

Progress test 4 (Units 10–12)

LISTENING

Track 5

Listen to a presentation on the Critical Path Method (CPM). Choose the best answer – a, b or c – to the questions below.

- 1 What is CPM based on?
 - a) Software analysis
 - b) Management analysis
 - c) Mathematical analysis
- 2 What information does CPM analyse?
 - a) Project activities, their duration and their dependency
 - b) Project activities, project personnel and skills available in the team
 - c) Project activities, required end date and supply chain factors
- 3 What does the speaker say about house building?
 - a) The framing depends on the foundations.
 - b) The plumbing depends on the electrics.
 - c) The foundations depend on the plumbing.
- 4 What does CPM calculate?
 - a) The most efficient technology for each activity
 - b) The ‘path’ of the project from start to finish
 - c) The projected effect of possible delays
- 5 What is a ‘critical activity’?
 - a) One that will change the end date if it goes off schedule
 - b) One that depends on other activities
 - c) One that the project team can’t agree about
- 6 What is an activity with ‘total float’?
 - a) One that will delay the entire project if it’s late
 - b) One that is optional and doesn’t have to be done
 - c) One that doesn’t affect the overall schedule
- 7 What does the ‘critical path’ show?
 - a) The shortest possible schedule
 - b) The longest possible schedule
 - c) A reasonable ‘average’ schedule
- 8 How does CPM help managers?
 - a) It helps them minimise the number of people required for a project.
 - b) It helps them run a project as efficiently as possible.

- c) It helps them link schedules and budgets.
- 9 What does a Gantt chart do?
- a) Clearly shows activity assignments
- b) Clearly displays the critical path
- c) Clearly shows suggested options for dealing with possible delays
- 10 Where are project elements often displayed in a Gantt chart?
- a) In the bars
- b) Along the top of the chart
- c) On the left-hand side

VOCABULARY

A Complete the sentences with the words and phrases in the box.

a broad shift amends chances foul our engagement
 over-assigning some fine-tuning the slack

- 11 Our system works well enough but it needs _____ to make it more efficient.
- 12 If we take all of _____ time out of the schedule, we may run into trouble if there are unexpected delays.
- 13 _____ critical tasks to stronger team members can cause real problems with schedules.
- 14 Every time something unexpected slows us down, Dean shouts _____ and starts rearranging the team.
- 15 If you're constantly behind schedule, _____ are your project plan was over-optimistic.
- 16 We're hoping to make _____ with the team at ATC and start doing business together again soon.
- 17 We're developing some plans for improving _____ with social media.
- 18 There's been _____ in attitudes towards debt in the past few years.

B Complete the text with the words and phrases in the box.

broadcasting gauging hawking proving netting trawling trying
 to come up with

I own an independent bookstore. Last year, I spent months _____¹⁹ the Internet and _____²⁰ a good idea for launching an online side to my business. There are plenty of websites out there _____²¹ anything you can imagine and _____²² huge discounts but it's hard to imagine most of them _____²³ more than a few hundred pounds a year and I'm sure some of them are losing money. It was easy to decide which sites I liked the look of but _____²⁴ the success of

any online business – even huge companies like Amazon – is impossible. Last month, I stopped worrying about what everyone else was doing and launched a simple website. It isn't yet _____²⁵ to be the making of my online business but I have a lot of ideas for developing it.

LANGUAGE

A Choose the correct words to complete the conversation.

Alicia I'm so tired of carrying this laptop. It weighs (a million / a ton / forever)²⁶!

Eric And it cost (a head / a foot / an arm)²⁷ and a leg, too, didn't it? Business travel is never easy!

Alicia Anyway, I heard you launched the YX-248. How's that going?

Eric It hasn't taken off in the mainstream yet but there's a lot of (grass / tree / plant)²⁸ roots interest in it already. It's all over the blogs.

Alicia Not every product can be an (entrenched / offensive / overnight)²⁹ success. Did you launch with the black case or the red one in the end?

Eric We're hedging our (tracks / bets / wins)³⁰ and offering both from the start.

Alicia Oh, that sounds good.

