

Schriftliche Maturitätsprüfung 2017

Fach	Englisch
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Klassen	alle 6. und 7. Klassen, Schuljahr 2016-17
Prüfungsdatum	23. Mai 2017
Prüfungsdauer	3 Stunden
Erlaubte Hilfsmittel	keine
Anweisungen zur Lösung der Prüfung	Die <i>Listening Comprehension</i> (Seiten 2 und 3) befindet sich auf einem separaten Blatt. Die <i>Listening Comprehension</i> wird nach 25 Minuten eingesammelt. Der Rest der Prüfung ist im vorliegenden Dossier gebunden.

Anzahl erreichbarer Punkte	Part	Approx. time (minutes)	Points	Page	
	1	Listening Comprehension	25	18	2+3
		Reading	15	0	4
	2	Reading Comprehension	25	32	5
	3	Vocabulary	15	20	6
	4	Essay	60	60	7
	5	Grammar	30	40	8
		Reading over	10	0	-
	Total	180	170		

Anzahl Seiten (inkl. Titelblatt) 9

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Name, Vorname Klasse Nummer

1 Listening Comprehension (18 points)

You will hear different speakers talking about the topic of antibiotics.
After 25 minutes, you will have to hand in this answer sheet separately.

1.1 Listening Comprehension Part 1 (8 points)

Part 1 is from *NPR (National Public Radio)*. You will hear some young scientists talking about how to fight dangerous superbugs.

For questions 1-4, answer the questions according to what you hear in full, informative sentences. You can take notes on an extra sheet of paper.

You have 1 minute to read the questions. Then you will hear this part twice.

- 1) How are the three young scientists described by Joe Palca (the interviewer)? (2)

Joe Palca describes the three young scientists as "extremely clean-cut, extremely motivated, extremely intelligent college students" from Stanford. They are later called "novice scientists", "young graduates" and "young entrepreneurs".

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- 2) Why are big pharmaceutical companies not particularly interested in doing research on drug-resistant bacteria? (2)

Because the market-size is small and because bacteria develop resistance relatively quickly to new drugs, making profits low.

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- 3) Explain the concept of how the three young scientists hope to win the fight against drug-resistant bacteria? (2)

They think they have figured out a set of proteins that would kill antibiotic-resistant bacteria. If the bacteria that evolve resist the proteins, they can no longer survive. So, they target something that's essential to bacteria survival.

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- 4) Does Professor Chaitan Khosla think that the invention of the young scientists has a realistic chance to get on the market? Explain. (2)

Professor Khosla believes it is "as good as any an idea that he has heard". Even so, Professor Khosla says it's "a long shot", as very few products actually get approved for sale. Furthermore, it could take their products decades before it can be sold.

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1.2 Listening Comprehension Part 2**(10 points)**

Part 2 is from the *Guardian (Science Weekly)*. You will hear an interview with Sir Richard Sykes on what can be done about the alarming growth in resistance to antibiotics.

For questions 5-9, choose the answer (A, B, C or D) which fits best according to what you hear. You have 2 minutes to read the questions. Then you will hear this part twice.

- 5) Sir Richard Sykes claims that
- A it's not clear whether humans or the bacteria are winning
 - B what people are told about bacteria is far from the truth
 - C the bacteria crisis is constantly worsening ✓
 - D bacteria are getting more resistant, but there are also new agents to fight them
- 6) In Richard Sykes' opinion, what makes it hard to fight bacteria is the fact that
- A the golden era of antibiotic discovery is over
 - B people think it's not difficult to find new antibiotics
 - C pharmaceutical companies find it less important to research other areas
 - D economic profit is probably more important for pharmaceutical companies ✓
- 7) According to Richard Sykes, what should we learn from H. G. Wells' novel "The War of the Worlds"?
- A Governments need to understand that bacteria are a very serious problem.
 - B The human race is vulnerable to infectious diseases. ✓
 - C Bacteria killed Martians, not lasers or fancy guns.
 - D Humans would be in a better situation if they fought back.
- 8) For Richard Sykes, what makes it so difficult to fight bacteria successfully?
- A The situation of the environment has been altered.
 - B The population of our planet has increased.
 - C Today many people like to travel widely.
 - D all of the above ✓
- 9) What is Richard Sykes most worried about?
- A People don't pay attention to bacteria in daily life.
 - B Flesh-eating bacteria and superbugs have been discovered in Delhi.
 - C Bacteria can adapt and create global chaos. ✓
 - D Bacteria can be kept under control in hospitals, but they can still spread.

