1. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**Monkey Pox**

Monkey pox is a rare disease caused by infection with monkey pox virus, that belongs to the same family of viruses that includes variola virus (the cause of smallpox), vaccinia virus (used in the smallpox vaccine), and cowpox virus. The virus was first isolated from colonies of monkeys kept for research, hence the name “monkey pox.” The first recorded human case of monkey pox was in 1970 in the Democratic Republic of Congo during a period of intensified effort to eliminate smallpox. There were also reports of cases in Liberia and Sierra Leone. The following year, there was one case in Cote d’Ivoire and two cases in Nigeria. Then in 1976 there were two cases in Cameroon and again in Nigeria, in 1978, one case was recorded. Since then, monkey pox has remained strictly a disease of Central and Western African countries, except in 2003, when 47 cases were reported in the US.

The natural reservoir of monkey pox remains unknown. However, African rodent species are expected to play a role in transmission. The monkey pox virus can cause an illness with a generalised vesicular skin rash, fever, and painful jaw swelling. In previous outbreaks, it has led to death in about 1-10 per cent of infected cases. There is no specific medicine to treat the disease, but intensive supportive care helps patients to recover fully.

Several steps must be taken to contain the present outbreak. The first is to prevent transmission from animal to man through contact with any of the animals listed as natural hosts of the virus – monkeys, rodents, rats, squirrels etc. Then, those handling sick animals, raw or infected tissues, must wear gloves and other appropriate protective clothing. All animal products (blood, meat) must be thoroughly cooked before eating. During a monkey pox outbreak, we must avoid close and direct contact with the blood, bodily fluids, or cutaneous or mucosal lesions of an infected person. Since there is neither a vaccine nor a specific treatment for the disease, we need to raise awareness of the risk factors and educate people about the measures that must be taken to reduce exposure to the virus. As a nation, we also need to upgrade our surveillance for the disease to rapidly identify new cases and isolate them. We must implement standard infection control in our health facilities, while providing our health workers with gloves and protective equipment when taking care of ill people. We cannot over stress the need for regular hand washing, especially after caring for or visiting sick people. Finally, we must keep our environment clean and free from invasion by rats and rodents.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. The causative organism in monkey pox is the same that of small pox and cowpox. +++
	1. FALSE
2. The first recorded case of monkey pox was the Nigerian case of 1978. +++
	1. FALSE
3. Scientists have now discovered how new outbreaks of monkey pox start. +++
	1. FALSE
4. Environmental sanitation plays a role in disease control. +++
	1. TRUE
5. There are many medicines to treat monkey pox because no specific ones work. +++
	1. FALSE
6. The following professionals: hunters, veterinarians, doctors and nurses are especially at risk during monkey pox outbreaks. +++
	1. TRUE
7. One can infer from the passage that there is an outbreak in the writer’s country.
	1. TRUE
8. Most people who contact monkey pox die. +++
	1. FALSE
9. Most cases of monkey pox were recorded in the US. +++
	1. FALSE
10. Monkey pox infection in health professionals can be minimised by the use of protective gloves only. +++
	1. FALSE
11. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**Monkey Pox**

Monkey pox is a rare disease caused by infection with monkey pox virus, that belongs to the same family of viruses that includes variola virus (the cause of smallpox), vaccinia virus (used in the smallpox vaccine), and cowpox virus. The virus was first isolated from colonies of monkeys kept for research, hence the name “monkey pox.” The first recorded human case of monkey pox was in 1970 in the Democratic Republic of Congo during a period of intensified effort to eliminate smallpox. There were also reports of cases in Liberia and Sierra Leone. The following year, there was one case in Cote d’Ivoire and two cases in Nigeria. Then in 1976 there were two cases in Cameroon and again in Nigeria, in 1978, one case was recorded. Since then, monkey pox has remained strictly a disease of Central and Western African countries, except in 2003, when 47 cases were reported in the US. The 2003 US outbreak is the only time monkey pox infections in humans were documented outside of Africa.   Most of those affected had close contact with pet prairie dogs believed to have had contact with animals that were imported. The current outbreak in Nigeria is of West African origin and associated with milder disease, fewer deaths, and limited human-to-human transmission. Studies have shown that the monkey pox virus can cause a fatal illness in humans and, although it is similar to human smallpox which has been eradicated, it is much milder.

A professor of virology and former President, Nigeria Academy of Science, Professor Oyewale Tomori, described as a shame Nigeria’s inability to diagnose monkey pox. Tomori, who spoke to Sunday Vanguard from the US, remarked: “It is indeed a shame for us in this country that, nearly 60 years after our so called independence, we are still unable to confirm a case of most diseases without sending our samples to laboratories overseas.“ And which overseas, are we talking about. Senegal! Just imagine. And there was a time when our laboratory system was able to confirm many of these diseases, now, none of these diseases are we able to confirm. “We do not have appropriate and well equipped laboratory facilities to definitely confirm suspected cases. Samples have been sent to Dakar and plans are being made to send additional samples to the smallpox laboratories of the WHO Collaborating Center for Smallpox and other Poxvirus Infections at the Center for Disease Control in Atlanta”.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. The causative organism in monkey pox is the same that of small pox and cowpox. +++
	1. FALSE
2. The first recorded case of monkey pox was the Nigerian case of 1978. +++
	1. FALSE
3. All people who contact monkey pox die. +++
	1. FALSE
4. Most cases of monkey pox were recorded in the US. +++
	1. FALSE
5. One can infer from the passage that one cannot be infected with monkey pox through contact with pets. +++
	1. FALSE
6. Professor Tomori works at the Center for Disease Control in Atlanta. +++
	1. NOT STATED
7. More incidents of monkey pox have been recorded in West African countries than anywhere else. +++
	1. TRUE
8. One can infer from the passage that the country has appropriate technology for the diagnosis and treatment of monkey pox. +++
	1. FALSE
9. The monkey pox virus was first isolated in a research facility in the US. +++
	1. NOT STATED
10. One can infer from the passage that some African countries have better technology than Nigeria. +++
	1. TRUE
11. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**Monkey Pox**

