FOUNDATION YEAR

LISTENING TEST

TITLE: Technological Change

LEVEL: Semester 1

WHAT: Practice Listening Exam including:
Worksheet
Answer Key
CD-Rom

WHY: To give practice in multiple choice test format similar to the Foundation Studies Listening Exam

SKILLS: Listening and note-taking; answering examination questions

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IF ANYTHING IS MISSING OR DAMAGED,
PLEASE TELL THE TEACHER
PRACTICE EXAMINATION - LISTENING TEST

INSTRUCTIONS FOR STUDENTS:

The topic of the lecture you are going to hear is **TECHNOLOGICAL CHANGE**.

- **Listen to the lecture** twice.
- **Do not look at the questions** while you are listening to the lecture.
- On separate sheets of paper, take notes on both occasions using note-taking techniques.
- Using the notes you have taken, select the most appropriate answer to the following questions.
- You will have 20 minutes to answer the questions.
- Check your answers in the Answer Sheet.

**Time approximately: 50 minutes**

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1. Which of the following would be the best title for this talk?
   a) The Effects of Technological Change  
   b) A History of Technological Change  
   c) The Advantages of Technological Change  
   d) The Need to Keep Up With Technological Change

2. The speaker
   a) believes that technological change is very beneficial to society
   b) believes that technological change is very harmful to society
   c) believes that technological change is both beneficial and harmful to society
   d) cannot make up her mind whether technological change is beneficial or not

3. Which of the following would be a suitable title for the first section of the talk:
   a) The Effects of Technology on Employment  
   b) Technology and Agricultural Production  
   c) Manufacturing Opportunities through Technology  
   d) Technology and the Need for Retraining

4. The speaker suggests that, because of technology, employment opportunities
   a) have increased
   b) have decreased
   c) have increased more than they have decreased
   d) have decreased more than they have increased

5. The Luddites are given as an example of people who
   a) designed new technology to improve productivity
   b) destroyed new technology because they were losing their livelihood
   c) demanded better working conditions
   d) forced employers to retrain them to use the new technology

6. The speaker states that working conditions in factories can sometimes be improved through
   a) team work
   b) deskill
   c) shorter working hours
   d) doing repetitive tasks
7. Which of the following points is NOT discussed in the next section on Work.
   a) division of labour
   b) deskillling
   c) factory work
   d) better pay

8. Select the best summary of the ideas in the next section of the talk:
   a) Home appliances are beneficial
   b) Technology reduces housework
   c) Household technology both saves and costs work.
   d) Household appliances are too expensive.

9. Which of the following statements is NOT a view expressed by the speaker:
   a) Medical science has improved through modern technology
   b) All aspects of health have improved in industrialised countries
   c) Fewer infants die in industrialised countries
   d) Life expectancy has increased in industrialised countries

10. Urbanisation is defined as
    a) the push of rural areas
    b) the pull of urban areas
    c) the growth of cities
    d) the migration of people from rural to urban areas

11. Urbanisation is discussed as being advantageous because
    a) it lowers the cost of public facilities
    b) it encourages people to leave the countryside
    c) it provides privacy for people
    d) it enables 20% of government budgets to go towards rural infrastructure.

12. Which of the following are problems of urbanisation which are NOT discussed by the speaker:
    a) air pollution
    b) global warming
    c) loss of communal living
    d) individual stress

13. The environment has been affected in three ways by technology. Which is the first one discussed:
    a) mining
    b) depletion of natural resources
    c) the development of agri-businesses
    d) chemical pollution

14. The second effect discussed is
    a) the destruction of the natural environment
    b) global warming
    c) depletion of natural resources
    d) the extinction of many species

15. Chemicals are mentioned as an example of
    a) environmental destruction because they often pollute the water supply
    b) technological change because they are useful in mining
    c) the damage caused by gold-mining
    d) the need to avoid large farms and plantations
16. The third major environmental problem mentioned is
   a) oil spills
   b) global warming
   c) depletion of fossil fuels
   d) loss of low-lying land

17. The poisoning of a European river system by cyanide is given as an example of
   a) the need to stop gold-mining
   b) the irresponsibility of European environmentalists
   c) the need to improve gold-mining techniques
   d) the kind of disaster resulting from technology

18. Computers are mentioned as an example of
   a) the benefits of modern technology
   b) the mixed effects of modern technology
   c) the speed of change in modern technology
   d) the high price of new technology

19. The speaker concludes that modern technology
   a) will continue to develop
   b) does not necessarily improve quality of life
   c) costs too much
   d) harms society more than it helps.
1. Which of the following would be the best title for this talk?
   a) *The Effects of Technological Change*