Antibiotics - When the drugs don't work

SOME people describe Darwinian evolution as “only a theory”. Try explaining that to the friends and relatives of the 700,000 people killed each year by drug-resistant infections. Resistance to antimicrobial medicines, such as antibiotics and

antimalarials, is caused by the survival of the fittest. Drug-resistance is not only one of the clearest examples of evolution in action, it is also the one with the biggest immediate human cost. And it is getting worse. Stretching today's trends out to 2050, the 700,000 deaths could reach 10 million.

Cynics might be forgiven for thinking that they have heard this argument before. People have fretted about resistance since antibiotics began being used in large quantities during the late 1940s. Their conclusion that bacterial diseases might again become epidemic as a result has proved invalid and will remain so. That is because the decline of common 19th-century infections such as tuberculosis and cholera was thanks to better housing, drains and clean water, not penicillin.

The real danger is more subtle — but grave nonetheless. The fact that improvements in public health like those the Victorians pioneered should eventually drive down tuberculosis rates in India hardly makes up for the loss of 60,000 new-born children every year to drug-resistant infections. Wherever there is widespread infection, there is resistance to its treatment. This is true in the rich world, too. Drug-resistant versions of organisms such as *Staphylococcus aureus* are increasing the risk of post-operative infection. The day could come when surgery is unwise and organ transplants, which stop rejection with immunosuppression, are downright dangerous. Imagine that everyone in the tropics was vulnerable once again to malaria and that every pin prick could lead to a fatal infection. It is old diseases, not new ones, that need to be feared.

The spread of resistance is an example of the tragedy of the commons¹; the costs of what is being lost are not seen by the people who are responsible. You keep cattle? Add antibiotics to their feed to enhance growth. The cost in terms of increased resistance is borne by society as a whole. You have a sore throat? Take antibiotics in case it is bacterial. If it is viral, and hence untreatable by drugs, no harm done — except to someone else who later catches a resistant infection.

In some health-care systems, doctors are rewarded for writing prescriptions. Patients suffer no immediate harm when they forget to complete drug courses after their symptoms have cleared up, leaving the most drug-resistant bugs alive. Because many people mistakenly believe that human beings, not bacteria, develop resistance, they do not realise that they are doing anything wrong.

If you cannot easily change behaviour, can you create new drugs instead? Perversely, the market fails here, too. Doctors want to save the best drugs for the hardest cases that are resistant to everything else. It makes no sense to prescribe an expensive patented medicine for the sniffles when something that costs cents will do the job.

Reserving new drugs for emergencies is sensible public policy. But it keeps sales low, and therefore discourages drug firms from research and development. Artemisinin, a malaria treatment which has replaced earlier therapies to which the parasite became resistant — and which now faces resistance problems itself — was brought to the world not by a Western pharmaceutical company, but by Chinese academics.

Because antimicrobial resistance has no single solution, it must be fought on many fronts. The use of antibiotics to accelerate growth in farm animals can be banned by agriculture ministries, as it has in the European Union. All the better if governments jointly agree to enforce such rules widely. In both people and animals, policy should be to vaccinate more so as to stop infections before they start. That should appeal to cash-strapped health systems, because prophylaxis is cheaper than treatment. By the same logic, hospitals and other breeding grounds for resistant bugs should prevent infections by practising better hygiene. Governments should educate the public about how antibiotics work and how they can help halt the spread of resistance. Such policies cannot reverse the tragedy of the commons, but they can make it a lot less tragic.

Policy can also sharpen the incentives to innovate. In a declaration in January, 85 pharmaceutical and diagnostic companies pledged to act against drug resistance. The small print reveals that the declaration is, in part, a plea for money. But it also recognises the need for “new commercial models” to encourage innovation by decoupling payments from sales.

That thought is taken up this week in the last of a series of reports commissioned by the British government and the Wellcome Trust, a medical charity. Among the many recommendations from its author, Jim O'Neill, an economist, is the payment of what he calls “market-entry rewards” to firms that shepherd new antibiotics to the point of usability. This would guarantee prizes of \$800m-1.3 billion for new drugs, on top of revenues from sales.

Another of Lord O'Neill's suggestions is to expand a basic-research fund set up by the British and Chinese governments in order to sponsor the development of cheap diagnostic techniques. If doctors could tell instantaneously whether an infection was viral or bacterial, they would no longer be tempted to administer antibiotics just in case. If they knew which antibiotics would eradicate an infection, they could avoid prescribing a drug that suffers from partial resistance, and thereby limit the further selection of resistant strains.

