



## The Next Factor Quiz

The pace of change and speed of innovation means there will be jobs over the coming decades which don't exist in 2010.

Ring or Underline Your Answers

**1) The take up of the Internet across the world since 1994 has been remarkable. What percentage of the world has access to the Internet in 2010?**

a) 1%   b) 5%   c) 15%   d) 20%   e) 25%   f) 30%   g) 50%

**2) Which of these countries has the highest number of people connected to the Internet?**

a) USA   b) India   c) China   d) Germany   e) Japan   d) UK   f) Russia   g) Indonesia

**3) The number of Personal Computers varies enormously in regions across the world. Can you rank these regions in terms of Personal Computers per 1000 head of population (one being the highest)?**

a) Asia and Australia   b) Eastern Europe & Russia   c) Latin America   d) Middle East & Africa  
e) North America (USA and Canada)   f) Western Europe

**4) Which government and companies have a controlling interest in the Internet?**

**5) What do you think are the advantages and some of the problems associated with the Internet?**

**6) How is the Internet connected through the world? It mainly relies on which one of the following?**

a) Satellites   b) Fibre Optic Cables   c) Copper Wire Cables

**7) There are hundreds of satellites currently orbiting the planet. What are their main uses?**

a) monitoring weather and crop production  
b) communications and broadcasting including mobile phones  
c) military surveillance  
d) linked to Global Positioning Systems (GPS) for shipping and vehicles  
e) managing traffic congestion in cities

**8) Robotics is a growing area of technology and has an expanding number of applications. Which of the following is incorrect:**

- a) industrial production processes e.g. paint spraying in car factories
- b) military uses - unmanned aircraft (UAVs) and bomb disposal vehicles
- c) as space exploration vehicles
- d) sing, dance and make tea, use a mobile

**9) Remote control devices and sensors are being used in a variety of applications across the world. How many of the following applications are true?**

- a) remote programming of household appliances
- b) monitoring energy consumption through smart meters on a minute by minute basis to reduce energy bills
- c) managing energy use in buildings
- d) monitoring structural conditions of bridges and alerting engineers on the need for repairs
- e) fitted on cars which can track traffic patterns and detect potholes

**10) How much of high street purchases are currently transacted by plastic credit cards dependent on digital technology?**

- a) 30%    b) 60%    c) 70%    d) 80%    e) 90%    f) 99%

**11) Information, communications and broadcasting technologies account for 6% of the UK's economy, with a turn over of £52 billions and employs 500,000 people.**

- a) True    b) False

**12) The number of mobile phones in the UK in 2009 was?**

- a) 25    b) 35    c) 40    d) 50    e) 60    f) 75 million

**13) Nanotechnology, the science of the very small, can be used in the following ways:**

- a) in the production of golf clubs and tennis rackets
- b) as anti chip car paint
- c) as self cleaning glass
- d) providing materials for the electronics and communications industry
- e) medical research
- f) in materials technology to produce very strong and lightweight products which could be used for example in space technology and aviation.
- g) enhancing the performance of computers
- h) fuel cells and batteries
- i) all of the above

**14) Computer games technology can be used in which of the following:**

- a) home entertainment
- b) medical treatments(used in rehabilitation after a stroke)
- c) training pilots and others requiring a high level of mental and co -ordination skills
- d) completing home work projects

**15) What are advantages of Wireless Technology? Can you give an example of its use?**

**16) Which of the following statements of the UK's aeronautical and aerospace industry is incorrect?**

- a) in 2008 the industry had a turnover of £21 billion
- b) workforce of 100,000
- c) fifth largest in the world
- d) exports 69% of its sales
- e) has 36% of its employees with degrees or equivalent
- f) second largest in the world

**17) Which of these challenges faces the UK aeronautical industry in 2010:**

- a) improving fuel efficiency
- b) reducing carbon emissions
- c) noise reduction
- d) incorporating new materials in aircraft for strength and lightness
- e) raising productivity per employee
- i) all of the above

**18) What does the International Space Centre do?**

**19) Sonar, the use of sound waves in the oceans, can be applied in which of the following ways:**

- a) locating shoals of fish by trawlers
- b) ship's navigation
- c) finding wrecks in the seas and oceans
- d) detecting submarine movements
- e) measuring waves and water velocity e.g. monitoring ocean currents
- f) mapping the contours of the sea bed

**20) What subjects do you think are the most relevant for future careers in digital and high technology?**

You will find more information on jobs and careers in the Body Talk Zone by going to the Future Morph website [www.futuremorph.org](http://www.futuremorph.org) and the Jobs4U website on [www.connexions-direct.com/jobs4u](http://www.connexions-direct.com/jobs4u) Also check out [www.mathscareers.org.uk](http://www.mathscareers.org.uk) and [www.tomorrowsengineers.org.uk](http://www.tomorrowsengineers.org.uk)



