Sudan University of Science &Technology
3rd Semester Exams 2017 – 2018
2nd Year Engineering (General)
Subject : English III Time: One hour and a half (1½)

Index No:-..... **Name: -** .....

Question (1) Read the text below then complete it with these grammatical items:

to / for / of / into / or

Engineering Materials

Engineers have to know the best and most economical materials to use. Engineer must also understand the properties .....these materials and how they can be worked. There are tows of these materials used in engineering metals and non – metals. We can divide metals ..... ferrous and non – ferrous metals. The former contain iron and the latter do not contain iron. cast iron and steel, which are both alloys, ...mixtures of iron and carbon , are the tow most important ferrous metals. Steel contains smaller proportion of carbon than cast iron contains. Certain elements can improve the properties of steel and are therefore added to it . .....,example , chromium may be included .....resist corrosion and tungsten to increase hardness. Aluminum, copper and the alloys, bronze and brass are common non – ferrous metals.

Question (2) Study the following statements carefully and write down whether they are true (T) or false (F) to the information expressed above.

1. Non – metals are used by engineers .
2. Cast iron contains more carbon then steel .
3. Chromium improves the properties of steel.
4. Copper contains iron .
5. Bronze is an alloy .

Question [3]contextual reference.

What do the following underlined words refer to?

Choose either (a or b)

e.g. 'they'	a. the engineers	b. the materials
1. 'the former'	a. ferrous metals	b. non – ferrous metals
2. 'the latter'	a. ferrous metals	b. non – ferrous metals
3. 'it'	a. steel	b. iron

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Question (3) Grammar.

Fill in the gaps with the correct form of the verbs in brackets.

1. My tutor ……..**(see)** me for tutorial every Monday at tow o'clock.
2. Ahmed …… **(not/study)** very hard at the moment. I…… **(not / think)** he 'll pass exams .
3. Be quiet! I…… .**(want)** to hear the news.
4. The mixture in the combustion chamber is……**(ignite)** by a sparking plug .
5. If you are not clever,your brain can be replaced in an operation ……**(know)** as a brain transplant .

Question (4) Translate into Arabic either sentence (a or b)

a. Science and technology have come to spread through every aspect of our lives, and as a result society is changing at a speed which is quite unprecedented.

b. There are people who have lived with transplanted hearts for seven years and more, kidneys and livers have also been transplanted, though the success rate in liver transplants is still very low.

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Good Luck

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Sudan University of Science & Technology
College of Languages
Department of University Requirements
3rd Semester Exam. 2016 - 2017
2nd Year Engineering

Subject: English III

Name: ..... Index No:.....
Total Mark: ..... Time allowed: 2 hours

Answer All Questions

Read the text and answer the questions below it:

The Future of Computers

In 1965 semiconductor pioneer Gordon Moore predicted that the number of transistors contained on a computer chip would double every year. This is now known as Moore's Law, and it has proven to be somewhat accurate. The number of transistors and the computational speed of microprocessors currently doubles approximately every 18 months. Components continue to shrink in size and are becoming faster, cheaper, and more versatile.

With their increasing power and versatility, computers simplify day-to-day life. Unfortunately, as computer use becomes more widespread, so do the opportunities for misuse. Computer hackers – people who illegally gain access to computer systems-often violate privacy and can tamper with or destroy records. Programs called viruses or worms can replicate and spread from computer to computer, erasing information or causing malfunctions. Other individuals have used computers to electronically embezzle funds and alter credit histories. New ethical issues also have arisen, such as how to regulate material on the Internet and the World Wide Web. Long-standing issues, such as privacy and freedom of expression, and governments are working to solve these problems through informed conversation, compromise, better computer security, and regulatory legislation.

Computers will become more advanced and they will also become easier to use. Improved speech recognition will make the operation of a computer easier. virtual reality, the technology of interacting with a computer using all of the human

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senses, will also contribute to better human and computer interfaces. Standards for virtual-reality program languages – for example, Virtual Reality Modeling language (VRML) – are currently in use or are currently in use or are being developed for the World Wide Web.

