General Training Reading and Writing Test A

SECTION 1 Questions 1–14

Read the text below and answer Questions 1-7.

EASTERN ENERGY

We are here to help and provide you with personal advice on any matters connected with your bill or any other queries regarding your gas and electricity supply.

Moving home

Please give as much notice as possible if you are moving home, but at least 48 hours is required for us to make the necessary arrangements for your gas and electricity supply. Please telephone our 24-hour line on 01316 753219 with details of your move. In most cases we are happy to accept your meter reading on the day you move. Tell the new occupant that Eastern Energy supply the household, to ensure the service is not interrupted. Remember we can now supply electricity and gas at your new address, anywhere in the UK. If you do not contact us, you may be held responsible for the payment for electricity used after you have moved.

Meter reading

Eastern Energy uses various types of meter ranging from the traditional dial meter to new technology digital display meters. Always read the meter from left to right, ignoring any red dials. If you require assistance, contact our 24-hour line on 0600 7310 310.

Energy Efficiency Line

If you would like advice on the efficient use of energy, please call our Energy Efficiency Line on 0995 7626 513. Please do not use this number for any other enquiries.

Special services

Passwords – you can choose a password so that, whenever we visit you at home, you will know it is us. For more information, ring our helpline on 0995 7290 290.

Help and advice

If you need help or advice with any issues, please contact us on 01316 440188.

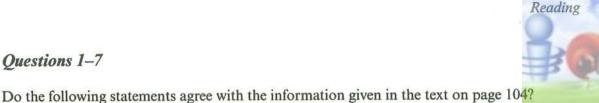
Complaints

We hope you will never have a problem or cause to complain, but, if you do, please contact our complaints handling team at PO Box 220, Stanfield, ST55 6GF or telephone us on 01316 753270.

Supply failure

If you experience any problems with your electricity supply, please call free on 0600 7838 836, 24 hours a day, seven days a week.





In boxes 1-7 on your answer sheet, write

TRUE	if the statement agrees with the information
FALSE	if the statement contradicts the information
NOT GIVEN	if there is no information on this

- Customers should inform Eastern Energy of a change of address on arrival at their new home.
- Customers are expected to read their own gas or electricity meters. 2
- It is now cheaper to use gas rather than electricity as a form of heating. 3
- Eastern Energy supplies energy to households throughout the country. 4
- The Energy Efficiency Line also handles queries about energy supply. 5
- All complaints about energy supply should be made by phone. 6
- Customers are not charged for the call when they report a fault in supply. 7



Questions 8-14

The text on page 107 has seven sections, A-G.

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

Write the correct number, i-x, in boxes 8-14 on your answer sheet.

List of Headings

- i Re-heating
- ii Foods with skins
- iii Keeping your oven clean
- iv Standing time
- v Rapid cooking times
- vi Using a thermometer
- vii Small quantities of food
- viii Deep fat frying
- ix Foods low in moisture
- x Liquids
- 8 Section A
- 9 Section B
- 10 Section C
- 11 Section D
- 12 Section E
- 13 Section F
- 14 Section G







Some important points to note



- A As microwave cooking times are much shorter than other cooking times, it is essential that recommended cooking times are not exceeded without first checking the food.
- B Take care when heating small amounts of food as these can easily burn, dry out or catch fire if cooked too long. Always set short cooking times and check the food frequently.
- C Take care when heating 'dry' foods, e.g. bread items, chocolate and pastries. These can easily burn or catch fire if cooked too long.
- D Some processed meats, such as sausages, have non-porous casings. These must be pierced by a fork before cooking, to prevent bursting. Whole fruit and vegetables should be similarly treated.
- When heating soup, sauces and beverages in your microwave oven, heating beyond boiling point can occur without evidence of bubbling. Care should be taken not to overheat.
- When warming up food for a second time, it is essential that it is served 'piping hot', i.e. steam is being emitted from all parts and any sauce is bubbling. For foods that cannot be stirred, e.g. pizza, the centre should be cut with a knife to test it is well heated through.
- G It is important for the safe operation of the oven that it is wiped out regularly. Use warm, soapy water, squeeze the cloth out well and use it to remove any grease or food from the interior. The oven should be unplugged during this process.

