

Name: \_\_\_\_\_ ( ) Date: \_\_\_\_\_  
Class: \_\_\_\_\_

**B2 level**

No. of Words: 890

Read the following passage and answer the questions that follow. (33 marks)

## **Zika epidemic and its association with baby microcephaly**

25 February 2016

[1] On 23 February 2016, the Centre for Health Protection was informed of two additional imported cases of Zika virus infection in the Mainland. The two involved a father and his son, who returned to the Mainland from Fiji and Samoa via Hong Kong on 14 February.

[2] For weeks, people around the world have been bombarded with news on the exotic-sounding Zika virus and stark photos of babies born with abnormally small heads. These images, accompanied by stories on the ongoing outbreak of the mosquito-borne disease across more than 20 countries, have generated responses ranging from travel warnings to the World Health Organization's declaration of a 'public health emergency of international concern'.

[3] Transmitted mainly through the bite of an infected *Aedes aegypti* mosquito, the Zika virus is currently found in some Central and South American countries, as well as a handful of Pacific island nations. Of all these countries, Brazil has been the most affected because it is where the majority of cases of microcephaly — a birth defect in which the infant's head is unusually smaller than average and the brain may not have developed properly — have been reported. Since the outbreak of Zika in October 2015, there have been 5,640 reported cases of microcephaly, of which 4,107 could be regarded as suspected cases.

[4] It all started with health experts in Brazil noticing an unusual number of babies born with misshapen skulls in September 2015. It was then discovered that in 26 of the first 35 cases registered, the mother had developed an illness with symptoms suggestive of a Zika infection during her pregnancy. Considering that in 2014, only about 150 cases of microcephaly were reported in Brazil, where on average about three million babies are born in a year, it is not entirely implausible that the Zika virus is related to the birth defect.

[5] Although there is mounting evidence that points to a link between Zika and microcephaly, the virus has not yet been proven to cause birth abnormalities. In fact, scientists have appealed for caution when interpreting the data as the evidence linking the two is circumstantial. Discarding the two as pure coincidence is unlikely to protect the community from the new threat, nor is stirring up public panic over the risks of contracting Zika necessary. Based on the evidence available so far, the World Health Organization (WHO) concluded that the recent 'cluster of microcephaly cases and other neurological disorders reported in Brazil' constitutes a public health emergency of international concern, and that a causal relationship between Zika infection during pregnancy and microcephaly is 'strongly suspected'.

[6] Lost amid all the scary bulletins is the fact that Zika produces very minor symptoms — a mild fever, skin rash, muscle and joint pain and fatigue — which last up to seven days and are found in only 20% of those infected. What the media appears to have failed to encapsulate is that the outbreak of the mosquito-borne disease itself has not been declared a public health  
35 emergency. Leslie Lobel, an Israeli physician based in Ben-Gurion University, said in a telephone interview that ‘the hysteria is way ahead of the research or the facts about the pathology surrounding the virus.’ He believes it is more important to first confirm whether Zika is responsible for the birth defect, or whether it is caused by other factors.

[7] One of the many investigations into the relationship between the Zika virus and  
40 microcephaly was carried out by Brazilian paediatrician Sandra da Silva Mattos and her colleagues. They examined a database of babies born prior to the current Zika epidemic in northeast Brazil, an area thought to be worst hit by the microcephaly cases. At first, they found that the incidence of microcephaly there was significantly higher than expected. However, the figures dropped to 0.02–0.19% — much more in line with those reported elsewhere in the  
45 world — when more specific criteria were used.

[8] Given that the medical records da Silva Mattos and her team looked at were several years before the Zika outbreak, and that they exhibited a seasonal fluctuation in a pattern that mirrors the peak activity of the Zika-carrying mosquitoes, the tasks facing scientists would not simply be to determine whether Zika is the cause of microcephaly, but to devise criteria that could  
50 allow for a much more accurate diagnosis of the condition. Moreover, what appeared to be an epidemic of infant microcephaly could actually turn out to be an example of the awareness effect — a problem or condition is more likely to be identified (or in some cases misidentified) when people are made more aware of it.

[9] All of the above may still suggest an increase in microcephaly, but the rise could well be  
55 much less drastic than when they were first reported. Determining whether Zika is the cause may require months, if not years, of research. Of all the 5,640 cases of microcephaly reported so far, 583 have been confirmed, but only 67 have been tested positive for the virus; the causal link between the birth defect and the virus remains a tenuous one.

[10] As the association between The Zika virus and microcephaly is yet to be established, it is  
60 only sensible to take precautionary measures, such as controlling mosquito populations and preventing mosquito bites for pregnant women. Prematurely arriving at a conclusion based on correlations could obscure the true cause behind the microcephaly cases.

