

DOKUMEN NEGARA

SANGAT RAHASIA



3

Bahasa Inggris SMA/MA IPA

Nama :	
No Peserta :	

Listening Section

In this section of the test, you will have the chance to show how well you understand spoken English. There are four parts to this section with special direction for each part.

PART I**Questions 1 to 4.****Directions:**

In this part of the test, you will hear some dialogues and questions spoken in English. The dialogues and the questions will be spoken twice. They will not be printed in your test book, so you must listen carefully to understand what the speakers are saying.

After you listen to the dialogue and the question about it, read the five possible answers, and decide which one would be the best answer to the question you have heard. Now listen to a sample question.

You will hear:

Man : I give up! I'll stop learning French.

Woman : Why do you say that? You are making a lot of progress.

Man : No, I'm not. I've tried hard but still I cannot speak it well.

Woman : How come? You can speak Arabic, Hindi, Japanese and even Russian well, can't you?

Narrator : What language is difficult for the man to learn?

- A. Hindi.
- B. Arabic.
- C. French.
- D. Russian.
- E. Japanese.

The best answer to this question is "French". Therefore you should choose answer (C).

1.
 - A. Job vacancy.
 - B. Job interview.
 - C. Printing company.
 - D. Getting high salary.
 - E. Finding a job.

2.
 - A. A novel.
 - B. A comic.
 - C. A magazine.
 - D. A science book.
 - E. An English Grammar Book.

DOKUMEN NEGARA

SANGAT RAHASIA



4

Bahasa Inggris SMA/MA IPA

3. A. The exam is easy.
 B. This time will not fly.
 C. The exam is in three weeks.
 D. He knows many things about the exam.
 E. He still has three days for the exam preparation.
4. A. She came to Nisa's party.
 B. She couldn't make a party.
 C. She had to go to a doctor.
 D. She invited the man to a party.
 E. She didn't go to Nisa's party.

PART II**Questions: 5 to 7.****Directions:**

In this part of the test, you will hear some incomplete dialogues spoken in English, followed by four responses, also spoken in English. The dialogues and the responses will be spoken twice. They will not be printed in your test book, so you must listen carefully to understand what the speakers are saying. You have to choose the best response to each question.

Now listen to a sample question.

Man : Hey, Cindy could you do me a favour?

Woman : What can I do for you?

Man : Would you mind going to the post office to send my letter?

Woman :

Narrator : What is the woman's possible response?

A. I am all out. Sorry.

B. I love to write letters.

C. Sure, by all means.

D. It's next to the police station.

Narrator : The best answer to the question is: "Sure, by all means." Therefore you should choose answer (C).

5. Mark your answer on your answer sheet.
6. Mark your answer on your answer sheet.
7. Mark your answer on your answer sheet.

DOKUMEN NEGARA

SANGAT RAHASIA

5



Bahasa Inggris SMA/MA IPA

PART III

Questions 8 to 11.

Directions:

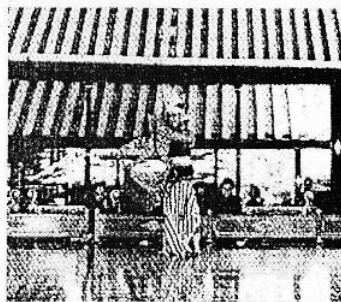
In this part of the test, you will hear some dialogues or monologues spoken in English. The dialogues or monologues will be spoken twice. They will not be printed in your test book, so you must listen carefully to understand what the speakers are saying. After you listen to the dialogue or monologue, look at the five pictures provided in your test book, and decide which would be the most suitable one with the dialogue or monologue you have heard.

8.

A.



B.



C.



D.



E.



9.

A.



B.



C.



D.



E.