B Rewrite these sentences, starting with the words given.

31 Next, we made our catalogue searchable online.

What we _____.

32 Lisa Reed is the regional manager – you need to write to her.

The person _____.

33 We increased production to fill all of our orders.

The reason why _____.

34 The workers have achieved something completely unexpected.

What the workers _____.

35 The battery problem was solved by the software update.

It was _____.

C Match each sentence (a–e) with the correct rhetorical device (36–40).

Are parasites a problem for your business?

That's a no-brainer – a question which has an obvious answer.^a Parasites – the mosquito that bites you, the cowbird that leaves its eggs in other birds' nests – take but they don't give anything back.^b Watch out for them.^c A mosquito bite can completely ruin your holiday – or your business.^d We'll look for them, we'll find them and we'll get rid of them.^e

- 36 Exaggerating for dramatic effect _____
- 37 Giving a definition _____
- 38 Illustrating a point with examples _____
- 39 Repeating a grammatical form _____
- 40 Using imperative forms _____

SKILLS

A Put the sentences into a logical order to make a conversation.

- a) **Helen** I'm sorry but we have to deal with cash flow, too, and we expect our customers to pay their bills on time.
- b) **Helen** I'm phoning about the outstanding payment on our last invoice. As you know, our credit terms are 30 days and payment is now well overdue.
- c) **Helen** I think we can work with that.
- d) **Ken** Yes, I'm aware of all that but we can't spend money we haven't got.
- e) **Ken** As I mentioned earlier, we've been seriously let down ourselves. I expect to send you a cheque on 15th March. Will that be acceptable?

- 41 _____
- 42 _____
- 43 _____
- 44 _____
- 45 _____

B Complete the conversation with the sentences (a–e) below.

A When is your company going to clean up the site?

B _____⁴⁶

A Actually, I'd like you to answer the question now.

B _____⁴⁷

A Who does have it?

B _____⁴⁸ You see, we have a dedicated clean-up team and they're still evaluating the situation.

A Are you saying there isn't a schedule for the clean-up?

B _____⁴⁹ The schedule will be their responsibility.

A OK, can you tell us anything about the nature of the chemicals at the site?

B _____⁵⁰

- a) I'm pleased you raised that point.
- b) Do you mind if we deal with that later?
- c) I'm afraid that's not really my field.
- d) I'm afraid I don't have that information to hand.
- e) As I've already said, the clean-up team is evaluating the situation.

C Complete the sentences with the words in the box.

by for on over to

51 Beatta just said something I'd like to comment _____.

52 I'd like to add _____ what Joanna just said.

53 Let's go _____ the action points before we finish.

54 I have a question _____ Liam.

55 Can I just check who's doing what and _____ when?

READING

A Read the article and choose the best option – a, b, or c – to complete the sentences below.

56 McGeough and von Spreckelsen realised their five-year plan _____ expected.

- a) as
- b) later than
- c) earlier than

57 Bapco Closures eventually opened their production facility _____.

- a) in Canada b) in the UK c) in the US

58 Bapco _____ most start-ups.

- a) fought for survival longer than
b) turned a profit at about the same time as
c) had a better idea than

59 Robin Klein thinks start-ups should _____.

- a) clearly understand their business model
b) generate revenue above all else
c) focus on their core business

60 Duncan Grierson financed his start-up by _____.

- a) pretending to remodel part of his house
b) remortgaging his house
c) drawing a salary from a part-time job

B Match the sentence beginnings (61–65) with the best endings (a–e).

- | | | | |
|----|----------------------------------------|----|-------------------------------------------------------------------------------------|
| 61 | Peter McGeough | a) | worked on the core business idea and waited for the business model to become clear. |
| 62 | Robin Klein says the founders of Skype | b) | didn't earn money from his company for three years. |
| 63 | Stefan Glaenzer | c) | paid a big return to investors in just two years. |
| 64 | Duncan Grierson | d) | backed a successful online music business. |
| 65 | Last.fm | e) | did consultancy work to generate income. |

Find the finance – and hold your nerve

By Jonathan Moules

Back in 1998, Peter McGeough and Henning von Spreckelsen took their families out to dinner to tell them that they were quitting their steady jobs at carton-maker Tetra Pak because they had a brilliant solution to the leaky milk bottle top.

