

## ALGO MCQ

1. Which methods are direct methods to resolve primary collisions ?

- ? (a) The linear probing
- ? (b) The double hashing
- ? (c) The coalesced hashing
- ? (d) The hashing with separate chaining

2. The primary collisions can be resolved by ?

- +2
- (a) open addressing
  - (b) chaining
  - (c) randomly
  - (d) universally

+2

3. The COMPLETION ?

- (a) uses all bits of the key representation
- (b) does not use all bits of the key representation
- (c) truncates the bit sequence in sub-words
- (d) applies only to a numerical key
- (e) is not a hashing method

-1

4. The MULTIPLICATION ?

- (a) uses all bits of the key representation
- (b) does not use all bits of the key representation
- (c) truncates the bit sequence in sub-words
- (d) applies only to a numerical key
- (e) is not a hashing method

+2

5. The major drawback of the compression that it ?

- (a) hashes identically the anagrams of a key
- (b) requires a prime number  $m$  greater than the number of the keys
- (c) uses just a part of the key representation
- (d) is effective only on a small collection of data

-1

6. The DIVISION ?

- (a) uses all bits of the key representation
- (b) does not use all bits of the key representation
- (c) truncates the bit sequence in sub-words
- (d) applies only to a numerical key
- (e) is not a hashing method



42 7. A primary collision is a collision ?

- (a) with a coincidence of hash values between an x and a y, with x equal to y
- (b) without a coincidence of hash values between an x and a y, with x equal to y
- (c) without a coincidence of hash values between an x and a y, with x different from y
- (d) with a coincidence of hash values between an x and a y, with x different from y

- 9 8. The COMPRESSION ?

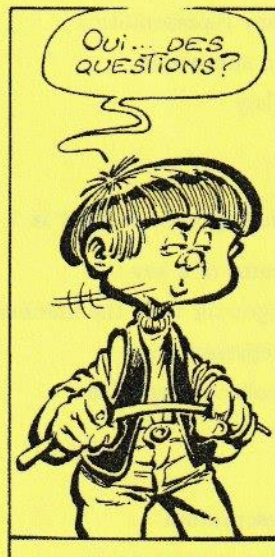
- (a) uses all bits of the key representation
- (b) does not use all bits of the key representation
- (c) truncates the bit sequence in sub-words
- (d) applies only to a numerical key
- (e) is not a hashing method

42 9. Is the modularization a basic hashing method ?

- (a) Yes
- (b) No
- (c) Sometimes

10. Does the coalesced hashing use a probe sequence function ?

- (a) Never
- (b) Sometimes
- (c) Always





## MCQ N°2

Monday, 7 October 2019

### Question 11

Let  $(u_n)$  be a strictly positive numerical sequence such that for any  $n \in \mathbb{N}$ ,  $\frac{u_{n+1}}{u_n} > 1$ . Then

- a.  $\sum u_n$  converges
- ☒ b.  $\sum u_n$  diverges
- $\rightarrow$  c. we cannot say anything about the nature of  $\sum u_n$

### Question 12

Let  $(u_n)$  be a strictly positive numerical sequence such that  $\frac{u_{n+1}}{u_n} \xrightarrow{n \rightarrow +\infty} \frac{1}{4}$ . Then

- $\rightarrow$  ☒ a.  $\sum u_n$  converges
- b.  $\sum u_n$  diverges
- c. we cannot say anything about the nature of  $\sum u_n$

### Question 13

Let  $(u_n)$  be a positive numerical sequence such that  $nu_n \xrightarrow{n \rightarrow +\infty} +\infty$ . Then

- a.  $\sum u_n$  converges
- ☒ b.  $\sum u_n$  diverges
- c. we cannot say anything about the nature of  $\sum u_n$

$$\left. \begin{array}{l} nu_n \rightarrow +\infty \\ n \frac{1}{n} \rightarrow 1 \end{array} \right\} \Rightarrow \exists n_0 \in \mathbb{N}, n \geq n_0$$

$$nu_n > n \times \frac{1}{n}$$

$$u_n > \frac{1}{n}$$

$$\sum u_n > \sum \frac{1}{n}$$

$$\text{DVB so } \sum u_n \text{ DVB}$$

### Question 14

Let  $(u_n)$  be a positive numerical sequence such that  $nu_n \xrightarrow{n \rightarrow +\infty} 0$ . Then

- a.  $\sum u_n$  converges
- $\rightarrow$  ☒ b.  $\sum u_n$  diverges
- ☒ c. we cannot say anything about the nature of  $\sum u_n$

### Question 15

- $\rightarrow$  a.  $\sum \frac{(-1)^n}{n}$  converges absolutely
- $\rightarrow$  ☒ b.  $\sum \frac{(-1)^n}{n}$  converges
- $\rightarrow$  ☒ c.  $\sum \frac{(-1)^n}{n^2}$  converges absolutely
- $\rightarrow$  ☒ d.  $\sum \frac{(-1)^n}{n^2}$  converges
- e. none of the above