DOKUMEN NEGARA

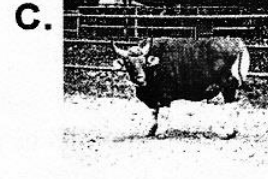
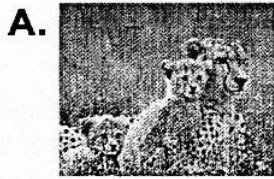
SANGAT RAHASIA

6

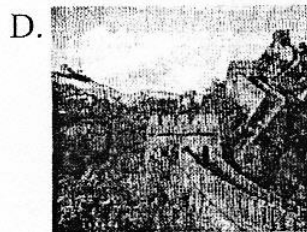
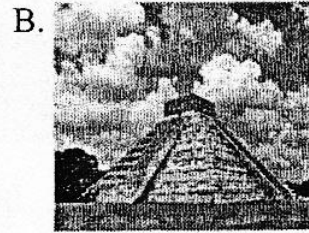
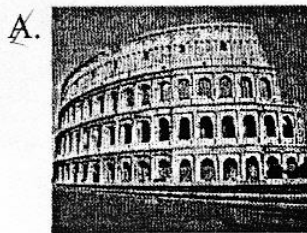


Bahasa Inggris SMA/MA IPA

10.



11.

**PART IV****Questions 12 to 15.****Directions:**

In this part of the test, you will hear several monologues. Each monologue will be spoken twice. They will not be printed in your test book, so you must listen carefully to understand what the speakers are saying.

After you hear the monologue and the question about it, read the five possible answers and decide which one would be the best answer to the question you have heard.

Questions 12 and 13 are based on the following monologue.

12. A. Paris.
 B. The Louvre.
 C. Notre Dame
 D. The crowded city.
 E. The City of Light.

DOKUMEN NEGARA

SANGAT RAHASIA



7

Bahasa Inggris SMA/MA IPA

13. A. The Louvre.
 B. The Cathedral.
 C. The Eiffel Tower.
 D. The lovely garden.
 E. The light structure.

Questions 14 and 15 are based on the following monologue.

14. A. Other beasts.
 B. The water.
 C. The frogs.
 D. A lake.
 E. A horse.
15. A. They ate an animal.
 B. They lived in a lake.
 C. They saw wild horses.
 D. They went somewhere.
 E. They jumped into water.

This is the end of the listening section

DOKUMEN NEGARA

SANGAT RAHASIA

8

**Bahasa Inggris SMA/MA IPA****The following text is for questions 16 and 17**

Dear Mr. Green:

I am writing concerning claim #760. The amount that your adjusters have set for the damage caused by Hurricane Harry to my barn is unacceptably low. The amount that your company has offered would not even allow doing the work myself, as the materials alone would cost almost \$300 more than your estimate.

I am including the estimate from our independent contractors that I have asked to inspect the damage to my barn, and their estimates vary between \$1,500 and \$1,750.

I would like your company to take into consideration the estimates I have provided and reevaluate your settlement offer. If you continue to deny the fact that your offer is unacceptably low, I will need to seek legal counsel.

I will appreciate your immediate attention to this matter.

Yours sincerely,

Mathew Liverpool

16. What is the cost of the materials needed to fix the damage according to Mr. Liverpool?
- A. Between \$1.500 and \$1.750.
 - B. Mr. Liverpool has not decided yet.
 - C. Much more expensive than expected.
 - D. 300 % less than Mr. Green's estimate.
 - E. \$300 more than Mr. Green's estimate.
17. It can be inferred from this letter that
- A. Mr.Green estimated the amount payable to Mr. Liverpool
 - B. Mr.Green failed to send contractors to inspect the barn
 - C. Mr. Liverpool was frustrated by the damage caused by Hurricane Harry
 - D. Mr. Liverpool was disappointed by the estimate made by Mr. Green's adjusters
 - E. Mr. Green estimated higher than what Mr. Liverpool had expected

DOKUMEN NEGARA

SANGAT RAHASIA

9

**Bahasa Inggris SMA/MA IPA**

The following text is for questions 18 and 19

Hotel Work :**One Month Training Course**

Suitable young men and women are invited to apply for places on the one month training course on hotel work organized by the Hong Kong Institute of Hotel Management. Tuition is free of charge and students who successfully complete the course will be offered employment in the Colony's leading hotels.