2. The speaker
   c) *believes that technological change is both beneficial and harmful to society*

3. Which of the following would be a suitable title for the first section of the talk:
   a) *The Effects of Technology on Employment*

4. The speaker suggests that, because of technology, employment opportunities
   d) *have decreased more than they have increased*

5. The Luddites are given as an example of people who
   b) *destroyed new technology because they were losing their livelihood*

6. The speaker states that working conditions in factories can sometimes be improved through
   a) *team work*

7. Which of the following points is NOT discussed in the next section on Work.
   d) *better pay*

8. Select the best summary of the ideas in the next section of the talk:
   c) *Household technology both saves and costs work.*

9. Which of the following statements is NOT a view expressed by the speaker:
   b) *All aspects of health have improved in industrialised countries*

10. Urbanisation is defined as
    d) *the migration of people from rural to urban areas*

11. Urbanisation is discussed as being advantageous because
    a) *it lowers the cost of public facilities*

12. Which of the following are problems of urbanisation which are NOT discussed by the speaker:
    b) *global warming*

13. The environment has been affected in three ways by technology. Which is the first one discussed:
    b) *depletion of natural resources*

14. The second effect discussed is
    a) *the destruction of the natural environment*

15. Chemicals are mentioned as an example of
    a) *environmental destruction because they often pollute the water supply*

16. The third major environmental problem mentioned is
    b) *global warming*

17. The poisoning of a European river system by cyanide is given as an example of
    d) *the kind of disaster resulting from technology*

18. Computers are mentioned as an example of
    b) *the mixed effects of modern technology*

19. The speaker concludes that modern technology
    b) *does not necessarily improve quality of life*
Technological change since the Industrial Revolution has had profound effects, not just on our work, but also on other aspects of our lifestyles. Some of these effects have been positive and others negative. Whether the positive effects outweigh the negative is a matter for ongoing debate. I intend to outline some of the effects of technological change in this short talk.

First of all I want to look at the effect on employment. There is no doubt that most new technology is labour-saving. In many instances this has been the purpose of the technology. That is, the steam powered textile machinery of the C19th or the robots being used in automated factory plants in the last decades are designed to save effort.

In other cases the technology was not designed to save work, but this became an accidental by-product of the invention. For example, computers were not initially designed to replace office workers, but in fact the use of computers in offices has had this result.

In agriculture there has been a major decline in employment as a direct consequence of the mechanisation of agricultural production. Small farmers have been forced to leave the land because they cannot operate on a large enough scale to use modern agricultural machinery, which is very expensive, and so they cannot compete with large farms, or agri-businesses, as they are called in the US. This trend of decline in employment in agriculture has been evident since the Industrial Revolution, and so now in Europe some 2% of the population are employed in agriculture, while in China, until recently, it was 80%. However, China too is experiencing a kind of industrial revolution, and there are strong social pressures being felt as peasants are finding their way into towns to look for work and a living.

In the manufacturing industry there has been a similar decline in employment, although this has only become really obvious in the last 20 years or so. There too, the use of labour-saving machinery has reduced the number of jobs. Until recently this was not felt because new industries, such as the mass production of motor vehicles, provided new jobs, but now there seems to be a steady unemployment rate of near 10% in most industrialised countries that it seems to be impossible to reduce.

Of course some people suggest that there are plenty of new jobs in the computer industry to take up those unemployed in other industries. It is true that employment has risen in the computer industry, but the manufacturing of computer components is itself computerised, so there is a limit to the ability of this industry to create jobs in the numbers needed to compensate for the decline in manufacturing employment in other industries.

Workers have generally reacted negatively to the introduction of new technology. This is because they have realised that they are faced with the loss of jobs and of their livelihood and so they have often shown resentment. The most famous case is the group in C19th England, known as the Luddites, who attacked and smashed the machines which were introduced to take away their jobs. We now often refer to people who are opposed to modern technology as ‘Luddites’. At that time employers showed no interest in what would happen to the workers who lost their jobs, and now the situation is not much better. Very few employers try to find other work for those workers who have been made redundant by the new technology. It is possible for some workers to retrain in a new skill, but this is much easier for those in the younger age groups. Older workers who are made redundant usually face many years of unemployment.

WORK

Another effect of technological change has been that there has been a greater degree of specialisation in the work force than before. In pre-industrialised societies, workers can perform many tasks to complete a job - for example they can build a complete house, or make a complete garment, from growing the cotton to weaving it to sewing it up.

In industrialised societies there is what is called a division of labour. This means that people specialise in one task only. In factories it has meant that workers only perform one task over and over again. This is referred to as deskilling. That is, people have lost the skills to do many things. Working on a production line in a factory is boring and unsatisfactory work. In some cases, such as in the automobile industry in some countries, the companies have tried to change the working conditions, so that teams of workers can complete a whole section together, and so feel some satisfaction in their jobs. But in many cases the workers in production line companies are not considered, and this can lead to stress, ill-health and industrial action.

