## Unit Wise Real Time Applications/Live Examples

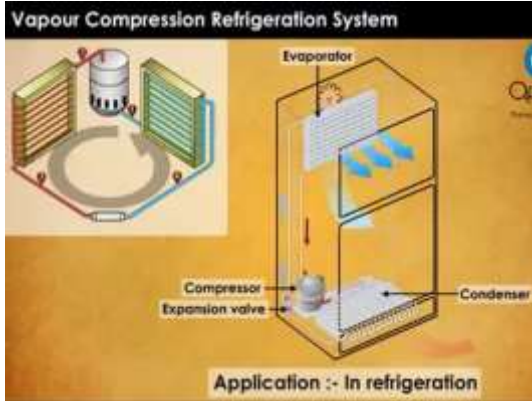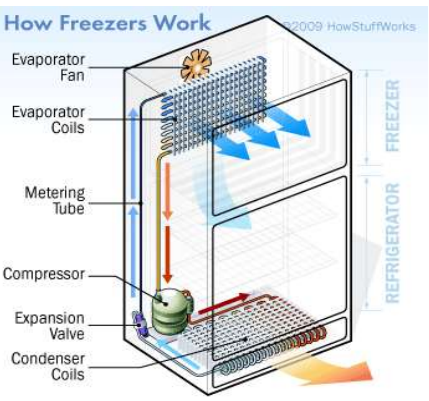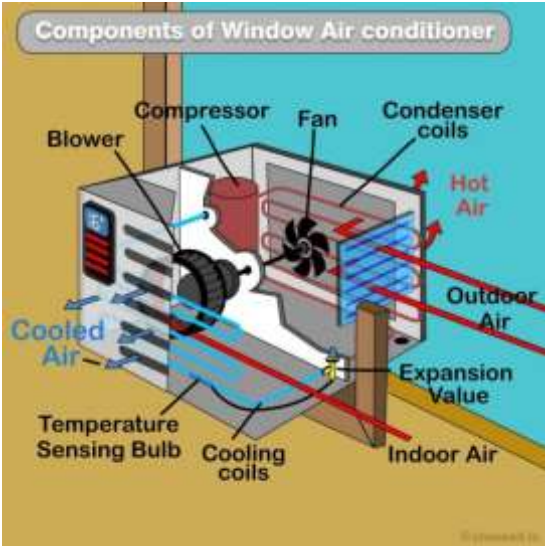**Department:** Mechanical        **Semester:** II        **Academic Year:** 2023–2024
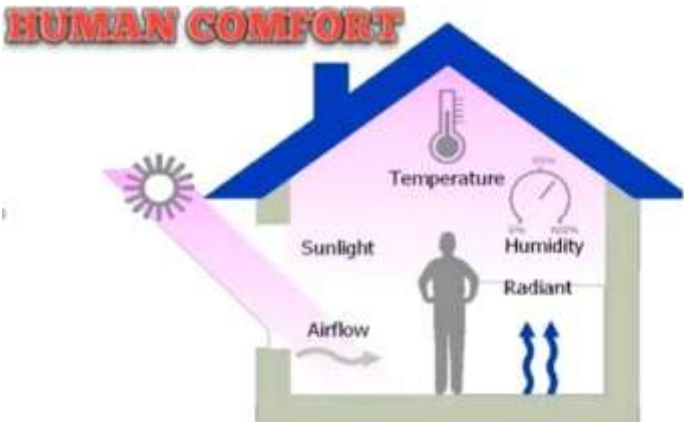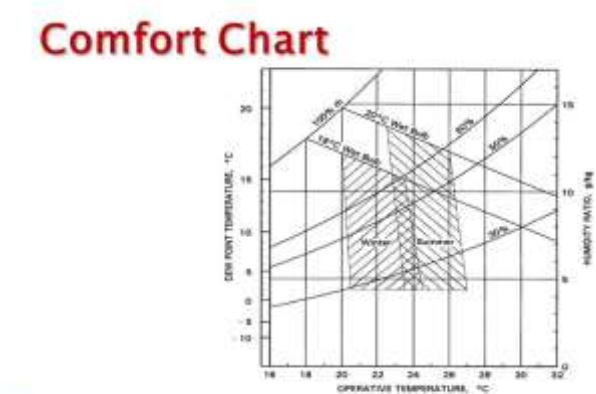
**Class: SE**        **Div.:**

