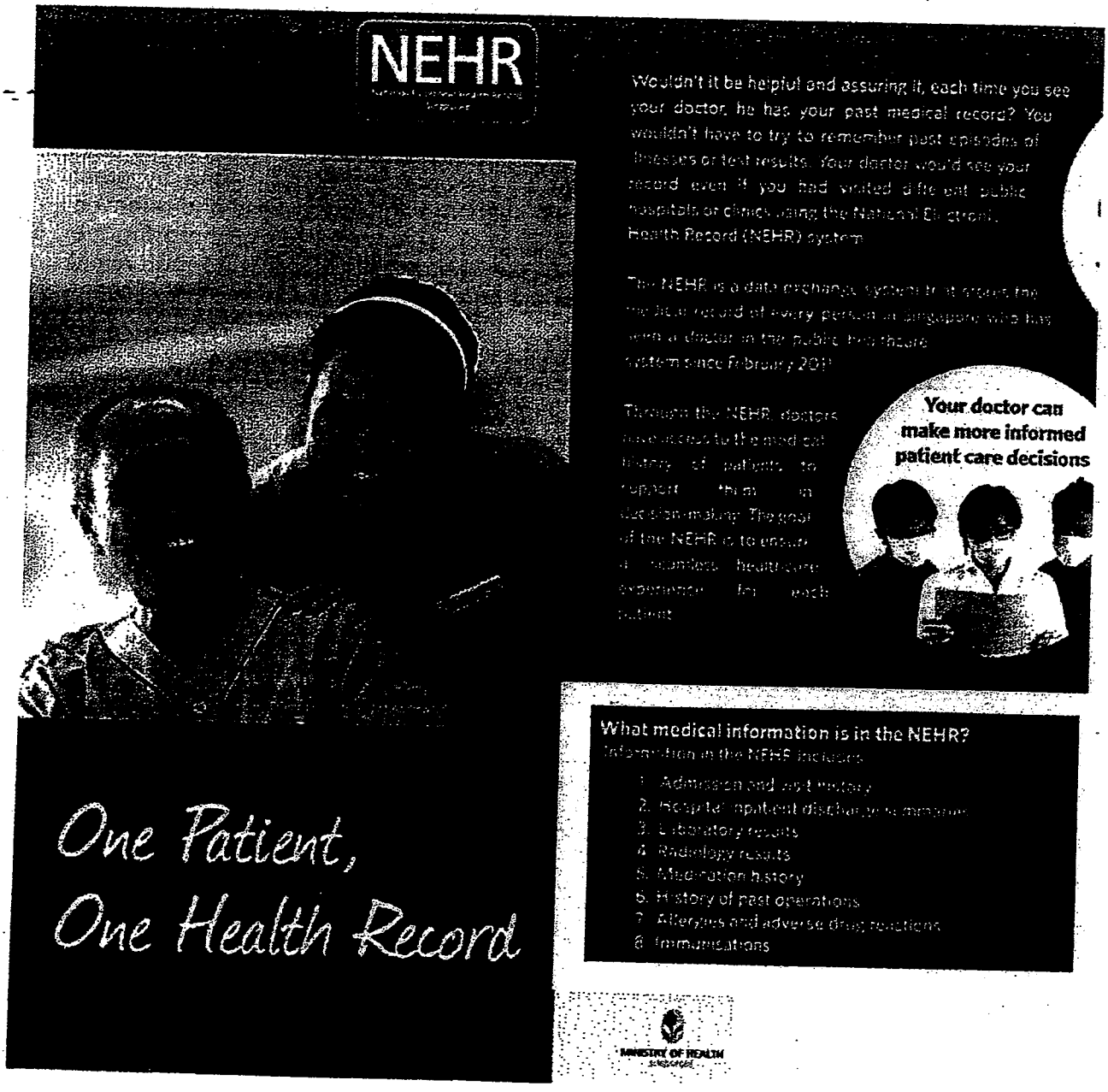
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2

Section A

Text 1

Study the brochure below and answer Questions 1 - 4 in the Question Paper Booklet.



Visual text adapted from "National Electronic Health Record", https://www.moh.gov.sg/content/moh_web/home/Publications/educational_resources/2014

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Section B

Text 2

The text below depicts the challenges the narrator faces while being stranded at sea with a tiger named Richard Parker. Read the text carefully and answer Questions 5 - 13 in the Question Booklet.