Combining policies to accomplish many things at once demands political leadership, but recent global campaigns against HIV/AIDS and malaria show that it is possible. Enough time has been wasted issuing warnings about antibiotic resistance. The moment has come to do something about it.

The Economist, May 21st 2016, adapted | 950 words

¹ ‘Tragedy of the commons’ - economic model which shows that individuals use resources selfishly and without consideration for the whole society's well-being.

2 Reading Comprehension

(32 points)

2.1 True or false?

(12 points)

The following statements are either true or false with respect to the article you have just read. Mark those that are true with a **T**, and those that are false with an **F**. Also, **indicate the line(s)** where the information can be found in the text. Do not indicate more than 4 lines, though.

- 1) For the author, the increasing resistance of bacteria is a strong case for the reality of Darwinian evolution. T.5-7.....
-
- 2) The number of deaths caused by drug resistance is expected to increase more than tenfold over the next 35 years. T.8-9.....
-
- 3) The author of the article believes that drug resistance might produce a new epidemic of bacterial diseases. F.13-15.....
-
- 4) When resistant bacteria spread, a pin prick still remains harmless, while surgery becomes much more dangerous than it is today. F.29-31.....
-
- 5) In the European Union, the use of antibiotics in the treatment of sick farm animals has been banned. F.62-64.....
-
- 6) To encourage vaccinations helps to cope with the problem of existing resistant bacteria as well as to slow down the development of further resistances. T.65-67..... T.65-67.....

2.2 Open comprehension questions

(16 + 4 points)

Answer the following questions in your own words. Do not copy whole passages from the article. Write your answers in full sentences on a separate sheet.

Notice: Your language (grammar, vocabulary, style) will be assessed and carries up to four points!

General note to the examiners:

- 1) Why does the author think that this time the warnings of increasing drug-resistance need to be taken seriously? State 3 reasons from the text. 3 points

For modern medicine, effective antibiotics are indispensable, e.g. without them even simple surgery becomes life-threatening, old diseases might come back, high baby mortality rate.

- 2) Why are pharmaceutical firms reluctant to spend effort and money to create new antibiotics? What is the resulting dilemma for society as a whole. 4 points

Sales (and profits) will be low. Therefore, pharmaceutical firms do not have a strong incentive to invest in this market. Dilemma: Necessary investments (into new research/drugs) are not made for lack of future profit. (The different interests of society and private firms are an example of the tragedy of the commons.)

- 3) How does the author use language to emphasize the importance of the problem of drug-resistance? Describe 2 different aspects and illustrate them with quotes from the text. 4 points

In general, the author uses dramatic vocabulary. War terminology (fought on many fronts (67)), a lot of numbers (twice 700,000, once projection of 10million). Involvement of reader: "Imagine that ... every pin prick could lead to a fatal infection" (34).

- 4) What suggestions are made in the text as to how governments should deal with the problem of increasing drug-resistance? 5 points

Governments should take action now (107/108). The problem "has no single solution" (67/8), but reasonable recommendations are on the table. A large part of the article is devoted to helpful approaches. "Many things" have to be done "at once" in a combined effort similar to recent global campaigns against HIV and malaria (107-110):
banning of antibiotics for non-medical use | more vaccination | better hygiene in hospitals | educate the public (complete drug course) | subsidising of research | improve diagnostic so that doctor can easily distinguish between virus and bacterial infection

3 Vocabulary

(20 points)

3.1 Antonyms

(5 points)

Find the word/phrase that is opposite in meaning to the word in **bold** print and that can be used in the original sentence. Do not simply add prefixes.

- 1) The use of antibiotics to **accelerate** growth in farm animals... decelerate, slow down

- 2) The real danger is more subtle—but **grave** nonetheless. slight, trivial

- 3) ...organisms such as Staphylococcus aureus are **increasing** the risk... decrease, lower, diminish, reduce

- 4) Reserving new drugs for emergencies is **sensible** public policy. senseless, absurd, idiotic, ludicrous

- 5) The small print **reveals**... hides, conceals, covers, obscures

3.2 Synonyms

(5 points)

Find a word / phrase that means the same as the word in **bold** print and that can be used in the original sentence.

