00:09:51
60	25	Waves_Ch2_4_Stefan's Law & Calorimetry illustration	00:11:13
61	26	Waves_Ch2_5_Newton's Law of Cooling & Calorimetry illustration	00:13:59
62	27	Waves_Ch2_6_Newton's Law of Cooling & Calorimetry	00:17:18
63	28	Waves_Ch2_7_Thermal conductivity & Stefan's Law	00:08:26
		CHAPTER 02 TOTAL · 28 lectures	08:20:05

CHAPTER 03 | Kinetic Theory of Gases

#	CH. #	LECTURE / TOPIC	DURATION
64	1	Waves_Ch3_1_Assumptions of Ideal Gas and Ideal Gas Equation	00:26:50
65	2	Waves_Ch3_2_Assumptions of Ideal Gas and Ideal Gas Equation illustrations	00:12:22
66	3	Waves_Ch3_3_Pressure of an Ideal Gas	00:34:49
67	4	Waves_Ch3_4_Pressure of an Ideal Gas illustrations	00:20:19
68	5	Waves_Ch3_5_Derivation of Gas Law from Kinetic Theory of Gases	00:20:50
69	6	Waves_Ch3_6_Maxwell's Distribution of Molecular speeds	00:14:29
70	7	Waves_Ch3_7_Maxwell's Distribution of Molecular speeds Illustration	00:07:51
71	8	Waves_Ch3_8_Kinetic Energy of an Ideal Gas	00:14:20
72	9	Waves_Ch3_9_Kinetic Energy of an Ideal Gas illustrations	00:18:35
73	10	Waves_Ch3_10_Degree of Freedom and Law of Equipartition of Energy	00:15:21
74	11	Waves_Ch3_11_Law of Equipartition of Energy	00:38:11
75	12	Waves_Ch3_12_Different Processes of Ideal Gas	00:21:44
76	13	Waves_Ch3_13_Different Processes Ideal Gas Illustration p1	00:24:18
77	14	Waves_Ch3_14_Different Processes Ideal Gas Illustration p2	00:40:12
78	15	Waves_Ch3_15_Different Processes Ideal Gas Illustration p1	00:34:41
79	16	Waves_Ch3_16_Different Processes Ideal Gas Illustration p2	00:29:19
SOLVED EXAMPLES			
80	17	Waves_Ch3_1_R.M. S Velocity and Internal Energy of Ideal Gas illustration	00:11:01
81	18	Waves_Ch3_2_Finding Collision Rate and Internal Energy of Ideal Gas illustration	00:11:48
82	19	Waves_Ch3_3_Gas Laws illustration	00:09:41

WAVES AND THERMODYNAMICS

CHAPTER 03 | Kinetic Theory of Gases · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
83	20	Waves_Ch3_4_Graphical Representation of Different Processes in Ideal Gas illustration	00:17:25
84	21	Waves_Ch3_5_Finding Maximum-Minimum Pressure in a Process illustration	00:09:36
85	22	Waves_Ch3_6_Aaplication of an Ideal Gas Equation illustration	00:10:52
86	23	Waves_Ch3_7_Force Exerted on a Surface Due to Moving Gas Molecules illustration	00:11:47
87	24	Waves_Ch3_8_Application of an Ideal Gas Equation illustration	00:11:15
88	25	Waves_Ch3_9_Application of an Ideal Gas Equation illustration	00:12:03
89	26	Waves_Ch3_10_Application of an Ideal Gas Equation illustration	00:11:16
90	27	Waves_Ch3_11_Application of an Ideal Gas Equation illustration	00:12:50
91	28	Waves_Ch3_12_Application of an Ideal Gas Equation illustration	00:14:17
92	29	Waves_Ch3_13_Application of an Ideal Gas Equation and Internal Energy illustration	00:11:34
		CHAPTER 03 TOTAL · 29 lectures	**08:49:36**