They had a five-year plan that involved buying a factory in Norwich to make their sophisticated plastic caps and fully expected to sell their venture, Bapco Closures, in eight years.

In fact it took them eight years to get someone to buy their idea and even then revenues were only £168,000 for the year. The plans, both for the UK factory and the target market, bit the dust much earlier, after the milk industry pulled its support for Bapco's product development. When McGeough and his team finally found a market for their product among food producers in North America, the founders had to go back to their eight angel investors for a further £4m of cash to build a factory in the US. 'It was a big ask,' McGeough admits. But what he and his team did have was the entrepreneurial survivor's instinct.

'I could say it was stubbornness or bloody-mindedness,' McGeough says. 'We wanted to prove to the dairy industry that they were wrong but we also believed that we could come up with a solution.'

Most start-ups do not battle on for as long as Bapco. The majority of would-be entrepreneurs fall by the wayside much sooner, exhausted by the stream of rejections or perhaps attracted back to the perceived security of a salaried post. Even a successful technology start-up can expect to be on a diet of baked beans and goodwill for three years, according to Robin Klein, founding partner of seed funding business The Accelerator Group (TAG).

The length of time new entrepreneurs have to spend without salary may increase in the coming years, particularly if, as forecast, the recovery of the economy remains sluggish and the banks remain unwilling to lend. The question then becomes how best to survive, what can be cut and where else a business owner can get cash to keep trading.

The temptation may be to rush into anything that can generate revenues for the business. McGeough admits that in the lean years he and his co-founders at Bapco would do whatever consultancy work they could to keep a roof over their families' heads.

Chasing revenues might not be the best strategy, according to Klein, who notes that some of the most successful start-ups, such as Internet telephony provider Skype, were far more focused on getting their product right.

'Skype had no revenue for years but the founders and backers were very clear that, if they could get millions of users, there was a business model lurking in there somewhere,' Klein says.

A much better use of time is to focus on stripping out the costs of the business, according to Stefan Glaenzer, a serial entrepreneur and investor who founded Ricardo.de, Germany's largest online auction company, before moving to London in 2000 to support other technology start-ups.

Living frugally is easier for young companies run by young people, which typify many of Glaenzer's more high profile investments. For instance, in 2005 he became the first person to back Last.fm, the online music business based in London's East End, which was sold just two years later to US media business CBS for \$280m (£176m).

Duncan Grierson, who went without a salary for three years while developing his household waste recycling business Sterecycle, not only worked from home but rented his spare bedroom and his living room floor to bring in cash. He also borrowed £25,000 from the bank under the guise of renovating his kitchen, using the money to pay his mortgage – a move that would certainly be more difficult in the current financial climate. The journey is not over for Sterecycle but Grierson has now built his first waste management plant in Rotherham and is processing up to 100,000 tonnes a year for three local authorities that have signed 10-year contracts.

The good news for those considering taking the plunge is that the cost of starting businesses is less with the reduction in technology costs, through innovations such as Internet telephony and freeware, software that is free to use.

You can make your own luck and survive longer by choosing good backers, according to Glaenzer. 'It all comes down to the selection of the right partners, be it mentors, advisers or seed investors,' he says.

It is helpful if your financial backers have a passion for what you are trying to achieve, Glaenzer notes. 'If you have someone who is only looking at the return on investment, they might not go the extra mile when you need them,' he says.



WRITING

You work in the accounts office of a printing firm. A small book publisher – Leeson House – has failed to pay two invoices. Use your manager's notes below to write a formal e-mail (150–200 words) to Mr Leeson, requesting payment.

Please write to Mr Leeson re: unpaid invoices

Invoice 490440 – £3,890.23 – 27 August

Invoice 491005 – £2,944.59 – 27 September

Terms: 30 days from invoice date

Good commercial relationship in past

Request settlement within 10 days

Problem with printing and binding? Call us.

If he fails to pay, will review account – may stop printing for him.

