1.**Read the article. Mark the sentences T (true) or F (false) or NG (not given)**

R. GREGORY HOUSE, the main character in the hit TV series House, M.D., is famous for being a pessimist. But it is not only Dr. House who is a pessimist. Hugh Laurie, the actor who plays him, is a pessimist, too.

Lourie never thought that House, M.D. was going to be a success. Even after seven seasons, he still feels pessimistic about it. He said in a recent interview, "If we do a bad show next week, they'll say, 'That's it. No more.' I'll just stop. I am, of course, someone who is constantly expecting a plane to drop on my head, if not today then tomorrow.! Like Dr. House, Laurie is also a talented musician and is passionate about the blues. He recently went to New Orleans to record an album in which he plays 15 of his favorite songs. But of course, he doesn't think that people will like it. When he was asked on a TV show why he was so pessimistic about lite, Laurie said it was because he is Scottish. "I definitely think that's where it comes from." Because of his reputation as a pessimist, people always folk to him about positive thinking. He says that complete strangers come up to him on the street and say, "Cheer up, it'll never happen!"

1 Hugh Laurie always thinks the worst will happen.

2. Hugh Lauries has bad experiences before.

3 He thinks they will make many more seasons of House, M.D.

4 He doesn't think his album will be successful.

5 He thinks that Scottish people are optimistic.

6 People often try to make him feel happier.

7. He has happy relationships.

2.

THE FALKIRK WHEEL

A unique engineering achievement

The Falkirk Wheel in Scotland is the world's first and only rotating boat lift. Opened in 2002, it is central to the ambitious f84.5m Millennium Link project to

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restore navigability across Scotland by reconnecting the historic waterways of the Forth & Clyde and Union Canals.

The major challenge of the project lay in the fact that the Forth & Clyde Canal is situated 35 metres below the level of the Union Canal. Historically, the two canals had been joined near the town of Falkirk by a sequence of 11 locks - enclosed sections of canal in which the water level could be raised or lowered - that stepped down across a distance of 1.5 km. This had been dismantled in 1933, thereby breaking the link. When the project was launched in 1994, the British Waterways authority were keen to create a dramatic twenty-first- century landmark which would not only be a fitting commemoration of the Millennium, but also a lasting symbol of the economic regeneration of the region.

Numerous ideas were submitted for the project, including concepts ranging from rolling eggs to tilting tanks, from giant see-saws to overhead monorails. The eventual winner was a plan for the huge rotating steel boat lift which was to become The Falkirk Wheel. The unique shape of the structure is claimed to have been inspired by various sources, both manmade and natural, most notably a Celtic double-floating objects displace their own weight in water. So when a boat enters a gondola, the amount of water leaving the gondola weighs exactly the same as the boat. This keeps the Wheel balanced and so, despite its enormous mass, it rotates through 180° in five and a half minutes while using very little power. It takes just 1.5 kilowatt-hours (5.4 MJ) of energy to rotate the Wheel - roughly the same as boiling eight small domestic kettles of water.

Boats needing to be lifted up enter the canal basin at the level of the Forth & Clyde Canal and then enter the lower gondola of the Wheel. Two hydraulic steel gates are raised, so as to seal the gondola off from the water in the canal basin. The water between the gates is then pumped out. A hydraulic clamp, which prevents the arms of the Wheel moving while the gondola is docked, is removed, allowing the Wheel to turn. In the central machine room an array of ten hydraulic motors then begins to rotate the central axle. The axle connects to the outer arms of the Wheel, which begin to rotate at a speed of 1/8 of a revolution per minute. As the wheel rotates, the gondolas are kept in the upright position by a simple gearing system. Two eight-metre-wide cogs orbit a fixed inner cog of the same width, connected by two smaller cogs travelling in the opposite direction to the outer cogs - so ensuring that the gondolas always remain level. When the gondola reaches the top, the boat passes straight onto the aqueduct situated 24

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metres above the canal basin.

The remaining 11 metres of lift needed to reach the Union Canal is achieved by means of a pair of locks. The Wheel could not be constructed to elevate boats over the full 35-metre difference between the two canals, owing to the presence of the historically important Antonine Wall, which was built by the Romans in the second century AD. Boats travel under this wall via a tunnel, then through the locks, and finally on to the Union Canal.

Do the following statements agree with the information given in Reading Passage 2?

Jn boxes 14-19 on your answer sheet, write

TRUE *if the statement agrees with the information*
FALSE *if the statement contradicts the information*
NOT G/VEN if there is *no information on this*

