Test 1

LISTENING

SECTION 1 *Questions 1–10*

Complete the notes below.

*Write **ONE WORD AND/OR A NUMBER** for each answer.*

HIRING A PUBLIC ROOM

Example

- the Main Hall – seats ..... 200 .....

Room and cost

- the **1** ..... Room – seats 100
- Cost of Main Hall for Saturday evening: **2** £ .....
  + £250 deposit (**3** ..... payment is required)
- Cost includes use of tables and chairs and also **4** .....
- Additional charge for use of the kitchen: £25

Before the event

- Will need a **5** ..... licence
- Need to contact caretaker (Mr Evans) in advance to arrange
  6 .....

During the event

- The building is no smoking
- The band should use the **7** ..... door at the back
- Don't touch the system that controls the volume
- For microphones, contact the caretaker

After the event

- Need to know the **8** ..... for the cleaning cupboard
- The **9** ..... must be washed and rubbish placed in black bags
- All **10** ..... must be taken down
- Chairs and tables must be piled up

SECTION 2 *Questions 11–20*

Questions 11–14

Complete the notes below.

*Write **ONE WORD** for each answer.*

Fiddy Working Heritage Farm

Advice about visiting the farm

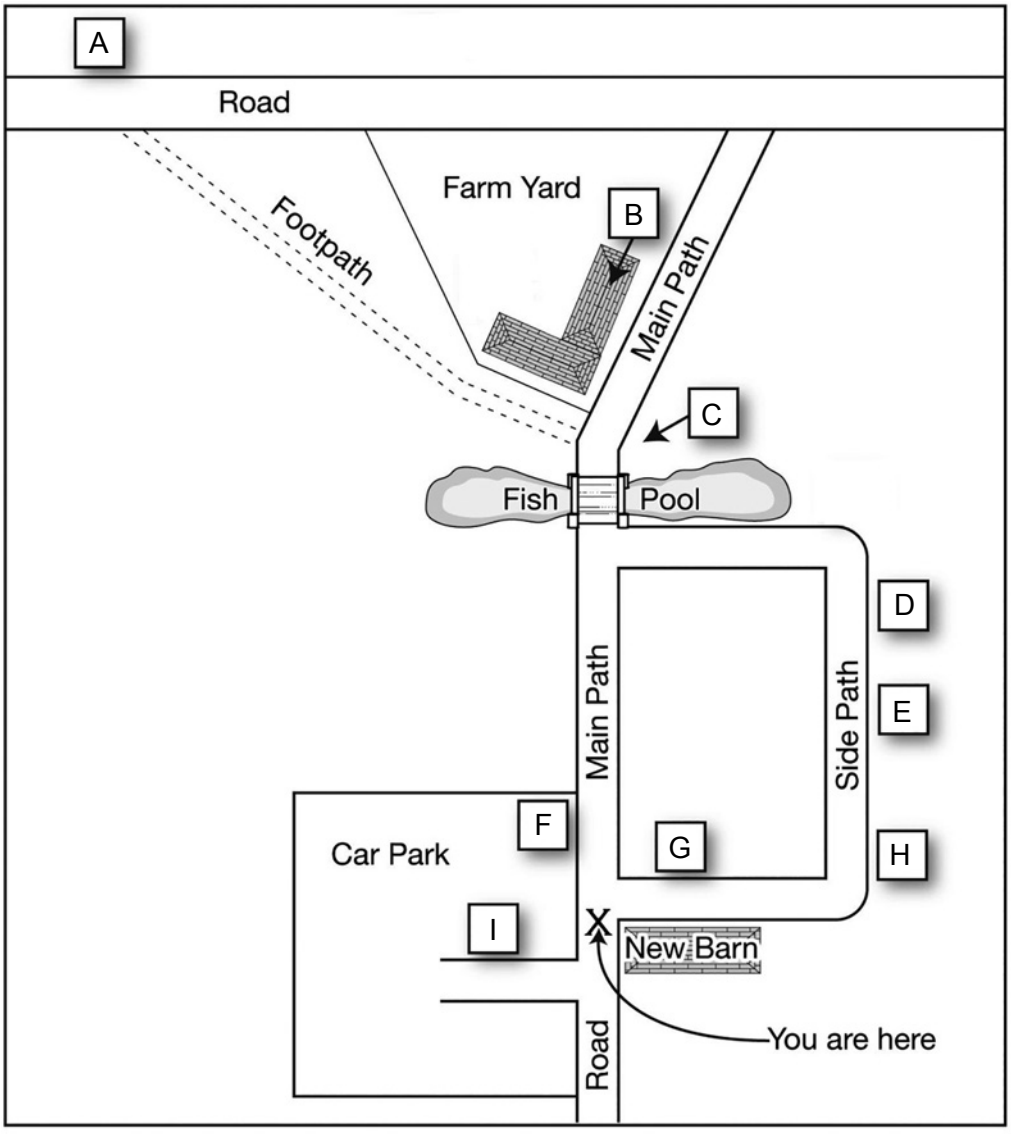
Visitors should

- take care not to harm any **11** .....
- not touch any **12** .....
- wear **13** .....
- not bring **14** ..... into the farm, with certain exceptions

Questions 15–20

Label the map below.

*Write the correct letter **A–I**, next to Questions 15–20.*



15 Scarecrow .....

16 Maze .....

17 Café .....

18 Black Barn .....

19 Covered picnic area .....

20 Fiddy House .....

SECTION 3 *Questions 21–30*

Choose the correct letter, **A**, **B** *or* **C**.

Study on Gender in Physics

21 The students in Akira Miyake's study were all majoring in

A physics.
B psychology or physics.
C science, technology, engineering or mathematics.

22 The aim of Miyake's study was to investigate

A what kind of women choose to study physics.
B a way of improving women's performance in physics.
C whether fewer women than men study physics at college.

23 The female physics students were wrong to believe that

A the teachers marked them in an unfair way.
B the male students expected them to do badly.
C their test results were lower than the male students'.

24 Miyake's team asked the students to write about

A what they enjoyed about studying physics.
