

First exam

The engine is the heart of an automobile. It is a device that converts the chemical energy of fuel into mechanical energy which is used to drive the vehicle. It is basically a device that produces power. In automobile internal combustion (IC) engines are used. The IC engine is the engine in which combustion (burning of fuel) takes place inside a cylinder and it suddenly generates a high-pressure force. This pressure force generated is used to drive a vehicle or rotate the wheel by use of some mechanism. Some of the most common types of engine as they are used in vehicles, boats, ships, airplanes, and trains. In these engines, fuel is ignited and work is done inside the engine, with the expanding gases moving pistons in the engine.

There are two main types of internal combustion engines used. The most common type is the reciprocating- engine, which uses the up-and-down motion of pistons to convert pressure from expanding gasses into rotational motion. As well as the internal combustion engine, steam engines and stirling engines are types of reciprocating engines. The other main type of engine is a rotary engine. This type of engine uses a rotating triangular rotor instead of pistons to convert heat from the combustion of an air/fuel mixture into useful work.

Additionally, internal combustion engines in vehicles are designed to run on two main types of fuels. The different engines are gasoline and diesel engines. In a gasoline engine, an air/fuel mixture in the engine is ignited with the assistance of a spark from a spark plug. This then causes the gas to heat and expand, moving pistons. A diesel engine runs in a slightly different manner, igniting the air/fuel mixture through compression instead of using a spark.

Questions:

Part one:

- 1/ in which paragraph§ it is mentioned the functions of the various types of IC? (1pt)
- 2/ say whether the following statements are true or false: (3pts)
 - a/ the engine is a device that transmutes the chemical energy of fuel into mechanical energy.
 - b/ the IC engines use pistons that work in a revolving motion.
 - c/ the rotary engine uses a rotating triangular rotor to restrain heat into useful work.
- 3/ answer the following questions according to the text: (3pts)
 - 1/ how many types of internal combustion engines? Name them.
 - 2/ are pistons used instead of a rotating triangular rotor in a rotary engine? Justify.
 - 3/ what are the other different types of vehicles that use the internal combustion engine?
- 4/ match the following words with their correct meaning: (2pts)

words	meanings
1/ a vehicle	a/ a means of carrying or transporting something planes,trains...etc
2/ an engine	b/ is a component of reciprocating engines.
3/ acceleration	c/ is the rate of change of velocity
4/ piston	d/ is a machine designed to convert one or more forms of energy into mechanical energy

Part two:

1/ complete the following sentences: (2pts)

A/ my friend and I changed the flat tire.

The flat.....

B/ the two officials are signing the treaty

The.....

2/ use the right connector (neither...nor/ either...or/ because/ but). Make the necessary changes. (3pts)

a/ you turn the money. I'll call the police.

b/ the cupcakes weren't chosen. The muffins weren't chosen by guests

c/ she got the best grades. She had worked hard.

Part three: (6pts) choose one of these (fill in the blanks or summary)

1/ Fill in the blanks with the right words :(6pts)

Manufacture- engines- motions- forces- engineering- mechanical
.....engineering is the branch of concerned with the design, ... installation, and operation of and machines and with manufacturing processes. It is particularly concerned with and.....

Steam engine- machinery- mechanical- engineering- tools- industrial
The invention of the in the latter part of the 18th century, providing a key source of power for the Revolution, gave an enormous impetus to the development of of all types. As a result, a new major classification of dealing with and machines developed, receiving formal recognition in 1847 in the founding of the Institution of Engineers in Birmingham, Eng.

2/ summarize the text using your own words (6pts)

Best of luck

Correction of the first English exam

(3 year students mechanical engineering)

Part one:

1/ the functions of the various types of IC are mentioned in the second paragraph (1pt)

2/ true/false (3pts)

a → true

b → true

c → false

3/ answer the questions from the text (3pts)

1/ we have two (2) types of internal combustion engines: reciprocating engine and rotary engine

2/ no, they are not. Justification: this type of engine uses a rotating triangular rotor instead of pistons.

3/ the other different types of vehicles that use the IC engine are: vehicles, boats, ships, airplanes, and trains.

4/ matching words (2pts)

vehicle → a

engine → d

acceleration → c

piston → b

Part two:

1/ active and passive voice (2pts)

a/ the flat tire was changed by my friend and me

b/ the treaty is being signed by the two officials

2/ join the sentences by using the right connector (3pts)

a/ either you turn the money or I'll call the police.

b/ neither the cupcakes nor the muffins were chosen by guests.

c/ she got the best grade because she had worked hard.

Part three: choose one of these:

1/ fill in the blanks (6pts)

The first paragraph:

1 → mechanical

2 → engineering

3 → manufacture

4 → engines

5 → forces

6 → motion

The second paragraph:

1 → steam engines

2 → industrial

3 → machinery

4 → engineering

5 → tools

6 → mechanical

2/ summarizing the text (6pts)

Department of technology

Grade: 3 year students (mechanical engineering)

Module: English

Handwritten signature

Text

Combustion is widely used for energy generation, propulsion, heating and waste disposal, as well as for many other applications. Mechanical engineers are often heavily involved with the design of combustion systems (internal combustion engines, gas turbines, furnaces, etc.) and deal with aspects of combustion ranging from increasing efficiencies to reducing pollutant emissions. This area of interest is designed for those who would like to work in fields that use combustion, or that deal with pollution related to combustion. With the current increased emphasis on reducing pollutants while efficiency is maintained or increased, mechanical engineers are becoming increasingly important in designing and improving combustion systems.

Questions:

Part one: (10pts)

1/ say whether the following statements are true or false (4pts)

a/ mechanical engineers are the ones responsible for spoiling combustion systems... *false*

b/ internal combustion engines and furnaces are parts included in combustion systems... *true*

c/ combustion has many various applications... *true*

d/ increasing efficiencies to minimize pollutant emissions are parts of combustion function... *true*

2/ answer the following questions from the text (3pts)

a/ in what do we use combustion?

it is used for energy generation, propulsion, heating and waste disposal, as well as for many other applications.

b/ who are involved in designing combustion systems?

Mechanical engineers are involved in designing combustion systems

c/ is waste disposal dismissed in combustion applications? Justify.

No, it is not. Justification: combustion is used in various applications and waste disposal one of these applications.

3/ find in the text words that are synonym/ opposite to the following words (2pts)

1/ competences = *efficiencies*

ameliorating = *improving*

2/ increasing =/= reducing

cooling =/= heating

Part two: (10pts)

1/ complete the following sentences (3pts)

A/ she speaks Chinese with her family

Chinese is spoken by her with her family

B /the vet fed the animals before their operation

The animals were fed by the vet before their operation

C/ they will buy a new computer next month

A new computer will be brought by them next month

2/ link the following sentences using the right connector (3pts)

Neither...nor/ both...and/ since/ but.

1/he felt disappointed. He felt misunderstood.

he felt both disappointed and misunderstood

2/ he never listens to or advise his friends when they have a problem.

he neither listens nor advise his friends when they have a problem

3/ I'm going to bed at 10 pm. I need to get up early tomorrow morning.

I'm going to bed at 10pm since I need to get up early tomorrow morning

Part three:

Fill in the gaps using the following words (4pts)

⁴ Motion- ¹ application- ² engineering- ³ manufacturing- technology- combustion

Technically mechanical engineering is the application of the principles and problem-solving techniques of engineering from design to manufacturing to the marketplace for any object. Mechanical engineers analyze their work using the principles of motion, energy, and force—ensuring that designs function safely, efficiently, and reliably, all at a competitive cost.

Best of luck