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General Certificate of Education Advanced Subsidiary Level

GENERAL PAPER

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Paper 2

October/November 2013

INSERT

1 hour 30 minutes

READ THESE INSTRUCTIONS FIRST

You are required to answer **one** question.

This Insert contains three passages, one for each of Questions 1 to 3. You need to study the passage for the question you have chosen before starting your answer. The time needed to do this is allowed for within the time set for the examination.

This document consists of **6** printed pages and **2** blank pages.



Passage 1 Study the dialogue below to answer Question 1 parts (a–d).

Two neighbours, Ernest and Felix, having just met at a petrol station, are chatting at a nearby picnic area.

Ernest: Not a full tank, then?

Felix: Just as much as I can afford, what with inflation and all the other expenses nowadays.

Ernest: Same here. Just enough fuel for the longer journeys. The rest we'll have to walk or bike as we would have done in the good old days.

Felix: Well, I suppose it'll keep us fit. No more heart attacks. 5

Ernest: Maybe, but where will it end? Prices sky high, political unrest all over the place threatening oil supplies, and fossil fuels due to run out, anyway, in the not too distant future.

Felix: That's being a shade pessimistic. There's always nuclear power. Just one reactor of our own would make quite a difference. 10

Ernest: (*indignantly*) You're joking! After all those earthquakes and tsunamis? It's far too dangerous. What about all those radiation leaks in recent years?

Felix: But we're hundreds of miles from the sea and don't have earthquakes.

Ernest: (*earnestly*) Listen, disastrous mistakes can still be made and who'd be prepared to accept our nuclear waste? Our neighbours in Grabbia, Harassia and Invidia are hardly friendly. Look how they constantly hold up our rail and river traffic with their absurd rules and regulations! 15

Felix: In which case, we could dispose of it ourselves and not rely on anyone else.

Ernest: (*sarcastically*) Where exactly? With most of our income coming from tourism, where could we bury it without our visitors noticing? In our parks and gardens? Behind our art galleries? Beneath our historic ruins? 20

Felix: (*thoughtfully*) Well, one or two of our very deep lakes would have to be used for that purpose. There are plenty of others, after all, that are equally picturesque.

Ernest: And then, there is that precious reactor of yours. Where would you site it?

Felix: By one of those lakes, of course. Out of harm's way, between it and the surrounding mountains... I know, squeezed in on the Jubbol Heights between Lake Krocno and the Lertur Range. 25

Ernest: Which are hardly accessible unless you're a goat or an eagle.

Felix: But you've been up there and I've been up there with our families.

Ernest: Risking broken axles and shattered exhausts. 30

Felix: But we did it, and we're talking about sturdier and more powerful vehicles than ours.

Ernest: So, what is so wonderful when you're up there, apart from the view?

Felix: Abundant sources of hydroelectric power to run any nuclear plant.

Ernest: (*triumphantly*) Exactly so. So, why not use the same water to generate all our electricity instead? That really would be a green solution to all our problems. Then, we could start to pay our way again and hold our heads high. Grabbia, Harassia and Invidia, you'd better watch out! 35

Felix: Ernest, do be realistic. There's a world of difference between the odd waterfall from the Lertur Range keeping a local reactor going and its catering for the whole country's needs. 40

Ernest: (*innocently*) Look, there's a Lesser Spotted Bluehawk over there! I haven't seen one for ages ... What were you saying?

Felix: (*cell phone rings*) Hello. What's that? They're ready? All right, I'll pick them up on the way back. Won't be that long. No, they're in the bottom drawer next to the birthday cards. Bye. (*coldly, turning back to Ernest*) I told you to be realistic. 45

Ernest: Er ... yes ... so you did ... Be realistic ... Very well, then. Why not make a proper job of it? Why not construct a massive dam at one end of Lake Krocno, the one nearer the Lertur Range, and –

Felix: And?

Ernest: Oh, I don't know. Blast away or bore a few holes through the mountains for the water from Lake Krocno to rush down to the plains and – 50

Felix: And?

Ernest: Turn it all to electricity at the bottom. Turbines and all that.

Felix: Watched by all your tourists who've flocked to the foothills to keep us from bankruptcy?

Ernest: Well, at least that would give them something different to look at once they've grown tired of all the beautiful scenery – 55

Felix: But it wouldn't be beautiful, all those pipes and whatnot!

Ernest: Sorry, Felix, got to go now. My wife and kids will be waiting for me. See you tonight.

Passage 2 Study the material below to answer Question 2 parts (a–e).

Nenver, a town of 12,000 inhabitants, many of whom are over 65, has two doctors' surgeries. One, the Old Park Practice, has been badly damaged by fire and will be out of commission for at least three months. Previously, three doctors, two nurses and three office staff worked there. The building consists of an office, a waiting room, five consultation or treatment rooms, a storeroom and toilets. It has its own car park. Whereas the Regional Health Authority will be able to supply any basic equipment that cannot be saved, it has nothing to offer by way of temporary accommodation. The alternatives under consideration are listed below:

- A** Three empty classrooms at Quadale Junior School, an institution which in recent years has experienced falling numbers of pupils.
- B** Eight small offices on the second floor of Radtar House, which is situated in the town centre.
- C** The Scala, a large, disused cinema on the opposite side of town, that comprises a foyer and three auditoriums.

