# Royal Enfield - Basic & Advance Certificate Course

## Contents

| Contents | Duration (Hrs) | Days |
|---|---|---|
| **Basic of Automobiles**<br>• Bore<br>• Stroke<br>• Cubic Capacity ( CC)<br>• Compression Ratio<br>• IHP, BHP, FHP<br>• Torque<br>• Ignition Timing<br>• Valve timing<br>• 4 Strokes<br>• Frame Number Explanation<br>• Power Flow in kick Start<br>• Self Start and from Piston to Wheel | 4 Hr<br>(9:00 am to 1:00 pm) | Day 1 |
| **UCE Engine 350 CC - Theory and Practical**<br>• What is UCE Engine<br>• Engine Specifications<br>• Parts Identifications<br>• Oil Replacement Process<br>• Dismantling Process<br>• Clutch Function and diagnosis<br>• Breather Circuit<br>• Valve timing setting, cam sleeve Setting and diagnosis<br>• Function of Auto De-compressor<br>• Function of Sprag Clutch and problem Discussion | 3:15 Hr<br>(1:45 pm to 5:00 pm) | |
| **Revision of Day 1**<br><br>**UCE Engine- continue**<br>• Function of Transmission and Explanation<br>• Practice of Transmission Assembly and Diagnosis<br>• Valve Train and Hydraulic Tappet explanation<br>• Engine Assembly<br>• Lubrication Circuit and related diagnosis<br>• Discussion on different kind of Engine Noise and diagnosis<br><br>**Measuring Instruments Theory and Practical on Dismantled Engine and practice**<br>• Vernier Calliper<br>• Micrometer<br>• Dial gauge<br>• Boar Gauge<br>• Feeler Gauge | 0.5 Hr<br>(9:00 am to 9:30 am)<br><br>2Hr<br>(9:30 am to 11:30 am)<br><br>1:30 Hr<br>(11:30 to 1:00 pm) | Day 2 |

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| **Interceptor /GT 650 CC Engine**<br><br>• Engine Specifications<br>• Parts Identification<br>• Engine Cut Section Explanation<br>• Slipper assist clutch explanation<br>• Engine Dismantling<br>• Transmission explanation<br>• Lubrication circuit explanation | 3:15 Hr<br><br>(1:45 pm to 5:00 pm) | Day 2 |
| **Revision of Day 2**<br><br>**Interceptor/ GT Engine - Continue**<br>• Bearing grade selection process<br>• Engine Assembly<br>• Angular Torque application<br>• Valve mechanism<br>• Valve timing<br>• Tappet Setting<br>• Diagnosis | 0.50 Hr<br>(9.00 am to 9.30 am)<br><br>3.30 Hr<br><br>(9.30 am to 1.00 pm) | Day 3 |
| **Carburettor**<br>• Types of Carburettor<br>• Working Principal and Function<br>• Explanation of Rich Mixture Lean Mixture<br>• Carburettor Circuits explanation and troubleshooting related to the circuit ( Float Circuit, Choke Circuit ( Starting Circuit), Pilot Circuit, Main Circuit | 1:15 Hr<br><br>(1:45 pm to 3.00 pm) | |
| **Practical related to Engine**<br>• Engine Compression test<br>• DB meter ( Engine Noise Checking)<br>• Tachometer Usage<br>• Oil Pressure Checking in Interceptor | 2 Hr<br><br>(3:00 pm to 5:00 pm) | |
| **Revision of Day 3**<br><br>**Vehicle Practical – Classic / Himalayan / Interceptor**<br>• Vehicle Specifications<br>• Vehicle Parts Identification<br>• PDI Process and Practice<br>  ○ Accelerator free play Setting and importance<br>  ○ Clutch free Play setting and Diagnosis<br>  ○ Chain Slackness Checking, Setting and Diagnosis<br>  ○ Brake Adjustment<br>  ○ Other Points<br>• Braking Systems ( Disc Brake/ Drum Brake) and Diagnosis<br>• ABS System explanation | 0.5 Hr<br>(9.00 am to 9.30 am)<br><br>3.30 Hr<br><br>(9:30 am to 1:00 pm) | Day 4 |

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| • Front Suspension explanation / Rear Suspension Adjustment<br>• Bharat Stage – 1,2,3,4 Explanation<br>• EVAP System<br>• PAV /SAI System<br>• Periodical Maintenance explanation<br>• Front and Rear Wheel Removal<br>• Vehicle problem Diagnosis<br>• Wheel Balancing | 3:15 Hr<br><br>(1:45 pm to 5:00 pm) | Day 4 |
| **Revision of Day 4**<br><br>**Electricals ( Theory)**<br>• Electrical Basics<br>• Electrical Symbols<br>• Electrical Specifications<br>• Various Electrical parts and its work and Working principal (CB Point, CDI, TCI, HT coil, TPS, Magnet Coil, Pulse coil….<br>• Electrical Circuits explanation 350 CC - ( Ignition / Charging/ Headlight/ Signalling/ Self Start/Horn)<br>• Multi-meter Explanation and its usage<br><br>**Battery – Working principal, Testing and Diagnosis**<br>• Types of Battery<br>• Working principal<br>• Charging Process SOP ( Both New Battery and Service Battery)<br>• Do's & Don'ts<br>• Maintenance tips<br>• Cause of Battery Failure explanation.<br><br>**Battery ( Practical)**<br>• Battery Testing process with the help of tachometer, Load tester<br>• Usage of Hydrometer<br>• Battery checking process on live vehicle<br>• Charging process | 0.5 Hr<br>(9:00 am to 9:30 am)<br><br>3:30 Hr<br><br>(9:30 am to 1:00 pm)<br><br>1:30 Hr<br><br>(1:45 pm to 3:15 pm) | Day 5 |
| **Electrical and electronics Component Checking with the help of Multi-meter**<br><br>• Stator Coil, Pickup Coil, RR Unit, HT Coil, Spark plug, relays, Suppressor cap<br>• Fuse Explanation on vehicle<br>• Practical on Electrical test Bench | 1:30 Hr<br><br>(3.30 pm to 5.00 pm) | |