Kollegium St. Fidelis, Stans
Mittelschule Nidwalden

Mai 2018

# Maturitätsprüfung 2018 English

| | | | |
|---|---|---|---|
| 8.00 - 8.50 | Part 1: | **Listening (36 points)** | |
| | | 50 minutes | |

9.00 - 10.20    Part 2:    **Comprehension (69 points)**
80 minutes

10.30 - 11.20    Part 3:    **Language (69 points)**
50 minutes

At the end of each part all your worksheets will be collected.
Write legibly and unambiguously.

# Good Luck!

Gabriela Bächler
David Fux
Ute Mayer

Full Name: _____

Class: _____

# Listening

*You will hear each of the passages twice.*

## Part 1

*Answer the following questions with **complete sentences**. Answer as precisely as possible. You have one minute to read the questions before you hear the recording.*

*While you are listening, take notes on a **separate piece of paper**. Then transfer your final answers to the exam sheet. (12)*

1. Why is apple the most popular selling 30 centimeter pie? (2)

_____

_____

_____

2. Why doesn't the 11 centimeter apple pie sell as well as the 30 centimeter pie? (2)

_____

_____

_____

3. What kind of global challenges can the effective use of data help with? Mention two of the examples given in the talk. (2)

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4. Why can we say that 4'000 years ago data was stored more or less the same way as today? (2)

_____

_____

_____

5. Data has gone from stationary and static to something fluid and dynamic. Explain. (2)

_____

_____

_____

6.  Explain the following quote: "Location has been datafied". (2)

_____

_____

_____

*In fifteen seconds, you will hear the text a second time. After the second time you will have eight minutes to complete and transfer your answers.*

## Part 2

*Fill the gaps with the word(s) from the text passage you will hear. You have one minute to read the text below before the audio starts. (12)*

Now think, for example, of the _____, the way that you are all sitting right now, the way that you sit, the way that you sit, the way that you sit. It's all different, and it's a function of your _____ and your back and the contours of your back, and if I were to put sensors, maybe 100 sensors into all of your chairs right now, I could _____ that's fairly unique to you, sort of like a fingerprint, but it's not your finger.

So what could we do with this? Researchers in Tokyo are using it as a potential _____ in cars. The idea is that the _____ sits behind the wheel, tries to stream off, but the car recognizes that a non-approved driver is behind the wheel, and maybe the engine just stops, unless you type in a password into the _____ to say, "Hey, I have _____ to drive." Great.

What if every single car in Europe had this technology in it? What could we do then? Maybe, if we _____ the data, maybe we could identify _____ that best predict that a car accident is going to take place in the next five seconds. And then what we will have datafied is _____, and the service would be when the car senses that the person slumps into that position, automatically knows, hey, set an internal alarm that would _____ the steering wheel, honk inside to say, "Hey, wake up, pay more attention to the road." These are the sorts of things we can do when we _____ more aspects of our lives.

*In fifteen seconds, you will hear the text a second time.*

## Part 3

*Which of the following statements are true and which are false? Write the word **True** or **False** in the box next to the sentence. If the statement is false, explain why. Write in full sentences. (12)*

*You have one minute to read the statements.*

1. Arthur Samuel taught the computer the strategy of how to win at checkers. (2)

   _____

   _____

   _____

2. Cars can drive on their own, because they are programmed for the roads they travel on. (2)

   _____

   _____

   _____

3. Algorithms can help with the biopsy of breast cancer. (2)

   _____

   _____

   _____

4. Privacy is the biggest problem today when we deal with big data. (2)

   _____

   _____

   _____

5. Because of big data and new technology, some highly educated people will lose their jobs. (2)

   _____

   _____

   _____

6. When it comes to big data, technology is more important than information. (2)

   _____

   _____

   _____

*In fifteen seconds, you will hear the text a second time. After the second time you will have six minutes to complete your answers.*

*Please remain seated until the listening is completed.*

# The New York Times

# The Real Threat of Artificial Intelligence

*By Kai-Fu Lee, June 24, 2017*



Rune Fisker

BEIJING — What worries you about the coming world of artificial intelligence?

