

ANSWER

Section 1

1 10.25 (am)

2 Box Hill

3 30 to 39

4 domestic duties

5 married, no children

6 walking

7 tighten

8 hike

9 swimming

10 energy

Section 2

11 A

12 E

13 D

14 F

15 C

16 B

17 E

18 C

19 I

20 F

Section 3

21 symbols

22 interpreted

23 nature

24 headings

25 Legal

26 procedures

27 associated

28 directions

29 notes

30 headings

Section 4

31 billion

32 clean room

33 radiation

34 (deep) underground

35 complex

36 heavy water

37 electronic

38 1000 tons

39 electric current

40 control

AUDIO SCRIPT

Section 1

You will hear a survey company representative ringing a person to obtain some information.

Rep.: Hello?

Person: Hello? Who is this?

Rep.: Hello. I'm a representative of the Tallyho Survey Company, and I'd like to ask you a few questions regarding **exercise (Example)**.

Person: Oh, that's an interesting subject.

Rep.: Yes, we think so, too.

Person: But I'm afraid I'm a bit busy at the moment.

Rep.: Don't worry. This will only take about four minutes at the most. It's **10:25 (Q1)** now, so it will all be over by 10:30.

Person: Well ... alright, if it's that short.

Rep.: It will be. So, one of the first things I need to know is where you are — that is, which suburb or area of the city? The last client was in Blackburn, for example.

Person: Blackburn. That's close to me. I'm in **Box Hill (Q2)**.

Rep.: Another eastern suburb then. I have a friend in Box Hill, too. Interesting place. Now, I need your approximate age for this survey. Are you younger than 20, between 20 and 29, 30 and 39, and so on?

Person: I'll turn 40 in a few months, so that puts me in the 40 to 49 age group.

Rep.: Well, that's in a few months, so right now you're in the **30 to 39 (Q3)**.

Person: Oh, right. So put that then.

Rep.: Okay. Now, I need to know your occupation. The last caller was a housewife, for example; the one before that a teacher.

Person: I used to be a teacher, too, teaching cookery.

Rep.: And now?

Person: Now you can just put '**domestic duties (Q4)**'. Actually, I hope to begin a new job soon, as a cook, but that won't be for some time yet. I have to wait for my husband's restaurant to open.

Rep.: Cook? That sounds interesting, but it's 'domestic duties' for now. Okay, that just leaves some information about your family. This is not obligatory at all, so if you don't want to answer, that's fine.

Person: What sort of information, exactly?

Rep.: Oh, it's very broad. Married, with children; single mother, that sort of thing. The last customer said she was a single mother.

Person: I'm married, and not a mother. Put '**married, no children (Q5)**'.

Rep.: I'm married with children, myself. But I'll put in your details, and that finishes the profile, and just I leave the actual survey itself, if you're ready to proceed.

Rep.: Alright, let's begin the survey now, about your exercise habits.

Person: I'm afraid I don't exercise much at all.

Rep.: Well, the main question is in what form you take your exercise, however little that may be — for example, in just cleaning. Do you clean the house?

Person: My husband does the cleaning, actually, but I **walk (Q6)** to the supermarket and shops very often, up to four times a week.

Rep.: I'll put that then, unless there's something else.

Person: Nothing else, really. But I diet. I'm very strict about what I eat. Oh, and I do yoga, although that's not very energetic—more a form of relaxation, and to **tighten (Q7)** my muscles.

Rep.: They're both important, of course, but what about sport? Do you undertake any sporting activities? This could be very infrequent. In the past, for example.

Person: My husband plays basketball at the local school, and I sometimes watch. When he was younger he was in a basketball team, but I never participated.

Rep.: Have you done anything at all?

Person: I used to **hike (Q8)** in a nearby national park.

Rep.: Well that's a definite physical activity, so I'll put that—but not basketball. Alright, that just leaves future exercise intentions. Do you plan, or expect to do, at some stage, any form of exercise?

Person: I once dreamt of doing modern dance, but that's never going to happen. Realistically, I'm thinking about going **swimming (Q9)**, at the local aquatic centre, although my husband thinks we should just jog. I can't see myself doing that, though—too tiring.

Rep.: I can understand. I used to jog, too, and it really makes you sweat. I'd say swimming's a much better option.

Person: But I'll be starting this job as a cook in my husband's restaurant. I imagine I'll be very tired doing all those late shifts. But if I have any **energy (Q10)** left over, I might go to the aquatic centre to release some stress.

Rep.: Alright. Well, that's the end of the survey. Thank you very much for your time.

Section 2

You will hear the director of a language-centre library explaining about its facilities to some new students.

Welcome to the library, or the I.L.C., which means Independent Learning Centre, and let me explain about some of its facilities. We're standing here at the entry gates, next to the borrowing desk. That's where you would take out any books, but you are also advised to study in the library here, since most of our material cannot be borrowed. Thus, we have Seating along the middle of the library, and in **that far corner in front of us. on the left, we have the Quiet Reading Section (Q11)**, for some serious reading activity.