### Question 16

The series  $\sum \frac{1}{e^n}$  is

- a. a Riemann series
- b. a geometric series
- c. a convergent series
- d. a divergent series

### Question 17

When  $x$  tends to 0, one has

- a.  $\frac{1}{1+x} = 1 + x + x^2 + x^3 + o(x^3)$
- b.  $\frac{1}{1+x} = 1 - x + x^2 - x^3 + o(x^3)$
- c.  $\frac{1}{1-x} = 1 + x + x^2 + x^3 + o(x^3)$
- d.  $\frac{1}{1-x} = 1 - x + x^2 - x^3 + o(x^3)$
- e. none of the above

### Question 18

When  $x$  tends to 0, one has

- a.  $\sqrt{1+x^2} = 1 + \frac{1}{2}x^2 + o(x^2)$
- b.  $\sqrt{1+x^2} = 1 + \frac{1}{4}x^2 + o(x^2)$
- c.  $\sqrt{1+x^2} = 1 + \frac{1}{4}x^4 + o(x^4)$
- d.  $\sqrt{1+x^2} = 1 + \frac{1}{2}x^2 + o(x^3)$
- e. none of the above



## Question 19

When  $x$  tends to 0, one has

a.  $\cos(x) = 1 - \frac{x^2}{2} + \frac{x^4}{4} + o(x^4)$

→ b.  $\cos(x) = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} + o(x^4)$

c.  $\cos(x) = x - \frac{x^3}{3} + \frac{x^5}{5} + o(x^5)$

d.  $\cos(x) = x - \frac{x^3}{3!} + \frac{x^5}{5!} + o(x^5)$

e. none of the above

## Question 20

Let  $(u_n)$  be a numerical sequence. Then

a. if  $(u_n)$  converges to 0, then  $\sum u_n$  converges

→ b. if  $\sum u_n$  converges, then  $(u_n)$  converges to 0

→ c. if  $(u_n)$  converges to 1, then  $\sum u_n$  diverges

d. if  $\sum u_n$  diverges, then  $(u_n)$  diverges

e. none of the above



## QCM 2 S3

The high price of multitasking by Daniel T. Willingham 15 July, 2019

1. Not only do smartphones provide unprecedented access to information, they provide unprecedented opportunities to multitask. Any activity can be accompanied by music, selfies or social media updates. Of course, some people pick poor times to tweet or text, and lawmakers have stepped in. Forty-eight states have banned texting while driving. In Honolulu, it's illegal to text or even look at your phone while crossing the street, and in the Netherlands they've banned texting while biking.
2. But legislation won't proscribe all situations in which multitasking is unwise; you need to self-regulate. Understanding how the brain multitasks and why we find multitasking so appealing will help you gauge the hazard of pulling out your phone.
3. Multitasking feels like doing two things simultaneously, so it seems the danger lies in asking one mental process to do two incompatible things — for texting drivers, watching the screen and the road. A lot of lawmakers must think that way, because 20 states have instituted bans on driving using a hand-held phone while still allowing hands-free calls. Yet hands-free or hand-held makes no difference — they impair driving equivalently as far as external hazards go. Why?
4. You actually manipulate your phone only briefly for voice calls. The real problem is the toggling of attention between the conversation and the road. Even simple tasks can't be done simultaneously; you switch between them, and that affects performance.
5. In a classic experiment, subjects viewed a digit-letter pair: for example, "C7." A signal instructed people to classify the letter as a vowel or non-vowel or the digit as odd or even. After the response, a new stimulus and a new signal appeared. When the classification task switched, people responded about 20 percent slower than when it was repeated, because switching requires extra steps: resetting your goal ("ignore digit, attend to letter") and reloading the mental rule ("judge it as vowel or consonant.")
6. The cost of shuffling goals and mental rules is harmless if there's predictable downtime during one or both tasks. As a conference call turns to an agenda item irrelevant to you, go ahead and answer email. Multitasking while driving is so dangerous because driving requires all of your attention at unpredictable times. People sense this, and when on the phone they drive slower and increase their following distance, but they are far too confident that these measures mitigate risk. Fifty-nine percent of adults, young and old, admit to using their phones while driving.
7. This overconfidence extends to other activities. A 2015 survey showed that a majority of students who use social media, text or watch TV while studying think that they can still comprehend the material they're studying.
8. This confidence is especially understandable for very simple tasks. Everyone knows texting behind the wheel is dangerous, but listening to music or chatting with a passenger seems so undemanding as to be innocuous. Yet both measurably compromise driving. If that's surprising, consider whether you've ever turned down the radio or shushed passengers when the road turned icy or when you were looking for an address.



