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1137/01

May/June 2016

Candidates answer on the Question Paper.

No additional materials are required.

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

Do not use staples, paper clips, glue or correction fluid.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

The number of marks is given in brackets [] at the end of each question or part question.

The total number of marks for this paper is 25.

This document consists of 8 printed pages.

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Part 1
Questions 1–10

Read the text below about a national park in North America and complete the notes on the opposite page.

Use **UP TO THREE WORDS** from the text for each gap.

There is an example **(0)** at the beginning.

Yellowstone National Park

Yellowstone National Park in North America, which is the oldest national park in the world, was established in 1872.

The intention behind the park was to preserve an area of outstanding natural beauty for the benefit of future generations. Today, the area, which consists of over 8,900 square kilometres of unspoilt countryside, is visited by millions of people each year. Most people go there to see wildlife, especially the brown bears, which roam the park freely. The park is also home to herds of bison and packs of grey wolves. The waterfalls and lakes are particularly popular, as well as the park's 10,000 thermal springs.

There are five different ways to enter Yellowstone. The opening dates of these depend on the weather – for example, late snow last year meant the East Entrance did not open until June. The North Entrance is the only way to get into the park all year round. For other entrances, visitors are advised to confirm opening dates with the park authorities. When entering the park, visitors pay a fee, which varies according to the size of their vehicle. The pass they receive allows them to stay there for seven days. Passes lasting twelve months are also available, but these need to be applied for in advance.

For the active visitor, who enjoys day hikes or longer wilderness explorations, the park has thousands of kilometres of paths to choose from. The Grand Loop road is an alternative for visitors who prefer to view the park from the comfort of their vehicle. There is a wide variety of roadside picnic sites where you can take a short break, but visitors are reminded that they should not block traffic in order to view wildlife or scenery.

Nine visitor centres are spread across Yellowstone. Refreshments are available at these, as well as information about the park. Various options exist for overnight accommodation. Visitors can either choose to stay at a gateway community just outside the park, or within the park itself. Since all the cabins and hotels inside Yellowstone are extremely popular, visitors are advised to make their booking early. An alternative is one of the many campsites in Yellowstone. A map showing where these are located is on sale at visitor centres.

Although Yellowstone is open all year round, it is recommended that anyone visiting in winter should take the extreme weather conditions into account. Visitors who do not have vehicles suitable for the conditions are advised to join a park authority snowmobile tour. Spring is the best time to see wildlife, but the weather can still be very cold. Obviously, the summer is hotter, but this is also the busiest time of the year and it is not advisable to go then if you want to avoid crowds. Early in the autumn may be preferable, when there is still a good chance of seeing wildlife.

Notes

Yellowstone, the world's (0) *oldest* national park, dates back to 1872.

It was originally set up so that (1) of visitors would be able to enjoy the amazing environment the area offers. Today, there is a wide range of attractions for visitors, who come to see the wildlife, which includes wolves, (2) and bison, as well as to enjoy the thermal springs and lakes.

Visitors can enter Yellowstone by five different routes but, in winter, there is no way to access the park other than through the (3) The fee visitors pay varies depending on the size of their vehicle, and, on arrival, they are given a pass enabling them to spend up to (4) in the park.

It is possible to explore Yellowstone by going along one of its (5) or by driving on the Grand Loop. Alongside this are numerous (6) where visitors can stop briefly and rest.

There are nine visitor centres in the park where you can find out all you need to know about Yellowstone, and get (7) or a map too. There are a number of possibilities for overnight accommodation, including five gateway communities outside the park and various cabins, lodges and hotels inside Yellowstone. The park also has a large number of (8) , and details of where they are can be found at each visitor centre.

Visitors are welcome at Yellowstone at any time. However, for many months of the year, the freezing temperatures make the roads unsuitable for ordinary cars. An alternative is to go on a (9) organised by the park authorities. It is still quite cold in spring but the weather improves in summer, when you should expect there to be (10)

There are fewer visitors later in the year, but there are still opportunities to enjoy the wildlife.

[10]

Part 2

Questions 11–18

Read the article below about two friends who cycled from London to Sydney, Australia. Eight sentences have been removed from the article. Choose from the sentences **A–I** the one which fits each gap **11–18**.

.....There is one extra sentence which you do not need to use.

Write your answers (**A–I**) in each gap below.

There is an example (**0**) at the beginning.

London to Sydney by bike

Two years ago, I decided to cycle 25,000 kilometres from London to Sydney with Jack Beresford, a friend I'd made at university. (**0**) *J* But there still seemed many valid reasons for going. At that point, we couldn't have anticipated the problems we'd face.

(**11**) We also aimed to raise funds for a charity, and set ourselves the ambitious target of £35,000.

In preparation for our journey, we cycled the length of Britain from Land's End to John o'Groats, which are 1,500 kilometres apart. (**12**) However, it was a good way of proving we could work together. It was also excellent practice for cycling long distances day after day.

The start of our journey, through Europe, was a relatively easy introduction to cycle touring.

We experienced no extreme weather, and the route wasn't too challenging.

(**13**) Even so, it helped build our strength for the mountains that lay ahead.

Although the conditions were in our favour, we didn't escape without incident. In Montenegro, during our descent towards the Bay of Kotor, Jack misjudged a sharp bend. Suddenly, he was lying injured on the side of the road. (**14**) We were soon on our way again.