SECTION 2 Questions 15–27

Read the text below and answer Questions 15-20.



CHOOSING PREMISES FOR A NEW BUSINESS

What you need

Three factors dominate the priorities of small businesses looking for premises: cost, cost and cost. Nobody ever has enough money, so there is an overwhelming temptation to go for the cheapest property. It is a mistake that can take decades to rectify – and even threaten the future of a promising business.

Ironically some firms swing too far in the other direction, committing themselves to a heavy initial outlay because they believe in the importance of image – and that does not come cheap. Finding the right premises is the real secret. That can, and will, vary enormously according to the type of business. But there are some general rules that apply to any operation.

Location

High street premises are important for shops which rely on passing trade – but these are expensive. Rents fall quickly within a few metres of main roads. Offices, however, need not be located centrally, particularly if most business is done on the phone or via email.

Manufacturing and storage relies heavily on access. Think about how vans and lorries will deliver and collect goods from the premises. Nearby parking can be important for staff, and public transport can be even more so, as traffic restrictions tighten.

Size

This is a crucial decision. Health and Safety laws provide basic guidance on how much room is required per office desk or manufacturing operation. But remember to allow for growth.

Growth

Every small business aims to become a big business, but this prospect can be obstructed if the wrong decisions are made early on. It is important to consider flexibility from the start. Can a building be physically altered internally by knocking down walls or by extending outwards or adding extra floors? Is there spare land next door to expand later if necessary?

Landlords obviously have to agree to any changes so it is important that the contract includes details of what will be allowed and how much extra will be charged on top of the costs of rebuilding or alteration. Planning rules must also be considered. Local authorities are not always open to discussion about the future of premises. They may have rigid rules about increasing density of development. The building may be in a conservation area or near housing, in which case it will be much more difficult to consider changes.



Questions 15-20

Complete the sentences below.

Choose NO MORE THAN TWO WORDS from the text for each answer.

Write your answers in boxes 15-20 on your answer sheet.

- 15 Some people choose expensive premises because they want to create an impressive for their company.
- 16 Businesses which depend on need to be on or near the principal shopping areas.
- 17 Businesses which produce goods must check there is to the premises for delivery vehicles.
- 18 When choosing a building for your premises, find out whether could be removed to create more room.
- 19 Make sure that the states what type of building alterations might be permitted.
- 20 If business premises are located close to, extensions may not be allowed.



Read the text below and answer Questions 21-27.



CALIFORNIA STATE COLLEGE

WORKING CONDITIONS AND BENEFITS FOR EMPLOYEES

Payday

Employees are paid every other Friday. If Friday is a holiday, payday will be the following Monday. Generally, employees pick up the pay checks in their department; if not, they may be picked up at the Business Office.

Overtime

All time worked over eight hours in one day and forty hours in a workweek, and also the first eight hours worked on the seventh day of work in a workweek is considered overtime for non-exempt employees. The supervisor must approve all overtime before overtime occurs. Hours in excess of eight hours on the seventh day and in excess of twelve hours in one day will be paid at double time. Exempt employees receive no additional compensation for overtime hours.

Parking

All employees who will be parking in a staff parking zone must obtain a parking permit. A monthly pre-tax payroll deduction can be made by visiting Human Resources. If you wish to pay cash, present your staff I.D. and license number to the Cashier's Office. The Safety Department will ticket cars without a parking permit and a fine will be applied.

I.D. Card

All employees are required to carry an I.D. card. If an employee loses his/her card, there will be an automatic charge of \$5.00 to issue a duplicate. If an employee gives up employment, his/her I.D. card must be returned prior to release of final paycheck.