Monkey pox is a rare disease caused by infection with monkey pox virus, that belongs to the same family of viruses that includes variola virus (the cause of smallpox), vaccinia virus (used in the smallpox vaccine), and cowpox virus. The virus was first isolated from colonies of monkeys kept for research, hence the name “monkey pox.” The first recorded human case of monkey pox was in 1970 in the Democratic Republic of Congo during a period of intensified effort to eliminate smallpox. There were also reports of cases in Liberia and Sierra Leone. The following year, there was one case in Cote d’Ivoire and two cases in Nigeria. Then in 1976 there were two cases in Cameroon and again in Nigeria, in 1978, one case was recorded. Since then, monkey pox has remained strictly a disease of Central and Western African countries, except in 2003, when 47 cases were reported in the US. The 2003 US outbreak is the only time monkey pox infections in humans were documented outside of Africa.   Most of those affected had close contact with pet prairie dogs believed to have had contact with animals that were imported. The current outbreak in Nigeria is of West African origin and associated with milder disease, fewer deaths, and limited human-to-human transmission. Studies have shown that the monkey pox virus can cause a fatal illness in humans and, although it is similar to human smallpox which has been eradicated, it is much milder.

A professor of virology and former President, Nigeria Academy of Science, Professor Oyewale Tomori, described as a shame Nigeria’s inability to diagnose monkey pox. Tomori, who spoke to Sunday Vanguard from the US, remarked: “It is indeed a shame for us in this country that, nearly 60 years after our so called independence, we are still unable to confirm a case of most diseases without sending our samples to laboratories overseas.“ And which overseas, are we talking about. Senegal! Just imagine. And there was a time when our laboratory system was able to confirm many of these diseases, now, none of these diseases are we able to confirm. “We do not have appropriate and well equipped laboratory facilities to definitely confirm suspected cases. Samples have been sent to Dakar and plans are being made to send additional samples to the smallpox laboratories of the WHO Collaborating Center for Smallpox and other Poxvirus Infections at the Center for Disease Control in Atlanta”.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. Some people who contact monkey pox die. +++
	1. TRUE
2. Most cases of monkey pox were recorded in the US. +++
	1. FALSE
3. The causative organism in monkey pox is the same that of small pox and cowpox. +++
	1. FALSE
4. The first recorded case of monkey pox in Nigeria was in 1978. +++
	1. FALSE
5. The monkey pox virus was first isolated in a research facility in the US. +++
	1. NOT STATED
6. One can infer from the passage that Professor Tomori is proud of his country. +++
	1. FALSE
7. One can infer from the passage that the country does not have appropriate technology for the diagnosis and treatment of monkey pox. +++
	1. TRUE
8. Professor Tomori works at the Center for Disease Control in Atlanta. +++
	1. NOT STATED
9. Smallpox is still a problem in Nigeria. +++
	1. FALSE
10. One can infer from the passage that some African countries have better technology than Nigeria. +++
	1. TRUE
11. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**Monkey Pox**

Monkey pox is a rare disease caused by infection with monkey pox virus, that belongs to the same family of viruses that includes variola virus (the cause of smallpox), vaccinia virus (used in the smallpox vaccine), and cowpox virus. The virus was first isolated from colonies of monkeys kept for research, hence the name “monkey pox.” The first recorded human case of monkey pox was in 1970 in the Democratic Republic of Congo during a period of intensified effort to eliminate smallpox. There were also reports of cases in Liberia and Sierra Leone. The following year, there was one case in Cote d’Ivoire and two cases in Nigeria. Then in 1976 there were two cases in Cameroon and again in Nigeria, in 1978, one case was recorded. Since then, monkey pox has remained strictly a disease of Central and Western African countries, except in 2003, when 47 cases were reported in the US.

The natural reservoir of monkey pox remains unknown. However, African rodent species are expected to play a role in transmission. The monkey pox virus can cause an illness with a generalised vesicular skin rash, fever, and painful jaw swelling. In previous outbreaks, it has led to death in about 1-10 per cent of infected cases. There is no specific medicine to treat the disease, but intensive supportive care helps patients to recover fully.

Several steps must be taken to contain the present outbreak. The first is to prevent transmission from animal to man through contact with any of the animals listed as natural hosts of the virus – monkeys, rodents, rats, squirrels etc. Then, those handling sick animals, raw or infected tissues, must wear gloves and other appropriate protective clothing. All animal products (blood, meat) must be thoroughly cooked before eating. During a monkey pox outbreak, we must avoid close and direct contact with the blood, bodily fluids, or cutaneous or mucosal lesions of an infected person. Since there is neither a vaccine nor a specific treatment for the disease, we need to raise awareness of the risk factors and educate people about the measures that must be taken to reduce exposure to the virus. As a nation, we also need to upgrade our surveillance for the disease to rapidly identify new cases and isolate them. We must implement standard infection control in our health facilities, while providing our health workers with gloves and protective equipment when taking care of ill people. We cannot over stress the need for regular hand washing, especially after caring for or visiting sick people. Finally, we must keep our environment clean and free from invasion by rats and rodents.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. Monkey pox infection in health professionals can be minimised by the use of protective gloves only. +++
	1. FALSE
2. Most cases of monkey pox were recorded in the US. +++
	1. FALSE
3. One can infer from the passage that health workers must always wear protective clothing. +++
	1. FALSE
4. There are many medicines to treat monkey pox because no specific ones work. +++
	1. FALSE
5. One can infer from the passage that one can be infected with monkey pox from eating meat and blood. +++
	1. TRUE
6. One can infer from the passage that there is an outbreak in the writer’s country. +++
	1. TRUE
7. Scientists have now discovered how new outbreaks of monkey pox start. +++
	1. FALSE
8. The causative organism in monkey pox is the same that of small pox and cowpox. +++
	1. FALSE
9. The first recorded case of monkey pox was the Nigerian case of 1978. +++
	1. FALSE
10. The following professionals: hunters, veterinarians, doctors and nurses are especially at risk during monkey pox outbreaks. +++
	1. TRUE
11. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**Fish Processing Technologies in Nigeria**

Fish processing is the processes associated with fish and fish products between the time in which fish are caught or harvested and the time in which the final product is delivered to the customer. If fish is not sold fresh, preservation methods which include freezing, smoking, drying and heat treatment should be applied to extend its shelf-life. Lack of adequate fish handling, processing techniques and storage facilities contribute significantly to the low supply of fish to poor rural dwellers that form three quarters of the population in developing countries. The long distance of distribution necessitates some processing and storage since preservation through refrigeration is not readily available. The need for the development of fish preservation and processing machinery and techniques for effective fish handling, harvesting, processing and storage can never be over-emphasized especially now that aquaculture production is on the increase in Nigeria. According to a scholar, storage life extension of smoked fish can result from a combination of lowered water activity and the uptake by the product of bactericidal and antioxidant components of wood smoke.