B the successful experiences of other people.
C something that was important to them personally.

25 What was the aim of the writing exercise done by the subjects?

A to reduce stress
B to strengthen verbal ability
C to encourage logical thinking

26 What surprised the researchers about the study?

A how few students managed to get A grades
B the positive impact it had on physics results for women
C the difference between male and female performance

27 Greg and Lisa think Miyake's results could have been affected by

A the length of the writing task.
B the number of students who took part.
C the information the students were given.

28 Greg and Lisa decide that in their own project, they will compare the effects of

A two different writing tasks.
B a writing task with an oral task.
C two different oral tasks.

29 The main finding of Smolinsky's research was that class teamwork activities

A were most effective when done by all-women groups.
B had no effect on the performance of men or women.
C improved the results of men more than of women.

30 What will Lisa and Greg do next?

A talk to a professor
B observe a science class
C look at the science timetable

SECTION 4 *Questions 31–40*

Complete the notes below.

*Write **ONE WORD ONLY** for each answer.*

Ocean Biodiversity

Biodiversity hotspots

- areas containing many different species
- important for locating targets for **31** .....
- at first only identified on land

Boris Worm, 2005

- identified hotspots for large ocean predators, e.g. sharks
- found that ocean hotspots:
  - were not always rich in **32** .....
  - had higher temperatures at the **33** .....
  - had sufficient **34** ..... in the water

Lisa Ballance, 2007

- looked for hotspots for marine **35** .....
- found these were all located where ocean currents meet

Census of Marine Life

- found new ocean species living:
  - under the **36** .....
  - near volcanoes on the ocean floor

Global Marine Species Assessment

- want to list endangered ocean species, considering:
  - population size
  - geographical distribution
  - rate of **37** .....
- Aim: to assess 20,000 species and make a distribution **38** ..... for each one

Recommendations to retain ocean biodiversity

- increase the number of ocean reserves
- establish **39** ..... corridors (e.g. for turtles)
- reduce fishing quotas
- catch fish only for the purpose of **40** .....

