



(I)Textbook:

A- Answer the following questions:

- 1) What is the Function of electrical charges in living systems?
- 2) What is an "electrical field" in a living system?
- 3) How does an eel kill its prey?
- 4) Why are blood transfusions successful?
- 5) Define : Conductors – Insulators – Semiconductors.

(II) Grammar and Structure:

A. Choose the correct answer;

1. She (goes - go - went) to Alex last summer.
2. I usually (wake up - woke up - wakes up) early.
3. (Either - Neither - Both) fixed and variable resistors are made.
4. This e-mail (sends - sent - was sent) by my best friend.
5. Your stomach pain is the (effect – affect – effective) of over eating
6. (Although - But - And) Ahmed likes bananas; I don't like them at all.
7. I'm not going anywhere today (because - because of - so that) the rain.
8. The letter (being – is – is being) typed now by the secretary.
9. The instructor (will answer - answer - answers) the questions tomorrow.
10. In old days people (travel – traveled – travels) on horsebacks.
11. English (is speaking - speaks - is spoken) all over the world.
12. He looked (up - into - about - after) the new words in his dictionary.
13. The focus control is (for – to – on) focusing the electron lens.
14. If we had taken your advice, we (saved - would save - will save –would have saved) a lot of time.
15. (Unless - Because - Although) all metals are conductors, some metals do not conduct.

III- Reading Comprehension

Read the following passage then answer the questions:

The resistance of metals varies with their temperature. When they get heated their resistance increases. When they cool, their resistance falls. The resistance of some metals and alloys steadily decreases as their temperature is lowered, then falls suddenly to a negligible value at temperatures a high degrees above absolute zero (-273C). in other words, these materials have almost no resistance to an electric current at very low temperatures. They become almost perfect conductors. This called superconductivity. It occurs only with certain materials, for example lead, and only at very low temperatures.

The practical applications of superconductivity are limited because of the very low temperatures required. A number of uses, however, have been proposed. If a current is induced by a magnetic field in a ring of superconducting material, it will continue to circulate when the magnetic field is removed. In theory this could be made use of in the memory cells of computers. Memory cells made of superconducting materials could store information indefinitely. Because of the zero resistivity of the cells, the information could be retrieved very quickly, as fast as 10 seconds.

Ninety per cent of the total losses in modern transformers is due to the resistance of the windings. Transformers could be made with windings cooled to the low temperatures at which superconductivity occurs. The resistance of the windings would be zero and the transformer would be almost ideal. Similarly a 100 efficient electric motor has been proposal using the magnetic field of superconducting coils.

A. Choose the correct answer:

1- One of superconducting materials is

- a. Lead b. copper c. carbon d. bronze

2- Materials exhibit superconductivity at very Temperature.

- a. High b. certain c. low d. valuable

3- Superconductivities at very low temperatures are perfect

- a. Materials b. insulators c. conductors d. metals

B. Answer the following questions:-

1. What do we mean by Superconductivity?
 - 2-When the transformer would be almost ideal?
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IV- Writing a paragraph

Write a paragraph on only ONE of the following topics:-

1. Electrical Engineering.
 2. Metals and its uses.
 3. Electricity and living systems.
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Good Luck



Faculty of Engineering
Subject: English

Electrical - Electronics
3rd year Makeup 2014
Time: 2 hour

(I)Textbook:

A- Answer the following questions:

1. They regulate the passage of chemicals through the surface of the cells
2. Areas of electrical charges.
3. It generates enough electricity to kill its prey?
4. Blood transfusions are successful because the isoantigens of donor red cells can be matched with those of the recipient.
5. Conductors: are substances which provide an easy path for an electric current.
Insulators: a material which does not easily release electrons.
Semiconductors: are midway between conductors and insulators.

II- Grammar and Vocabulary

A. Choose the correct answer;

- 1)went 2) wake up 3) Both 4) was sent 5) effect
- 6) Although 7) because of 8) is being 9) will answer 10) traveled
- 11) is spoken 12) up 13) for 14) would have saved 15) Although

III. Reading comprehension

A- Choose the correct answer :

- 1- Lead.
- 2- Low.
- 3- Conductors.

B. Answer the following questions:-

- 1- Materials have almost no resistance to an electric current at very low temperatures. They become almost perfect conductors. This called superconductivity
- 2- The resistance of the windings would be zero and the transformer would be almost ideal.

IV- Writing a paragraph

Writing is assessed by the examiner.