The Training Course will take place from Monday 21st July to Friday 22nd August, from 9 a.m. to 4.30 p.m. daily, except Saturdays and Sundays.

Applications for places on the course are welcome for students now in their third year at secondary school, who have good knowledge of English, and have interest in hotel work.

Application forms may be obtained from:

The Hong Kong Institute of Management,
Box 948,
The South China Times.

The closing date for applications is April 29th

18. Those who successfully complete the course will be given
- A. free tuition
 - B. a further training course
 - C. jobs in big hotels in the colony
 - D. a chance to stay in the colony's leading hotels for one month
 - E. membership of the Hong Kong Institute of Hotel management
19. What requirement is needed by an applicant to apply for the hotel work training?
- A. Able to speak Mandarin.
 - B. Secondary school graduate.
 - C. Good knowledge of English.
 - D. Reputable university graduate.
 - E. 2-year experience in hotel work.

DOKUMEN NEGARA

SANGAT RAHASIA

10

**Bahasa Inggris SMA/MA IPA****The following text is for questions 20 to 22****Wade Withdraws From US Basketball Team**

NEW YORK: Miami Heat guard Dwyane Wade withdrew his name from the player pool for the US Olympic basketball team on Thursday because his injured left knee will require surgery, USA Basketball said.

After receiving the diagnosis from the Heat team physician, the All-Star guard, who helped Miami win the NBA title in five games over the Oklahoma City Thunder, informed USA Basketball chairman Jerry Colangelo that he was having the surgery soon and would be unable to compete in London.

"As many people may know, throughout the season, I struggled with a recurring knee issue," Wade said in a statement. "After the championship game, I visited my doctors for a round of comprehensive medical test, and the recent result dictated the need for surgery. While every part of me wants to be in London, I need to take this time to do what's best to improve my health and allow me to continue to play the game I love."

Wade was the US team's leading scorer in their run 2008 Olympic gold in Beijing, scoring a game-high 27 points as the Americans beat Spain 118-107 in the Olympic final.

Despite having his knee drained during the NBA play-off, Wade averaged over 22 points a game during Miami's championship series triumph over the Thunder.

Wade's exit from the US squad left 17 players in the mix for 12 spots on The Olympic team following injuries that removed several players from consideration, including Derrick Rose of the Chicago Bulls and Dwight Howard of the Chicago Bulls.

-Reuters

20. Why can't Wade play for US basketball team?
- He is too old to play basketball.
 - His injured left knee requires surgery.
 - He doesn't want to compete in London.
 - He wants to visit his doctor for a medical test.
 - He was removed from the US basketball team.
21. Based on the text, Dwyane Wade
- will be a guard in the US Olympic basketball team
 - will never play basketball again for the US team
 - failed to play in Beijing Olympic Games
 - is the most valuable player in the Olympic Games
 - was the leading scorer for the US team in Beijing Olympic Games
22. What is the main idea of paragraph 3?
- People know that Dwyane Wade has a problem.
 - Dwyane Wade visits his doctors for medical tests.
 - The doctors suggested Wade recovers his knee by surgery.
 - Dwyane Wade wants to improve his health to continue the game.
 - Dwyane Wade has struggled with his knee problem that he needs surgery.

DOKUMEN NEGARA

SANGAT RAHASIA

11



Bahasa Inggris SMA/MA IPA

The following text is for questions 23 to 25.