## The Next Factor Quiz; Answers

**1) The take up of the Internet across the world since 1994 has been remarkable. What percentage of the world has access to the Internet in 2010?**

- a) 1% b) 5% c) 15% d) 20% **e) 25%** f) 30% g) 50%

*Currently running around 1.5 billion people*

**2) Which of these countries has the highest number of people connected to the Internet?**

- a) USA b) India **c) China** d) Germany e) Japan d) UK f) Russia g) Indonesia

*China has currently 253 million using the Internet.*

**3) The number of Personal Computers varies enormously in regions across the world. Can you rank these regions in terms of Personal Computers per 1000 head of population (one being the highest)?**

- a) Asia and Australia b) Eastern Europe & Russia c) Latin America d) Middle East & Africa  
e) North America (USA and Canada) f) Western Europe

1. e) North America (974)
2. f) Western Europe (688)
3. b) East Europe & Russia (393)
4. c) Latin America (295)
5. a) Asia and Australia (189)
6. d) Middle East & Africa (167)

**4) Which government and companies have a controlling interest in the Internet?**

*Trick question - the whole idea of the Internet is that it is decentralised and not controlled by any government or business.*

*The Internet Corporation for Assigned Names and Numbers (ICANN) acts as a co-ordinator. There are 13 processing centres located around the world underpinning the system.*

**5) What do you think are the advantages and some of the problems associated with the Internet?**

*The Internet is instant, global, allows immediate access to the public, inter - reactive without censorship or ownership. There are authoritarian governments who try to control the Internet for their own advantages.*

*It provides a vast source of information and links to millions of people in almost all countries across the world. Most businesses and companies now could not operate without the Internet.*

*There are disadvantages over accuracy and quality control as well as use by extremist groups, as well as concerns over addiction to gambling, pornography, bullying, identity fraud etc.*

6) How is the Internet connected through the world? It mainly relies on which one of the following?

- a) Satellites    **b) Fibre Optic Cables**    c) Copper Wire Cables

*Around 90% of the Internet goes through fibre optic cables which are laid across the world's oceans beds as well as in underground cables on land.*

7) There are hundreds of satellites currently orbiting the planet. What are their main uses?

- a) Monitoring weather and crop production**  
**b) communications and broadcasting including mobile phones**  
**c) military surveillance**  
**d) linked to Global Positioning Systems (GPS) for shipping and vehicles.**  
 e) managing traffic congestion in cities

*All except for e) managing traffic congestion in cities*

8) Robotics is a growing area of technology and has an expanding number of applications. Which of the following is incorrect:

- a) industrial production processes e.g. paint spraying in car factories  
 b) military uses - unmanned aircraft (UAVs) and bomb disposal vehicles  
 c) as space exploration vehicles  
**d) sing, dance and make tea, use a mobile**

*The odd one out is obviously - d) sing, dance and make tea, use a mobile*

9) Remote control devices and sensors are being used in a variety of applications across the world. How many of the following applications are true?

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**b) monitoring energy consumption through smart meters on a minute by minute basis to reduce energy bills**  
**c) managing energy use in buildings**  
**d) monitoring structural conditions of bridges and alerting engineers on the need for repairs**  
**e) fitted on cars which can track traffic patterns and detect potholes**

*All of the above*

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**15) What are advantages of Wireless Technology? Can you give an example of its use?**

*Computers and electronic equipment can be used without leads and plugs to the mains system. Lap tops for example can be used by people on trains to do their work.*

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- e) raising productivity per employee
- i) all of the above**

**18) What does the International Space Centre do?**

*The UK together with a number of other countries was involved in creation of the International Space Centre which was completed in 1998.*

*Mainly concerned with research into medical and biological projects like the effects on the human body of weightlessness and zero gravity as well the physics of low gravity. The Space Station allows measurements that would be impossible from Earth to help in astronomical research, as well as monitoring weather patterns which are useful to meteorologists.*

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- b) ship's navigation
- c) finding wrecks in the seas and oceans
- d) detecting submarine movements
- e) measuring waves and water velocity e.g. monitoring ocean currents
- f) mapping the contours of the sea bed

*Incorrect as this is done by satellite navigation systems.*

**20) What subjects do you think are the most relevant for future careers in digital and high technology?**

*Especially - Mathematics, Physics, Chemistry, Engineering Science, Design & Technology, Biology*