Too often the answer to this question resembles the plot of a sci-fi thriller. People worry that developments in A.I. will bring about the
5     "singularity" — that point in history when A.I. surpasses human intelligence, leading to an unimaginable revolution in human affairs. Or they wonder whether instead of our controlling artificial intelligence, it will control us, turning us, in effect, into cyborgs°.

*a being with both organic and bio- mechatronic body parts*

These are interesting issues to contemplate, but they are not
10     pressing. They concern situations that may not arise for hundreds of years, if ever. At the moment, there is no known path from our best A.I. tools (like the Google computer program that recently beat the world's best player of the game of Go) to "general" A.I. — self-aware

15 computer programs that can engage in common-sense reasoning, attain knowledge in multiple domains, feel, express and understand emotions and so on.

This doesn't mean we have nothing to worry about. On the contrary, the A.I. products that now exist are improving faster than most people realize and promise to radically transform our world, not

20 always for the better. They are only tools, not a competing form of intelligence. But they will reshape what work means and how wealth is created, leading to unprecedented economic inequalities and even altering the global balance of power.

It is imperative that we turn our attention to these imminent

25 challenges.

What is artificial intelligence today? Roughly speaking, it's technology that takes in huge amounts of information from a specific domain (say, loan° repayment histories) and uses it to make    *credit* a decision in a specific case (whether to give an individual a loan) in

30 the service of a specified goal (maximizing profits for the lender). Think of a spreadsheet° on steroids, trained on big data. These tools    *a chart, table* can outperform human beings at a given task.

This kind of A.I. is spreading to thousands of domains (not just loans), and as it does, it will eliminate many jobs. Bank tellers°,    *cashier*

35 customer service representatives, telemarketers, stock and bond traders, even paralegals° and radiologists will gradually be replaced    *legal assistant* by such software. Over time, this technology will come to control semiautonomous and autonomous hardware like self-driving cars and robots, displacing factory workers, construction workers,

40 drivers, delivery workers and many others.

Unlike the Industrial Revolution and the computer revolution, the A.I. revolution is not taking certain jobs (artisans, personal assistants who use paper and typewriters) and replacing them with other jobs (assembly-line workers, personal assistants conversant

45 with computers). Instead, it is poised° to bring about a wide-scale    *to be ready to do sth* decimation of jobs — mostly lower-paying jobs, but some higher-paying ones, too.

This transformation will result in enormous profits for the companies that develop A.I., as well as for the companies that adopt

50 it. Imagine how much money a company like Uber would make if it used only robot drivers. Imagine the profits if Apple could manufacture its products without human labor. Imagine the gains to a loan company that could issue 30 million loans a year with virtually no human involvement. (As it happens, my venture capital

55 firm has invested in just such a loan company.)

We are thus facing two developments that do not sit easily together: enormous wealth concentrated in relatively few hands and enormous numbers of people out of work. What is to be done?

Part of the answer will involve educating or retraining people in

60 tasks A.I. tools aren't good at. Artificial intelligence is poorly suited for jobs involving creativity, planning and "cross-domain" thinking — for example, the work of a trial lawyer. But these skills are typically required by high-paying jobs that may be hard to retrain displaced workers to do. More promising are lower-paying jobs
65 involving the "people skills" that A.I. lacks: social workers, bartenders°, concierges — professions requiring nuanced human interaction. But here, too, there is a problem: How many bartenders does a society really need?

*barkeeper*

The solution to the problem of mass unemployment, I suspect, will
70 involve "service jobs of love." These are jobs that A.I. cannot do, that society needs and that give people a sense of purpose. Examples include accompanying an older person to visit a doctor, mentoring at an orphanage and serving as a sponsor at Alcoholics Anonymous — or, potentially soon, Virtual Reality Anonymous (for those
75 addicted to their parallel lives in computer-generated simulations). The volunteer service jobs of today, in other words, may turn into the real jobs of the future.