WATER HYBRID SYSTEM, AN ALTERNATIVE TO PETROLEUM

Jakarta: Cars and motorcycles have the long-term effect of destroying the environment by depleting fossil fuel. On top of that, the emissions released from the combustion system of an automobile can also cause the greenhouse effect. Carbon dioxide and carbon monoxide are two greenhouse gases that damage our earth's atmosphere. They could cause certain vegetation to die off, the snow caps to melt, and the earth's atmospheric temperature to increase.

Reducing the amount of these greenhouse gases will greatly help reduce these effects. That is why we need an alternative for petroleum.

Researchers are currently working on environmentally friendly and inexhaustible energy resources: water.

They have created a water-hybrid combustion system that converts vehicles to use water as a source of primary fuel. The engine derives fuel from hydrogen and oxygen, generated by the electrolysis of water. The only by-product resulting from the hydrogen and oxygen components of combustion within the engine is water vapour. Therefore, emissions are cleaner, with fewer polluting particles, as reported by Jinali Parekh.

The technology existed back in 1805 when a Swiss inventor named Isaac de Rivaz made the first car powered by water. There has been significant development of the technology since then, but recently researchers at the Massachusetts Institute of Technology are working on the use of hydrogen from water as an alternative fuel to drive cars.

23. What does the text tell about?
- A. The hybrid system of water.
 - B. The technology to create a new fuel.
 - C. The idea of an alternative to petroleum.
 - D. The general knowledge of hybrid system.
 - E. The hybrid system of water as an alternative to petroleum.
24. To help reduce the green-house effects, we need to
- A. produce green-house gases
 - B. minimize the amount of green-house gases
 - C. convert the vehicles to modern ones
 - D. create a new type of petroleum
 - E. create significant technology
25. "Reducing the amount of these greenhouse gases" (Paragraph 2)
The underlined word is closest in meaning to
- A. keeping
 - B. allowing
 - C. managing
 - D. decreasing
 - E. converting

DOKUMEN NEGARA

SANGAT RAHASIA

12

**Bahasa Inggris SMA/MA IPA****The following text is for questions 26 to 28.**

Picasso was one of the most outstanding and important artist of the 1900's. He is best known for this paintings. Almost every style in modern art is represented in Picasso's works.

Picasso was born in 1881 in Malaga, Spain as the son of an art teacher. He studied painting from his father and several art schools. However, he never finished his college level course of study at the Academy of Arts in Madrid.

From about 1895 to 1901, he painted realistic works in a traditional style. Then he entered what was called the Blue Period. During this time, he only used shades of blue in his paintings to show the poverty he saw in Barcelona.

After 1908, he entered into the style of cubism. Among his well-known cubist paintings are "Three Musicians" and "Man with a Guitar".

Picasso died in Mougins, France in 1973. He was a really great artist.

26. Why did Picasso become so popular? Because
- A. he was the most outstanding artist of the 1900's
 - B. he was known for his great paintings
 - C. he painted in traditional style
 - D. he was son of an art teacher
 - E. he studied in art schools
27. According to the text, Picasso
- A. died in Spain in 1973
 - B. was born in Malaga, Italy
 - C. was famous for his painting style
 - D. had a father who worked as an art teacher
 - E. finished his study at the academy of Arts in Madrid
28. What can you infer from the text?
- A. Picasso's father was not good at art.
 - B. Picasso passed away at the age of 92.
 - C. Picasso was unpopular artist of 1900's.
 - D. Blue period shows the prosperity in Barcelona.
 - E. For 8 years, Picasso painted realistic works in a traditional style.

DOKUMEN NEGARA

SANGAT RAHASIA

13

**Bahasa Inggris SMA/MA IPA**

The following text is for questions 29 to 32.

Each keyboard uses a series of switches to provide messages to the computer. The keys are nested on rubber dome switches that contain carbon in the center. This causes each key to be pressed down and come right back up when you do not press it anymore. Keyboards contain anywhere between 80 to 110 keys, but there could be more. The keyboard also has a microprocessor, to respect the frequency with which signals are passed. Regardless of how sophisticated your keyboard is, keyboards generally use the same system for transmitting signals to the computers that they are attached to.