1 I heard loud sniffing and a body being dragged. His shifting weight made the boat rock a little. I began hearing the sound of a mouth eating. I peeked beneath the tarpaulin[1]. He was in the middle of the boat, eating the hyena by great chunks, voraciously. This chance would not come again. I reached and retrieved the six remaining life jackets and the last oar. They would go to improving the raft. I noticed in passing a smell - not the sharp smell of cat urine, but vomit. There was a patch of it on the floor of the boat. It must have come from Richard Parker. So he was indeed seasick.

2 Richard Parker opened his maw and the squealing rat disappeared into it like a baseball into a catcher's mitt[2]. Its hairless tail vanished like a spaghetti noodle sucked into a mouth. He seemed satisfied and backed down, returning beneath the tarpaulin. My legs instantly became functional again. I leapt up, raising the locker lid again to block the open space between the bench and tarpaulin.

3 I hitched a long rope to the raft. Lifeboat and raft were now tethered. Next, I attached a life jacket to each side of the raft, on its underside. Another life jacket I strapped across the hole of the lifebuoy to act as a seat. I turned the last oar into a footrest, lashing it on one side of the raft, about two feet from the lifebuoy, and tying the remaining life jacket to it. My fingers trembled as I worked, and my breath was short and strained. I checked and rechecked all my knots.

4 I looked about the sea. Only great, gentle swells. No whitecaps. The wind was low and constant. I looked down. There were fish – big fish with protruding foreheads and long dorsal fins, smaller fish and smaller ones still – and sharks. I eased the raft off the lifeboat. If for some reason it did not float, I was as good as dead. It took to the water beautifully. In fact, the buoyancy of the life jackets pushed the oars and lifebuoy right out of the water. But my heart sank. As soon as the raft touched the water, the fish scattered – but the sharks remained. Three or four of them. One swam directly beneath the raft. Richard Parker growled. I felt like a prisoner being pushed off a plank by pirates.

[1] tarpaulin: a protective covering of canvas or waterproof material.
[2] mitt: a rounded glove used in baseball.

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4

5 I brought the raft as close to the lifeboat as the tips of the oars would allow. I leaned out, laying my hands on the lifebuoy. Through the "cracks" in the floor of the raft – yawning crevasses would be more accurate – I looked directly into the sea's bottomless depths. I heard Richard Parker again. I flopped onto the raft on my stomach. I lay flat and spread-eagled, not moving a finger. I expected the raft to overturn at any moment. Or a shark to lunge and bite right through the life jackets and oars. Neither happened. The raft sank lower and pitched and rolled, the tips of the oars dipping underwater, but it floated robustly. Sharks came close, but did not touch.

6 I felt a gentle tug. The lifeboat and the raft had already separated as far as the rope would go, while the rope tensed and lifted out of the water, wavering in the air. It was a highly distressing sight. It only needed a shark to bite the rope, or a knot to become undone, or a large wave to crash upon me, and I would be lost. The lifeboat now seemed a haven of comfort and security.

7 I gingerly sat up. Stability was good, so far. My footrest worked well enough. But it was all too small. There was just enough space to sit on and no more. This toy raft, mini-raft, micro-raft, might do for a pond, but not for the Pacific Ocean. I took hold of the rope and pulled. The closer I got to the lifeboat, the slower I pulled. When I was next to the lifeboat, I heard Richard Parker. He was still eating.

8 I stayed on the raft. I didn't see what else I could do. My options were limited to perching above a tiger or hovering over sharks. I knew perfectly well how dangerous Richard Parker was.

Adapted from 'Life of Pi' by Yann Martel.

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Section C

Text 3

The article below explains the link between genetics and sports. Read the text carefully and answer Questions 14 – 20 in the Question Booklet and Summary Sheet.

1 Ron Duguay, who played 12 seasons in the National Hockey League, was bracing for bad news. Famous in the 1980s for playing without a helmet, he fiddled with his mammoth New York Rangers championship ring as he sat in a doctor's office.

2 He was in town to talk with Dr. Braverman, hoping to get some help with his deteriorating memory. "People tell me I should write a book about my career," Duguay said, "but I'd have to call up my teammates. There's a lot I can't remember." He guesses that he had between one and three serious concussions during his career, and he frequently suffered hits on his unprotected head. After a battery of exams, Braverman informed Duguay that he had flunked three tests of his memory and of the processing speed of his brain. "He's a mess compared to his old self," Braverman said. Braverman also ordered a test to see what versions Duguay has of the ApoE gene.