The Regional Health Authority is aware of the following information:

- 1 The cheapest public car park is some distance from Radtar House.
- 2 Nenver's markets operate on Monday, Wednesday and Friday.
- 3 The Old Park Practice is next door to Quadale Junior School.
- 4 Most of the local government offices in Nenver are located on the ground or first floor of Radtar House.
- 5 Toilet facilities at Quadale Junior School are not available to the general public.
- 6 The second-floor offices at Radtar House are poorly lit.
- 7 All three classrooms at Quadale Junior School have sliding partitions within them.
- 8 Public transport is infrequent except on market days.
- 9 All the Old Park doctors come from the same university.
- 10 The narrow roads are always congested round Quadale Junior School at the beginning and end of the school day.
- 11 The cinema seating and furnishings have already been removed from The Scala.
- 12 There is a tiny kitchen and a toilet on the second floor of Radtar House.
- 13 There has been an upsurge in petty crime round The Scala.
- 14 There is now no cinema left in Nenver.
- 15 Quadale Junior School is in the middle of the main residential area of Nenver.
- 16 The public area on the ground floor of Radtar House is extremely comfortable.
- 17 Lighting, heating, water and toilet facilities are still in place at The Scala.
- 18 An epidemic is spreading that affects young children and the elderly.
- 19 The Scala is on the edge of a rundown retail park.
- 20 Access to the second floor of Radtar House is either by steep stairs or by a complicated lift.

Passage 3 Study the article below to answer Question 3 parts (a–e).

‘How does a country change its time zone?’

Samoa plans to move itself from one side of the international dateline to the other, redrawing this already wobbly line. How does a country go about changing its time zone?

Samoa sits in the middle of the Pacific Ocean, just 32km (20 miles) east of the international dateline. On Samoa’s side of this imaginary line that runs from pole to pole, it is Tuesday. On the other side, it is already Wednesday. And this makes it tricky to communicate with its key neighbours, Australia and New Zealand, a day ahead on the other side. So Samoa plans to reset its clocks and calendars when it shifts its dateline – probably on Thursday 29 December, Prime Minister Tuilaepa Sailele Malielegaoi said. Samoa will lose a day as it jumps straight from Thursday to Saturday. Any residents with a birthday on Friday 30 December will have to celebrate a day early, or a day late, as that date will not exist in their country.

“There is no body that can say yes or no,” says David Mumford of Collins Bartholomew, which publishes the Collins and Times atlases for Harper Collins. “The country decides for itself. Then it’s just a matter of publicising it, informing the international community and the map-makers.”

In mid-April, a Samoan official made contact with the cartographers at Collins Bartholomew, alerting them to the proposed change and asking who else might need to be informed. “There have been various deviations and enclaves over the years, so we need to keep an eye out for proposed time zone changes. Once these go ahead, we update our atlases,” says Mr Mumford.

The dateline and standard time zones, in convenient hourly chunks, date from 1884’s International Meridian Conference. It agreed upon a 24-hour clock for the world, with days starting at midnight at longitude 0 – a prize awarded to Greenwich, in London. This meant longitude 180 – the imaginary dateline which separates two consecutive calendar days – would run through the Pacific Ocean. Nor did the Meridian Conference specify the exact course of the dateline. It zigs and zags as it crosses land or passes through island groups. It kinks east to encompass Siberia within the same date as the rest of Russia, and west to bring Hawaii into line with the rest of the U.S.

Over the years, many countries have ignored this international standard and set their own time as a way to assert national identity, to make political connections, or to keep one time zone within their borders. Some opt for local time based on the position of the sun, says Rebekah Higgitt, curator of the history of science and technology at the Royal Observatory in Greenwich. In 2007, Venezuela’s president Hugo Chavez shifted the entire country back 30 minutes. And France used to be on Paris time, which is only nine minutes ahead of GMT [Greenwich Mean Time]. But the country is now GMT+1 [hour]. “A switch can make historical records confusing, and may cause headaches for legal cases, but most people won’t notice,” says Ms Higgitt.

Swapping sides of the dateline is not a first for Samoa. It, and neighbouring American Samoa, lay west of the dateline until 1892, when a U.S. businessman convinced both to switch to the east for trading purposes.

The last country to shift the international dateline was Kiribati, which previously straddled the dateline, meaning a time difference of 23 hours between neighbouring islands. So on New Year’s Day 1995, it declared that it was adding a huge eastward bulge to its section of the dateline so all 33 of its islands would have the same date. “It was an administrative convenience,” says Michael Walsh, the Kiribati Honorary Consul to the U.K. “There were nine islands on the other [eastern] side of the international dateline, and 20% of the population. An unintentional by-product of this was that when the millennium came, we were the first to see the sun.” There were not so many practical problems in this move, he says. The easternmost islands were uninhabited, with no infrastructure. “We just did it and told the world. Some atlases took a while to adjust.”

Kiribati's decision did prove somewhat controversial, says Roger Pountain, of Collins Bartholomew, as some believe that the dateline is a global standard, and is therefore a matter for the international community to decide. "It is still the case that some cartographers, website owners, and even public authorities continue to prefer to show the dateline as not diverted round Kiribati, while also acknowledging that Kiribati's time zone conflicts with that," says Pountain.

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Samoa may yet find itself in a similar position.

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