When a key is pressed, the rubber dome switch pushes down on the circuit board, making its center carbon contact touch the circuit, completing an electrical circuit. This instructs the keyboard to send a signal. Signals from the keyboard continue to be sent at a certain frequency, regulated by the microprocessor. Keyboards have internal circuit boards, meaning it must pull power somewhere. Whether a keyboard uses a USB cable or a PS/2 cable, when the computer detects a keyboard connected, it will supply to the keyboard through the cable. Wireless keyboards work differently in that they are powered by an internal battery. The wireless portal is powered by the computer, and a signal is shared between the two devices, using infrared, radio or Bluetooth technology. However, wireless keyboards are similar to wired keyboards in that they both have a similar structure, sending signals when a circuit is completed on their circuit boards. The only difference is how the signal reaches its destination.

29. What is the main function of a computer keyboard?
- To help a microprocessor work.
 - To save data from the computer.
 - To nest the keys on rubber dome.
 - To transmit signals to the computer.
 - To receive messages from the computer.
30. A signal is sent to the computer when
- a key is pressed
 - a circuit is turned on
 - a computer is held on
 - a keyboard is switched
 - a certain frequency is regulated
31. From the text above, we know that a keyboard
- receives output from a computer
 - saves data from a computer
 - gives input to a computer
 - calculates numbers
 - manipulates data
32. " ..., when the computer detects a keyboard connected, ..." (paragraph 2)
The underlined word is closest in meaning to
- attaches
 - delivers
 - watches
 - finds
 - holds

DOKUMEN NEGARA

SANGAT RAHASIA

14



Bahasa Inggris SMA/MA IPA

The following text is for questions 33 to 35

Faster planes and cheaper flights are making it easier than ever before for people to travel. In the most 'developed' societies, visiting exotic places is a sought-after status symbol. The tourism industries of both developed and developing countries have recognised this fact and are learning to take advantage of it.

There are, however, some problems associated with this new industry. Firstly, there is the increasing crime rate. Some locals see tourists as an easy prey because, not only are they in unfamiliar territory and therefore less able to take care of themselves, but also they carry visible items of wealth, such as cameras and jewelry which can be disposed of quickly for profit.

Another major problem is health. With greater mobility comes greater danger of spreading contagious diseases around the world. One carrier returning home could easily start an epidemic before their illness was diagnosed. Moreover, the emergence of many diseases which resist antibiotics is causing scientists to be increasingly concerned about this issue.

Also to be considered is the natural environment, which can be seriously threatened by too many visitors. Australia's Great Barrier Reef, for example, is in danger of being destroyed by tourists and there are plans to restrict visitors to some of the more delicate coral cays

These are just three of the reasons why any country should be wary of committing itself to an extensive tourism development program.

33. Why does the natural environment become one of the serious problem associated with the faster planes and cheaper flight? Because
- it easily started an epidemic before their illness was diagnosed
 - it can be destroyed by too many visitors
 - the health problem will increase
 - they carry visible items of wealth
 - it can increase crime rate
34. Why is the crime rate increasing due to the new industry?
- Some tourists carry visible items of wealth.
 - The tourists are spreading contagious diseases.
 - The government is planning to restrict visitors to some coral cays.
 - The new industry makes the number of unemployment increase.
 - The tourists come by plane.
35. "One carrier returning home could easily start an epidemic before their illness was diagnosed." (Paragraph 3)
The underlined word means
- found
 - observed
 - identified
 - examined
 - healed

DOKUMEN NEGARA

SANGAT RAHASIA

15



Bahasa Inggris SMA/MA IPA

The following text is for questions 36 to 38.

The Halloween Kid

Burgeoning filmmaker Axelle Carolyn showed a lyrical, controlled sense of cinema in her 2011 short film debut THE LAST POST. Now, the sometime actress, model and author have created another work of gentle, frightening craft in THE HALLOWEEN KID.

