

على المترشح أن يختار أحد الموضوعين التاليين
الموضوع الأول

PART ONE: Reading (15 points)

A) Comprehension (08 points)

Read the text carefully then do the following activities.

Don't let the name fool you: a black hole is anything but empty space. Rather, it is a great amount of matter packed into a very small area - think of a star ten times more massive than the Sun pressed into a sphere approximately the diameter of New York City. The result is a gravitational field so strong that nothing, not even light, can escape. In recent years, NASA instruments have painted a new picture of these strange objects that are, to many, the most fascinating ones in space.

Most black holes form from the remnants of a large star that dies in a supernova explosion. If the total mass of the star is large enough (about three times the mass of the Sun), no force can keep the star from collapsing under the influence of gravity. However, as the star collapses, a strange thing occurs. When the surface of the star nears an imaginary surface called the "event horizon," time on the star slows relative to the time kept by observers far away. As the surface reaches the event horizon, time stands still, and the star can collapse no more - it is a frozen collapsing object.

Scientists estimate that there are as many as ten million to a billion black holes in the Milky Way alone. Astronomers can detect them by watching for their effects on nearby stars and gas using Chandra X-ray telescope.

<https://science.nasa.gov>

1. Say whether the following statements are true or false.

- Black holes are empty bodies in space.
- The gravity in black holes is strong.
- All stars in the universe collapse under the effect of gravity.
- "Black hole" is the fate of giant stars in the outer space.

2. Identify the paragraphs in which the following ideas are mentioned.

- Indefinite number of black holes exists in our galaxy.
- Time near collapsing stars slows down then stops.

3. Answer the following questions according to the text.

- What makes gravity so strong in black holes?
- How is a black hole formed?
- Can our sun collapse on itself? Why or why not?
- What is Chandra X-ray Telescope used for?

4. Find what or who the underlined words in the text refer to.

- a) ones (§1) b) that (§2) c) them (§3)

B) Text Exploration (07 pts)

1. Find in the text words or phrases that are closest in meaning to the following.

a) leftovers (§2) =... b) falls (§2) =... c) observe (§3)=...

2. Give the opposites of the following words keeping the same root.

a- Packed \neq b- relative \neq c- frozen \neq

3. Complete sentence (b) so that it means the same as sentence (a).

1. a) Supergiant stars lose so much hydrogen that they destroy themselves in a huge explosion.

b) because

2. a) An astronomer hopes to take part in the coming mission of NASA.

b) He wishes

3. a) NASA instruments have painted a new picture of strange objects.

b) A new picture

4. Reorder the following sentences to get a coherent passage.

a) which persistently works to try and cause the star to collapse.

b) to counteract the force of gravity and put the star into equilibrium.

c) A star's life is a constant struggle against the force of gravity

d) The star's core is very hot and creates pressure within the gas

Part II: Written Expression. (05 pts)

Choose ONE of the following topics.

Topic One: *There are many ways to celebrate Astronomy Day. Your school has selected you to deliver a speech about the benefits of studying astronomy and exploring space. Write a speech of about 80 o 120 words on the topic. Make the best use of these notes.*

- Develop telecommunications
- Reveal the origin of universe
- Assist / Navigation/ sailing
- predict / weather

Topic Two: You work for a company whose manager does not respect labour standards. Write a letter of about 80 to 120 words to the authorities in which you denounce his wrongdoings.

الموضوع الثاني

Part One: Reading:

(15 points)

A/Comprehension

(08 points)

Read the text carefully then do the following activities

The brain uses more energy than any other organ in the human body, and glucose is its primary source of fuel. Because the brain is so rich in nerve cells, or neuron, it is the most energy –demanding organ, using one-half of all the sugar in the body. But what happens when the brain is exposed to an excessive amount of sugar?