8 The Falkirk Wheel has linked the Forth & Clyde Canal with the Union Canal for the first time in their history.

9 There was sorne opposition to the design of the Falkirk Wheel at first.

10 The Falkirk Wheel was initially put together at the location where its components were manufactured.

11 The Falkirk Wheel is the only boat lift in the world which has steel sections bolted together by hand.

12 The weight of the gondolas varies according to the size of boat being carried.

13 The construction of the Falkirk Wheel site took into account the presence of a nearby ancient monument.

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3. **matching headings**

A

Easter Island, or Rapu Nui as it is known locally, is home to several hundred ancient human statues - the moai. After this remote Pacific island was settled by the Polynesians, it remained isolated for centuries. All the energy and resources that went into the moai - some of which are ten metres tall and weigh over 7,000 kilos - came from the island itself. Yet when Dutch explorers landed in 1722, they met a Stone Age culture. The moai were carved with stone tools, then transported for many kilometres, without the use of animals or wheels, to massive stone platforms. The identity of the moai builders was in doubt until well into the twentieth century. Thor Heyerdahl, the Norwegian ethnographer and adventurer, thought the statues had been created by pre-Inca peoples from Peru. Bestselling Swiss author Erich von Daniken believed they were built by stranded extraterrestrials. Modern science - linguistic, archaeological and genetic evidence - has definitively proved the moai builders were Polynesians, but not how they moved their creations. Local folklore maintains that the statues walked, while researchers have tended to assume the ancestors dragged the statues somehow, using ropes and logs.

B

When the Europeans arrived, Rapa Nui was grassland, with only a few scrawny trees. In the 1970s and 1980s, though, researchers found pollen preserved in lake sediments, which proved the island had been covered in lush palm forests for thousands of years. Only after the Polynesians arrived did those forests disappear. US scientist Jared Diamond believes that the Rapanui people - descendants of Polynesian settlers - wrecked their own environment. They had unfortunately settled on an extremely fragile island - dry, cool, and too remote to be properly fertilised by windblown volcanic ash. When the islanders cleared the forests for firewood and farming, the forests didn't grow back. As trees became scarce and they could no longer construct

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wooden canoes for fishing, they ate birds. Soil erosion decreased their crop yields. Before Europeans arrived, the Rapanui had descended into civil war and cannibalism, he maintains. The collapse of their isolated civilisation, Diamond writes, is a 'worst-case scenario for what may lie ahead of us in our own future'.

C

The moai, he thinks, accelerated the self-destruction. Diamond interprets them as power displays by rival chieftains who, trapped on a remote little island, lacked other ways of asserting their dominance. They competed by building ever bigger figures. Diamond thinks they laid the moai on wooden sledges, hauled over log rails, but that required both a lot of wood and a lot of people. To feed the people, even more land had to be cleared. When the wood was gone and civil war began, the islanders began toppling the moai. By the nineteenth century none were standing.

D

Archaeologists Terry Hunt of the University of Hawaii and Carl Lipo of California State University agree that Easter Island lost its lush forests and that it was an 'ecological catastrophe' - but they believe the islanders themselves weren't to blame. And the moai certainly weren't. Archaeological excavations indicate that the Rapanui went to heroic efforts to protect the resources of their wind-lashed, infertile fields. They built thousands of circular stone windbreaks and gardened inside them, and used broken volcanic rocks to keep the soil moist. In short, Hunt and Lipo argue, the prehistoric Rapanui were pioneers of sustainable farming.

E

Hunt and Lipo contend that moai-building was an activity that helped keep the peace between islanders. They also believe that moving the moai required few people and no wood, because they were walked upright. On that issue, Hunt and Lipo say, archaeological evidence backs up Rapanui folklore.

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Recent experiments indicate that as few as 18 people could, with three strong ropes and a bit of practice, easily manoeuvre a 1,000 kg moai replica a few hundred metres. The figures' fat bellies tilted them forward, and a D-shaped base allowed handlers to roll and rock them side to side.

F

Moreover, Hunt and Lipo are convinced that the settlers were not wholly responsible for the loss of the island's trees. Archaeological finds of nuts from the extinct Easter Island palm show tiny grooves, made by the teeth of Polynesian rats. The rats arrived along with the settlers, and in just a few years, Hunt and Lipo calculate, they would have overrun the island. They would have prevented the reseeding of the slow-growing palm trees and thereby doomed Rapa Nui's forest, even without the settlers' campaign of deforestation. No doubt the rats ate birds' eggs too. Hunt and Lipo also see no evidence that Rapanui civilisation collapsed when the palm forest did. They think its population grew rapidly and then remained more or less stable until the arrival of the Europeans, who introduced deadly diseases to which islanders had no immunity. Then in the nineteenth century slave traders decimated the population, which shrivelled to 111 people by 1877.

G

Hunt and Lipo's vision, therefore, is one of an island populated by peaceful and ingenious moai builders and careful stewards of the land, rather than by reckless destroyers ruining their own environment and society. 'Rather than a case of abject failure, Rapu Nui is an unlikely story of success', they claim. Whichever is the case, there are surely some valuable lessons which the world at large can learn from the story of Rapa Nui.

Questions 14-20

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Reading Passage 2 has seven paragraphs, **A-G**.

Choose the correct heading for each paragraph from the list of headings below.

Write the correct number, i-ix, in boxes 14-20 on your answer sheet.

List of Headings

i Evidence of innovative environment management practices

ii An undisputed answer to a question about the moai

iii The future of the moai statues

iv A theory which supports a local belief

v The future of Easter Island

vi Two opposing views about the Rapanui people

vii Destruction outside the inhabitants' control

viii How the statues made a situation worse

ix Diminishing food resources

14 Paragraph A

15 Paragraph B

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16 Paragraph C

17 Paragraph D

18 Paragraph E

19 Paragraph F

20 Paragraph G

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