With improved technologies, fresh fish can be processed as wanted without any significant loss of quality. Producers should understand how smoking procedures affect the interrelationships between yield, throughput and final profitability. Presently in Nigeria, the mechanization level of fish processing is low which results from the overall limited production, seasonal availability of fish, poor information dissemination of the available improved technology to processors and lack of inexpensive equipment adaptable for processing. The production system is mainly artisanal and fish are marketed mostly in five different forms; fresh, smoked, dried, salted and frozen. Processing of fish either through smoking or drying are widely used in fish preservation in the process, moisture content present in the fish is extracted through heating, thus inhibiting the action of micro-organisms and prolong shell life. Processing of fish by smoking or drying enhances the nutritive value and promotes digestibility of protein. Some of the traditional fish processing methods are associated with contamination which may be injurious to consumers. The adoption of appropriate processing technologies will give satisfaction to consumers and equally preserve economical balance.

It is reported that about 12% of fish is lost post-harvest in the fresh state. For dried fish, 16% is lost before and during processing and 6% from storage prior to sales, bringing the total loss of fish to 35%. The problem of high post-harvest losses has been recognized as a major impediment to the realization of the goal of increasing the contribution of fisheries to the Nigerian economy. There is a dearth of information on the exact magnitude of post-harvest losses in fisheries. Such information would be valuable in developing appropriate technologies and intervention to mitigate the post-harvest fish losses. The prominent fish preservation method in Nigeria is smoke-drying, because not all fishing communities have asses to electricity to preserve their catch.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. According to the passage, all traditional means of fish processing is injurious to man. +++
	1. FALSE
2. Fish processing could be mechanized in Nigeria if appropriate technology was easily accessible. +++
	1. TRUE
3. Fish processing has not been an active economic contributor due to post-harvest factors. +++
	1. TRUE
4. Fisheries researchers have gathered enough data on post-harvest losses. +++
	1. FALSE
5. Materials used in fish processing in Nigeria aid the shelf life of the fish processed. +++
	1. TRUE
6. More than a tenth of the fish is wasted during the drying process. +++
	1. TRUE
7. Not all forms of processing are easily obtainable in Nigeria. +++
	1. TRUE
8. Processing is associated with specific animals in Nigeria. +++
	1. FALSE
9. Suitable means of fish processing results in financial gains and customers’ satisfaction. +++
	1. TRUE
10. The most significant loss of fish occurs when the fish is fresh. +++
	1. FALSE
11. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**Fish Processing Technologies in Nigeria**

Fish processing is the processes associated with fish and fish products between the time in which fish are caught or harvested and the time in which the final product is delivered to the customer. If fish is not sold fresh, preservation methods which include freezing, smoking, drying and heat treatment should be applied to extend its shelf-life. Lack of adequate fish handling, processing techniques and storage facilities contribute significantly to the low supply of fish to poor rural dwellers that form three quarters of the population in developing countries. The long distance of distribution necessitates some processing and storage since preservation through refrigeration is not readily available. The need for the development of fish preservation and processing machinery and techniques for effective fish handling, harvesting, processing and storage can never be over-emphasized especially now that aquaculture production is on the increase in Nigeria. According to a scholar, storage life extension of smoked fish can result from a combination of lowered water activity and the uptake by the product of bactericidal and antioxidant components of wood smoke.

With improved technologies, fresh fish can be processed as wanted without any significant loss of quality. Producers should understand how smoking procedures affect the interrelationships between yield, throughput and final profitability. Presently in Nigeria, the mechanization level of fish processing is low which results from the overall limited production, seasonal availability of fish, poor information dissemination of the available improved technology to processors and lack of inexpensive equipment adaptable for processing. The production system is mainly artisanal and fish are marketed mostly in five different forms; fresh, smoked, dried, salted and frozen. Processing of fish either through smoking or drying are widely used in fish preservation in the process, moisture content present in the fish is extracted through heating, thus inhibiting the action of micro-organisms and prolong shell life. Processing of fish by smoking or drying enhances the nutritive value and promotes digestibility of protein. Some of the traditional fish processing methods are associated with contamination which may be injurious to consumers. The adoption of appropriate processing technologies will give satisfaction to consumers and equally preserve economical balance.

It is reported that about 12% of fish is lost post-harvest in the fresh state. For dried fish, 16% is lost before and during processing and 6% from storage prior to sales, bringing the total loss of fish to 35%. The problem of high post-harvest losses has been recognized as a major impediment to the realization of the goal of increasing the contribution of fisheries to the Nigerian economy. There is a dearth of information on the exact magnitude of post-harvest losses in fisheries. Such information would be valuable in developing appropriate technologies and intervention to mitigate the post-harvest fish losses. The prominent fish preservation method in Nigeria is smoke-drying, because not all fishing communities have asses to electricity to preserve their catch.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. According to the passage, all traditional means of fish processing is injurious to man. +++
	1. FALSE
2. Automatic fish processing the country is very encouraging. +++
	1. FALSE
3. Drying of fish enhances digestion. +++
	1. TRUE
4. Due to lack of infrastructure facility in Nigeria, drying is a popular process of food processing. +++
	1. TRUE
5. Fish processing could be mechanized in Nigeria if appropriate technology was easily accessible. +++
	1. TRUE
6. Fish processing has not been an active economic contributor due to post-harvest factors. +++
	1. TRUE
7. Fisheries researchers have gathered enough data on post-harvest losses. +++
	1. FALSE
8. Food processing is mainly to preserve food shelf life. +++
	1. TRUE
9. Materials used in fish processing in Nigeria aid the shelf life of the fish processed. +++
	1. TRUE
10. More than a tenth of the fish is wasted during the drying process. +++
	1. TRUE
11. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**What Makes a Technology Appropriate? (**by Barrett Hazeltine, Adapted**)**