Holidays

All regular and temporary full-time employees generally receive approximately 13 paid holidays during the course of each calendar year, Regular part-time employees will receive holiday benefits worked out using a prorated system. The holiday schedule is initiated annually.

Personal Holiday

Each employee is granted one extra day as a Personal Holiday at the time of hire, and at the beginning of each calendar year. Personal Holiday hours must be taken at one time (eight hours full-time or prorated based on the employee's time). Employees requesting Personal Holiday will be required to complete 'Leave Request' forms. No more than one Personal Holiday is authorized annually.

Birthday Holiday

All regular and temporary full-time or part-time employees are entitled to take their birthday off with pay. An employee has a fifteen-day span before and following his/her birthday to take the paid day off. What is known as a grace period through January 15th is given to those employees whose birthdays fall between December 16th and the end of the year.



Questions 21-27

Answer the questions below.

Choose NO MORE THAN THREE WORDS from the text for each answer.

Write your answers in boxes 21-27 on your answer sheet.

- 21 Where do most employees collect their wages?
- 22 Who has to authorise any overtime an employee wishes to do?
- 23 Who is not paid extra for working more than 40 hours a week?
- 24 Where should employees go if they wish to have the parking charge taken off their salary?
- 25 What method is used to calculate part-time employees' holidays?
- 26 Which documents must employees fill in to select their Personal Holiday?
- What is the name of the special entitlement provided to employees with birthdays in the second half of December?

SECTION 3 Ouestions 28-40

Read the text on pages 112 and 113 and answer Questions 28-40.



A Very Special Dog

Florence is one of a new breed of dog who is making the work of the Australian Customs much easier.



It is 8.15 a.m. A flight lands at Melbourne's Tullamarine International Airport. Several hundred pieces of baggage are rushed from the plane onto a conveyor belt in the baggage reclaim annexe. Over the sound of roaring engines, rushing air vents and grinding generators, a dog barks. Florence, a sleek black labrador, wags her tail.

Among the cavalcade of luggage passing beneath Florence's all-smelling nose, is a nondescript hardback

suitcase. Inside the case, within styrofoam casing, packed in loose pepper and coffee, wrapped in freezer paper and heat-sealed in plastic, are 18 kilograms of hashish.

The cleverly concealed drugs don't fool super-sniffer Florence, and her persistent scratching at the case alerts her handler. Florence is one of a truly new breed: the product of what is perhaps the only project in the world dedicated to breeding dogs solely to detect drugs. Ordinary dogs have a 0.1% chance of making it in drug detection. The new breeding programme, run by the Australian Customs, is so successful that more than 50% of its dogs make the grade.

And what began as a wholly practical exercise in keeping illegal drugs out of Australia may end up playing a role in an entirely different sphere - the comparatively esoteric world of neurobiology. It turns out that it's not Florence's nose that makes her a top drug dog, but her unswerving concentration, plus a few other essential traits. Florence could help neurobiologists to understand both what they call 'attention processing', the brain mechanisms that determine what a person pays attention to and for how long, and its flip side, problems such as Attention Deficit/Hyperactivity Disorder (ADHD), As many as 3 to 5% of children are thought to suffer from the condition in the US, where the incidence is highest, although diagnosis is often controversial.

The Australian Customs has used dogs to find drugs since 1969. Traditionally, the animals came from pounds and private breeders. But, in 1993, fed up with the poor success rate of finding good dogs this way, John Vandeloo, senior instructor with the Detector Dog Unit, joined forces with Kath Champness, then a doctoral student at the University of Melbourne, and set up a breeding programme. www.TAILIEUTIENGANH.NET

Champness began by defining six essential traits that make a detector dog. First, every good detector dog must love praise because this is the only tool trainers have at their disposal, but the dog must still be able to work for long periods without it. Then it needs a strong hunting instinct and the stamina to keep sniffing at the taxing rate of around 300 times per minute. The ideal detector is also fearless enough to deal with jam-packed airport crowds and the roaring engine rooms of cargo ships.