When we finally reached the Anatolian plains in Turkey, we left summer behind and embarked on a bitter, six-month winter. Between central Turkey and eastern China the temperature rarely rose above zero. (**15**) During these testing times we had to encourage each other to keep going. In China, we cycled 3,200 kilometres, descending 3,500 metres from the frozen

shores of Qinghai Lake to the town of old Beichuan. Once there, summer arrived quickly, and now we had to endure the extreme heat. We needed to cover as much distance as we could. By early afternoon the heat was often unbearable – in some places the tarmac on the road was actually bubbling! (16) We could then make good progress before we had to stop for a break.

A significant milestone was when we finally reached Singapore – the end of the Eurasian land mass! The remainder of our journey, some of which was by boat, took another four months. Sixteen months after leaving London, we eventually arrived in Sydney. For both of us it was an incredible adventure. We'd survived the trip, needing no more than could be fitted into just two bags.

(17) We learned a greater appreciation for simple pleasures like a hot shower and a comfortable bed. For anyone who is considering taking a similar trip, I would say, 'Go ahead'. (18) Life is definitely more fun when there's a bit of risk involved!

[8]

- A It made us realise that experiences in life are much more important than material possessions.
- B Our feet and hands went numb, and the conditions made the roads hazardous.
- C Otherwise, we were sure to have run into problems.
- D It's probably best not to think about it too hard, as you'll always find excuses not to go.
- E This meant that most days we had a fairly straightforward ride.
- F It was a relatively short distance compared to that of London to Sydney.
- G To avoid this part of the day, we started cycling just after sunrise.
- H All we knew was that we wanted to meet amazing people and see incredible places.
- I As it turned out, he just had a few cuts and bruises.
- J When we met up and started planning our expedition, neither of us had ridden bicycles in five years.

Part 3

Questions 19–25

Read the text below about a football pitch in Rio de Janeiro in Brazil. For questions **19–25**, circle the correct answer, **A, B, C** or **D**.

There is an example **(0)** at the beginning.

The kids from Morro da Mineira in the Brazilian city of Rio de Janeiro had always loved to play football – even though their community pitch was in a poor state of repair. This was not the only problem they had. Due to constant power shortages, this team of talented teenagers was forced to play in the heat of the day, and could rarely extend their games beyond sunset. Now, thanks to some extraordinary technology, these young players are able to use the field all night long if they wish, provided they keep on running!

That is because, at this newly renovated pitch, all the kinetic energy expended by the players is harnessed and used to power the lights. The overall aim of the initiative is to encourage people to find new ways to deliver electricity by more sustainable means. The hi-tech football field was officially opened last month by legendary soccer player Pelé. Since then, the team has been able to increase the number of hours they train, which is widely regarded as a positive development.

The company which was helping to re-turf the pitch was working in partnership with a company called *Pavegen*, which manufactures special tiles that make use of the energy created by movement. The tiles feed energy to a system of floodlights above the pitch. Placed under the astro-turf, they work in conjunction with solar panels that are also installed around the field.

Laurence Kemball-Cook, Pavegen's founder, says that when the 200 tiles were being laid, the super-excited teens were eager to help test the technology by jumping and playing on them. He adds that what really thrilled them was learning about how their energy would be stored and then used to illuminate the field at night. He believes that the hi-tech soccer field, which has transformed the community pitch into a 'real-life' science experiment, has not only made it possible for teens to play more football, but has also ignited a passion for science.

The tiles, made largely from rubber and other, recycled, materials, are the brainchild of 28-year-old Kemball-Cook, who has extensive experience of working with several multinational organisations. While reluctant to reveal everything about the technology behind the tiles and their development, Kemball-Cook does say that they use a system of cogs, which, when stepped on, spin like tops and act as electricity generators.

At a cost of 500 US dollars per tile, the technology is still too expensive to be deployed on a large scale. However, Kemball-Cook hopes to bring it down by refining the manufacturing process further, so that he can fulfill his dream of using Pavegen tiles to power the entire world!

- 0 What does the writer say about the football pitch at Morro da Mineira?
- A It was very popular.
 - B** It needed to be improved.
 - C It closed very early.
 - D It was in the centre of the city.
- 19 What difficulty did the young footballers face?
- A There was a shortage of good players.
 - B Equipment costs were very high.
 - C Running fast for a long time was hard.
 - D The amount of time they could play was limited. [1]
- 20 The new football pitch is part of a project that hopes to
- A improve training methods in sport.
 - B promote renewable energy sources.
 - C encourage young people to exercise more.
 - D generate money for the local area. [1]
- 21 Where are the special tiles located?
- A inside solar panels
 - B beneath the pitch
 - C next to floodlights
 - D around the edge of the pitch [1]
- 22 What is the writer doing in the fourth paragraph?
- A describing the teenagers' reaction to the installation of the tiles
 - B illustrating the importance of the technology behind the tiles
 - C comparing the teenagers' attitudes with those of the tiles' inventor
 - D demonstrating the importance of science education in schools [1]

23 What is the meaning of 'ignited a passion for' in the fourth paragraph?

- A explained a fascination for
- B confirmed an awareness of
- C promoted an interest in
- D ensured the importance of

[1]

24 What do we learn about Laurence Kemball-Cook?

- A He has a background in medicine.
- B He got the idea for the tiles while working on other projects.
- C He carried out a lot of research in order to develop the tiles.
- D He prefers to keep some information about the tiles to himself.

[1]

25 What would be the most suitable title for this text?

- A No step is wasted
- B Low cost but hi-tech
- C Skill counts in football
- D A worldwide phenomenon

[1]

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