

عنيد - اميد ! 4

Department of technology

Level: 4 year civil engineering students

full name:.....

Module: English

Text

Structural engineers are concerned with the conception, analysis, design and construction of components or assemblies to resist loads arising from internal and external forces. Solid mechanics is the study of the distribution of stresses that a given load produces when applied to a solid element, and the calculation of the resulting strains, given the characteristics of the materials that make up that element.

The application of solid mechanics enables the structural engineer to assemble elements, such as beams and columns, into a structure that will resist both static and dynamic loads, such as gravity, wind, snow and earthquakes. In addition to steel and concrete, new materials that are being developed and used in structural engineering include reinforced plastics and polymers. The rehabilitation of existing structures weakened by corrosion continues to be an important task.

While typical civil engineering structures include large buildings, bridges and dams, graduates with a specialization in structural engineering may also be concerned with designing the structures of machinery, vehicles, aircraft and spacecraft.

Employment opportunities include work with consulting structural engineers, construction companies, building development companies, engineering departments of private corporations, aircraft and aerospace related companies, public utilities, and government agencies.

adopted and adapted

Questions:

Part one:

1/ say whether the following statements are true or false (3pts)

a/ solid mechanics helps the structural engineer to compile elements.....

b/ typical civil engineering structures is not only concerned with the structures of machinery.....

c/ structural engineers involve in a variety of fields.....

2/ answer the following questions (2pts)

a/ name some occupation chances for a structural engineer?

.....

b/ does the application of solid mechanics permit us to assemble elements for better decayment of loads?

.....

3/ find synonyms/ opposite to the following words (2pts)

Implementation=.....

rigid=.....

destruction= /=.....

dismant= /=.....

Part two

1/ draw the right shape to the following geometrical labels (4pts)

a/ trapezoid.....

b/ hexagon.....

c/ cylinder.....

d/ ellipse.....

2/ give the right measurement to the following angles (4pts)

a/ straight angle.....

b/ reflex angle.....

c/ obtuse angle.....

d/ acute angle.....

3/ classify the following words in their right column (2pts)

Three dimensional figures- 180°- theta- two dimensional figures- vertex- arms- cylinder- circle

shapes		angles	measurements
<u>Solid shapes</u>	<u>Plane shapes</u>		

4/ translate the following words (3pts)

1/ sphere.....

2/ breadth.....

3/ three dimensional figures.....

4/ curviness.....

5/ geometrical shapes.....

6/ zero thickness.....

Best of luck

Part one

1/ true or false (3pts)

a/ true

b/ true

c/ true

2/ answering questions from the text (2pts)

a/ some occupation chances for structural engineers are: construction companies, building development companies, engineering departments of private corporations....etc

b/ no, it does not

3/ synonyms and opposites (2pts)

a/ implementation= application

b/ rigid= solid

c/ destruction=/= construction

d/ dismant=/= assemble

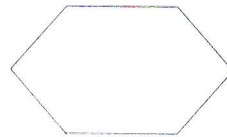
part two

1/ draw the right shape (4pts)

a/ trapezoid



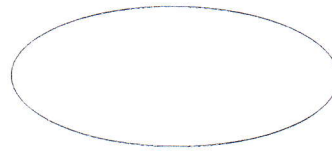
b/ hexagon



c/ cylinder



d/ ellipse



2/ give the right measurement to the following angles (4pts)

a/ straight angle is 180° exactly

b/ reflex angle is greater than 180°

c/ obtuse angle is greater than 90° and less than 180°

d/ acute angle is less than 90°

3/ fill the table (2pts)

Three dimensional figures- 180° - theta- two dimensional figures- vertex- arms- cylinder- circle

shapes		angles	measurements
Solid shapes	Plane shapes		
3 dimensional figures	2 dimensional shapes	Theta- vertex- arms	180°
cylinder	circle		

4/ translation of words (4pts)

Sphere كروي جسم

2/ breadth عرض

three dimensional figures أشكال ثلاثية الأبعاد

4/ curviness انحناء

geometrical shapes أشكال هندسية

zero thickness صفر سمك