The remaining two traits are closely related and cognitive in nature. A good detector must be capable of focusing on the task of searching for drugs, despite the distractions in any airport or dockside. This is what neurobiologists call 'selective attention'. And finally, with potentially tens of thousands of hiding places for drugs, the dog must persevere and maintain focus for hours at a time. Neurobiologists call this 'sustained attention'.

Vandeloo and Champness assess the dogs' abilities to concentrate by marking them on a scale of between one and five according to how well they remain focused on a toy tossed into a patch of grass. Ivan scores a feeble one. He follows the toy, gets half-way there, then becomes distracted by places where the other dogs have been or by flowers in the paddock. Rowena, on the other hand, has phenomenal concentration; some might even consider her obsessive. When Vandeloo tosses the toy, nothing can distract her from the searching, not other dogs, not food. And even if no one is around to encourage her, she keeps looking just the same. Rowena gets a five.

A person's ability to pay attention, like a dog's, depends on a number of overlapping cognitive behaviours, including memory and learning – the neurobiologist's attention processing. Attention in humans can be tested by asking subjects to spot colours on a screen while ignoring shapes, or to spot sounds while ignoring visual cues, or to take a 'vigilance test'. Sitting a vigilance test is like being a military radar operator. Blips appear on a cluttered monitor infrequently and at irregular intervals. Rapid detection of all blips earns a high score. Five minutes into the test, one in ten subjects will start to miss the majority of the blips, one in ten will still be able to spot nearly all of them and the rest will come somewhere in between.

Vigilance tasks provide signals that are infrequent and unpredictable – which is exactly what is expected of the dogs when they are asked to notice just a few odour molecules in the air, and then to home in on the source. During a routine mail screen that can take hours, the dogs stay so focused that not even a postcard lined with 0.5 grams of heroin and hidden in a bulging sack of letters escapes detection.

With the current interest in attentional processing, as well as human conditions that have an attention deficit component, such as ADHD, it is predicted that it is only a matter of time before the super-sniffer dogs attract the attention of neurobiologists trying to cure these conditions.

Questions 28-32

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

Write the correct letter in boxes 28-32 on your answer sheet.

28 The drugs in the suitcase

- A were hidden inside the lining.
- B had pepper and coffee around them.
- C had previously been frozen.
- D had a special smell to repel dogs.

29 Most dogs are not good at finding drugs because

- A they don't work well with a handler.
- B they lack the right training.
- C the drugs are usually very well hidden.
- D they lack certain genetic qualities.

30 Florence is a good drug detector because she

- A has a better sense of smell than other dogs.
- B is not easily distracted.
- C has been specially trained to work at airports.
- D enjoys what she is doing.

31 Dogs like Florence may help scientists understand

- A how human and dog brains differ.
- B how people can use both sides of their brain.
- C why some people have difficulty paying attention.
- D the best way for people to maintain their focus.

32 In 1993, the Australian Customs

- A decided to use its own dogs again.
- B was successful in finding detector dogs.
- C changed the way it obtained dogs.
- D asked private breeders to provide more dogs.



Reading

Questions 33-36

Choose FOUR letters, A-J.

Write the correct letters in boxes 33-36 on your answer sheet.

The writer mentions a number of important qualities that detector dogs must have.

Which FOUR of the following qualities are mentioned by the writer of the text?

- A a good relationship with people
- B a willingness to work in smelly conditions
- C quick reflexes
- D an ability to work in noisy conditions
- E an ability to maintain concentration
- F a willingness to work without constant encouragement
- G the skill to find things in long grass
- H experience as hunters
- I a desire for people's approval
- J the ability to search a large number of places rapidly

Questions 37-40

Do the following statements agree with the information given in the text?