READING

READING PASSAGE 1

*You should spend about 20 minutes on **Questions 1–13**, which are based on Reading Passage 1 below.*

Crop-growing skyscrapers

By the year 2050, nearly 80% of the Earth's population will live in urban centres. Applying the most conservative estimates to current demographic trends, the human population will increase by about three billion people by then. An estimated 10^9 hectares of new land (about 20% larger than Brazil) will be needed to grow enough food to feed them, if traditional farming methods continue as they are practised today. At present, throughout the world, over 80% of the land that is suitable for raising crops is in use. Historically, some 15% of that has been laid waste by poor management practices. What can be done to ensure enough food for the world's population to live on?

The concept of indoor farming is not new, since hothouse production of tomatoes and other produce has been in vogue for some time. What is new is the urgent need to scale up this technology to accommodate another three billion people. Many believe an entirely new approach to indoor farming is required, employing cutting-edge technologies. One such proposal is for the 'Vertical Farm'. The concept is of multi-storey buildings in which food crops are grown in environmentally controlled conditions. Situated in the heart of urban centres, they would drastically reduce the amount of transportation required to bring food to consumers. Vertical farms would need to be efficient, cheap to construct and safe to operate. If successfully implemented, proponents claim, vertical farms offer the promise of urban renewal, sustainable production of a safe and varied food supply (through year-round production of all crops), and the eventual repair of ecosystems that have been sacrificed for horizontal farming.

It took humans 10,000 years to learn how to grow most of the crops we now take for granted. Along the way, we despoiled most of the land we worked, often turning verdant, natural ecozones into semi-arid deserts. Within that same time frame, we evolved into an urban species, in which 60% of the human population now lives vertically in cities. This means that, for the majority, we humans have shelter from the elements, yet we subject our food-

bearing plants to the rigours of the great outdoors and can do no more than hope for a good weather year. However, more often than not now, due to a rapidly changing climate, that is not what happens. Massive floods, long droughts, hurricanes and severe monsoons take their toll each year, destroying millions of tons of valuable crops.

The supporters of vertical farming claim many potential advantages for the system. For instance, crops would be produced all year round, as they would be kept in artificially controlled, optimum growing conditions. There would be no weather-related crop failures due to droughts, floods or pests. All the food could be grown organically, eliminating the need for herbicides, pesticides and fertilisers. The system would greatly reduce the incidence of many infectious diseases that are acquired at the agricultural interface. Although the system would consume energy, it would return energy to the grid via methane generation from composting non-edible parts of plants. It would also dramatically reduce fossil fuel use, by cutting out the need for tractors, ploughs and shipping.

A major drawback of vertical farming, however, is that the plants would require artificial light. Without it, those plants nearest the windows would be exposed to more sunlight and grow more quickly, reducing the efficiency of the system. Single-storey greenhouses have the benefit of natural overhead light: even so, many still need artificial lighting. A multi-storey facility with no natural overhead light would require far more. Generating enough light could be prohibitively expensive, unless cheap, renewable energy is available, and this appears to be rather a future aspiration than a likelihood for the near future.

One variation on vertical farming that has been developed is to grow plants in stacked trays that move on rails. Moving the trays allows the plants to get enough sunlight. This system is already in operation, and works well within a single-storey greenhouse with light reaching it from above: it is not certain, however, that it can be made to work without that overhead natural light.

Vertical farming is an attempt to address the undoubted problems that we face in producing enough food for a growing population. At the moment, though, more needs to be done to reduce the detrimental impact it would have on the environment, particularly as regards the use of energy. While it is possible that much of our food will be grown in skyscrapers in future, most experts currently believe it is far more likely that we will simply use the space available on urban rooftops.