Nearly all technology would be appropriate somewhere, so a general meaning of the term "Appropriate Technology" is elusive but the term is often used, as I will, in a narrower sense. An accepted meaning is that Appropriate Technology is small scale, labor intensive, creates meaningful jobs, maintainable by the local community, environmentally sound, and energy efficient. A major early proponent was E. F. Schumacher, an economist who visited Burma after World War II and recognized that the technologies effective in Britain and the rest of the industrialized world were inappropriate in much of the world, partly because the capital cost to create a job, a work place, using western technology was prohibitive--£2000 (in 1966). On the other hand, local artisans were using tools costing tools costing £2 and were not producing much. Schumacher argued for an "Intermediate" technology, where the capital cost per workplace would be about £100, large enough to be effective, small enough so many jobs could be created. The term "Intermediate" was found to be offensive and was replaced by "Appropriate".

The reasons Schumacher pushed appropriate technology in the Third World are probably evident—the capital investment required to create many jobs is not feasible if industrialized world technology is used but would be feasible with a smaller scale technology. Appropriate technology would reach many more people than high technology, reducing economic inequality. A second advantage is that jobs would be created in the villages, avoiding social disruption, such as caused by urban migration. Another advantage expected was that the artisans using these improved but still comprehendible tools would develop attitudes of self-reliance and responsibility. Further, proponents of small-scale technologies believe such technologies are easier on the environment.

Another reason why "appropriate" was used is a reaction to the many attempts to transplant a technology into a situation where it did not fit. Machines that worked well when used and maintained by experienced operators in Britain and the US failed permanently at the hands of untrained staff lacking support. When machines were exported to less industrialized regions, spares and lubricants did not always follow. Local people tend to be ingenious and motivated but are at a tremendous disadvantage without the engineering ecosystem we take for granted. A gross simplification, which has a kernel of truth, is that people in less industrialized countries have an excess of time and a lack of capital. The opposite is true in industrialized countries; hence the risk of transplanted technology being inappropriate.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. Any technology may conceivably be referred to as appropriate technology. +++
	1. TRUE
2. Appropriate technology is usually the cheapest available. +++
	1. FALSE
3. Appropriate technology in the narrow sense still requires the employment of many workers. +++
	1. TRUE
4. Lack of motivation is one of the reasons for the failure of sophisticated technology in less industrialized nations. +++
	1. FALSE
5. Environmental friendly technology is always appropriate for a developing country. +++
	1. FALSE
6. The capital cost to create a job, a work place, using appropriate technology today is £2000. +++
	1. NOT STATED
7. Appropriate technology needs to be labor intensive because time is cheaper in developing countries. +++
	1. TRUE
8. F. Schumacher lived in Burma after World War II. +++
	1. FALSE
9. Engineering ecosystem probably refers to the technical support needed to make certain technologies work. +++
	1. TRUE
10. Large scale installations requiring a few highly trained foreign workers may be appropriate in a developing country. +++
	1. FALSE
11. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**What Makes a Technology Appropriate? (**by Barrett Hazeltine, Adapted**)**

Nearly all technology would be appropriate somewhere, so a general meaning of the term "Appropriate Technology" is elusive but the term is often used, as I will, in a narrower sense. An accepted meaning is that Appropriate Technology is small scale, labor intensive, creates meaningful jobs, maintainable by the local community, environmentally sound, and energy efficient. A major early proponent was E. F. Schumacher, an economist who visited Burma after World War II and recognized that the technologies effective in Britain and the rest of the industrialized world were inappropriate in much of the world, partly because the capital cost to create a job, a work place, using western technology was prohibitive--£2000 (in 1966). On the other hand, local artisans were using tools costing tools costing £2 and were not producing much. Schumacher argued for an "Intermediate" technology, where the capital cost per workplace would be about £100, large enough to be effective, small enough so many jobs could be created. The term "Intermediate" was found to be offensive and was replaced by "Appropriate".

The reasons Schumacher pushed appropriate technology in the Third World are probably evident—the capital investment required to create many jobs is not feasible if industrialized world technology is used but would be feasible with a smaller scale technology. Appropriate technology would reach many more people than high technology, reducing economic inequality. A second advantage is that jobs would be created in the villages, avoiding social disruption, such as caused by urban migration. Another advantage expected was that the artisans using these improved but still comprehendible tools would develop attitudes of self-reliance and responsibility. Further, proponents of small-scale technologies believe such technologies are easier on the environment.

Another reason why "appropriate" was used is a reaction to the many attempts to transplant a technology into a situation where it did not fit. Machines that worked well when used and maintained by experienced operators in Britain and the US failed permanently at the hands of untrained staff lacking support. When machines were exported to less industrialized regions, spares and lubricants did not always follow. Local people tend to be ingenious and motivated but are at a tremendous disadvantage without the engineering ecosystem we take for granted. A gross simplification, which has a kernel of truth, is that people in less industrialized countries have an excess of time and a lack of capital. The opposite is true in industrialized countries; hence the risk of transplanted technology being inappropriate.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. Any technology may conceivably be referred to as appropriate technology. +++
	1. TRUE
2. Appropriate technology needs to be labor intensive because time is cheaper in developing countries. +++
	1. TRUE
3. E. F. Schumacher lived in Burma after World War II. +++
	1. FALSE
4. Engineering ecosystem probably refers to the technical support needed to make certain technologies work. +++
	1. TRUE
5. Lack of motivation is one of the reasons for the failure of sophisticated technology in less industrialized nations. +++
	1. FALSE
6. Large scale installations requiring a few highly trained foreign workers may be appropriate in a developing country. +++
	1. FALSE
7. The capital cost to create a job, a work place, using appropriate technology today is £2000. +++
	1. NOT STATED
8. Appropriate technology is usually the cheapest available. +++
	1. FALSE
9. Appropriate technology in the narrow sense still requires the employment of many workers. +++
	1. TRUE
10. Environmental friendly technology is always appropriate for a developing country. +++
	1. FALSE
11. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**What Makes a Technology Appropriate? (**by Barrett Hazeltine, Adapted**)**

Appropriate Technology tends to be small scale, labor intensive, creates meaningful jobs, maintainable by the local community, environmentally sound, and energy efficient. A major early proponent was E. F. Schumacher, an economist who visited Burma after World War II and recognized that the technologies effective in Britain and the rest of the industrialized world were inappropriate in much of the world.