In boxes 37-40 on your answer sheet, write

TRUE if the statement agrees with the information FALSE if the statement contradicts the information NOT GIVEN if there is no information on this

- 37 Methods of determining if a child has ADHD are now widely accepted.
- 38 After about five minutes of a vigilance test, some subjects will still notice some blips.
- 39 Vigilance tests help improve concentration.
- 40 If a few grams of a drug are well concealed, even the best dogs will miss them.

General Training Reading and Writing Test B

SECTION 1

Questions 1-14

Read the text below and answer Questions 1-7.

CALL ANYWHERE IN THE STATE FOR ONE LOW SHORT-DISTANCE RATE!

You have a choice of three Supafone Mobile Digital access plans: Leisuretime, Executive and Highflier. They are designed to meet the needs of light, moderate and high-volume users. Calls in each plan are charged at only two rates – short-distance and long-distance. You enjoy big savings with off-peak calls.

LEISURETIME

Your mobile phone is mainly for personal use. You use your phone to keep family and friends in touch. You don't want to strain your budget.

With this plan you enjoy the lowest monthly access fee and extremely competitive costs for calls. However, a monthly minimum call charge applies.

EXECUTIVE

You're in business and need to be able to call your office and your clients whenever the need arises. You value the convenience of a mobile phone but need to keep a close eye on overheads.

For frequent users: the monthly access fee is slightly higher, but you enjoy the savings of a discounted call rate.

Highflier

You are always on the move and communications are critical. You need to be able to call and be called wherever you are – world-wide.

As a high-volume user you pay an access fee of just \$60 a month but even lower call rates.

	LEISURETIME \$35		EXECUTIVE \$46		HIGHFLIER \$60	
Monthly Access Fee						
	PEAK 30 sec. unit	OFF PEAK Save 50%	PEAK 30 sec. unit	OFF PEAK Save 50%	PEAK 30 sec. unit	OFF PEAK Save 50%
Short-distance	21.0 cents	10.5 cents	16.8 cents	8.4 cents	15.1 cents	7.6 cents
Long-distance	31.5 cents	16.8 cents	25.2 cents	12.6 cents	21.0 cents	11.4 cents
Best if you spend this amount a month on calls	up to \$95		\$95 – \$180		more than \$180	

Peak time: 7 a.m. to 7 p.m. Monday-Saturday

Off peak: all other times, including all day Sunday. Billing increments are in 30-second units. Call charges are rounded up to the nearest cent. In off-peak periods, calls are subject to a minimum charge of two 30-second units.

Once-only Connection Fee: \$30 plus additional \$35 for your SmartCard.

Questions 1-7

Classify the following statements as referring to

- A the LEISURETIME plan
- B the EXECUTIVE plan
- C the HIGHFLIER plan
- D ALL three of the plans

Write the correct letter, A, B, C or D, in boxes 1-7 on your answer sheet.

- 1 The monthly access fee is the highest but the call rates are the lowest.
- 2 Calls are charged at short-distance or long-distance rates.
- 3 This plan is NOT primarily intended for people who need a mobile phone for their work.
- 4 This plan is a cost-effective choice if you spend just over \$100 a month on calls.
- 5 It costs 21 cents for a 30-second long-distance call at 2 p.m.
- 6 The connection fee is \$30.
- 7 You will have to pay a minimum amount for calls each month.



Westwinds Farm Campsite

Open April – September (Booking is advised for holidays in July and August to guarantee a place.)

Jim and Meg Oaks welcome you to the campsite. We hope you will enjoy your stay here.

We ask all campers to show due care and consideration whilst staying here and to observe the following camp rules.

- · Keep the campsite clean and tidy:
 - dispose of litter in the bins provided;
 - leave the showers, toilets and washing area in the same state as you found them:
 - ensure your site is clear of all litter when you leave it.
- Don't obstruct rights of way. Keep cars, bikes, etc. off the road.
- Let sleeping campers have some peace. Don't make any noise after 10 o'clock at night or before 7.30 in the morning.
- Dogs must be kept on a lead. Owners of dogs that disturb other campers by barking through the night will be asked to leave.
- · Disorderly behaviour will not be tolerated.
- . The lighting of fires is strictly prohibited.
- Ball games are not allowed on the campsite. There is plenty of room for ball games in the park opposite the campsite.
- Radios, portable music equipment, etc. must not be played at high volume.