Other volunteer jobs may be higher-paying and professional, such as compassionate medical service providers who serve as the
80 "human interface" for A.I. programs that diagnose cancer. In all cases, people will be able to choose to work fewer hours than they do now.

Who will pay for these jobs? Here is where the enormous wealth concentrated in relatively few hands comes in. It strikes me as
85 unavoidable that large chunks of the money created by A.I. will have to be transferred to those whose jobs have been displaced. This seems feasible only through Keynesian° policies of increased government spending, presumably raised through taxation on wealthy companies.

*relating to the economic theories of John Maynard Keynes*

90 As for what form that social welfare would take, I would argue for a conditional universal basic income: welfare offered to those who have a financial need, on the condition they either show an effort to receive training that would make them employable or commit to a certain number of hours of "service of love" voluntarism.

95 To fund this, tax rates will have to be high. The government will not only have to subsidize° most people's lives and work; it will also have to compensate for the loss of individual tax revenue previously collected from employed individuals.

*to support financially*

This leads to the final and perhaps most consequential challenge of
100 A.I. The Keynesian approach I have sketched out may be feasible in the United States and China, which will have enough successful A.I. businesses to fund welfare initiatives via taxes. But what about other countries?

They face two insurmountable problems. First, most of the money
105 being made from artificial intelligence will go to the United States and China. A.I. is an industry in which strength begets° strength:

*to cause, to create*

The more data you have, the better your product; the better your product, the more data you can collect; the more data you can collect, the more talent you can attract; the more talent you can

110 attract, the better your product. It's a virtuous circle°, and the United States and China have already amassed the talent, market share and data to set it in motion.

*a recurring cycle of events, the result of each one being to increase the beneficial effect of the next*

For example, the Chinese speech-recognition company iFlytek and several Chinese face-recognition companies such as Megvii and

115 SenseTime have become industry leaders, as measured by market capitalization. The United States is spearheading the development of autonomous vehicles, led by companies like Google, Tesla and Uber. As for the consumer internet market, seven American or Chinese companies — Google, Facebook, Microsoft, Amazon, Baidu,

120 Alibaba and Tencent — are making extensive use of A.I. and expanding operations to other countries, essentially owning those A.I. markets. It seems American businesses will dominate in developed markets and some developing markets, while Chinese companies will win in most developing markets.

125 The other challenge for many countries that are not China or the United States is that their populations are increasing, especially in the developing world. While a large, growing population can be an economic asset (as in China and India in recent decades), in the age of A.I. it will be an economic liability because it will comprise°

130 mostly displaced workers, not productive ones.

*to include*

So if most countries will not be able to tax ultra-profitable A.I. companies to subsidize their workers, what options will they have? I foresee only one: Unless they wish to plunge their people into poverty, they will be forced to negotiate with whichever country

135 supplies most of their A.I. software — China or the United States — to essentially become that country's economic dependent, taking in welfare subsidies in exchange for letting the "parent" nation's A.I. companies continue to profit from the dependent country's users. Such economic arrangements would reshape today's geopolitical

140 alliances.

One way or another, we are going to have to start thinking about how to minimize the looming° A.I.-fueled gap between the haves and the have-nots, both within and between nations. Or to put the matter more optimistically: A.I. is presenting us with an

*threatening*

145 opportunity to rethink economic inequality on a global scale. These challenges are too far-ranging in their effects for any nation to isolate itself from the rest of the world.

*Kai-Fu Lee is the chairman and chief executive of Sinovation Ventures, a venture capital firm, and the president of its Artificial Intelligence Institute.*

Full Name: _____

Class: _____

# Comprehension and Vocabulary

### A) Comprehension

*Answer the following questions by formulating complete sentences. Avoid copying from the text and do not use contracted verb forms. (Contents: 22 points / Language: 12 points)*

1. What do people often worry about in the context of Artificial Intelligence, and are these worries legitimate concerns according to Lee? (2/2)

_____

_____

_____

_____

_____

2. In Lee's opinion, how will A.I. change the economy and the political world, and what are the consequences of this? (4/2)

