

# Unit 2 - Week 1

## Course outline

### How does an NPTEL online course work?

#### Week 1

Course Overview and Classification of Internal Combustion Engines - Part 01

Course Overview and Classification of Internal Combustion Engines - Part 02

Engine Components - Part 01

Engine Components - Part 02

Operation of Four Stroke Engines - Part 01

Operation of Four Stroke Engines - Part 02

Quiz : Assignment 1

Week 1 Feedback

Solution - Assignment 1

#### Week 2

#### Week 3

#### Week 4

#### Week 5

#### Week 6

#### Week 7

#### Week 8

#### Week 9

#### Week 10

#### Week 11

#### Week 12

### Lecture Material

### Download Videos

# Assignment 1

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

**Due on 2020-02-12, 23:59 IST.**

1) A heat engine is a device that converts chemical energy in fuel into \_\_\_\_\_ energy finally.

1 point

- potential  
 kinetic  
 internal  
 electrical

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*kinetic*

2) An IC engine in which the fuel air mixture is introduced into the combustion chamber at near atmospheric pressure is called a \_\_\_\_\_ engine.

1 point

- supercharged  
 turbocharged  
 pressurized  
 naturally aspirated

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*naturally aspirated*

3) A \_\_\_\_\_ sleeve is thicker and in direct contact with the coolant.

1 point

- wet  
 dry  
 hot  
 cold

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*wet*

4) A \_\_\_\_\_ pin connects the piston to the connecting rod.

1 point

- caster  
 circlip  
 gudgeon  
 snap

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*gudgeon*

5) Twice the crankshaft \_\_\_\_\_ is equal to the distance travelled by the piston in one stroke.

1 point

- offset  
 length  
 width  
 thickness

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*offset*

6) The \_\_\_\_\_ valve is used to remove the products of combustion from the cylinder.

1 point

- intake  
 transfer  
 exhaust  
 intermediate

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*exhaust*

7) Let the crankshaft of a 4-stroke IC engine be rotating at 1500 rpm. Then, the time duration (in ms) of one intake stroke is

1 point

- 40  
 10  
 20  
 5

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*20*

8) Valve train noise can be reduced by using a \_\_\_\_\_ valve.

1 point

- larger  
 tappet  
 spring loaded  
 thicker

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*tappet*

9) The main problem encountered with spring return valves at high speed is that of

1 point

- valve life  
 valve failure  
 valve robustness  
 valve float

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*valve float*

10) Let the crankshaft of a 4-stroke engine be rotating at 2500 rpm. Then, the camshaft should rotate at

1 point

- 2500 rpm  
 1250 rpm  
 5000 rpm  
 625 rpm

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*1250 rpm*

11) The component that smoothens out the torque variations in the engine output is the

1 point

- crankshaft  
 camshaft  
 flywheel  
 piston

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*flywheel*

12) The position of the piston when it is nearest to the crankshaft is referred to as the \_\_\_\_\_ dead centre.

1 point

- bottom  
 top  
 near  
 far

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*bottom*

13) The nominal volume of the combustion chamber when the piston is at TDC is called as \_\_\_\_\_ volume.

1 point

- displacement  
 total  
 cylinder  
 clearance

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*clearance*

14) Which one of the following statements is true about the suction stroke in a 4-stroke IC engine?

1 point

- The exhaust valve remains closed.  
 The inlet valve remains closed.  
 The piston moves away from the BDC.  
 The piston moves towards the TDC.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*The exhaust valve remains closed.*

15) Which one of the following statements is true about the compression stroke in a 4-stroke IC engine?

1 point

- The exhaust valve remains open.  
 The inlet valve remains open.  
 The piston moves away from the BDC.  
 The piston moves away from the TDC.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*The piston moves away from the BDC.*