The management reserves the right to refuse admittance.

Questions 8-14

Do the following statements agree with the information given in the text on page 119?

In boxes 8-14 on your answer sheet, write-

TRUE if the statement agrees with the information if the statement contradicts the information NOT GIVEN if there is no information on this

- 8 The campsite is open all year round.
- 9 You should book ahead for the busier times of the year.
- 10 The minimum stay at the campsite is two nights.
- 11 The entrance to the campsite is locked after 10 p.m.
- 12 No dogs are allowed on the campsite.
- 13 You are not allowed to cook food on open fires.
- 14 The owners of the campsite may not allow you to camp there.



SECTION 2 Questions 15–27

Read the text below and answer Questions 15-27.

The law on minimum pay

Who is entitled to minimum pay?

Nearly all workers aged 16 years and over, including part-time workers, are entitled to the National Minimum Wage. Amongst those to whom it does **not** apply are those engaged in unpaid work and family members employed by the family business.

What is the minimum wage that I am entitled to?

The National Wage Act specifies the minimum rates of pay applicable nationwide. Since 1 October 2007, the adult rate for workers aged 22 and over has been £5.25 per hour. The development rate for 18–21 year olds and for workers getting training in the first 6 months of a job is £4.60 per hour. The rate for 16–17 year olds starts at £3.40 an hour. There are special provisions for some workers, for example those whose job includes accommodation. Pay means gross pay and includes any items paid through the payroll such as overtime, bonus payments, commission and tips and gratuities.

I believe I'm being paid below the National Minimum Wage Rate. How can I complain?

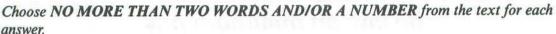
If you are being paid less than this, there are various steps you can take:

- If you feel able, you should talk directly with your employer. This is a clear legal right, and employers can be fined for not paying the NMW.
- If you are a trade union member, you should call in the union.
- If neither of these is appropriate then you can email via the Revenue and Customs website or call their helpline for advice.

You have the legal right to inspect your employer's pay records if you believe, on reasonable grounds, that you are being paid less than the NMW. Your employer is required to produce the records within 14 days, and must make them available at your place of work or at some other reasonable place. If your employer fails to produce the records, you may take the matter to an employment tribunal. You must make your complaint within three months of the ending of the 14-day notice period.

Questions 15-21

Complete the sentences below.



Write your answers in boxes 15-21 on your answer sheet.

- 15 The law on minimum pay doesn't cover you if you are working in your or if you are a volunteer.
- 17 There are different rules for people who are provided with with their jobs.
- 19 Anyone being paid below the National Minimum Wage should speak to their if they can.
- 20 According to the law, you can ask to look at your boss's
- 21 You have a period of to complain if your boss does not co-operate within the specified period of time.





Dealing with your office emails

Email has completely changed the way we work today. It offers many benefits and, if used well, can be an excellent tool for improving your own efficiency. Managed badly, though, email can be a waste of valuable time. Statistics indicate that office workers need to wade through an average of more than 30 emails a day. Despite your best efforts, unsolicited email or spam can clutter up the most organised inbox and infect your computer system with viruses. Here we give you guidance on protecting yourself.

Prioritising incoming messages

If you are regularly faced with a large volume of incoming messages, you need to prioritise your inbox to identify which emails are really important. If it is obvious spam, it can be deleted without reading. Then follow these steps for each email:

- Check who the email is from. Were you expecting or hoping to hear from the sender? How quickly do they expect you to respond?
- Check what the email is about. Is the subject urgent? Is it about an issue that falls within your sphere of responsibility, or should it just be forwarded to someone else?
- Has the email been in your inbox for long? Check the message time.