3 Duguay's grandmother died from Alzheimer's disease. Studies of Alzheimer's patients have found that a particular variant of the ApoE gene is associated with increased risk of the disease. Each person has two copies of the ApoE gene. Each copy would be ApoE2, ApoE3, or ApoE4. People with one copy of the ApoE4 gene have a three-to- four-fold increased risk of Alzheimer's, while people with two ApoE4 copies have eight times the risk. Alzheimer's patients with ApoE4 variants also tend to show dementia at an earlier age than Alzheimer's patients who do not have this particular variant.

4 A series of small studies also suggests that athletes with ApoE4 variants who get hit in the head are more likely to recover slowly and to suffer greater dementia later in life. It is not entirely clear how ApoE affects brain recovery, but the gene is involved in the inflammatory response of the brain after injury, and people with the ApoE4 variant appear to take longer to clear their brains of amyloid, a protein, which floods in heads after trauma.

5 A 1997 study of 30 boxers found that those who had taken many blows to the head and had an ApoE4 copy scored significantly worse on tests of brain impairment than similar fighters who did not have the ApoE4 copy. The ApoE4 variant is present in less than 25% of the general population but it was present in all three of the boxers in the study who were severely impaired. In 2000, a study of 53 active professional footballers concluded that three factors caused some players to score lower than others on brain function tests: age, having been hit in the head a lot and possessing an ApoE4 variant.

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6

6 Last year, doctors from Boston University made news with research on dozens of cases of brain damage in football players and boxers. What escaped the news was the genetic data they had for nine of the athletes. Five, or at least 56%, had at least one ApoE4 variant, more than twice the proportion found in the general population, showing another link between ApoE4 and increased risk of brain damage.

7 Barry Jordan, the chief medical officer of the New York State Athletic Commission, considered requiring ApoE screening for all boxers in the state, but then backed off. Doctors agree that more understanding of how ApoE4 affects brain recovery is needed before a genetic test becomes common practice. Jordan and James P. Kelly, a neurologist, cited two other arguments against offering the ApoE test to athletes: first, teams and insurance companies may unfairly discriminate against athletes with certain genes; second, to tell someone he has an ApoE4 variant is to tell him his risk of developing Alzheimer's – information he might not want to know. "With ApoE4, some would argue that knowledge is not power," Kelly says. "The world of genetics for decades has suggested that there's no reason to give people genetic-risk information unless there's something proven you can do about it."

8 For athletes facing head trauma, perhaps there are relatively painless actions they could take. "If this gene is how you're describing it," says Duguay, whose test showed that he has one ApoE4 copy, "and I knew I had it when I was playing, I would've seriously considered wearing a helmet."

Adapted from 'Sports Genes', by David Epstein.

END OF INSERT

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Section A [5 marks]

Text 1

Refer to the brochure (Text 1) on page 2 of the Insert for Questions 1 – 4.

1 With reference to the first paragraph, why is it assuring if a doctor has one's past medical records?

_____

_____ [1]

2 What is the purpose of this brochure?

_____

_____ [1]

3 Explain two ways in which the National Electronic Health Record (NEHR) will be beneficial for patients with chronic illnesses.

1. _____

_____ [1]

2. _____

_____ [1]

4 Look at the photograph placed at the left side of the visual text. What idea is the photograph trying to establish?

_____

_____ [1]

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Section B [20 marks]

Refer to Text 2 on pages 3 – 4 of the Insert for Questions 5 – 13.

5 Find two words in Paragraph 1 which suggest that Richard Parker had been stranded at sea for a long time.

(i) _____ [1]

(ii) _____ [1]

6 In Paragraph 1, the narrator mentioned that 'This chance would not come again' (line 4).

(i) What does 'this chance' refer to?

_____

_____ [1]

(ii) Why do you think this chance would not come again?

_____

_____ [1]

7 '...the squealing rat disappeared into [the tiger's maw] like a baseball into a catcher's mitt' (lines 9 - 10). What is unusual and effective about this description?

_____

_____

_____ [2]

8 'Its hairless tail vanished like a spaghetti noodle sucked into a mouth' (lines 10 – 11). What is so interesting about the way the writer describes Richard Parker's act of eating the rat?

_____

_____ [1]

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9 Select three details in Paragraph 4 and explain how each detail highlights the narrator's feeling of doom.