_____

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3. How is the A.I. revolution different from the Industrial Revolution and the computer revolution? (4/2)

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4. According to Lee, what is A.I. bad at, and how is this a chance? (4/2)

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5. How will "service jobs of love" and any other newly created jobs be funded?  (4/2)

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6. What difficulties do countries other than the USA and China face, and how are these countries to cope with them? (4/2)

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*Answer the following question by carefully formulating **your own opinion** in an elaborated and well-structured text. Avoid copying from the text and do not use contracted verb forms.*
*(Contents: 10 points / Language: 6 points)*

**7. Are you sceptical of A.I. or do you see it as a chance to improve our lives? (10/6)**

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**B) Vocabulary**

*Paraphrasing: explain the following passages by reformulating them, substituting the underlined words. (4)*

1. These are underlined issues to contemplate. (9)

_____

2. Roughly speaking, it's technology that takes in huge amounts of information from a specific domain. (26-8)

_____

3. A.I. is presenting us with an opportunity to rethink economic inequality on a global scale. (144-5)

_____


*Synonyms: give one word or one expression with the same meaning. Do not explain the words. (4)*

| | | | |
|---|---|---|---|
| to resemble (3) | | gains (52) | |
| multiple (15) | | unavoidable (85) | |
| to alter (23) | | to increase (126) | |
| imperative (24) | | option (132) | |

*Antonyms: give one word or one expression with the opposite meaning. Do not explain the words. (4)*

| | | | |
|---|---|---|---|
| artificial (1) | | gradually (36) | |
| to improve (18) | | feasible (87) | |
| wealth (21) | | conditional (91) | |
| to eliminate (34) | | to expand (121) | |


*Word families: use the word given in brackets to form a word that fits in the gap. (7)*

1. He is _____ in his demands. *(reason, 14)*

2. We are _____, not partners. *(to compete, 20)*

3. Because I have a limited amount of money, I am trying to _____ and spend less on food than I usually do. *(economic, 22)*

4. The _____ year of the Reconstruction Period was 1876. *(decision, 29)*

5. In the Literature of Europe, there are many passages of great _____ beauty. *(to imagine, 50)*

6. Fred looked for ways to make his business more _____. *(profit, 51)*

7. Tom did not find anyone who met the _____. *(to require, 63)*

8. He seems to find it difficult to integrate _____. *(society, 71)*

9. According to the court record, the serial killer showed no _____ for his victims. *(compassionate, 79)*

10. You cannot be too _____ if you want a job right away. *(choose, 81)*

11. The branches _____ gently in the breeze. *(motion, 112)*

12. This element is _____ throughout the play. *(recognition, 113)*

13. Teenagers should have the _____ to make their own decisions in preparation for their lives as adults. *(autonomous, 117)*

14. Even though the house was priced very low, the potential buyers still believe the price was _____. *(to negotiate, 134)*

Full Name: _____

Class: _____

# Language

## A) Transformations

*Reformulate the sentences using the word in brackets or starting it in the given way. Elements that do not change **need to be written**. (10)*

1. I should have travelled more in my youth. (only)

   _____ more in my youth.

2. "Are you all coming tomorrow?" Terry asked us. (whether)

   Terry asked _____.

3. We'll have to cancel the meeting if John does not turn up soon. (unless)

   _____, we'll have to cancel the meeting.

4. I don't want you to come to my party. (rather)

   I _____ to my party.

5. The manager provided the staff with extra training. (by)

   _____ the manager.

6. My best friend travelled around the world a lot when he was a child because his father was a diplomat. I'm sure he will never forget this. (remember / *No "that"!*)

   I'm sure my friend_____ when he was a child.

7. Even though I did not have an umbrella, I walked home in the rain. (in spite)

   _____, I walked home in the rain.

8. My laptop is gone so apparently someone has borrowed it. (must)

   _____ my laptop.

9. We need to have dinner at your place tonight because the workers are refurnishing my apartment.

   We need to have dinner at your place tonight because I'm _____.

10. Do not count the words in your essay, it is a waste of time! (point)

    There _____ the words in your essay.