- 1) How to combat the **dangerous** rise of antibiotic resistance... grave, menacing, threatening, se-vere

- 2) Resistance to antimicrobial medicines, such as antibiotics and antimalarials, is **caused** by the survival of the fittest. created, generated, induced, pro-voked

- 3) The lack of an **incentive** to do the right thing is hard to correct. bait, encouragement, inducement, reward

- 4) If they knew which antibiotics would **eradicate** an infection... annihilate, eliminate, get rid of

- 5) Enough time has been wasted **issuing** warnings... announce, publish, distribute

3.3 Word formation

(10 points)

In the following text, use one word that fits the gap and belongs to the same word family as the word in CAPITALS. See the first line for an example.

How do we avoid the antibiotics apocalypse?

Every year, at least 700,000 people die from drug-re.s.i.s.t.a.n.t. infections. It is why government scientists have described antibiotic resistance as one of the greatest global th.r.e.a.t.s. of the 21st century. So what are people doing to try to avert the so-called antibiotics apocalypse? Well, it turns out, quite a lot. First, there are those who are trying to get us to take fewer antibiotics. That is because the more antibiotics we all take, the more resistant bacteria become.

Jason Doctor, a psychologist at the University of Southern California, has been carrying out experiments to see whether it is possible to get doctors to pr.e.s.c.r.i.b.e. fewer pills. He pe.r.s.u.a.d.e.d. more than 200 doctors to sign a letter to their patients, making a c to prescribe antibiotics more judiciously. They blew it up into the size of a poster and put it on the walls of their health clinics. Then they experimented with a ranking system, sending doctors a monthly email telling them how many antibiotics they were prescribing in.a.p.p.r.o.p.r.i.a.t.e.l.y. compared to their peers. They set up alerts on doctors' computers, prompting them to question whether they really needed to prescribe antibiotics, and they also found ways that doctors could appease pe.r.s.i.s.t.e.n.t. patients who demanded the medication. When they tried all these different approaches together, it dr.a.m.a.t.i.c.a.l.l.y. reduced the number of antibiotic prescriptions issued. Some of these changes are now being im.p.l.e.m.e.n.t.e.d. across the US and in other countries, but even if people were only given antibiotics when they really needed them, that would not solve the problem. Because while humans are a big market for antibiotics, there is an even bigger one. In 1950, a chance di.s.c.o.v.e.r.y. in a laboratory showed that antibiotics make animals grow faster. Since then, farmers all over the world have pumped them into their animals, even after scientific studies pr.o.v.e.d. that bacterial resistance could pass from animals to humans.

RESIST
THREATEN
PRESCRIPTION | PERSUASION
COMMIT
APPROPRIATE
PERSIST
DRAMA
IMPLEMENTATION
DISCOVER
PROOF

4 Essay

(60 points)

Choose one of the following topics for an essay (300-400 words).

- 1) Comment on the following quotation by Franklin D. Roosevelt: "Competition [is] useful up to a certain point, [...] cooperation [...] begins where competition leaves off."

- 2) Write a letter of concern to a fictional politician on the following topic: "What will ultimately destroy the human race and/or our planet?"

- 3) Analyse the following: "Poison is in everything, and nothing is without poison. The dosage makes it either a poison or a remedy." Paracelsus, alchemist, born in Einsiedeln, 1498.

5 Grammar

(40 points)

5.1 Transformation

(18 points)

Complete the second sentence so that it has a **similar meaning** to the first sentence, using the word given. Do **not** change the word given. You must use **between 3 and 6 words per gap**, including the word given. There is an example (0) at the beginning.

- 0) When does the next exam begin? **TELL**

Couldyou tell me when..... the next exam begins?

- 1) For years, farmers used to feed those animals antibiotics. **BE**

For years, those animals used to / be fed antibiotics.

- 2) A ban on giving growth-promoting antibiotics to their animals had little effect as farmers used the same amount and just labelled them differently. **RESULT**

A ban on giving growth-promoting antibiotics to their animals didn't result / in farmers using fewer antibiotics.

- 3) The Dutch government decided it would crack down on the practice of farmers to give their animals antibiotics that are just labelled differently. **PUT**

"We are no longer willing to put up with / our farmers' illegal practice to give their animals antibiotics that are just labelled differently."

- 4) Experts believe that the BRIC countries are all likely to double their use of antibiotics by 2030. **THOUGHT**

It is thought that by 2030 the BRIC countries will (have) double (d) their use of antibiotics.