_____

_____

_____

_____ [3]

10 At the end of Paragraph 6, the narrator admitted that 'The lifeboat now seemed a haven of comfort and security' (line 42).

(i) Explain the irony of the statement.

_____

_____ [1]

(ii) What does this reveal about the situation he was in?

_____ [1]

11 'This toy raft, mini-raft, micro-raft, might do for a pond, but not for the Pacific Ocean' (lines 44 - 45).

(i) Explain how the repetitive effect of the word 'raft' in 'toy raft, mini-raft, micro-raft' reveals the writer's state of mind.

_____

_____ [1]

(ii) Apart from the size of the raft, why do you think the raft was not suitable for the narrator?

_____

_____ [1]

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12 In Paragraph 8, the narrator stayed on the raft at a distance which balanced his two fears. What were the two fears of the narrator?

_____

_____ [2]

13 The structure of the text reflects the main stages in the narrative.
Complete the flow chart by choosing one phrase from the box to summarise the main focus in each stage of the narrative. There are some extra phrases in the box that you do not need to use.

Main stages

Trying to put theory into practice	Searching for help
Necessary preparations	Facing up to a threat
Testing out possibilities	Observing the enemy
Realising the unfortunate outcome	

Flow chart

Paragraphs 1 - 2:
(i) _____

Paragraph 3:
(ii) _____

Paragraphs 4 - 6:
(iii) _____

Paragraphs 7 - 8:
(iv) _____

[4]

[Turn over

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Section C [25 marks]

Refer to Text 3 on pages 5 – 6 of the Insert for Questions 14 – 20.

14 Ron Duguay was 'bracing for bad news' (line 2). Which other word in Paragraph 1 indicates that he was feeling nervous?

_____ [1]

15 From Paragraph 1, state two reasons why Duguay was famous.

_____

_____ [2]

16 'He's a mess compared to his old self' (line 12). With reference to Paragraph 2, suggest what Duguay's 'old self' was like.

_____

_____ [2]

17 **In your own words**, what adverse consequence is associated with Alzheimer's patients with ApoE4 in Paragraph 3?

_____ [1]

18 Here is a part of a conversation between two athletes, Joe and David, who have read the article.

Joe:	I agree with James P. Kelly that knowledge is not power, when it comes to ApoE4 screening.
David:	I definitely do not agree. Surely we can take preventive measures if we know that we have ApoE4.

(i) Cite information from Paragraph 7 that Joe can use to support his statement.

_____ [1]

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(ii) How do you think David could explain his position with reference to Paragraph 8?

_____ [1]

19 'If... I knew I had it when I was playing, I would have seriously considered wearing a helmet' (lines 55 – 57). In the light of the Alzheimer's threat facing those with the ApoE4 gene variant, explain how Duguay's statement is rather unexpected.

_____

_____ [2]

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This page is to be detached and handed in separately.

Candidate Name:			
Index Number:		**Class:**	SEC 4____

20 **Using your own words as far as possible,** summarise the links between possessing the ApoE4 gene variant and possible negative health effects.

Use only information from paragraphs 3 to 5.

Your summary must be in continuous writing (not note form). It must not be longer than 80 words long (not counting the words given to help you begin).

People with the ApoE4 gene variant are more likely to…

No. of words: [ ] [15]

END OF PAPER

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ANS

SINGAPORE CHINESE GIRLS' SCHOOL PRELIMINARY EXAMINATION 2015 SECONDARY FOUR

PAPER 2 COMPREHENSION

SUGGESTED ANSWERS

Section A

1. Any possible answer from:

   "You wouldn't have to try to remember past episodes of illnesses or test results"

   OR

   "Your doctor would see your record even if you had visited different public hospitals or clinics".

   Answers must be tweaked to fit the question and cover the area of how it ASSURES one.

2. To inform and educate patients on the National Electronic Health Record System.

3. Any 2 possible answers from:

[Any possible answer from the list at the bottom right table

Eg: Admission and visit history / Hospital inpatient discharge summaries/ laboratory results/ radiology results/ medication history/ history of past operations / allergies and adverse drug reactions / immunisations as long as it includes explanation of how the Information helps one with an ONGOING illness].

4. The smiles on both the patient and healthcare officer suggests that with the NEHR, one would have a more pleasant / positive healthcare experience.