In the home it is supposed to be a different story. Here it is said that the labour-saving devices that have been introduced by technology are a great help. Devices such as the refrigerator, the washing machine, electric stove, microwave oven and so on are said to have taken the hard work out of housework. This is true, of course, and nearly everyone would agree that such equipment makes life much easier. However, people are actually spending much more time working to pay for these household appliances, so the saving in work is not as great as it seems. The extra leisure time that is supposed to be provided by such appliances is not necessarily used for leisure at all, but for extra work!
One area where the quality of life has been improved immensely through modern science and technology is in medical science. People in developed countries now live much longer and have a much lower infant mortality rate than there was in the past in these countries. But even here the picture is not all positive. Technology has brought with it increases in certain diseases such as cancer and heart disease. Pollution causes ill-health and brain damage. Then there is stress from work and noise pollution, which also affects the life of the individual, and can lead to a breakdown in the family. All of this has been brought about by the changes in work patterns and lifestyles brought about by technology.

A combined effect of the loss of jobs in the country-side, and of the availability of work in manufacturing and the service sectors in the cities has been the phenomenon known as urbanisation. In other words, since the beginning of industrialisation there has been a large flow of workers from the countryside to the cities, and this process is continuing at an ever-increasing rate in newly industrialised countries. (In some highly developed countries you can now find wealthy people retiring to the countryside to escape from the noise and pollution of cities, but this is a new and unusual trend still.) In fact migration from rural areas accounts for half of city population growth. There are a number of reasons for this movement, generally referred to under the categories of rural push and urban pull. The push from the countryside is the result of lack of work, lack of services and facilities such as education and health, and a loss of agricultural land to large landowners. The pull from the urban areas is the attraction exerted by the availability of jobs in the manufacturing and service industries, the fact that governments spend typically 80% of their budgets on urban areas and thus provide infrastructure, health and education facilities there which are lacking in the countryside, and of course there is the fact that there is more entertainment in cities.

In other words, the concentration of population into cities has meant that facilities like transport, entertainment, hospitals and schools can be provided at relatively low cost. The improvement in standards of living that result from the availability of these amenities must, however, be offset against the negative consequences of city living. These include increased levels of pollution, lack of space and fresh air and stress caused by the increased speed of city work and lifestyles. It is also interesting to note that while cities are very crowded, people feel much greater isolation and loneliness there than in smaller communities. Many city dwellers do not even know their own neighbours and dwellers in high-rise apartments often do not know anyone else in the building. As population densities become grater, these problems become more acute and lead to increases in crime, suicide, family breakdowns and health problems.

Finally, one of the areas most severely affected by technology is the environment.

Most of the new technology requires resources such as minerals and fossil fuels to operate and this has had 3 major effects on the environment. First of all there is a depletion of natural resources - i.e. some of these resources are becoming scarce or are running out. Secondly, there has been major destruction of the environment. Large plantations or agri-businesses have destroyed the habitats of plants and animals and have led to the extinction of many species. The use of chemicals in these large farms and plantations has also caused terrible damage and often affects the water supply.

Even more dramatic is the damage done by mines which are necessary to obtain the minerals that technology depends on. Mines not only destroy the land, but they often use chemicals to extract the minerals which are extremely dangerous. A recent example has been the overflow of cyanide, which is a very dangerous poison used in the extraction of gold, from a dam in Rumania into the major river system of central Europe. All the fish and plants in one river died, and the water that people relied on became unusable.

Other regular environmental disasters are oil spills at sea from oil tankers, and these too kill huge numbers of marine animals and birds, and spoil beaches.

Finally, the burning of the fossil fuels is leading to the well-known global warming effect, which have an immense impact on the world. Some low-lying areas will be covered totally by sea, and agriculture is going to change significantly as well.

So let me conclude by considering the latest advances is technology, and how they are affecting us. Now the so-called Information Age is upon us and there are more and more rapid developments in electronic equipment, especially in computers and audio-visual equipment. Most people who can afford to want to buy the latest equipment because the improvements in speed and performance are so spectacular. Nevertheless there is, as always, a price to pay. Through computers the increase in job redundancy is escalating, leading to permanently high figures of unemployment in most countries. The speed of technological change also leads to deskilling, stress and anxiety in the workforce, and the phenomenon of fewer and fewer people working longer and longer hours. Quality of life can be measured in a number of ways. The use of technology only improves a very small aspect of this quality of life. The cost may be higher than we realise.