CHAPTER 04 | Thermodynamics

#	CH. #	LECTURE / TOPIC	DURATION
93	1	Waves_Ch4_1_Thermodynamics system process and variables	00:22:22
94	2	Waves_Ch4_2_Work done in a Thermodynamic Process	00:27:03
95	3	Waves_Ch4_3_Work done in a Thermodynamic Process Illustrations	00:29:13
96	4	Waves_Ch4_4_First Law of Thermodynamics	00:16:13
97	5	Waves_Ch4_5_First Law of Thermodynamics Illustrations	00:20:52

WAVES AND THERMODYNAMICS

CHAPTER 04 | Thermodynamics · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
98	6	Waves_Ch4_6_First Law of Thermodynamics Illustrations p2	00:24:37
99	7	Waves_Ch4_7_Molar specific Heat of Gases p1	00:28:06
100	8	Waves_Ch4_8_Molar specific Heat of Gases p2	00:21:17
101	9	Waves_Ch4_9_Molar specific Heat of Gases Illustrations	00:24:37
102	10	Waves_Ch4_10_Molar specific Heat of Gases Illustrations	00:24:20
103	11	Waves_Ch4_11_Molar specific Heat of Gases Illustrations	00:20:05
104	12	Waves_Ch4_12_Gaseous Mixture	00:18:13
105	13	Waves_Ch4_13_Different Processes in First Law of Thermodynamics	00:30:19
106	14	Waves_Ch4_14_Different Processes in First Law of Thermodynamics Illustrations	00:15:36
107	15	Waves_Ch4_15_Adiabatic Process p1	00:23:59
108	16	Waves_Ch4_16_Adiabatic Process p2	00:18:35
109	17	Waves_Ch4_17_Adiabatic Process Illustrations	00:38:48
110	18	Waves_Ch4_18_Free Expansion	00:12:58
111	19	Waves_Ch4_19_Polytropic Process	00:22:40
112	20	Waves_Ch4_20_Polytropic Process Illustrations	00:33:25
113	21	Waves_Ch4_21_Cyclic and Non-Cyclic Process	00:13:48
114	22	Waves_Ch4_22_Cyclic and Non-Cyclic Processes illustrations	00:16:52
115	23	Waves_Ch4_23_Cyclic and Non-Cyclic Processes illustrations	00:20:26
116	24	Waves_Ch4_24_Cyclic and Non-Cyclic Processes illustrations	00:30:53
117	25	Waves_Ch4_25_Reversible and Irreversible	00:13:34

CHAPTER 04 | Thermodynamics · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
118	26	Waves_Ch4_26_Heat Engine	00:21:47
119	27	Waves_Ch4_27_Second Law of Thermodynamics	00:08:01
120	28	Waves_Ch4_28_Carnot Engine	00:24:53
121	29	Waves_Ch4_29_Carnot Engine illustrations	00:19:31
122	30	Waves_Ch4_30_Refrigerator or Heat Pump	00:15:41
123	31	Waves_Ch4_31_Refrigerator or Heat Pump Illustrations	00:11:22
SOLVED EXAMPLES			
124	32	Waves_Ch4_1_Application of the First Law of Thermodynamics in Cyclic Process	00:15:04
125	33	Waves_Ch4_2_Application of the First Law of Thermodynamics in Cyclic Process	00:05:58
126	34	Waves_Ch4_2_Application of the First Law of Thermodynamics in Cyclic Process	00:04:52
127	35	Waves_Ch4_4_Application of the First Law of Thermodynamics in Adiabatic Process	00:04:14
128	36	Waves_Ch4_5_Application of the First Law of Thermodynamics in Adiabatic Process	00:09:09
129	37	Waves_Ch4_6_Application of the First Law of Thermodynamics in Adiabatic Process	00:08:07
130	38	Waves_Ch4_7_Application of the First Law of Thermodynamics in Adiabatic Process	00:09:19
131	39	Waves_Ch4_8_Application of the First Law of Thermodynamics in Different Situations	00:09:04
132	40	Waves_Ch4_9_Application of the First Law of Thermodynamics in Different Situations	00:16:03
133	41	Waves_Ch4_10_Application of the First Law of Thermodynamics in Different Situations	00:10:50
134	42	Waves_Ch4_11_Application of the First Law of Thermodynamics in Different Situations	00:09:21
135	43	Waves_Ch4_12_Application of the First Law of Thermodynamics in Different Situations	00:09:56
136	44	Waves_Ch4_13_Application of the First Law of Thermodynamics in Different Situations	00:11:28