## Comprehension

1. Which of the following is true according to paragraph 1?
 

A. The patients could have brought the virus to Hong Kong.	A	B	C	D
B. The patients were infected in the mainland.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. The patients lived in Fiji and Samoa.				
D. The patients were the first cases in China.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
  
2. What does the writer think about the news reports on Zika virus and photos of babies with abnormality?  
 \_\_\_\_\_
  
3. What does 'These images' (lines 5–6) refer to?  
 \_\_\_\_\_
  
4. How many countries have been affected by the Zika virus?  
 \_\_\_\_\_
  
5. Based on paragraph 3, decide whether the following statements are **True, False** or the information is **Not Given**. Blacken ONE circle only for each statement. (3 marks)
 

	T	F	NG
i) A person will have Zika virus disease if he / she is bitten by an <i>Aedes aegypti</i> mosquito.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ii) There are more cases of Zika virus disease in Central and South American countries than Pacific island nations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iii) There is no Zika virus infection in Europe yet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
  
6. What do the following words refer to? (3 marks)
 

i) which (line 15)	_____
ii) It (line 16)	_____
iii) where (line 20)	_____
  
7. What is paragraph 4 about?
 

A. Baby deformities in Brazil	A	B	C	D
B. Causes of a large population in Brazil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Why people link Zika to microcephaly				
D. Dangers of Zika infection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Complete this summary of paragraph 4 and 5 by choosing a word from the eight options given below. Write the correct word in the space provided. Each word can be used **ONCE** only. (3 marks)

causal	close	coincidental	deformed
hesitant	implausible	quick	possible

Even though a large number of babies found to suffer from microcephaly have mothers who suffered from Zika infection when they were pregnant, scientists are still (i) \_\_\_\_\_ in establishing a (ii) \_\_\_\_\_ relationship between the two. WHO, however, decided that it is highly (iii) \_\_\_\_\_ that this is the case.

9. Why don't scientists regard Zika and microcephaly as pure coincidence? (2 marks)

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10. What does 'Lost amid all the scary bulletins' (line 31) suggest about Zika's symptoms?

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11. Match the person on the left with the idea on the right. Write the letter (A–C) on the line next to the person's name. ONE question is not used. (2 marks)

Person	Idea
i) Leslie Lobel _____	A. The number of microcephaly cases confirmed depends a lot on the criteria.
ii) Sandra da Silva Mattos _____	B. We are beginning to see how the Zika virus causes microcephaly.
	C. People are scared of the Zika virus disease even though it is not so frightening.

12. What do the following pronouns refer to? (2 marks)

- i) it (line 38) \_\_\_\_\_
- ii) they (line 47) \_\_\_\_\_

13. Find a phrase in paragraph 7 that means the same as 'before'.

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14. Below is a summary of paragraph 8. In three of the lines, there is ONE mistake. If you find a mistake, underline the mistake and replace the word with one that expresses the correct idea. Write the word in the space on the right. If there is no mistake, put a tick (✓) in the space. The first has been done for you. (4 marks)

	Summary	Correction
e.g.	The data of babies born <u>after</u> the Zika outbreak shows that	<i>before</i>
i)	the patterns of microcephaly and the peak activity	
ii)	of Zika-carrying mosquitoes are very different. Scientists	
iii)	now need to find out the consequence of Zika virus infection	
iv)	and criteria which can identify related microcephaly.	

15. According to paragraph 8, what is the silver lining to the microcephaly epidemic?

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16. Which word can best replace 'tenuous' in line 58?

- A. strong  
B. noticeable  
C. mysterious  
D. weak

A      B      C      D  
○      ○      ○      ○

17. Which of the following does the writer imply in paragraph 9?

Put a tick (✓) next to the TWO that apply.

(2 marks)

- i) We will not have microcephaly in the future.  
ii) A lot needs to be done to decide if the Zika virus causes microcephaly.  
iii) Very few microcephaly cases are linked to the Zika virus.  
iv) Confirming the causal link between the Zika virus and microcephaly is only a matter of time.

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18. What 'birth defect' is the writer talking about in line 58?

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19. Find a word in paragraph 10 that means the same as 'preventive'.

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20. What does the 'conclusion in lines 61 refer to?

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## Zika epidemic and its association with baby microcephaly

### Answer key

1. A (line 3)
2. There is a lot / too many. (line 4: bombarded with)
3. The photos of babies born with abnormally small heads (line 5)
4. More than 20 countries (line 7)
5. (i) F (line 9: infected *Aedes aegypti* mosquito)  
(ii) NG  
(iii) T (lines 10–11)
6. (i) reported cases of microcephaly (lines 14–15)  
(ii) The connection people draw between Zika and microcephaly  
(iii) Brazil (line 20)
7. C
8. (i) hesitant (lines 23–24)  
(ii) causal (line 23)  
(iii) possible (lines 29–30)
9. This is unlikely to protect the community from the new threat (line 25) (*1 mark*)  
and the link between mother infection and baby microcephaly is strong. (lines 17–19) (*1 mark*)
10. They are not reported. / People don't notice them.
11. (i) C (lines 43–45)  
(ii) A (lines 36–37)
12. (i) the birth defect (line 38)  
(ii) the medical records (da Silva Mattos and her team looked at) (line 46)
13. prior to (line 41)
- 14.

	Summary	Correction
e.g.	The data of babies born <u>after</u> the Zika outbreak shows that	<i>before</i>
i)	the patterns of microcephaly and the peak activity	✓
ii)	of Zika-carrying mosquitoes are very <u>different</u> . Scientists	similar (lines 47–48)
iii)	now need to find out the <u>consequence</u> of Zika virus infection	cause (line 49)
iv)	and criteria which can identify related <u>microcephaly</u> .	diseases / infections

15. It draws people attention to the Zika virus; with more research carried out, the Zika virus infection is more likely to be identified in the future.
16. D
17. (i)  
(ii) ✓ (lines 55–56)  
(iii) ✓ (line 57)  
(iv)
18. The infant's head is unusually smaller than average and the brain may not have developed properly. (lines 12–13)
19. precautionary (line 60)
20. That the Zika virus causes microcephaly