An initial scan like this can help you identify the emails that require your prompt attention. The others can be kept for reading at a more convenient time.

Replying in stages

Having prioritised your emails, you can answer them in stages, first with a brief acknowledgement and then a more detailed follow-up. This is particularly advisable when dealing with complicated matters where you don't want to give a rushed answer. If you decide to do this, tell the recipient a definite date when you'll be able to get back to him or her and try to keep to this wherever possible.

Some emails are uncomplicated and only require a brief, one line answer, so it's a good idea to reply to these immediately. For example, if all you need to say is, 'Yes, I can make the 10.00 meeting', or 'Thanks, that's just the information I needed', do it. If you are unable to reply there and then or choose not to, let the sender know that you've received the message and will be in touch as soon as possible.

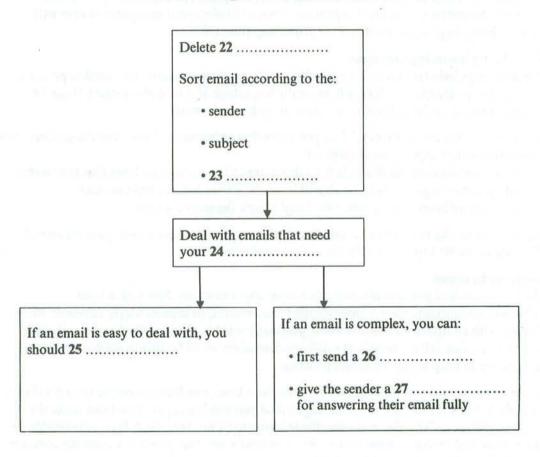
Questions 22-27

Complete the flow chart below.

Choose NO MORE THAN TWO WORDS from the text for each answer.

Write your answers in boxes 22-27 on your answer sheet.

Dealing with emails





SECTION 3

Questions 28-40

Reading

Read the text on pages 125 and 126 and answer Questions 28-40.

THE IRON BRIDGE

The Iron Bridge was the first of its kind in Europe and is universally recognised as a symbol of the Industrial Revolution.



- A The Iron Bridge crosses the River Severn in Coalbrookdale, in the west of England. It was the first cast-iron bridge to be successfully erected, and the first large cast-iron structure of the industrial age in Europe, although the Chinese were expert iron-casters many centuries earlier.
- B Rivers used to be the equivalent of today's motorways, in that they were extensively used for transportation. The River Severn, which starts its life on the Welsh mountains and eventually enters the sea between Cardiff and Bristol, is the longest navigable river in Britain. It was ideal for transportation purposes, and special boats were built to navigate the waters. By the middle of the eighteenth century, the Severn was one of the busiest rivers in Europe. Local goods, including coal, iron products, wool, grain and cider, were sent by river. Among the goods coming upstream were luxuries such as sugar, tea, coffee and wine. In places, the riverbanks were lined with wharves and the river was often crowded with boats loading or unloading.
- C In 1638, Basil Brooke patented a steel-making process and built a furnace at Coalbrookdale. This later became the property of Abraham Darby (referred to as Abraham Darby I to distinguish him from his son and grandson of the same name). After serving an apprenticeship in Birmingham, Darby had started a business in Bristol, but he moved to Coalbrookdale in 1710 with an idea that coke derived from coal could provide a more economical alternative to charcoal as a fuel for ironmaking. This led to cheaper, more efficient ironmaking from the abundant supplies of coal, iron and limestone in the area.
- D His son, Abraham Darby II, pioneered the manufacture of cast iron, and had the idea of building a bridge over the Severn, as ferrying stores of all kinds across the river, particularly the large quantities of fuel for the furnaces at Coalbrookdale and other surrounding ironworks, involved considerable expense and delay. However, it was his son Abraham Darby III (born in 1750) who, in 1775, organised a meeting to plan the building of a bridge. This was designed by a local architect, Thomas Pritchard, who had the idea of constructing it of iron.
- E Sections were cast during the winter of 1778–9 for a 7-metre-wide bridge with a span of 31 metres, 12 metres above the river. Construction took three months during the summer of 1779, and remarkably, nobody was injured during the construction process a feat almost unheard of even in modern major civil engineering projects. Work on the