High or low glucose levels can affect the brain's functional connectivity and diminishes the mental capacity .Brain functions such as thinking, memory, and learning are closely linked to glucose levels and how efficiently the brain uses this fuel source. If there isn't enough glucose in the brain, the neurotransmitters, the brain's chemical messengers, are not produced and the communication between neurons breaks down. This can lead to loss of energy for brain and cognitive functions.

Although the brain needs glucose, too much of this energy source can be a bad thing. The excess glucose consumption leads to slowed cognitive function, deficits in memory, problems with attention, inflammation in the brain and even increases sadness and anxiety.

One way to decrease sugar consumption is to be mindful of the added sugars in processed foods and drinks. These can include items such as soft drinks, candy, and baked goods. It is also helpful to read nutrition labels and ingredient lists to identify added sugars. Another strategy is to opt for healthier alternatives to sugary treats, such as fruits or unsweetened yogurt.

Adapted from: <https://hms.harvard.edu/news-events/algarvewellnessretreat.com>

1. Say whether the following statements are true or false.

- a) The brain consumes half of the body total amount of sugar.
- b) High level of sugar can improve the brain's functions.
- c) Too little glucose in the brain is as bad as too much of it.
- d) Processed foods contain a reasonable amount of sugar.

2. Answer the following questions according to the text.

- a) Why does the brain need sugar?
- b) How does the lack of glucose affect our brain?
- c) Does the excessive consumption of glucose lead to learning disorder?
- d) How can we prevent sugar overconsumption? Copy down two ways.

3. Find what or who the underlined words in the text refer to.

- a) its (§1) b) this fuel source (§2) c) these (§4)

4. Choose the general idea of the text.

- a) The impact of added sugars on our diet.
- b) The brain's need for sugar.
- c) The pros and cons of sugar consumption.

B/Text Exploration

1- Find words, phrases or expressions in the text whose definitions follow:

- The organ inside the head that controls all body functions of a human being. (§1) = ...
- a simple sugar which is an important energy source in living organisms (§2) = ...
- the action of using up a resource. (§4) = ...

2- Divide the following words into roots and affixes:

Connectivity – mindful – unsweetened

Prefix	Root	Suffix

3- Combine each pair of sentences with one of the connectors provided. Make changes where necessary.

- Sugar provides energy. Sugar has no nutritional value on its own. (**despite**)
- Fructose increases food intake. Glucose decreases food intake. (**unlike**)
- You eat or drink too much sugar. The extra insulin affects your arteries. (**provided**)

4- Fill in each gap with the appropriate word from the list given.

added – diet – preserve – nutrients – consume- present

Some foods that naturally contain sugar, such as vegetables, fruit and milk, are an important part of a healthy ...**(1)**..., because they also contain important...**(2)**.... All other sugars are called 'free sugars'. Free sugars are sugars ...**(3)**....to food products, and sugar is naturally ...**(4)**....in honey, syrups and fruit juices.

Part Two: Written Expression

(05 points)

Choose **ONE** of the following topics:

Topic One:

Topic one: While experts believe that sugar consumption raises the risk of Alzheimer's disease, obesity and many chronic diseases, many people rely on quick, sugary processed foods to boost their energy. Write a composition of about 80 to 120 words to be published on your school magazine about the best ways to prevent high –level sugar intake.

- Control / ban advertisement about sugary food
- give importance to packaging and ingredients
- sugar replacement / prioritize fruits and vegetables

Topic Two: Humour can have powerful impacts on both our physical and mental health. Doctors say that laughter is the best medicine against anxiety and depression. Imagine you were a journalist, write an article of about 80 to 120 words on the topic.