- 5) Researchers started looking for new antibiotics in the saliva of Komodo dragons in 2014. **FOR**

Researchers have been looking for new antibiotics in the saliva of Komodo dragons for three years.

- 6) Once the bacterium realises it's a good place to multiply, then it communicates. **ONLY**

Only when the bacterium realises it's a good place to multiply, does it communicate.

- 7) Success will largely depend on us learning much more about bacteria. **IF**

We will only succeed / if we learn more about bacteria.

- 8) It is very unlikely that a cure will arrive as early as the beginning of next year. **UNTIL**

There is almost no chance / of a new cure (arriving) until the beginning of next year.

- 9) "There is no such thing as a connection between antibiotics and the spread of resistant bacteria," a farmer said. **DENIED**

The farmer denied / the existence of a connection between antibiotics and the spread of resistant bacteria.

5.2 Gap-filling**(22 points)**

Complete the following text by putting the **verbs in brackets into the correct form**. Include any **preposition** that may be required. Where there is no verb given, think of **ONE** word which best fits the gap.

Antibiotic resistance: sometimes knowledge is not enough

By Imran Khan, chief executive of the British Science Association

A survey (1) (h.a.s.)...r.e.v.e.a.l.e.d. (reveal) that the people who know most about antibiotic resistance are the most likely to do two things (2) t.h.a.t./w.h.i.c.h./t.o. make the problem even worse. If antibiotic resistance (3) c.o.n.t.i.n.u.e.s. (continue) to spread, then the drugs we take for granted now (4) w.i.l.l...b.e.c.o.m.e. (become) ineffective within the next few decades. The UK's Chief Medical Officer (5) wasn't exaggerating/didn't exaggerate (not, exaggerate) when she said it (6) c.o.u.l.d...h.e.r.a.l.d. (herald) the end of modern medicine, because without antibiotics, everything from transplant surgery to cancer treatment becomes unviable due to the risk of infection.

The advice for the public is straightforward: be really careful about how you use antibiotics and we (7) w.i.l.l...b.e...a.b.l.e...t.o...k.e.e.p. (able, keep) our existing ones effective for longer. You (8) w.o.u.l.d...t.h.i.n.k. (think) that people who know most about the threat of antibiotic resistance would also be most likely to follow this advice to the letter.

Strangely, this survey by the Office for National Statistics (ONS) (9) h.a.s...f.o.u.n.d. (find) that it's the people who know most about antibiotics and the threat of resistance who are most likely to do two dangerous things experts advise against: they are more likely to take antibiotics without prescription, and more likely to give them to someone else. Worse, we (10) h.a.v.e...k.n.o.w.n. about this effect since 2003. Has that knowledge influenced public health campaigns? With the stakes so high, are policymakers doing enough to incorporate public opinion and behaviour (11) i.n.t.o. their plans? In other words, (12) a.r.e...w.e...u.s.-i.n.g. (we, use) research about what the public think and do to inform evidence-based policy?

Participants in the 2003 study (13) w.e.r.e...a.s.k.e.d. (ask) whether they (14) a.g.r.e.e.d. (agree) with a series of factual statements (15) a.b.o.u.t. antibiotics and antimicrobial resistance. People with higher scores were indeed more likely to follow a crucial rule in antibiotic use – completing the full course of antibiotics, helping to kill off bugs that (16) m.i.g.h.t./m.a.y...h.a.v.e. (may, have) a weak resistance to the drug in question.

The British Science Association (17) has looked/has been looking (look) at these findings as part of our efforts to bring public views into policymaking through our partnership with Sciencewise. Our recently published report also shows that public opinion on antimicrobial resistance (18) h.a.s.n.'t...c.h.a.n.g.e.d. (not change) much over the past 10 years, (19) d.e.s.p.i.t.e./e.x.p.l.a.i.n.i.n.g. the fact that resistant infections now kill as many people across the European Union as car accidents. Politicians (20) a.r.e...p.a.y.i.n.g. (pay) attention, economists are on the case, and the public recently voted the issue the top challenge for the new Longitude Prize to address. If we (21) (h.a.d.)...t.r.i.e.d...t.o...e.x.p.l.o.r.e. (try, explore) the relationship between science and the public a bit more closely, we (22) w.o.u.l.d.n't/d.i.d.n't h.a.v.e...t.o...p.a.y. (not, pay) the price.

<https://www.theguardian.com> › Science › Antibiotics 10.12.2014, adapted