The short film features a rhyming, Edward Gorey-esque poem (penned by Carolyn) as its script and story: a tale of a poor, put-upon little boy named Henry who feels more akin to the supernatural creatures of his imagination than the cruel, narrow minded adults and children who permeates his world. But of course, Henry might not be as delusional as we think and, come Halloween, he found his only moments of respite amongst other kids, who are in fact, dead!

That's pretty much it as far as THE HALLOWEEN KID's narrative goes, but like THE LAST POST, the film is not about story, rather creating a tiny, perfectly realized universe that aims for more sensitivity than shock, more melancholy than morbid. The music is lovely and whimsical, as in the almost Boris Karloff-like narration by legendary Shakespearean dramatic Derek Jacobi.

THE HALLOWEEN KID shows even more promise from Carolyn, who with this beautifully sculpted piece of work is one to watch, not just as a 'horror filmmaker', but as a quality director of movies, full stop.

36. The writer of script and story in the Halloween Kid is
- A. Axelle Carolyn
 - B. Edward Gorey
 - C. Derek Jacoby
 - D. Shakespear
 - E. Henry
37. According to the reviewer, the movie was
- A. lovely
 - B. morbid
 - C. shocking
 - D. frightening
 - E. melancholy
38. Based on the text, the film has proven that Axelle Carolyn is
- A. a popular horror film maker
 - B. a beautiful sculptor
 - C. a qualified movie director
 - D. a talented actress
 - E. a talented model and author

DOKUMEN NEGARA

SANGAT RAHASIA

16

**Bahasa Inggris SMA/MA IPA**

The following text is for questions 39 to 41.

Internet has been the most outstanding innovation in the history of mankind. As with every single innovation, the internet has its own advantages and disadvantages.

The target of the internet has always been the communication. By the beginning of computer's internet, our earth has reduced and has attained the form of a global village. Now we can communicate in a fraction of second with a person who is sitting in the other parts of the world. Today, for better communication, we can avail the facilities of e-mail and we can chat for hours with our loved ones. There are plenty messenger services in offering. With the help of such services, it has become very easy to establish a kind of global friendship.

However, the internet also has disadvantages. One of them is the wide spread of unsuitable contents for kids. It is a very serious issue and related to children's healthy mental life. There are thousands of such inappropriate contents on the internet which can be easily found. Though, the internet can also create havoc, destruction and its misuse can be very fatal, the advantages of it out-weigh its disadvantages.

39. What is one of the advantages of internet?
- A. To create the misuse of time.
 - B. To easily find inappropriate person.
 - C. To chat with love ones only.
 - D. To connect people in the other part of the world.
 - E. To spread issues related to children healthy mental life.
40. What is the main idea of paragraph 2?
- A. The internet could create havoc and destruction.
 - B. The internet could facilitate communication.
 - C. The internet has more advantages than disadvantages.
 - D. Many modern devices can be connected to the internet.
 - E. The internet has become the most noticeable innovation.
41. All in all, the writer believes that the internet is
- A. very harmful
 - B. inappropriate
 - C. very useful
 - D. destructive
 - E. cheap

DOKUMEN NEGARA

SANGAT RAHASIA

17

**Bahasa Inggris SMA/MA IPA**

The following text is for questions 42 to 44.

Australia has another kind of animal besides kangaroo, that is wombat. While kangaroo and wombat are physically dissimilar, they both share the common marsupial feature of having a pouch. The pouch of a wombat is, perhaps strangely, backward facing.

This is of evolutionary benefit to the wombat's natural behavior though, as wombats use their rodent like front teeth and powerful claws to burrow, and their backwards pouches prevent their offspring from getting covered in dirt.

Though these stubby creatures may appear cute, they commonly become increasingly aggressive as they reach adulthood. The wombat is, however, still cuddly enough to have its own day, which is celebrated every October 22.