approach roads continued for another two years, and the bridge was opened to traffic in 1781. Abraham Darby III funded the bridge by commissioning paintings and engravings, but he lost a lot on the project, which had cost nearly double the estimate, and he died leaving massive debts in 1789, aged only 39. The district did not flourish for much longer, and during the nineteenth and early twentieth centuries factories closed down. Since 1934 the bridge has been open only to pedestrians. Universally recognised as the symbol of the Industrial Revolution, the Iron Bridge now stands at the heart of the Ironbridge Gorge World Heritage Site.

- F It has always been a mystery how the bridge was built. Despite its pioneering technology, no eye-witness accounts are known which describe the iron bridge being erected and certainly no plans have survived. However, recent discoveries, research and experiments have shed new light on exactly how it was built, challenging the assumptions of recent decades. In 1997 a small watercolour sketch by Elias Martin came to light in the Swedish capital, Stockholm. Although there is a wealth of early views of the bridge by numerous artists, this is the only one which actually shows it under construction.
- G Up until recently it had been assumed that the bridge had been built from both banks, with the inner supports tilted across the river. This would have allowed river traffic to continue unimpeded during construction. But the picture clearly shows sections of the bridge being raised from a barge in the river. It contradicted everything historians had assumed about the bridge, and it was even considered that the picture could have been a fake as no other had come to light. So in 2001 a half-scale model of the bridge was built, in order to see if it could have been constructed in the way depicted in the watercolour. Meanwhile, a detailed archaeological, historical and photographic survey was done by the Ironbridge Gorge Museum Trust, along with a 3D CAD (computer-aided design) model by English Heritage.
- H The results tell us a lot more about how the bridge was built. We now know that all the large castings were made individually as they are all slightly different. The bridge wasn't welded or bolted together as metal bridges are these days. Instead it was fitted together using a complex system of joints normally used for wood but this was the traditional way in which iron structures were joined at the time. The construction of the model proved that the painting shows a very realistic method of constructing the bridge that could work and was in all probability the method used.
- I Now only one mystery remains in the Iron Bridge story. The Swedish watercolour sketch had apparently been torn from a book which would have contained similar sketches. It had been drawn by a Swedish artist who lived in London for 12 years and travelled Britain drawing what he saw. Nobody knows what has happened to the rest of the book, but perhaps the other sketches still exist somewhere. If they are ever found they could provide further valuable evidence of how the Iron Bridge was constructed.





Answer the questions below.

Choose ONE NUMBER ONLY from the text for each answer.

Write your answers in boxes 28-31 on your answer sheet.

- 28 When was the furnace bought by Darby originally constructed?
- 29 When were the roads leading to the bridge completed?
- 30 When was the bridge closed to traffic?
- 31 When was a model of the bridge built?

Questions 32-36

Do the following statements agree with the information given in the text?

In boxes 32-36 on your answer sheet, write

TRUE if the statement agrees with the information
FALSE if the statement contradicts the information
NOT GIVEN if there is no information on this

- 32 There is no written evidence of how the original bridge was constructed.
- 33 The painting by Elias Martin is the only one of the bridge when it was new.
- 34 The painting shows that the bridge was constructed from the two banks.
- 35 The original bridge and the model took equally long to construct.
- 36 Elias Martin is thought to have made other paintings of the bridge.

Questions 37-40

The text has nine paragraphs, A-I.

Which paragraph contains the following information?

Write the correct letter, A-I, in boxes 37-40 on your answer sheet.

- 37 why a bridge was required across the River Severn
- 38 a method used to raise money for the bridge
- 39 why Coalbrookdale became attractive to iron makers
- 40 how the sections of the bridge were connected to each other