The reasons Schumacher pushed appropriate technology in the Third World are probably evident—the capital investment required to create many jobs is not feasible if industrialized world technology is used but would be feasible with a smaller scale technology. Appropriate technology would reach many more people than high technology, reducing economic inequality. A second advantage is that jobs would be created in the villages, avoiding social disruption, such as caused by urban migration. Another advantage expected was that the artisans using these improved but still comprehendible tools would develop attitudes of self-reliance and responsibility. Further, proponents of small-scale technologies believe such technologies are easier on the environment.

Another reason why "appropriate" was used is a reaction to the many attempts to transplant a technology into a situation where it did not fit. Machines that worked well when used and maintained by experienced operators in Britain and the US failed permanently at the hands of untrained staff lacking support. When machines were exported to less industrialized regions, spares and lubricants did not always follow. Local people tend to be ingenious and motivated but are at a tremendous disadvantage without the engineering ecosystem we take for granted. A gross simplification, which has a kernel of truth, is that people in less industrialized countries have an excess of time and a lack of capital. The opposite is true in industrialized countries; hence the risk of transplanted technology being inappropriate.

One concern about appropriate technologies is whether it can produce sufficient goods and services to meet needs. The answer, of course, depends on the situation and the technology chosen. Another concern is whether users or designers will accept a simple solution when a more complicated one is available—perhaps this bias toward complexity is a North American phenomenon. I suspect people doing planning for third world nations have a concern that promoting appropriate technology will permanently exclude a nation from participating in modern industry. A suspicion may exist that appropriate technology is in fact a strategy to keep less industrialized nations that way forever. A final concern about appropriate technology is that it is difficult to manage because it supports self-reliant artisans working on locally selected projects.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. The development of appropriate technology may be hindered by designer bias. +++
	1. TRUE
2. Lack of motivation is one of the reasons for the failure of sophisticated technology in less industrialized nations. +++
	1. FALSE
3. E. F. Schumacher lived in Burma after World War II. +++
	1. FALSE
4. ‘Engineering ecosystem’ probably refers to the technical support needed to make certain technologies work. +++
	1. TRUE
5. Industrialization and technological development may be hindered by appropriate technology. +++
	1. TRUE
6. Appropriate technology designers all live in North America. +++
	1. FALSE
7. The self-reliance of local artisans using appropriate technology on locally selected projects is a great advantage. +++
	1. FALSE
8. Appropriate technology always sufficiently serves the needs of a community where it is used +++
	1. FALSE
9. Lack of technical support is one of the reasons for the failure of sophisticated technology in less industrialized nations. +++
	1. FALSE
10. It is appropriate for developing nations to remain satisfied with appropriate technology. +++
	1. FALSE
11. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**What Makes a Technology Appropriate? (**by Barrett Hazeltine, Adapted**)**

Appropriate Technology tends to be small scale, labor intensive, creates meaningful jobs, maintainable by the local community, environmentally sound, and energy efficient. A major early proponent was E. F. Schumacher, an economist who visited Burma after World War II and recognized that the technologies effective in Britain and the rest of the industrialized world were inappropriate in much of the world.

The reasons Schumacher pushed appropriate technology in the Third World are probably evident—the capital investment required to create many jobs is not feasible if industrialized world technology is used but would be feasible with a smaller scale technology. Appropriate technology would reach many more people than high technology, reducing economic inequality. A second advantage is that jobs would be created in the villages, avoiding social disruption, such as caused by urban migration. Another advantage expected was that the artisans using these improved but still comprehendible tools would develop attitudes of self-reliance and responsibility. Further, proponents of small-scale technologies believe such technologies are easier on the environment.

Another reason why "appropriate" was used is a reaction to the many attempts to transplant a technology into a situation where it did not fit. Machines that worked well when used and maintained by experienced operators in Britain and the US failed permanently at the hands of untrained staff lacking support. When machines were exported to less industrialized regions, spares and lubricants did not always follow. Local people tend to be ingenious and motivated but are at a tremendous disadvantage without the engineering ecosystem we take for granted. A gross simplification, which has a kernel of truth, is that people in less industrialized countries have an excess of time and a lack of capital. The opposite is true in industrialized countries; hence the risk of transplanted technology being inappropriate.

One concern about appropriate technologies is whether it can produce sufficient goods and services to meet needs. The answer, of course, depends on the situation and the technology chosen. Another concern is whether users or designers will accept a simple solution when a more complicated one is available—perhaps this bias toward complexity is a North American phenomenon. I suspect people doing planning for third world nations have a concern that promoting appropriate technology will permanently exclude a nation from participating in modern industry. A suspicion may exist that appropriate technology is in fact a strategy to keep less industrialized nations that way forever. A final concern about appropriate technology is that it is difficult to manage because it supports self-reliant artisans working on locally selected projects.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. Appropriate technology always sufficiently serves the needs of a community where it is used +++
	1. FALSE
2. Lack of technical support is one of the reasons for the failure of sophisticated technology in less industrialized nations. +++
	1. FALSE
3. Engineering ecosystem probably refers to the technical support needed to make certain technologies work. +++
	1. TRUE
4. Industrialization and technological development may be hindered by appropriate technology. +++
	1. TRUE
5. It is appropriate for developing nations to remain satisfied with appropriate technology. +++
	1. FALSE
6. Appropriate technology needs to be labor intensive because time is cheaper in developing countries. +++
	1. TRUE
7. The self-reliance of local artisans using appropriate technology on locally selected projects is a great advantage. +++
	1. FALSE
8. The development of appropriate technology may be hindered by designer bias. +++
	1. TRUE
9. Lack of motivation is one of the reasons for the failure of sophisticated technology in less industrialized nations. +++
	1. FALSE
10. Appropriate technology designers all live in North America. +++
	1. FALSE
11. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**What Makes a Technology Appropriate? (**by Barrett Hazeltine, Adapted**)**