Progress test 4 Answer key

LISTENING (10 MARKS)

1 c 2 a 3 a 4 b 5 a 6 c 7 a 8 b 9 b 10 c

VOCABULARY (15 MARKS)

- 11 some fine-tuning
- 12 the slack
- 13 Over-assigning
- 14 foul
- 15 chances
- 16 amends
- 17 our engagement
- 18 a broad shift
- 19 trawling
- 20 trying to come up with
- 21 hawking
- 22 broadcasting
- 23 netting
- 24 gauging
- 25 proving

LANGUAGE (15 MARKS)

- 26 a ton
 - 27 an arm
 - 28 grass
 - 29 overnight
 - 30 bets
 - 31 What we did next was make our catalogue searchable online.
 - 32 The person you need to write to is Lisa Reed, the regional manager.
 - 33 The reason why we increased production was to fill all of our orders.
 - 34 What the workers have achieved is something completely unexpected.
 - 35 It was the software update that solved the battery problem.
- 36 d 37 a 38 b 39 e 40 c

SKILLS (15 MARKS)

41 b 42 d 43 a 44 e 45 c

46 b 47 d 48 c 49 e 50 a

51 on

52 to

53 over

54 for

55 by

READING (10 MARKS)

56 b 57 c 58 a 59 c 60 a 61 e 62 a 63 d 64 b 65 c

WRITING (15 MARKS)

See Examiner's notes.

MODEL ANSWER TO WRITING TASK

Dear Mr Leeson

Re: Invoices 490440 and 491005

I'm writing to inform you that invoice 490440 for £3,890.23 dated 27 August and invoice 491005 for £2,944.59 dated 27 September are still unpaid. I attach copies of these invoices for your information. As you know, our agreed payment terms are 30 days from the date of the invoice.

In view of our good commercial relationship in the past, we'd like to resolve the matter amicably. We'd ask you to settle your account within ten working days. In the event that you have already paid the invoices, please ignore this reminder.

If there is a problem with the quality of the printing or binding which has caused you to withhold payment, please contact us immediately at the telephone number below and we can resolve the issue.

Should you fail to pay these invoices by the stated date, then we may have no alternative but to review your account with us, which would mean that we would no longer be able to supply your company with printing services.

Best regards

PROGRESS TEST 4

Track 5

The Critical Path Method is a technique for modelling projects and it's a fantastic tool for managing any kind of project. It's a type of mathematical analysis and it's commonly used in software development, research, engineering, plant maintenance, aerospace, ... just about anything you can think of.

How does CPM work? To develop a model, you need three things. First, you need a detailed list of all of the activities that have to be done for the project to be completed. If you're building a house, this would include designing the house, putting in the foundations, doing the brick work, adding plumbing and electrics, and so on. Second, you need to know how much time each activity will take. The design phase might take six months, it might take a week to put in the foundations, and it may take a week for the electricians to do the first fix of the wiring. Finally, you need to know which activities depend on other activities. For the house-building project, you need to put the foundations in first, then build the frame on top of that, then add plumbing and electrics and so on.

Now we're ready to apply CPM. Given the values I just spoke about, CPM calculates the longest path of project activities from start to finish. It also determines the earliest that each activity can begin and the latest it can finish. This shows which activities are 'critical'. A critical activity is one that will affect the whole project if it's delayed. It also shows which activities have 'total float'. If an activity with 'total float' is delayed, it won't affect the completion date of the project.

So what's the 'critical path'? It's the sequence of activities required to complete the project and it shows the shortest possible time needed to complete the project. Any delay in an activity on the critical path will directly affect the end date of the project.

The usefulness of this model is obvious. It gives project managers the ability to prioritise activities, shorten their duration – we call this 'fast-tracking' – and apply resources to them for the maximum benefit of the project.

So what does a critical path actually look like? How can this information be displayed so it isn't too dense or complex? One way is a Gantt chart. A Gantt chart is a type of bar chart. It can have dates running along the top of the chart and a breakdown of project elements in a list at the left-hand side. For tracking work in progress, many Gantt charts include a vertical 'today' line so everyone can see exactly where the project stands.