We used to have the computers there but then realised that that corner was very quiet, and thus better suited for the purpose it now has. The computers were instead shifted to a more central location, **right beside us here, on the left (Q12)**. Again, somewhat confusingly, this area **once housed the Newspaper and Magazine Section**, but the people in the Quiet Reading Area had to walk too far to collect this literature, **so it was moved to right beside them, in the adjacent corner (Q13)**. So, feel free to read the newspapers there. But the reference books, those huge weighty dictionaries, atlases, and encyclopedias, were all situated at **the opposite end of the building, against the wall (Q14)**. This was because they weren't generally that popular, and we wanted more space for the magazine racks, always a favourite with readers.

Okay, as well as reading, you need to work on your listening skills, and for that you need the Audio Section. Again, such an activity needs a quiet area, so we put this in the **last remaining corner, up there on your right, as you can see (Q15)**. There are CD players and headphones, so just borrow the listening packs, sit down there, and listen away.

Right, that just leaves the main library. In other libraries, that's often right beside the Newspaper and Magazine Section, allowing freedom to choose from all genres of literature, but here, we've got them further apart. For the **main library, just follow your nose, past the central settling there, and it's there among all that shelving (Q16)**, upon which you'll find an abundance of interesting hooks and listening packs to use.

Now, I'd like to tell you a bit more about an excellent service offered in the I.L.C. here that we call the 'Special Sessions'. What can you do in service? For a start, many of you need practice in speaking English. and for that we hold a special Discussion Session, led by a teacher. That can be noisy, in fact, we hope that it is noisy, since that would mean many people are talking. It's in the Central Seating area, and it used to be from 10.30 to 1.30. but we found that the noise was disturbing the regular I.L.C. patrons, so we shortened and moved this discussion to **the morning, 9.00 am time slot (Q17)**, when fewer people tire in the centre. It goes for one and a half hours.

Alright, what about Writing Skills? Well, we can help you there with another teacher. Now, writing is a fairly quiet activity, so that teacher stations him or herself in the **Quiet Reading area from 1.30 until three (Q18)**. The 10.30-to-midday time slot cannot have a teacher for such writing skills, as they are all teaching in the morning. For this reason, of course, there cannot be an on-call teacher in the morning either, although many people would like one, particularly the 10.30-to-noon crowd, having just finished their early morning class. These students all have to wait until midday onwards, when, for three hours, a teacher will be stationed in the **Audio Section (Q19)**, ready to deal with all those questions.

Until recently, we had another teacher doing the 3-pm-to-6-pm time slot, in the Central Settling, but all the noise interfered with the late users of the I.L.C., so we had to cancel that. Also noisy can be the Language Exchange, where local students who want to learn your language will help you practise English. This is generally done in pairs, so the noise level is low enough not to need this exchange to run at 9 am, but at a more congenial **time of 10.30, among the Central Seating (Q20)**. That must finish by 1.30 though, tiller which quieter and more individual activities take place.

Section 3

Dylan: Hi, Emily. What did you think of that lecture?

Emily: A bit hard to follow, but I have some good lecture-listening note-taking strategies which really help, so I can review the lecturer's message later.

Dylan: Lecture-listening note-taking strategies? Review it later? That sounds interesting. I must admit, I struggle a bit to take down the gist of what I hear. Look at my notes.

Emily: Well, I can see a basic problem immediately. You're writing full words, such as 'century' when all you need is a 'C'. And don't write 'increase'; just draw an 'up' arrow. And why write 'thousand' when a 'th' will do?

Dylan: I see. Just use **symbols (Q21)**. That's not a bad idea at all.

Emily: It's the most basic strategy, allowing you to record information at a faster pace. These lecturers can talk faster than others, too, so you don't want to waste any time. But you need to be very familiar with your set of symbols.

Dylan: Why?

Emily: Because you'll have to look at these notes days, weeks, or even months afterwards, when you begin writing your essay, so you'll need to be able to **interpret (Q22)** them at a later stage.

Dylan: I think I can do this, even by looking at your notes. 'Immed' must mean immediately.

Emily: But regarding the lecture as a whole, I knew the professor would be giving a set of specific recommendations, and comparing two alternative approaches, so I formatted my page in advance, adding the features consistent with the **nature (Q23)** of what I was going to hear.

Dylan: Ah ... I think I need an example of what you mean.

Emily: Well, look at my page. Before the lecture, I drew large **headings (Q24)** saying 'recommendations' and 'Approach 2'. After the lecture, I drew a table saying, 'Approach 1' and 'Approach 2'. At the end I drew a flowchart, as obviously the final recommendation would be a step-by-step approach. Then I was prepared in advance to simply fill in the spaces.

Dylan: Wow! Now that's clever.

Dylan: Your advice about note taking sounds great, but I still have one question, Emily. How are you able to design your page in advance? I mean, how can you predict the nature of the talk, and know which design is likely to work best?

Emily: It's rather obvious when you think about it. What's your next lecture about?

Dylan: **Legal Studies (Q25)**.