**Course:** Applied Thermodynamics

| Unit No. -Name | Real life Applications |
|---|---|
| Unit I: | **1. Vapour compression cycle (VCC) – Household refrigerator**<br><br><br><br>**2. Vapour compression cycle (VCC) – Window air conditioner**<br><br> |

| Unit No. -Name | Real life Applications |
|---|---|
| | 3. **psychrometric chart human comfort**  Fig. 5  ASHRAE Summer and Winter Comfort Zones (Acceptable ranges of operative temperature and humidity for people in typical summer and winter clothing during primarily sedentary activity.) |

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## Unit Wise Real Time Applications/Live Examples

**Department:** Mechanical          **Semester:** II          **Academic Year:** 2023–2024

**Class:** SE                                **Div.: A**

**Course:** Applied Thermodynamics

| Unit No. -Name | Real life Applications |
|---|---|
| Unit II: | 4.   Cylinder head – Top of cylinder<br><br><br><br>5.   Cylinder – Piston reciprocate inside cylinder it withstands 70 bar pressure & 1400 $^0$C<br><br> |

| Unit No. -Name | Real life Applications |
|---|---|
| | 6. Piston – Transfer gas force to connecting road  7. Connecting rod – Transfer gas force to crank  |

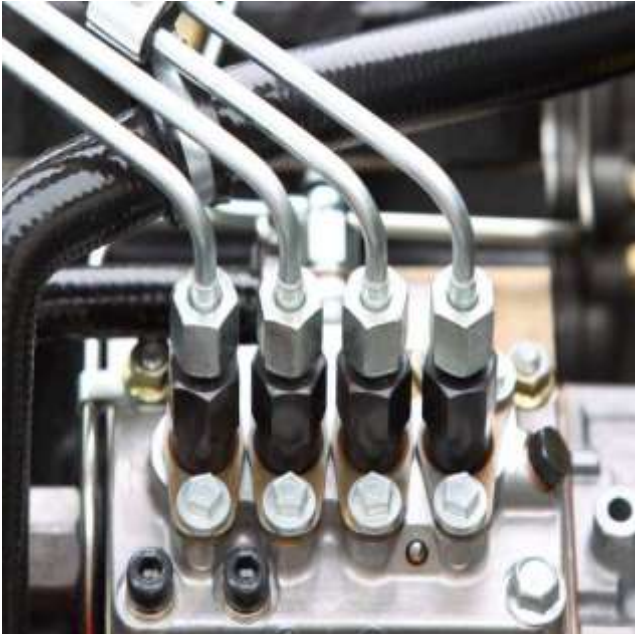| Unit No. -Name | Real life Applications |
|---|---|
| | 8. Oil Sump – Used to collect lubrication oil.<br><br><br><br>9. Crank shaft – crank convert reciprocating motion into rotary motion & transfer it output shaft (Crank shaft)<br><br> |

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## Unit Wise Real Time Applications/Live Examples

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**Class:** SE          **Div.:** A

**Course:** Applied Thermodynamics

| Unit No. -Name | Real life Applications |
|---|---|
| Unit II: | 10. Carburetor – Mostly used in two wheelers like BAJAJ pulsar, Unicorn, Honda Shine, Activa etc.<br>SU Carburetor – Bentley & Jaguar<br><br><br><br> |

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|---|---|---|

| Unit No. -Name | Real life Applications |
|---|---|
| | 11.  Multi point fuel injection – Used in SI Engine (Multicylinder)<br><br><br><br>12. Fuel Injection system – Used in CI Engine<br><br> |

| | | |
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|---|---|---|

| Unit No. -Name | Real life Applications |
|---|---|
| | 13. Combustion chamber – In order to create swirl foloowing type of combustion chambers are used in CI engine.<br><br> |