## B) Conditionals

*Complete the following sentences with the right verb form. (4)*

1. Supposing the police _____ (not / arrive) in time to save the children that were locked in the basement, what _____ (happen)?

2. If Alexander Fleming _____ (discover) penicillin, there _____ (be) far more casualties every year.

3. If the weather _____ (be) good tomorrow, we _____ (have) a picnic in the park.

4. Famous people never stay in this hotel. But if a celebrity _____ (stay) here, we _____ (tighten) our security arrangements.

**C) Tenses**

*Put the verbs in brackets into the correct tense and form, including passive, infinitive and gerund. (19)*

Six years ago, I (finish) _____ high school. Since that day and until last week, I (not/see) _____ any of my classmates again and I was kind of happy about that. I know it (sound) _____ weird but let me tell you why I think this way. Back at school, some of my mates (use/tell) _____ me horrible things and I was fed up with (beg) _____ them to leave me alone but they neither (pay) _____ attention to my words nor apologized for (be) _____ so cruel to me. There was this girl who (call) _____ Andrea, whom I especially disliked. We just (cannot/get) _____ along.

Last week, as I (walk) _____ along Milford street, I (hear) _____ the most terrifying voice I (ever/hear) _____. "Carla! Carla! It's me, Andrea!" My school nightmare was back. I (cannot/believe) _____ what (happen) _____ to me. I asked the universe "What (I/do) _____ to deserve such punishment?!" As no answer (receive) _____, by my confused mind, I said to Andrea "Hi there! How (you/be) _____ all this time? You (look) _____ fantastic."

As I (say) _____ this, I remembered a Spring Day celebration eight years before when I (call) _____ Piggy by her and her girl friends and I wished the earth _____ (swallow) me up. "Well, you know, this and that," she replied. She went on "I (study) _____ at university when I (meet) _____ a wealthy man- which was what I (actually/look) _____ for at university!- so I _____ (drop) out. I _____ (get) married and (buy) _____ a three-storey house downtown. I (also/travel) _____ a lot recently; in fact, I (travel) _____ the globe three times already. What else...?" "Oh, you have a wonderful life! Congrats!" I said reluctantly. "What about you?" she asked. "What (you/do) _____ recently?" she added. (not/have) _____ time to think of a better answer, I replied with the truth. "I (work) _____ in a small grocery for five years but I (try) _____ to find a better job for quite some time now. I (also/learn) _____ how to speak Spanish, as I hope one day I (be) _____ able to visit my parents' family in Spain." She said she was in a hurry, kissed me goodbye and left. No comment (make) _____ about my news. As I started (walk) _____ towards the bus stop, I could hear a silly laughter coming from her. "Poor thing!" I thought "She (not/change) _____ in the least; she is still the same shallow Andy ... still the same ..."

**D) Phrasals**

*Complete the following sentences by replacing the verbs in **bold print** with a phrasal verb from the box in the appropriate form (do not change the tense). Not all the phrasal verbs in the box are used. (10)*

> call off - come into - come round - fall for - give in - go off - lay off - look after -
> look into - look up - pass away - pass on - pick on - put off - put up with - show off -
> take after - take down - turn up - wear off

1.  Stop **boasting** / _____ and do your job!

2.  I had been on a diet for two months but yesterday I **just could not resist any longer** /

    _____ and had a cream cake.

3.  The numbness in his shoulder was starting to **gradually disappear** / _____.

4.  She really **looks like** / _____ her mother; the resemblance is incredible!

5.  Since the company was on the verge of bankruptcy, 500 workers had to be **fired** / _____.

6.  I'm afraid we'll have to **postpone** / _____ the meeting as our CEO's flight has

    been **cancelled** / _____.

7.  He was surprised to learn that he **inherited** / _____ a lot of money after his

    grandmother **died** / _____ in her sleep right before Christmas.

8.  Gas officials are **investigating** / _____ the cause of the explosion.


**E) Open Cloze**

*Complete the text, using one suitable word in each gap. (16)*

It's 500 years 1) _____ Martin Luther defied the authority 2) _____ the Catholic church. It's time 3) _____ a similar revolt 4) _____ the hypocrisy of the religion of technology.