Other, exotic models of computation are being developed, including biological computing that uses living organisms, molecular computing that uses molecules with particular properties, and computing that uses deoxyribonucleic acid (DNA), the basic unit of heredity, to store data and carry out operations. These are examples of possible future computational platforms that, so far, are limited in abilities or are strictly theoretical. Scientists investigate them because of the physical limitations of miniaturizing circuits embedded in silicon. There are also limitations related to heat generated by even the tiniest of transistors.

Intriguing breakthroughs occurred in the area of quantum computing in the late 1990s. Quantum computers under development use components of a chloroform molecule (a combination of chlorine and hydrogen atoms) and a variation of a medical procedure called magnetic resonance imaging (MRI) to compute at a molecular level. Scientists use a branch of physics called quantum mechanics, which describes the behavior of subatomic particles (particles that make up atoms), as the basis for quantum computing. Quantum computers may one day be thousands to millions of times faster than current computers, because they take advantage of the laws that govern the behavior of subatomic particles. These laws allow quantum computers to examine all possible answers to a query simultaneously. Future uses of quantum computers could include code breaking and large database queries. Theorists of chemistry, computer science, mathematics, and physics are now working to determine the possibilities and limitations of quantum computing.

Communications between computer users and networks will benefit from new technologies such as broadband communication systems that can carry significantly more data faster or more conveniently to and from the vast interconnected databases that continue to grow in number and type.

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Question [1]:
Answer the following questions:

1. What is Moore's Law?

.....

2. What are the disadvantages of computer development?

.....

3. What is virtual reality and why is it important?

.....

4. What is quantum mechanics?

.....

5. What could future uses of quantum computers include?

.....

Question [2]:

Read the text again. Choose the best meaning (a, or b) for each word as it is used in the text.

1.	embezzle:	a.	steal	b.	still
2.	query:	a.	question	b.	answer
3.	properties:	a.	qualities	b.	quantities
4.	embedded:	a.	fixed	b.	kissed
5.	tiniest:	a.	smallest	b.	biggest
6.	quantum mechanics:	a.	a branch of mathematics		
		b.	a branch of physics		
7.	misuse:	a.	using correctly	b.	using wrongly

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سوف تغير التقنيات الحديثة الاتصالات بين مستخدمي الحاسوب والشبكات. 5

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Question [5]:
Read, think, and answer carefully. Draw a circle or underline the correct answer for each space.

1. The human eye .....things in three dimensions. length, width, and depth.
   a. see b. seeing c. sees
2. Things .....by the normal eye in three dimensions.
   a. see b. is seen c. are seen
3. The professor .....three writing assignments (by the student)
   a. gave b. was given c. were given
4. The missing printer .....to the Computer Center.
   a. has returned b. has been returned
   c. has been
5. Disk damage may .....by any of several viruses.
   a. be caused b. caused c. causes

Question [6]:
Re-arrange the following sentences to build a well-developed paragraph by numbering them. e.g. 1 ; 2 ; 3 ; 4 ; 5

[ ] However, some people are convinced mobile phones are the cause of their health problems, or have caused the death of their loved ones.

[ ] But much of this research has involved the exposure of mice and rats to high level of microwave radiation.

[ ] There have been attempts to sue mobile companies for damages but so far all have failed.

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[ ] Recent research suggested mobile phones could also be addictive and encourage alcohol drinking.

[ ] This does not tell us enough about the effects of using mobile phones in human beings.

Question [7]:

Match list (A) with list (B):

List A	List B
1. Chromium	[ ] toxic waste product
2. tungsten	[ ] kidneys
3. thermoplastics	[ ] receiver
4. thermoses	[ ] blood
5. rotation	[ ] heat
6. transfusion	[ ] cannot be shaped
7. transplant	[ ] corrosion
8. impurities	[ ] hardness
9. transmitter	[ ] revolving
10. transmission	[ ] can be shaped

All the best wishes of success

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