الإجابة النموذجية لموضوع اختبار مادة :اللغة الإنجليزية / 3 الشعب العلمية والتقنية

العلامة		عناصر الإجابة												
مجموعة	مجزأة													
08 pts		Part one : Reading A/Comprehension 1. F T F T 2. A---§3 B----§2 3. A) The reason is that a great amount of matter packed into a very small area. B) from the remnants of a large star <u>that</u> dies in a supernova explosion C) No, because it doesn't have the size / largeness needed to explode. D) Chandra X-ray telescope is used to detect black holes. 4. A) objects b) large star c) black holes												
07 pts		B- Text Exploration 1. Lexis / synonyms a) Remnants b) collapses c) detect 2. Morphology/ the opposites Unpacked – irrelative – defrozen 3. Syntax 1.b) Supergiant stars destroy themselves in a huge explosion because they lose so much hydrogen. 2. a) b) He wishes he would take part in the coming mission of NASA. 3.b) A new picture of strange objects has been painted by NASA instrument 4. Reordering C A D B												
05 pts		Part Two : Written Expression <table><tr><th>Criteria</th><th>Relevance</th><th>Semantic coherence</th><th>Correct use of English</th><th>Excellence vocab&creativity)</th><th>Final score</th></tr><tr><td>Common streams</td><td>1</td><td>1</td><td>2</td><td>1</td><td>5</td></tr></table>	Criteria	Relevance	Semantic coherence	Correct use of English	Excellence vocab&creativity)	Final score	Common streams	1	1	2	1	5
Criteria	Relevance	Semantic coherence	Correct use of English	Excellence vocab&creativity)	Final score									
Common streams	1	1	2	1	5									

الإجابة النموذجية لموضوع اختبار مادة :اللغة الإنجليزية / 3 الشعب العلمية والتقنية

العلامة		عناصر الإجابة												
مجموعة	مجزأة													
08 pts		Part one : Reading A/Comprehension 1. T F T F 2. A) Because the brain is so rich in nerve cells. B) If there isn't enough glucose in the brain, the neurotransmitters, the brain's chemical messengers, are not produced and the communication between neurons breaks down C) Yes; it does. D) - to be mindful of the added sugars in processed foods and drinks. - to read nutrition labels and ingredient lists to identify added sugars. - to opt for healthier alternatives to sugary treats. (grade 2 only) 3. A) brain b) glucose c) processed foods and drinks 4. The main idea of the text is (c)												
2	0.5X4													
3.5	1													
	1													
	0.5													
	0.5x2													
1.5	0.5X3													
1	1													
07 pts		B- Text Exploration 1. Brain b) glucose c) consumption 2. Morphology <table><tr><th>Prefix</th><th>Root</th><th>Suffix</th></tr><tr><td>//////</td><td>Connect</td><td>-ivity</td></tr><tr><td>//////</td><td>Mind</td><td>-ful</td></tr><tr><td>un</td><td>sweet</td><td>-ened</td></tr></table> 3. Syntax a) Despite providing energy, sugar has no nutritional value on its own. b) Unlike Fructose ,which increases food intake, glucose decreases food intake. Or: Unlike Fructose , glucose decreases food intake. c) Provided you eat or drink too much sugar, the extra insulin will affect your arteries. 5- Fill in each gap with the appropriate word from the list given. diet – nutrients added – present	Prefix	Root	Suffix	//////	Connect	-ivity	//////	Mind	-ful	un	sweet	-ened
Prefix	Root		Suffix											
//////	Connect		-ivity											
//////	Mind		-ful											
un	sweet		-ened											
1.5	0.5X3													
1.5	0.5X3													
3	1X3													
1	0.25X4													
05 pts		Part Two : Written Expression <table><tr><th>Criteria</th><th>Relevance</th><th>Semantic coherence</th><th>Correct use of English</th><th>Excellence vocab&creativity)</th><th>Final score</th></tr><tr><td>Common streams</td><td>1</td><td>1</td><td>2</td><td>1</td><td>5</td></tr></table>	Criteria	Relevance	Semantic coherence	Correct use of English	Excellence vocab&creativity)	Final score	Common streams	1	1	2	1	5
Criteria	Relevance		Semantic coherence	Correct use of English	Excellence vocab&creativity)	Final score								
Common streams	1		1	2	1	5								