CHAPTER 04 | Thermodynamics · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
137	45	Waves_Ch4_14_Application of the First Law of Thermodynamics in Different Situations	00:12:46
		CHAPTER 04 TOTAL · 45 lectures	**13:26:17**

CHAPTER 05 | Linear and Angular Simple Harmonic Motion

#	CH. #	LECTURE / TOPIC	DURATION
138	1	Waves_Ch5_1_Linear and Angular SHM-Periodic and Oscillatory Motion	00:33:17
139	2	Waves_Ch5_2_Equation of the Simple Harmonic Motion p1	00:15:28
140	3	Waves_Ch5_3_Equation of the Simple Harmonic Motion p2	00:21:03
141	4	Waves_Ch5_4_Equation of the Simple Harmonic Motion Illustrations p1	00:17:56
142	5	Waves_Ch5_5_Equation of the Simple Harmonic Motion Illustrations p2	00:21:03
143	6	Waves_Ch5_6_Velocity and Acceleration particle performing in SHM	00:17:47
144	7	Waves_Ch5_7_Velocity and Acceleration particle performing in SHM Illustration	00:12:37
145	8	Waves_Ch5_8_Analysing Simple harmonic Motion in circular Motion -Equation of SHM p1	00:34:37
146	9	Waves_Ch5_9_ Analysing Simple harmonic Motion and Writing Equations in Different Situations p2	00:28:28
147	10	Waves_Ch5_10_Concept of Phase Difference and Illustrations p1	00:16:00
148	11	Waves_Ch5_11_Phase Difference Illustrations p2	00:21:27
149	12	Waves_Ch5_12_Phase Difference Illustrations p3	00:20:46
150	13	Waves_Ch5_13_Phase Difference Illustrations p4	00:29:14
151	14	Waves_Ch5_14_Energy of a Body in SHM p1	00:18:16

CHAPTER 05 | Linear and Angular Simple Harmonic Motion · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
152	15	Waves_Ch5_15_Energy of a Body in SHM p2	00:27:16
153	16	Waves_Ch5_16_Energy of a Body in SHM Illustrations p1	00:20:20
154	17	Waves_Ch5_17_Energy of a Body in SHM Illustrations p2	00:19:42
155	18	Waves_Ch5_18_Finding Effective Force Constant (Keff) of SHM from given potential energy relation	00:30:27
156	19	Waves_Ch5_19_Spring-Mass System	00:35:22
157	20	Waves_Ch5_20_Oscillation in a Two Particle System	00:23:41
158	21	Waves_Ch5_21_Oscillation of a Two Particle System Illustrations	00:23:11
159	22	Waves_ch5_22_Calculation of (Keff) for a complicated Spring Mass System p1	00:17:50
160	23	Waves_ch5_23_Calculation of (Keff) for a complicated Spring Mass System p2	00:14:51
161	24	Waves_ch5_24_Calculation of (Keff) for a complicated Spring Mass System p3	00:17:58
162	25	Waves_ch5_25_Analysis of Angular SHM and Simple pendulum	00:28:05
163	26	Waves_ch5_26_Equivilant force constant (keq) for simple pendulum	00:23:00
164	27	Waves_ch5_27_Analysis of Angular SHM and Simple pendulum Illustrations	00:26:04
165	28	Waves_ch5_29_Pendulum of Large Length	00:14:44
166	29	Waves_ch5_30_Physical Pendulum (Compound Pendulum)	00:33:35
167	30	Waves_ch5_31_Torsional Pendulum	00:10:24
168	31	Waves_ch5_32_S.H.M in Case of Rotation and Rolling	00:20:44
169	32	Waves_ch5_33_S.H.M in Case of Rotation and Rolling Illustrations	00:25:57
170	33	Waves_ch5_34_Motion of an object in a tunnel through the earth	00:36:16
171	34	Waves_ch5_35_Oscillation of a body in liquid	00:12:35

