

Discipline:
Mechanical
Subject:
Thermal Engg-II

Semester: 4th

No. of day /
Week class.

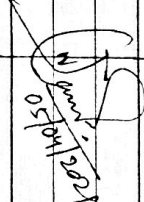
Name of the faculty:

Semester for 15

| Week | Class day | Theory Topics. |
|----------------------------|-----------|--|
| 5th Apr to 10th Apr | 1st | Introduction to I.C engine |
| | 2nd | Define mech. efficiency, mean eff. pressure. |
| | 3rd | Define Brake power, Indicated power & problem |
| | 4th | Define mechanical & Indicated thermal eff. |
| | 5th | Overall efficiency, Brake thermal efficiency |
| 12th Apr to 17th Apr | 1st | Specific fuel consumption, air fuel ratio, problem |
| | 2nd | Determine the efficiency |
| | 3rd | Maha Navratri Sankranti |
| | 4th | Introduction to air compressor |
| | 5th | Classify air compressor |
| 19th Apr to 24th Apr | 1st | Principle of operation. |
| | 2nd | Explain functions of compressor. |
| | 3rd | Ram - Navami |
| | 4th | Industrial use of compressor air |
| | 5th | Types of air compressor |
| 26th Apr to 1st May | 1st | Describe the parts of reciprocating air comp. |
| | 2nd | Principle of reciprocating air compressor. |
| | 3rd | Explain the terminology of RAC. |
| | 4th | Bore, strokes, Press. ratio free air delivered |
| | 5th | volumetric efficiency |
| 3rd May to 8th May | 1st | Derive the work done of single & 2 stage |
| | 2nd | compressor. Problems |
| | 3rd | Problems without clearance only |
| | 4th | Problems on above |
| | 5th | Properties of steam. |

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|------------------------|-------------|--|
| 10th May to 15th May | 1st and 2nd | Diff. Bet ⁿ gas & vapours Formation of steam Representation on P-V, T-s diagrams |
| 15th May to 21st May | 4th and 5th | Representation on P-V, T-s diagrams H-s, T-H diagrams T-d, U-I, P-h etc. |
| 17th May to 20th May | 1st and 2nd | Definition and properties of steam Use of steam tables & mollier chart for finding unknown, known plane & flow process of vapour. |
| 24th May to 29th May | 4th and 5th | P-V, T-s diagram explain. Determine the change in properties & solve simple problems. Introduction to steam generators. |
| 31st May to 1st June | 1st and 2nd | Classification & types of Boilers. Types of boiler & Comparison between fire tube and water tube boiler. |
| 1st June to 5th June | 1st and 2nd | Description & working of common boilers (cannon). |
| 5th June to 9th June | 3rd and 4th | Description & working principle of Lancashire boiler. Description & working principle of Babcock boiler. |
| 9th June to 11th June | 4th and 5th | Description & working of Wilcox boiler draught, forced. |
| 11th June to 13th June | 1st and 2nd | Boiler Draught (Natural & Balanced) |
| 13th June to 15th June | 2nd and 3rd | Boiler Draught, mounting. Introduction to steam power cycles. |

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|------------------------|-------------|--|
| 14th June to 19th June | 1st and 2nd | Cannot cycle with vapour. Raja Sankrant |
| 19th June to 21st June | 4th and 5th | Derive work & efficiency of the cycle Define reheat cycle Presentation in P-V, T-s diagram. |
| 21st June to 26th June | 1st and 2nd | Define Rankine cycle. Presentation in P-V, T-s diagram |
| 26th June to 30th June | 3rd and 4th | Derive work, efficiency, effect of various cond condition in the Rankine cycle Reheat & Regeneration cycle. Problem can't cycle & Rankine cycle. |
| 30th June to 1st July | 1st and 2nd | Define heat transfer, modes of heat transfer Radiation, Fourier law of heat conduction Thermal conduction, Newton's laws of cooling, Radiation, Stefan, Boltzman, Kirchhoff black body radiation. Definition of emissivity, absorptivity, transmissibility. |


 05/04/2021