A new power is loose 5) _____ the world. It is nowhere and 6) _____ it's everywhere. It knows everything about us – our movements, our thoughts, our desires, our fears, our secrets, who our friends are, our financial status, even 7) _____ well we sleep 8) _____ night. We tell it things that we would not whisper to another human being. It shapes our politics, stokes our appetites, loosens our tongues, heightens our moral panics, keeps us entertained (and therefore passive). We engage 9) _____ it 150 times or more every day, and with every moment of contact we add 10) _____ the unfathomable wealth of its priesthood. And we worship it 11) _____ we are, somehow, mesmerised by it.

In 12) _____ words, we are all members of the Church of Technopoly[1], and 13) _____ we worship is digital technology. Most of us are so happy in our obeisance to this new power that we spend 14) _____ average of 50 minutes on our daily devotion 15) _____ Facebook alone 16) _____ a flicker of concern. It makes us feel modern, connected, empowered, sophisticated and informed.

Suppose, 17) _____, you were one of a minority who was becoming assailed by doubt – stumbling 18) _____ the conclusion that what you 19) _____ thought of as liberating might actually be malign and dangerous. But yet everywhere you look you see only happy-clappy believers. How would you go 20) _____ convincing the world that it was in the grip of a power that was deeply hypocritical and corrupt? Especially when that power apparently offers salvation and self-realisation for those 21) _____ worship at its sites?

It would be a tough assignment. But take heart: there once was a man who had similar doubts 22) _____ the dominant power of his time. His name was Martin Luther and 500 years ago 23) _____ Tuesday he

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[1] A society in which technology is idolized.

pinned a long screed on to the church door in Wittenberg, which was then a small and relatively obscure town in Saxony. The screed contained a list of 95 "theses" challenging the theology (and therefore the authority) of the then all-powerful Catholic church. This rebellious stunt 24) _____ an obscure monk must have seemed 25) _____ the time like a flea bite on an elephant. But it was the event that triggered a revolution 26) _____ religious belief, undermined the authority of the Roman church, unleashed ferocious wars in Europe and shaped the world in which most of us (at least 27) _____ the west) grew up. Some flea bite.

In posting his theses Luther was conforming 28) _____ an established tradition of scholastic discourse. A "thesis", in this sense, is a succinctly expressed proposition put 29) _____ as the starting point for a discussion. What made Luther's theses really provocative, though, was that they represented a refutation of 30) _____ the theology and the business model of the Catholic church. In 31) _____ days, challenging 32) _____ would not have been a good career move for an Augustinian monk. Challenging both was suicidal.

Extract from: <https://www.theguardian.com/technology/2017/oct/29/why-we-need-a-21st-century-martin-luther-to-challenge-church-of-technology-95-theses> (5 April 2018)

### F) Translation
*Translate the following sentences as precisely as possible. (10)*

1. Nachdem sie ihren High School Abschluss gemacht haben, setzen viele Studenten ein Jahr aus, um Militärdienst zu leisten oder Berufserfahrung zu sammeln.

   _____

   _____

   _____

2. Die Globalisierung hat zu einem Anstieg der Zu- und Abwanderung beigetragen, da sie die Ungleichheit zwischen den Nationen hervorgehoben hat.

   _____

   _____

   _____

3. Falls du einer Firma eine Blindbewerbung schickst, vergewissere dich, dass dein Lebenslauf und dein Bewerbungsschreiben einen guten Eindruck machen.

   _____

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   _____

4. Viele Wissenschaftler sind beunruhigt, dass die Gletscher schmelzen, der Meeresspiegel ansteigt und tausende von Tier- und Pflanzenarten vom Aussterben bedroht sind.

   _____

   _____

   _____

5. Der zunehmende Druck zu gewinnen und bestehende Rekorde zu brechen hat dazu geführt, dass immer mehr Sportler leistungssteigernde Drogen nehmen.

   _____

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   _____