42. What is the similarity between kangaroo and wombat?
- A. They are aggressive.
 - B. They have long legs.
 - C. Their rodent-like front teeth.
 - D. The position of their pouch .
 - E. They belong to marsupial animal. \
43. The information given in the text describes that wombat
- A. is a strange animal \
 - B. has backward pouch
 - C. is a powerful animal
 - D. looks like a kangaroo
 - E. has the same physical with kangaroo
44. Based on the text, we may conclude that wombat
- A. can make a hole
 - B. is an animal like kangaroo
 - C. is a big and strange animal
 - D. is kangaroo evolutionary -
 - E. is always a dangerous animal

DOKUMEN NEGARA

SANGAT RAHASIA

18

**Bahasa Inggris SMA/MA IPA****The following text is for questions 45 and 46.**

Unlimited calls & texts from Lycamobile to Lycamobile: From the 1st November to 30th November 2012, customers with a minimum balance of £20 can enjoy free and unlimited calls & texts from Lycamobile UK to Lycamobile UK. Any changes to rates will be notified on the rates section of our website at www.lycamobile.co.uk or call our customer services team on 020 7132 0322 to check rates or for more information.

Weekly Value Pack costs £5 and gives 100 minutes or 200 minutes to calls to selected international Landline or mobiles destinations and it is valid for 7 days from the day activated. The Monthly Value Pack costs £20 and gives 250 or 500 or 1000 minutes to call to selected International Landline or mobile destinations and it is valid for 30 days from the day activated. You may only have one type of value pack active during the appropriate subscription period. This promotion is valid from 01/11/2012 to 30/11/2012. Visit www.lycamobile.co.uk or call customer service on 0207 132 0322 for more information and participating counties.

45. How long is the Pack valid if you buy a 'monthly value Pack' of £20?
- A. One week.
 - B. One month.
 - C. Two weeks.
 - D. A half month.
 - E. Unlimited.
46. Unlimited calls and texts are offered by Lycamobile UK for calls
- A. using the monthly value pack of £20.
 - B. using the weekly value pack of £5.
 - C. made from Lycamobile UK.
 - D. made with the UK only.
 - E. to Lycamobile UK.
47. **Arrange these sentences below into a good paragraph.**

HOW TO TIE A NECK TIE

1. First of all, start with the wide end on your right.
2. Secondly, cross the wide end over the narrow, and back underneath.
3. Then bring the wide end up through the loop
4. Finally, pull the wide end through the knot in front. Tighten and draw up to collar
5. Then, bring the wide end up, and turn down through the loop
6. After that, pass the wide end around to the front from your left to right

- A. 1 - 2 - 6 - 5 - 3 - 4
- B. 1 - 2 - 3 - 4 - 5 - 6
- C. 1 - 2 - 3 - 5 - 4 - 6
- D. 1 - 2 - 5 - 3 - 6 - 4
- E. 1 - 2 - 5 - 6 - 3 - 4

DOKUMEN NEGARA

SANGAT RAHASIA

19

**Bahasa Inggris SMA/MA IPA****Questions 48 to 50: complete the following text with the words provided.****The Man and The Monster**

Once upon a time there lived a young man, named Nazar. He lived a very poor life. One day, Nazar went to town to look for a job. He had to climb up the hill and (48) ... a thick jungle to get to a nearest town. Suddenly, he heard (49) ... from a bush. When he approached, he found some people gathering around a big tree. Nazar realized that the people were doing against God order. Then he took out a big (50)... axe and planned to cut down the tree.

48.
- A. checked
 - B. examined
 - C. inspected
 - D. went through
 - E. hunted through
49.
- A. trembles
 - B. shadows
 - C. movement
 - D. gestures
 - E. sounds
50.
- A. sharp
 - B. edge
 - C. dull
 - D. rough
 - E. thick