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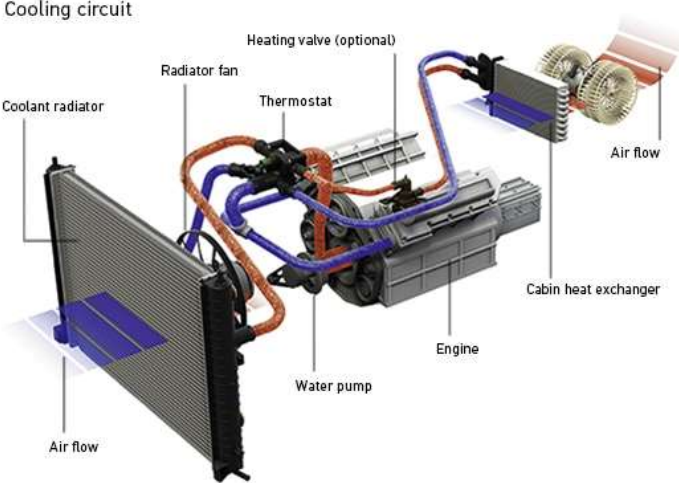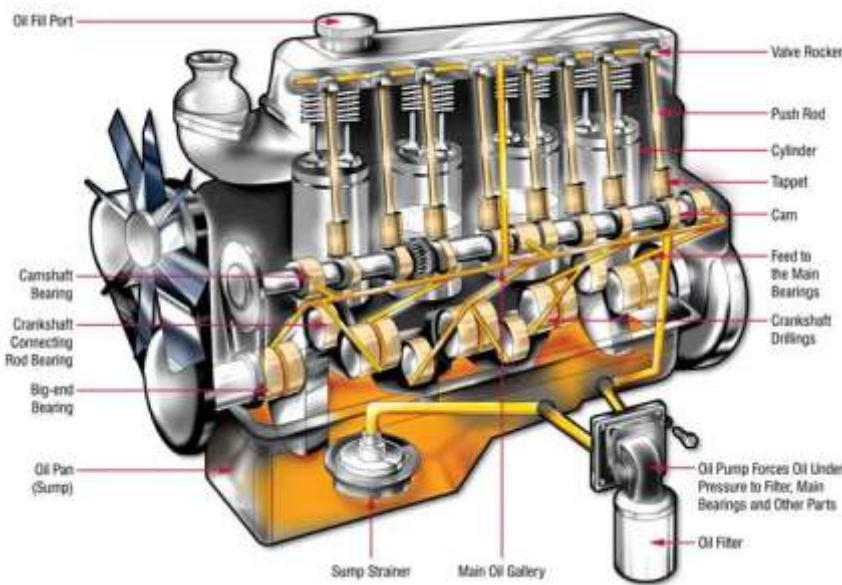**Department:** Mechanical          **Semester:** II          **Academic Year:** 2023–2024
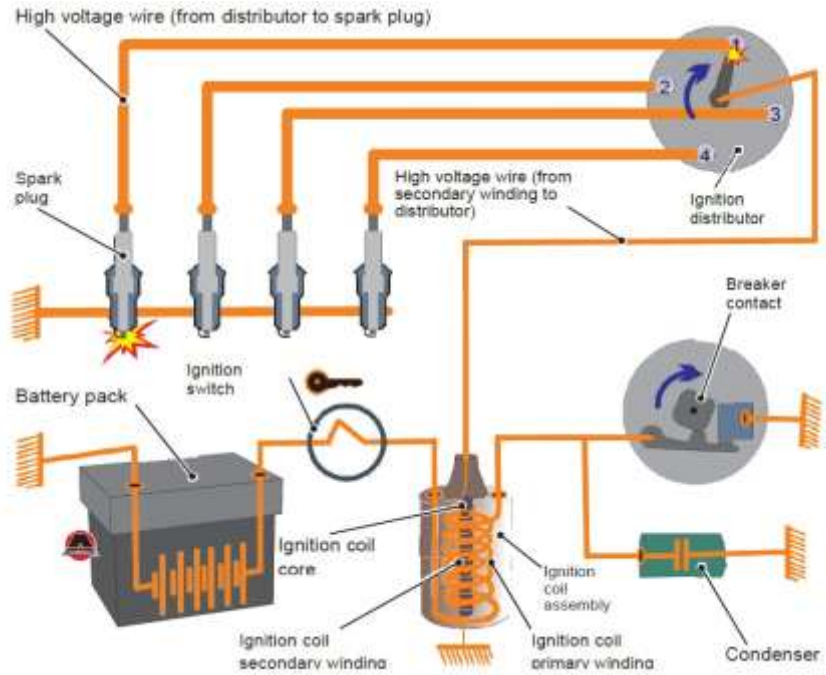
**Class:** SE                           **Div.:** A