CHAPTER 05 | Linear and Angular Simple Harmonic Motion · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
172	35	Waves_ch5_36_Superposition of two SHM in phaser diagram	00:18:17
SOLVED EXAMPLES			
173	36	Waves_Ch5_1_Solved Example Basic concept of S.H.M and finding equation of S.H.M	00:13:50
174	37	Waves_Ch5_2_Solved Example Mixed concept based on basic concept of S.H.M and laws of motion	00:10:04
175	38	Waves_Ch5_3_Solved Example Mixed concept based on basic concept of S.H.M and laws of motion	00:17:17
176	39	Waves_Ch5_4_Solved Example Mixed concept based on basic concept of S.H.M and laws of motion	00:12:22
177	40	Waves_Ch5_5_Solved Example Mixed concept based on basic concept of S.H.M and Circular Motion	00:12:08
178	41	Waves_Ch5_6_Solved Example Mixed concept based on basic concept of S.H.M,friction and torque	00:16:54
179	42	Waves_Ch5_7_Solved Example Mixed concept based on basic concept of S.H.M and Collision	00:13:19
180	43	Waves_Ch5_8_Solved Example Angular SHM	00:10:26
181	44	Waves_Ch5_9_Solved Example Mixed concept based on basic concept of angular SHM and Rolling	00:11:01
182	45	Waves_Ch5_10_Solved Example Mixed concept based on basic concept of angular SHM and Rolling	00:12:31
183	46	Waves_Ch5_11_Solved Example Mixed concept based on basic concept of angular SHM and Rolling	00:12:34
184	47	Waves_Ch5_12_Solved Example Mixed concept based on basic concept of S.H.M and Thermodynamics	00:14:27
185	48	Waves_Ch5_13_Solved Example Mixed concept based on basic concept of S.H.M and Thermodynamics	00:10:42
186	49	Waves_Ch5_14_Solved Example Mixed concept based on basic concept of S.H.M, Laws of motion and Fluid Mechanics	00:18:14
187	50	Waves_Ch5_15_Solved Example Mixed concept based on basic concept of S.H.M and Fluid Mechanics	00:19:30
188	51	Waves_Ch5_16_Solved Example Mixed concept based on basic concept of S.H.M and Fluid Mechanics	00:11:49
		CHAPTER 05 TOTAL · 51 lectures	16:45:26

CHAPTER 06 | Travelling Waves

#	CH. #	LECTURE / TOPIC	DURATION
189	1	Waves_Ch6_1_Wave Motion	00:06:18
190	2	Waves_Ch6_2_Wave Motion and Pulse	00:06:24
191	3	Waves_Ch6_3_Classification of Waves	00:28:25
192	4	Waves_Ch6_4_Classification of Waves	00:17:32
193	5	Waves_Ch6_5_Wave Parameters	00:20:15
194	6	Waves_Ch6_6_Wave Functions	00:17:16
195	7	Waves_Ch6_7_Wave Functions illustrations	00:24:42
196	8	Waves_Ch6_8_Differential Equation of Wave function	00:23:18
197	9	Waves_Ch6_9_Equation of a plane progressive wave	00:32:58
198	10	Waves_Ch6_10_Equation of a plane progressive wave	00:25:00
199	11	Waves_Ch6_11_Equation of a plane progressive wave	00:32:54
200	12	Waves_Ch6_12_Particle Velocity and Acceleration	00:28:21
201	13	Waves_Ch6_13_Particle Velocity and Acceleration illustrations	00:29:44
202	14	Waves_Ch6_14_Particle Velocity and Acceleration illustrations	00:12:17
203	15	Waves_Ch6_15_Particle Velocity and Acceleration illustration	00:25:19
204	16	Waves_Ch6_16_Speed of the waves of string	00:27:35
205	17	Waves_Ch6_17_Speed of the waves of string	00:26:16
206	18	Waves_Ch6_18_Power Transmitted along the String by a sine wave	00:16:10
207	19	Waves_Ch6_19_Power Transmitted along the String by a sine wave	00:13:51
208	20	Waves_Ch6_20_Power Transmitted along the String by a sine wave	00:19:15