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Section B

5. i) voraciously
   ii) seasick

6. i) The chance for Richard Parker to be distracted enough for the narrator to reach into the lifeboat and remove the life jackets from it without being noticed by Richard Parker.

   ii) Richard Parker was busy eating the hyena and based on the situation of them being stranded out in sea, there would be no other living creature to distract the tiger after the hyena was eaten.

   Or

   The writer will be the next in line to be killed as there would be no other living creature to distract the tiger after the hyena was eaten. Hence he would have no other chance of escaping.

7. ~~The comparison of the rat that is a squealing, living creature to a baseball is unusual as a baseball is an inanimate object. But it is effective as it emphasizes how easily the rat is snugly engulfed in the tiger's mouth like the tight firm grip of the ball in the catcher's mitt normally associated with the sport.~~

   The comparison was unusual because the hyena is actually a much larger creature than it was described (as 'the rat') by the writer.
   Or
   The hyena, a fearsome predator (that just kill a zebra and orangutan), is described as a squealing rat by the author.

   [1]

   However it was effective in showing,

   how much smaller the hyena was as compared to the tiger (rat vs cat / hyena vs tiger) such that it can fit snugly into the maw of the tiger,
   or
   how helpless it was being subdue/captured by powerful the Bengal Tiger.

   as if it were a baseball in the catcher's mitt.
   [1]

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~~8. The rat, commonly known as a rodent or a pest is in fact described here as a delicious and appetising human meal (spaghetti) to a tiger.~~

The writer described the manner which the tiger ate the hyena, as if it were a human enjoying a delicious meal. (after facing starvation on the boat)

Or

It shows how effortless it was for the tiger to consume the hyena (???)

(next up – the 'special' language use question)

9. Three Details:
"I was as good as dead" – clearly expresses his resigned fate. [1]

"My heart sank" – the heaviness of his heart highlights the knowledge of how severe his situation is. [1]

By comparing his plight to "a prisoner being pushed off a plank by pirates", it also reinforces how trapped he felt in a hopeless situation that would inevitably end up in a disaster. [1]

10. i) It was ironic because he spent his whole time planning to leave the lifeboat where the tiger was in only to find himself trapped on the raft which was just as dangerous. (weak raft, surrounded by sharks)

OR

He wanted to leave the raft due to the dangerous sharks in the sea only to enter the lifeboat that contains another predator, a tiger.

ii) The situation was bleak / dangerous / hopeless

11. i) The repetition highlights and emphasizes the smallness / small size of the raft and it reveals the writer's total sense of hopelessness/ despair that he will not survive.

ii) The conditions of the raft was not sturdy enough for the unpredictable ocean. [FOCUS ON CONDITIONS OF RAFT]

12. perching above a tiger or hovering over sharks

13. i) observing the enemy
ii) necessary preparations
iii) testing out possibilities
iv) realizing the unfortunate outcome

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Section C

14. Fiddled

15. .
- He is a skilled/ experienced hockey player/ won championships
- He was famous for playing without a helmet

16. He had a good memory and he had higher brain processing speed.

17. They are more likely to develop dementia (symptoms of the disease/ memory loss) at a younger age.

18. i) Insurance companies may unfairly discriminate against an athlete with a certain gene.

OR

There's no reason to give people genetic-risk information unless there's something proven you can do about it (or simply, 'there's nothing proven that we can do about preventing Alzheimer's')

ii) For athletes facing head trauma, they could try to avoid taking damaging blows to the head / wear a helmet.

19.

Expected Response:	Duguay should have acknowledged that he should have worn a helmet
Unexpected Response	He does not commit to/ say for sure that he will wear a helmet/ He is non-committal about wearing a helmet

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Summary
(ANSWERS)

the links between possessing the ApoE4 gene variant, and possible negative health effects. Use only information from paragraphs 3 to 5.

	Points Lifted from the Passage
1	Have increased risk of the disease
2	Those with one copy… three-to-fourfold increased risk of Alzheimer's
3	Two copies… eight times the risk\
4	… tend to show dementia at an earlier age…
5	Hit in the head… more likely to recover slowly
6	Suffer greater dementia later in life
7	Involved in the inflammatory response of the brain after injury
8	Take longer to clear brains of …. Amyloid… floods in flowing head trauma
9	… scored significantly worse on tests of brain impairment / caused some players to score lower on brain function tests
10	…present in all three boxers in the study who were severely impaired. (must paraphrase to suit question)

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