**Course:** Applied Thermodynamics

| Unit No. - Name | Real life Applications |
|---|---|
| Unit IV: | 14. Engine Performance<br><br><br><br>15. Turbocharger & Supercharger<br><br> |

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| Unit No. - Name | Real life Applications |
| --- | --- |
| | <br><br>16. Exhaust gas analyzer<br><br><br><br> |

| Unit No. - Name | Real life Applications |
|---|---|
| | 17.Catalytic converter  |
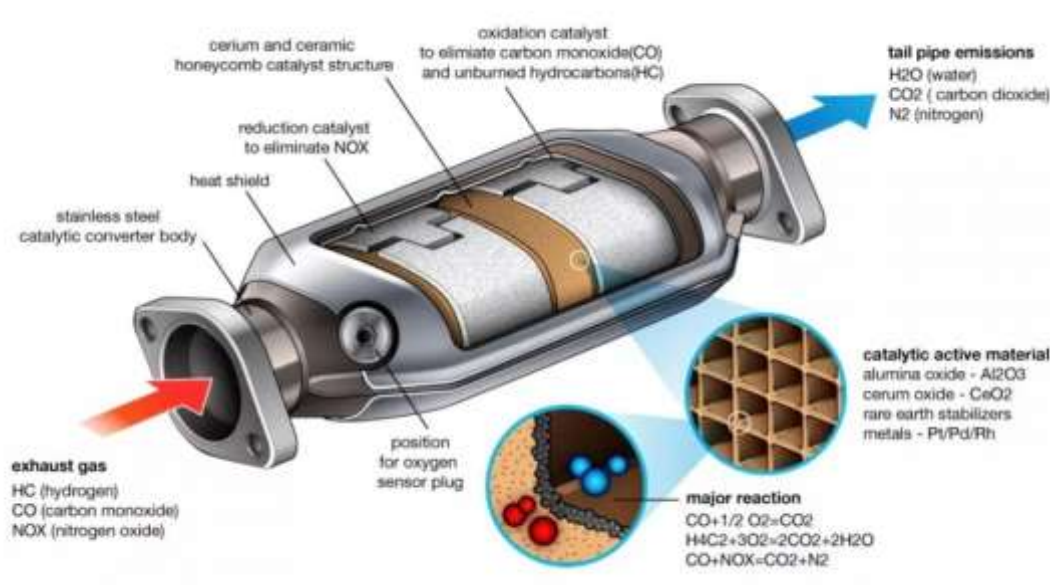
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## Unit Wise Real Time Applications/Live Examples

**Department:** Mechanical     **Semester:** II     **Academic Year:** 2023–2024

**Class:** SE     **Div.:** A

**Course:** Applied Thermodynamics

| Unit No. -Name | Real life Applications |
|---|---|
| Unit V: | 18. Engine Cooling<br><br><br><br>19. Lubrication system<br><br> |

| Unit No. -Name | Real life Applications |
|---|---|
| | 20. Ignition system  |

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**Course:** Applied Thermodynamics

| Unit No. -Name | Real life Applications |
|---|---|
| Unit V: | 21. Spray painting – using rotary air compressor<br><br><br><br> |

| Unit No. -Name | Real life Applications |
|---|---|
| | 22. Air Compressor  - In contruction <br><br>  <br><br> 23. Air compressor – In refrigeration <br><br>  |

| Unit No. -Name | Real life Applications |
|---|---|
| | 24. Air Compressor – In gas turbine Engine<br><br> |

 

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