

The Second Term Exam . / 2Sc. + 2 Tech.M

Part One : Reading and Interpreting . (14 pts)

A) Comprehension Read the text then do the following activities . **(8 pts)**

The Text:

The two main hazards of electricity are electric shock and fire. Both hazards can be avoided if electrical equipments and installations are properly used.

How does electric shock occur? Electricity " escapes " from a circuit by travelling to earth. If it travels to earth through a human body, it causes an electric shock. The shock may be small and insignificant or fatal. This depends on the voltage of the electricity and the resistance of the body and ground. An electric shock is more dangerous when resistance is low. For example , wet ground has a lower resistance than dry ground. A man on wet ground may be killed by an electric shock. Similarly , most metals have a low resistance. If a man is holding on a metal ladder and receives an electric shock , this latter may kill him.

Fires in electrical equipments are caused by overheating or sparking. They can also be caused by damaged insulation. The main danger of most small fires is that they can spread quickly.

All electric tools , equipments and other installations should be earthed, especially if they are made of metal. An earth-wire has a very low resistance. If electricity " escapes " , it follows the earth-wire. The equipment is still safe to touch. All electrical wires should also be insulated. Insulation prevents contact between the electric circuit and anything else. The insulation must not be broken or frayed.

In addition , electricians and other workers doing electrical repairs should take special precautions : before starting work , they should switch off the electric current at the mains and wear thick rubber shoes - rubber has high resistance to electric current.

*Adapted from Industrial Safety C. J. Moor. R.V. ALLOT
Heinemann Education Books.*

1) Choose the right answer . (1 pt)

- a-The text is an extract from : 1- the internet / 2- a newspaper / 3-a book
- b-It is about : 1-The invention of electricity .
2-The dangers of electricity .
3-The use of electricity .

2) Are the following questions "True" or "False" according to the text ? (2pts)

- a) An electric shock is less dangerous when resistance is high .
b) Dry ground has less resistance than wet ground .
c) Fires in electric equipments are caused only by overheating and sparking .
d) Insulation protects from electric shocks .

3) Answer the following questions according to the text . (4 pts)

- a) How is an electric shock caused ?
b) When is it still safe to touch electric equipment even if electricity escapes ?
c) What precautions should be taken before repairing electric equipments ?
d) Does rubber have low resistance to electric current ?

- 4) What or who do the underlined words refer to in the text ? (1 pt)
 a- it (§ 2)..... / b- they (§ 4)

B) Text Exploration

(7pts)

- 1) Match each word with its suitable meaning . (1 pt)

The word	The meaning
1-hazards	a-safety measures
2-fatal	b-dangers
3-safe	c-can cause death .
4-precautions	d-harmless

- 2) Complete the following Table . (1 pt)

Verb	noun	adjective
-to electrify	-.....	-.....
-to resist	-.....	-.....

- 3) Complete the second sentences so that they have the same meaning as the first one given . (2 pts)

- 1-a) Electricians should wear thick rubber shoes .
 b) Thick rubber shoes
 2-a) Sure , man's life has been improved by inventions .
 b) Sure , inventions

- 4) Reorder the words of the following sentence : (1 pt)

-hard – for – work – find –in order to – scientists – cures .-diseases – dangerous .

- 5) Fill in the gaps with the following words . (1 pt)

-aware -occur -dangerous -act

Careful workers plan what they are going to do before they1..... . Their mind is always2..... of what their bodies are doing . They think of problems before they3..... and are able to avoid4..... situations .

- 6) Classify the following words according to the pronunciation of the final "ed" (1 pt)

-used - avoided - escaped - insulated

/t/	/d/	/id/

Part Two : Writing (5 pts)

Choose one of the following topics .

Topic One : Use the following cues to write a short composition about solutions that can be brought over to fight pollution.

-reduce toxic emissions given off by factories. -use biodegradable products. -use solar energy to reduce toxic gases. -stop deforestation. -not to pour polluted water into streams , rivers and seas.

Topic Two : Which job would you like to take up in the future ? Write a short composition stating your choice and the reasons for such preference.