How did thinking about appropriate technology evolve? In the first place appropriate technology is becoming accepted. I am struck when I visit places in Africa and Asia that appropriate technology is recognized as a viable option. In the United States people seem less familiar with the term but the ideas are gaining hold. Thinking about appropriate technology changed in another way—a recognition that technology is only part of the solution. In the Third World, aid organizations that once focused heavily on designing devices are now focusing more on the entire value chain—realizing that creating jobs requires attention to suppliers and customers, as well as technology. A third way that thinking has evolved how local people are involved. At least some aid organizations are paying much attention to existing community knowledge, choosing technologies that build on what the community has been doing, using appropriate technology ideas to help people do things better.

So, is appropriate technology really useful beyond helping poor farmers in remote places? Are the ideas applicable in other contexts? I see several generally useful themes coming out of the appropriate technology effort:

* Bias for simplicity, for small scale solutions
* Avoidance of technology that creates major cultural change
* Recognition that successful innovation requires more than technology advances
* Being attentive to the quality of jobs produced

Schumacher would be disappointed that community development is not included but appropriate technology ideas do not seem to be leading in that area.

I should elaborate. People become engineers because they like to make things. They feel rewarded when their solution to a challenging problem works and often feel more rewarded when the solution is sophisticated. This aspiration for technological elegance can overcome awareness of what is needed. Aiming for perfection narrows a designer's vision. A solution that satisfies and meets other requirements is needed in many cases, especially in unfamiliar settings, and such a solution is very likely to be small scale.

Appropriate technology tends to be close to the traditional technology so the cultural change required when it is introduced is usually small. The work people do after the new technology is introduced is similar but more productive. Successful implementation of appropriate technology has, in most cases, focused on villages—where poor people tend to live. Having productive jobs in a village retains village culture, easing the adjustment to the different sort of life a new technology will bring. The admonition to the engineer introducing a new technology is to learn about the existing culture and forecast, as best as possible, the effect of an engineering advancement.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. Ideas about appropriate technology apply only in Africa and Asia. +++
	1. FALSE
2. Sophisticated technologies are personally satisfying for many designers but may not be appropriate in a developing country. +++
	1. TRUE
3. The farther away from traditional technology a device is, the more appropriate it is likely to be. +++
	1. FALSE
4. Large scale, sophisticated installations requiring a only few highly trained foreign workers may be appropriate in large villages. +++
	1. FALSE
5. The attitude of the writer is that rural people simply have to adjust to engineering advancement for their own good. +++
	1. FALSE
6. The only difference between traditional technology and new technology is that the latter is more productive. +++
	1. FALSE
7. The main purpose of appropriate technology is helping poor farmers in remote places. +++
	1. FALSE
8. Community development is required to make appropriate technology serve its purpose. +++
	1. TRUE
9. It is wise for developing nations to remain satisfied with appropriate technology. +++
	1. FALSE
10. The development of appropriate technology may be hindered by designer bias. +++
	1. TRUE

12. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**What Makes a Technology Appropriate? (**by Barrett Hazeltine, Adapted**)**

How did thinking about appropriate technology evolve? In the first place appropriate technology is becoming accepted. I am struck when I visit places in Africa and Asia that appropriate technology is recognized as a viable option. In the United States people seem less familiar with the term but the ideas are gaining hold. Thinking about appropriate technology changed in another way—a recognition that technology is only part of the solution. In the Third World, aid organizations that once focused heavily on designing devices are now focusing more on the entire value chain—realizing that creating jobs requires attention to suppliers and customers, as well as technology. A third way that thinking has evolved how local people are involved. At least some aid organizations are paying much attention to existing community knowledge, choosing technologies that build on what the community has been doing, using appropriate technology ideas to help people do things better.

So, is appropriate technology really useful beyond helping poor farmers in remote places? Are the ideas applicable in other contexts? I see several generally useful themes coming out of the appropriate technology effort:

* Bias for simplicity, for small scale solutions
* Avoidance of technology that creates major cultural change
* Recognition that successful innovation requires more than technology advances
* Being attentive to the quality of jobs produced

Schumacher would be disappointed that community development is not included but appropriate technology ideas do not seem to be leading in that area.

I should elaborate. People become engineers because they like to make things. They feel rewarded when their solution to a challenging problem works and often feel more rewarded when the solution is sophisticated. This aspiration for technological elegance can overcome awareness of what is needed. Aiming for perfection narrows a designer's vision. A solution that satisfies and meets other requirements is needed in many cases, especially in unfamiliar settings, and such a solution is very likely to be small scale.

Appropriate technology tends to be close to the traditional technology so the cultural change required when it is introduced is usually small. The work people do after the new technology is introduced is similar but more productive. Successful implementation of appropriate technology has, in most cases, focused on villages—where poor people tend to live. Having productive jobs in a village retains village culture, easing the adjustment to the different sort of life a new technology will bring. The admonition to the engineer introducing a new technology is to learn about the existing culture and forecast, as best as possible, the effect of an engineering advancement.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. Appropriate technology still requires the employment of many workers. +++
	1. TRUE
2. Community development is required to make appropriate technology serve its purpose. +++
	1. TRUE
3. It is wise for developing nations to remain satisfied with appropriate technology. +++
	1. FALSE
4. The development of appropriate technology may be hindered by designer bias. +++
	1. TRUE
5. The attitude of the writer is that rural people simply have to adjust to engineering advancement for their own good. +++
	1. FALSE
6. The main purpose of appropriate technology is helping poor farmers in remote places. +++
	1. FALSE
7. Appropriate technology enjoys the same popularity in the United States as it does in Africa and Asia. +++
	1. FALSE
8. Sophisticated technologies are personally satisfying for many designers but may not be appropriate in a developing country. +++
	1. TRUE
9. The farther away from traditional technology a device is, the more appropriate it is likely to be. +++
	1. FALSE
10. Large scale, sophisticated installations requiring a only few highly trained foreign workers may be appropriate in large villages. +++
	1. FALSE

13. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**What Makes a Technology Appropriate? (**by Barrett Hazeltine, Adapted**)**

Nearly all technology would be appropriate somewhere, so a general meaning of the term "Appropriate Technology" is elusive but the term is often used, as I will, in a narrower sense. An accepted meaning is that Appropriate Technology is small scale, labor intensive, creates meaningful jobs, maintainable by the local community, environmentally sound, and energy efficient. A major early proponent was E. F. Schumacher, an economist who visited Burma after World War II and recognized that the technologies effective in Britain and the rest of the industrialized world were inappropriate in much of the world, partly because the capital cost to create a job, a work place, using western technology was prohibitive--£2000 (in 1966). On the other hand, local artisans were using tools costing tools costing £2 and were not producing much. Schumacher argued for an "Intermediate" technology, where the capital cost per workplace would be about £100, large enough to be effective, small enough so many jobs could be created. The term "Intermediate" was found to be offensive and was replaced by "Appropriate".

The history of appropriate technology, and other instances of attempting technology change, is that for sustainable improvement much more must be done than simply deliver a new device. Certainly problems of spares and lubricants must be addressed but broader problems must be considered. For example, how will the customer get the cash to pay? Who will sell the new technology? Who will buy the output? Must insurance be provided and who will organize that? And so forth. As noted, improving devices is not sufficient for significant change.

To genuinely improve people's lives better jobs are needed, as well as more jobs. One aspect of a better job is being more productive, so some sort of a surplus is created. Anecdotes abound of how a better tool has taken a farmer or artisan out of poverty to middle class, allowing, for example, school fees to be paid and a cement floor installed in the home. Another aspect of a better job is giving opportunities for users to think resourcefully and to advance themselves.

A technology is appropriate, it seems to me:

* If it produces sufficient goods and services,
* If the capital needs are reasonable,
* If it matches local resources, both physical and human
* If the user can understand and maintain it,
* If it does not cause a major cultural disruption,
* If it fits into a viable value chain,
* If it promotes responsible jobs.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. Appropriate technology is usually the cheapest available. +++
	1. FALSE
2. The capital cost to create a job or a work place today, using appropriate technology, is £2000. +++
	1. NOT STATED
3. E. F. Schumacher lived in Burma after World War II. +++
	1. FALSE
4. Appropriate technology is useful only if it still requires the employment of many workers. +++
	1. TRUE
5. Cultural disruption is one of the benefits of appropriate technology. +++
	1. FALSE
6. A part of the value chain is a market for products of appropriate technology. +++
	1. TRUE
7. The writer says farmers who use appropriate technology have homes with cement floor. +++
	1. FALSE
8. Appropriate technology always leads to sustainable development. +++
	1. FALSE
9. Large scale installations requiring a few highly trained foreign workers may be appropriate in a developing country. +++
	1. FALSE
10. Lack of local expertise can render a technology inappropriate. +++
	1. TRUE

14. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**What Makes a Technology Appropriate? (**by Barrett Hazeltine, Adapted**)**

Nearly all technology would be appropriate somewhere, so a general meaning of the term "Appropriate Technology" is elusive but the term is often used, as I will, in a narrower sense. An accepted meaning is that Appropriate Technology is small scale, labor intensive, creates meaningful jobs, maintainable by the local community, environmentally sound, and energy efficient. A major early proponent was E. F. Schumacher, an economist who visited Burma after World War II and recognized that the technologies effective in Britain and the rest of the industrialized world were inappropriate in much of the world, partly because the capital cost to create a job, a work place, using western technology was prohibitive--£2000 (in 1966). On the other hand, local artisans were using tools costing tools costing £2 and were not producing much. Schumacher argued for an "Intermediate" technology, where the capital cost per workplace would be about £100, large enough to be effective, small enough so many jobs could be created. The term "Intermediate" was found to be offensive and was replaced by "Appropriate".

The history of appropriate technology, and other instances of attempting technology change, is that for sustainable improvement much more must be done than simply deliver a new device. Certainly problems of spares and lubricants must be addressed but broader problems must be considered. For example, how will the customer get the cash to pay? Who will sell the new technology? Who will buy the output? Must insurance be provided and who will organize that? And so forth. As noted, improving devices is not sufficient for significant change.

To genuinely improve people's lives better jobs are needed, as well as more jobs. One aspect of a better job is being more productive, so some sort of a surplus is created. Anecdotes abound of how a better tool has taken a farmer or artisan out of poverty to middle class, allowing, for example, school fees to be paid and a cement floor installed in the home. Another aspect of a better job is giving opportunities for users to think resourcefully and to advance themselves.

A technology is appropriate, it seems to me:

* If it produces sufficient goods and services,
* If the capital needs are reasonable,
* If it matches local resources, both physical and human
* If the user can understand and maintain it,
* If it does not cause a major cultural disruption,
* If it fits into a viable value chain,
* If it promotes responsible jobs.

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. Any technology may conceivably be referred to as appropriate technology. +++
	1. TRUE
2. Appropriate technology is usually the cheapest available. +++
	1. FALSE
3. Appropriate technology always leads to sustainable development. +++
	1. FALSE
4. Large scale installations requiring a few highly trained foreign workers may be appropriate in a developing country. +++
	1. FALSE
5. Lack of local expertise can render a technology inappropriate. +++
	1. TRUE
6. A part of the value chain is a market for products of appropriate technology. +++
	1. TRUE
7. One criterion for evaluating appropriate technology is affordability. +++
	1. TRUE
8. The capital cost to create a job or a work place today, using appropriate technology, is £2000. +++
	1. NOT STATED
9. Appropriate technology is useful only if it still requires the employment of many workers. +++
	1. TRUE
10. Cultural disruption is one of the benefits of appropriate technology. +++
	1. FALSE

15. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**The Triune Brain**

The first of our three brains to evolve is what scientists call the reptilian cortex. This brain sustains the elementary activities of animal survival such as respiration, adequate rest and a beating heart. We are not required to consciously “think” about these activities. The reptilian cortex also houses the “startle centre”, a mechanism that facilitates swift reactions to unexpected occurrences in our surroundings. That panicked lurch you experience when a door slams shut somewhere in the house, or the heightened awareness you feel when a twig cracks in a nearby bush while out on an evening stroll are both examples of the reptilian cortex at work. When it comes to our interaction with others, the reptilian brain offers up only the most basic impulses: aggression, mating, and territorial defence. There is no great difference, in this sense, between a crocodile defending its spot along the river and a turf war between two urban gangs.