CHAPTER 06 | Travelling Waves · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
SOLVED EXAMPLES			
209	21	Waves_Ch6_1_Solved Example Wave Velocity and particle velocity	00:11:09
210	22	Waves_Ch6_2_Solved Example Basics of Wave Motion	00:07:16
211	23	Waves_Ch6_3_Solved Example Writing Wave equation	00:08:38
212	24	Waves_Ch6_4_Solved Example Writing Wave equation	00:08:36
213	25	Waves_Ch6_5_Solved Example Writing Wave equation,wave velocity and particle Velocity	00:16:15
214	26	Waves_Ch6_6_Solved Example Writing Wave equation	00:15:07
215	27	Waves_Ch6_7_Solved Example Writing Wave equation	00:10:16
216	28	Waves_Ch6_8_Solved Example Writing Wave equation	00:14:38
217	29	Waves_Ch6_9_Solved Example Writing Wave equation	00:11:47
218	30	Waves_Ch6_10_Solved Example Writing Wave equation,wave velocity and particle Velocity	00:10:59
219	31	Waves_Ch6_11_Solved Example Writing Wave equation and Energy carried by wave	00:12:08
220	32	Waves_Ch6_12_Solved Example Writing Wave equation and Energy carried by wave	00:11:31
		CHAPTER 06 TOTAL · 32 lectures	09:32:10

CHAPTER 07 | Superposition and standing waves

#	CH. #	LECTURE / TOPIC	DURATION
221	1	Waves_Ch7_1_Principles of Superposition for waves p1	00:13:50
222	2	Waves_Ch7_2_Principles of Superposition for waves p2	00:31:24

CHAPTER 07 | Superposition and standing waves · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
223	3	Waves_Ch7_3_Interference of the wave p1	00:29:45
224	4	Waves_Ch7_4_Interference of the wave p2	00:15:40
225	5	Waves_Ch7_5_Interference of the wave Illustrations p1	00:21:40
226	6	Waves_Ch7_6_Interference of the wave Illustrations p2	00:32:40
227	7	Waves_Ch7_7_Quinke's tube	00:16:41
228	8	Waves_Ch7_8_Reflection and Transmission of the Wave p1	00:25:07
229	9	Waves_Ch7_9_Reflection and Transmission of the Wave p2	00:14:19
230	10	Waves_Ch7_10_Equation of Stationary wave and formation of nodes antinodes p1	00:40:24
231	11	Waves_Ch7_11_Equation of Stationary wave and formation of nodes antinodes p2	00:33:33
232	12	Waves_Ch7_12_Formation of stationary wave on strings p1	00:24:23
233	13	Waves_Ch7_13_Formation of stationary wave on strings illustration p2	00:36:43
234	14	Waves_Ch7_14_Resonance in string Oscillation	00:32:40
235	15	Waves_Ch7_15_Sonometer	00:26:57
236	16	Waves_Ch7_16_Vibaration of the composite strings p1	00:20:19
237	17	Waves_Ch7_17_Vibaration of the composite strings illustrations p2	00:34:47
238	18	Waves_Ch7_18_Formation of waves in organ pipes	00:37:20
239	19	Waves_Ch7_19_Formation of waves in organ pipes illustrations	00:28:38
240	20	Waves_Ch7_20_Formation of waves in organ pipes illustrations	00:26:10
241	21	Waves_Ch7_21_Kundnt's tube	00:27:54
242	22	Waves_Ch7_22_Resonance tube p1	00:19:50

