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Courses » IC Engines and Gas Turbines

Announcements **Course** Ask a Question Progress FAQ

# Unit 3 - Week 1 - Introduction to IC Engines

Register for Certification exam

## Course outline

How to access the portal

Week 0 - Introductory Session

Week 1 - Introduction to IC Engines

- Lec 1: External and Internal combustion engines, Engine components, SI and CI engines
- Lec 2: Four-stroke and Two-stroke engines, Comparison between SI and CI engines, and Four-stroke and Two-stroke engines
- Quiz : Assignment 01
- Solutions: Assignment 01

## Assignment 01

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2019-02-13, 23:59 IST.**

1) Which of the following engines can be categorized into IC engine **1 point**

- Spark ignition engine
- Compression ignition engine
- Steam engine
- Stirling engine

**No, the answer is incorrect.**  
**Score: 0**

**Accepted Answers:**  
*Spark ignition engine*  
*Compression ignition engine*

2) Depending upon the number of stroke, IC engines can be classified into **1 point**

- Single stroke engine
- Two stroke engine
- Three stroke engine
- Four stroke engine

**No, the answer is incorrect.**  
**Score: 0**

**Accepted Answers:**  
*Two stroke engine*  
*Four stroke engine*

3) The air standard cycle that describes the functioning of an SI engine is **1 point**

- Brayton cycle

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**Week 5 - Alternative Fuels, Combustion in SI and CI Engines**

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**Week 6 - Fuel Injection Systems**

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**Week 7: Introduction to Gas Turbines**

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**Interaction Session**

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**Week 8 : Performance Analysis of Brayton Cycle**

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**Week 9: Introduction to Various Aircraft Engine and Performance Parameters**

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**Week 10: Components of Brayton Cycle Based Power Plant**

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**Week 11: Components of Brayton Cycle Based Power Plant**

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**Week 12: Components of Brayton Cycle Based Power Plant**

**Accepted Answers:**  
*Otto cycle*

4) "The weight and compression ratio of a CI engine is higher than that of an SI engine." This statement is **1 point**

True  
 False

**No, the answer is incorrect.**  
**Score: 0**

**Accepted Answers:**  
*True*

5) Which of the followings are not the component of a CI engine **1 point**

Spark plug  
 Fuel injector  
 Carburetor  
 Piston

**No, the answer is incorrect.**  
**Score: 0**

**Accepted Answers:**  
*Spark plug*  
*Carburetor*

6) In an IC engine, the reciprocating to rotary motion conversion is done by the combination of **1 point**

a

Cam and Follower  
 Crankshaft and Connecting rod  
 Ratchet and Pawl  
 Rack and Pinion

**No, the answer is incorrect.**  
**Score: 0**

**Accepted Answers:**  
*Crankshaft and Connecting rod*

7) Which of the following are the idle strokes in a 4 stroke IC engine **1 point**

Intake  
 Compression  
 Power  
 Exhaust

**No, the answer is incorrect.**  
**Score: 0**

**Accepted Answers:**  
*Intake*  
*Compression*  
*Exhaust*

8) In a 4 stroke IC engine, the ratio of rotational speed of camshaft to crankshaft is

**Hint****No, the answer is incorrect.****Score: 0****Accepted Answers:***(Type: Range) 0.49,0.51***1 point**

9) A single cylinder IC engine has the bore and stroke of 4 units each. The total surface area through which heat transfer can take place is **1 point**

- $12\pi$
- $16\pi$
- $24\pi$
- $64\pi$

**No, the answer is incorrect.****Score: 0****Accepted Answers:** $24\pi$ 

10) For a four cylinder reciprocating engine with cylinder diameter  $D$  cm, stroke length  $L$  cm and clearance volume  $V_c \text{ cm}^3$  the engine capacity (cc) will be **1 point**

- $\pi D^2 L / 4$
- $\pi D^2 L$
- $(\pi D^2 L / 4) + V_c$
- $\pi D^2 L + 4V_c$

**No, the answer is incorrect.****Score: 0****Accepted Answers:** $\pi D^2 L$ 
[Previous Page](#)
[End](#)