Although the lizard may stake a claim to its habitat, it exerts total indifference toward the well-being of its young. Listen to the anguished squeal of a dolphin separated from its pod or witness the sight of elephants mourning their dead, however, and it is clear that a new development is at play. Scientists have identified this as the limbic cortex. Unique to mammals, the limbic cortex impels creatures to nurture their offspring by delivering feelings of tenderness and warmth to the parent when children are nearby. These same sensations also cause mammals to develop various types of social relations and kinship networks. When we are with others of “our kind” – be it at soccer practice, church, school or a nightclub – we experience positive sensations of togetherness, solidarity and comfort. If we spend too long away from these networks, then loneliness sets in and encourages us to seek companionship.

Only human capabilities extend far beyond the scope of these two cortexes. Humans eat, sleep and play, but we also speak, plot, rationalise and debate finer points of morality. Our unique abilities are the result of an expansive third brain – the neocortex –which engages with logic, reason and ideas. The power of the neocortex comes from its ability to think beyond the present, concrete moment. While other mammals are mainly restricted to impulsive actions (although some, such as apes, can learn and remember simple lessons), humans can think about the “big picture”. We can string together simple lessons (for example, an apple drops downwards from a tree; hurting others causes unhappiness) to develop complex theories of physical or social phenomena (such as the laws of gravity and a concern for human rights).

**Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**

1. One can infer from the passage that the limbic cortex and the reptilian cortex perform almost same function. +++
	1. FALSE
2. The limbic cortex is exclusive to mammals. +++
	1. TRUE
3. One can infer from the passage that the human brain has three parts. +++
	1. TRUE
4. The limbic cortex is responsible for social relations. +++
	1. TRUE
5. One can infer from the passage that humans can function with just the neocortex. +++
	1. FALSE
6. Territorial defence is only peculiar to reptiles. +++
	1. FALSE
7. Because of their advanced brain capabilities, only humans are capable of demonstrating love.
	1. FALSE
8. The most rudimentary impulses are handled by the limbic cortex.
	1. FALSE
9. The cortex responsible for logical matters is the neocortex.
	1. TRUE
10. Apes and other primates have a small neocortex.
	1. FALSE

16. INSTRUCTIONS: Read the passage below and answer the questions that follow.

**The Triune Brain**

The first of our three brains to evolve is what scientists call the reptilian cortex which sustains the elementary activities of animal survival such as respiration, adequate rest and a beating heart. The second one, the limbic cortex is unique to mammals, and it impels creatures to nurture their offspring by delivering feelings of tenderness and warmth to the parent when children are nearby. Humans can also speak, plot, rationalise and debate finer points of morality due to an expansive third brain – the neocortex –which engages with logic, reason and ideas.

The neocortex is also responsible for the process by which we decide on and commit to particular courses of action. Strung together over time, these choices can accumulate into feats of progress unknown to other animals. Anticipating a better grade on the following morning’s exam, a student can ignore the limbic urge to socialise and go to sleep early instead. Over three years, this ongoing sacrifice translates into a first class degree and a scholarship to graduate school; over a lifetime, it can mean groundbreaking contributions to human knowledge and development. The ability to sacrifice our drive for immediate satisfaction in order to benefit later is a product of the neocortex.

Understanding the triune brain can help us appreciate the different natures of brain damage and psychological disorders. The most devastating form of brain damage, for example, is a condition in which someone is understood to be brain dead. In this state a person appears merely unconscious – sleeping, perhaps – but this is illusory. Here, the reptilian brain is functioning on autopilot despite the permanent loss of other cortexes. Disturbances to the limbic cortex are registered in a different manner. Pups with limbic damage can move around and feed themselves well enough but do not register the presence of their littermates.

In our own species, limbic damage is closely related to sociopathic behaviour. Sociopaths in possession of fully-functioning neocortexes are often shrewd and emotionally intelligent people but lack any ability to relate to, empathise with or express concern for others. One of the neurological wonders of history occurred when a railway worker named Phineas Gage survived an incident during which a metal rod skewered his skull, taking a considerable amount of his neocortex with it. Though Gage continued to live and work as before, his fellow employees observed a shift in the equilibrium of his personality. Gage’s animal propensities were now sharply pronounced while his intellectual abilities suffered; garrulous or obscene jokes replaced his once quick wit. New findings suggest, however, that Gage managed to soften these abrupt changes over time and rediscover an appropriate social manner. This would indicate that reparative therapy has the potential to help patients with advanced brain trauma to gain an improved quality of life.

1. **Read each statement below and decide, STRICTLY ON THE BASIS OF THE TEXT, if it is true, false or whether the passage does not say. In the space provided, write TRUE, FALSE or NOT STATED as appropriate.**
2. Phineas Gage started behaving like an animal after his accident.
3. FALSE
4. In a brain dead human, the reptilian cortex is no longer functioning.
	1. FALSE
5. Limbic damage affects an animal’s capacity to interact with others of its kind.
	1. TRUE
6. Though Phineas Gage suffered some type of brain damage, his life did not change at all.
	1. FALSE
7. A brain dead person is able to breath because of the activity of the reptilian cortex.
	1. TRUE
8. The cortex responsible for logical matters is the neocortex.
	1. TRUE
9. The limbic cortex is exclusive to human beings and apes.
	1. FALSE
10. From the passage, humans have three brains.
	1. TRUE
11. From the passage, mammals have three brains.
	1. TRUE
12. One can infer from the passage that humans with an impaired neocortex can continue their jobs.
	1. TRUE