CHAPTER 07 | Superposition and standing waves · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
243	23	Waves_Ch7_23_Resonance tube p2	00:25:05
244	24	Waves_Ch7_24_Vibration of Clamped Rod	00:34:40
245	25	Waves_Ch7_25_Beats	00:29:51
246	26	Waves_Ch7_26_Beats illustrations	00:35:56
SOLVED EXAMPLES			
247	27	Waves_Ch7_1_Solved example formation of stationary waves in strings	00:13:12
248	28	Waves_Ch7_2_Solved example Resonance in air column	00:13:29
249	29	Waves_Ch7_3_Solved example Beats	00:19:25
250	30	Waves_Ch7_4_Solved example formation of stationary waves in strings and Beats	00:12:19
251	31	Waves_Ch7_5_Solved example formation of stationary waves in Composite strings	00:14:18
252	32	Waves_Ch7_6_Solved example formation of stationary waves in organ pipe and Beats	00:12:13
253	33	Waves_Ch7_7_Solved example Formation of stationary waves in organ pipe and analyzing pressure variation in the organ pipe	00:17:40
254	34	Waves_Ch7_8_Solved example Formation of stationary waves in organ pipes	00:11:04
255	35	Waves_Ch7_9_Solved example Formation of stationary waves in organ pipes	00:13:19
256	36	Waves_Ch7_10_Solved example Formation of stationary waves in strings	00:10:07
257	37	Waves_Ch7_11_Solved example Formation of stationary waves in organ pipes and rod	00:14:52
258	38	Waves_Ch7_12_Solved example Stationary waves	00:17:17
259	39	Waves_Ch7_13_Solved example Formation of stationary waves in strings	00:12:34
260	40	Waves_Ch7_14_Solved example Finding energy of oscillation of a string	00:24:05
		CHAPTER 07 TOTAL · 40 lectures	15:22:10

WAVES AND THERMODYNAMICS

CHAPTER 08 | Sound waves and doppler effect

#	CH. #	LECTURE / TOPIC	DURATION
261	1	Waves_Ch8_1_Propagation of Sound Waves	00:24:07
262	2	Waves_Ch8_2_Velocity of sound longitudinal waves of solids	00:25:49
263	3	Waves_Ch8_3_Speed of Sound in Gaseous medium	00:36:24
264	4	Waves_Ch8_4_Speed of Sound in Gaseous medium illustrations	00:21:18
265	5	Waves_Ch8_5_Displacement wave, pressure wave and density wave p1	00:23:47
266	6	Waves_Ch8_6_Displacement wave, pressure wave and density wave p2	00:21:16
267	7	Waves_Ch8_6_Displacement wave, pressure wave and density wave p3	00:16:48
268	8	Waves_Ch8_8_Intensity of periodic sound p1	00:13:19
269	9	Waves_Ch8_9_Intensity of periodic sound p2	00:18:08
270	10	Waves_Ch8_10_Intensity of periodic sound p3	00:21:38
271	11	Waves_Ch8_11_Measurements of sound levels p1	00:19:30
272	12	Waves_Ch8_12_Measurements of sound levels p	00:31:17
273	13	Waves_Ch8_13_Doppler Effect	00:33:03
274	14	Waves_Ch8_14_Source and Observer both in Motion	00:24:57
275	15	Waves_Ch8_15_Doppler effect illustrations	00:29:11
276	16	Waves_Ch8_16_Doppler effect in reflected sound	00:32:07
277	17	Waves_Ch8_17_Doppler effect for accelerated motion	00:17:11
278	18	Waves_Ch8_18_Doppler effect when source and observer are not in same line of motion p1	00:22:56
279	19	Waves_Ch8_18_Doppler effect when source and observer are not in same line of motion p2	00:21:22

CHAPTER 08 | Sound waves and doppler effect · CONTINUED

#	CH. #	LECTURE / TOPIC	DURATION
SOLVED EXAMPLES			
280	20	Waves_ch8_1_Solved Example Organ pipes,pressure variation and density variation due to sound wave	00:15:54
281	21	Waves_ch8_2_Solved Example Sound Level	00:10:05
282	22	Waves_ch8_3_Solved Example Doppler effect and beats	00:10:57
283	23	Waves_ch8_4_Solved Example Doppler effect and S.H.M	00:13:05
284	24	Waves_ch8_5_Solved Example Doppler effect	00:07:02
285	25	Waves_ch8_6_Solved Example Doppler effect and SHM	00:16:27
286	26	Waves_ch8_7_Solved Example Doppler effect and Beats	00:09:27
287	27	Waves_ch8_8_Soved Example Doppler effect ,Sonometer and Beats	00:09:40
288	28	Waves_ch8_9_Solved Example Doppler effect	00:11:06
289	29	Waves_ch8_10_Solved Example Doppler effect	00:12:46
		CHAPTER 08 TOTAL · 29 lectures	**09:30:37**