Emily: Well, that suggests to me that you'll need a flowchart, since the judicial system has a very logical 'do this first, do that second' approach, which must be followed in that order—y'know, all the processes that happen in the courtroom, and the **procedures (Q26)** that must take place to ensure complete legality.

Dylan: Sure. That's the way law is, very linear and orderly, but what about Culture Studies? That's just a mass of comparisons of different cultures.

Emily: Which tells you that you will need a table, where, in tabular form, you can efficiently write down information.

Dylan: But often the lecture's not that simple. The professor throws in a really complex mix of ideas.

Emily: Then use a spider graph—like the web a spider makes, where there's a central idea around which you attach all the **associated (Q27)** thoughts, and ideas, and impressions.

Dylan: I see. I think I understand. And that would be very quick, too; very efficient. I like that. But what about Management Theory? How would you approach that?

Emily: The same as with Culture Studies. I'd use a network, which is basically the same as a spider graph, linking thoughts, although this time there are **directions (Q28)** involved. It is this element that makes it different—the fact that the thoughts go one way and not the other.

Dylan: Okay ... has directions. It sounds logical. And what about the other subjects, such as Political Science? There's no predictable order to that.

Emily: Well, for that I'd just put my **notes (Q29)** in a line, that is, in linear, or straight-line fashion, and these notes would use symbols, of course, to save time.

Dylan: Okay, that just leaves Mass Media.

Emily: For that, I wouldn't have any special design at all. As you say, sometimes it's impossible to predict in what way lecturers will present their information, in which case the best you can do is pre-write **headings (Q30)**, but not specific, just general, as in Main One, Main Two, Sub One, Two, and Three, and so on.

Dylan: Okay.

Emily: But always be prepared to adapt to the nature of the talk, using any one of the other methods if it becomes appropriate at the time.

Section 4

You will hear a lecturer talking about an unusual atomic particle, called the neutrino.

When considering the smallest unit of matter—the atom — most people know of electrons, protons, and neutrons, but almost none know of another particle, even though they are constantly emitted from the sun in the trillions, with 100 to **200 billion (Q31)** of them regularly passing through your body every second. To repeat, that's not thousands, not millions, but billions, every second. You don't feel them because they are small, in fact, so tiny that we can barely detect their presence at all. These mysterious particles are called neutrinos.

Despite such an abundance, detecting them is a huge undertaking, and there are many reasons for this. Firstly, the neutrino itself is so small that you need to eliminate absolutely all other particles around. To do this, you need what is called a **clean room (Q32)**, one that has an extremely low level of dust, microbes, floating particles, or chemical vapours. You probably don't know it, but the air around you right now has almost 40 million particles per cubic meter. In contrast, the cleanest of clean rooms has less than 10.

The second problem is that you also need an environment with absolutely no background **radiation (Q33)**. At the surface of the Earth, such radiation is all around, from the sun and sky, and from TVs and communication devices. The only way to screen out all that is to go underground, and I mean **deep underground (Q34)**. For example, the Sudbury Neutrino Observatory in Canada uses an old nickel mine, one of the deepest in the world, and puts the Observatory in its lowest tunnel, more than two kilometers below the surface. At such depths, stray radiation is sufficiently screened out to allow neutrinos only to pass by.

The final problem is that you need an elaborate detection system, and this apparatus is huge, and its installation in this deep underground cavity presents quite a headache. Holding such a weighty construction safe and secure requires **complex (Q35)** engineering work, such as rock-bolting and support structuring. This obviously requires great care, and takes a lot of effort.

So, I've told you about the difficulty in detecting neutrinos. They are tiny, virtually weightless, have no electric charge, and hardly interact with anything at all. Yet we can detect them, and to see how, let's consider the Sudbury installation once again. The detector there consists of a spherical container filled with **heavy water (Q36)**. This rests inside another vessel filled with normal water, which helps support the weight of the inner sphere, as well as providing further shielding from any stray radiation. At the edge of this inner sphere are about 10,000 **electronic (Q37)** detectors. These are extremely sensitive, able to multiply a hundred million times any electric current which occurs.

So, as the neutrinos pass through this sphere of water, there is a very very very small chance that one of them may hit a water molecule. To increase the likelihood of this, two strategies are used. One, the larger the sphere of water, the better, and the Sudbury tank holds not 10 tons, not 100 tons, but **1000 tons (Q38)**. Two, the water is special, consisting as it does of heavier molecules. So, what happens is this. If the neutrino hits the water molecule, the neutrino is absorbed, but the molecule itself splits apart, producing a tiny **electric current (Q39)**. It is this which is detected, and analysed, giving key information about the neutrino.

The final question is why do we care about these elusive particles? Well, just think — they can pass right through the core of our sun at the speed of light without being affected or losing strength. No other form of radiation can do that, meaning that the knowledge we get about neutrinos can help us to **control (Q40)** them. With this ability, we can probe the centre of our Earth, the inner layers of our sun, and the outer limits of our solar system, and that makes it all worth the effort.