9. Even walking, which feels like something we do on autopilot, is not immune. Experiments in virtual environments show that pedestrians are more likely to be hit by a vehicle when crossing the street if they are listening to music.
10. But people don't multitask solely because they see no harm in it; they perceive benefits. They say they multitask for efficiency, to fight boredom or to keep up with social media.
11. Music, likely the most common variety of multitasking, is added to tasks because it heightens arousal (for example, your heart rate increases), making it easier to stick with a long drive or a tedious textbook. Music was once common on factory assembly lines; the British Broadcasting Corporation offered a radio program for this purpose, "Music While You Work," from 1940 until 1967.
12. Thus, even if you fully appreciate the cognitive cost, you might tolerate it in exchange for the emotional lift. Parents disapprove when their child studies with deadmau5 blasting because they compare that with studying in silence. But the child calculates that without the music, he wouldn't study.
13. This trade-off of cognition and emotion suggests a few principles to better manage your multitasking.
14. First, hoping for efficiency by combining two pure productivity tasks — say, composing a letter while following a presentation — is folly. That's all cognitive cost and no emotional benefit.
15. Second, be realistic about what poor task performance (when driving, for example, or operating machinery) might mean, given that you're not as good at multitasking as you believe. If you're not ready to eliminate secondary tasks, at least be ready to ditch them in the moment. I don't expect music to disappear from cars, but consider hitting mute if traffic gets dense or road conditions worsen.
16. Third, see if you can get the emotional lift without the cognitive cost. Instead of multitasking, take more rest breaks, and get your social media fix during a break.
17. People will choose to multitask. But we should, at the very least, be fully aware of how that choice affects us and the potential consequences for ourselves and others. We need to pay attention to how much — or how little — we are paying attention.

QCM Read the text and answer the questions.

21. How many of the states in the US have made texting while driving a car illegal?

a. 43  
b. All of them  
c. 28

→ d. None of the above.

22. Which word in paragraph 2 means "to control one's own behavior"?

a. To proscribe  
b. To gauge  
→ c. To self-regulate

d. None of the above.

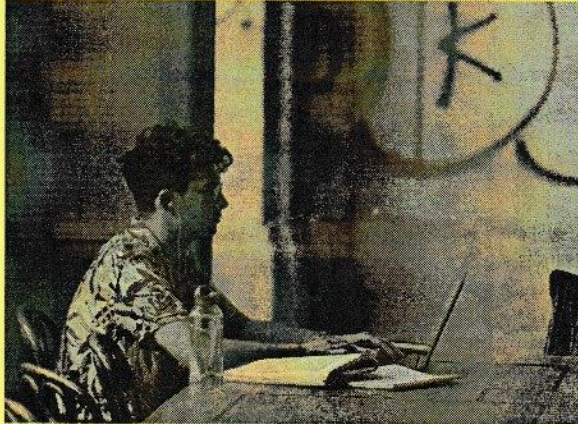


23. In paragraph 2, the word "hazard" is closest in meaning to:
- a. Danger
  - b. Caution
  - c. Chance
  - d. Warning
24. In the experiment described in paragraph 5, people's performance slowed down when
- a. The signal disappeared too fast.
  - b. The signal was repeated too often.
  - c. The task became easier to accomplish.
  - d. The classification changed.
25. An "agenda item" in paragraph 6 refers to
- a. An appointment.
  - b. A point to be addressed in a meeting.
  - c. An important email.
  - d. An issue.
26. (Paragraph 6) According to the author, when can one switch to a different task?
- a. When the conference call is about email.
  - b. When answering email is the agenda item that is being discussed.
  - c. When the agenda item being discussed does not concern one.
  - d. None of the above.
27. (Paragraph 8) The fact that the drivers turn down the radio when the road is icy makes the author think:
- a. Drivers do not need the radio.
  - b. Listening to the radio is always dangerous.
  - c. Drivers know that the radio is a distraction.
  - d. The radio is a risk in winter.
28. (Paragraph 12) By "cognitive cost", the author means:
- a. the mental effort of concentration.
  - b. the concentration one loses due to doing several tasks simultaneously.
  - c. the efficiency one gains by doing several tasks simultaneously.
  - d. None of the above
29. (Paragraph 14) Which statement reflects the author's view of a "productivity task"?
- a. Composing a letter gives emotional benefit.
  - b. Composing a letter while following a presentation gives cognitive benefit.
  - c. Composing a letter while following a presentation has a high cognitive cost.
  - d. Following a presentation produces emotional benefit.
30. The author thinks...
- a. If people do not understand the risks of multitasking, they will stop doing it.
  - b. People will continue to multitask.
  - c. If people like the risks of multitasking, they will take breaks.
  - d. All of the above.



Europe – Associated Press – Aug 1, 2019

## Poland Waives Tax for Young Employees to Counter Brain Drain



A Polish man works on a laptop in a cafe in Warsaw, Poland, Aug. 1, 2019.

On Thursday Poland scrapped its personal income tax for young employees earning less than \$22,000 a year, as part of a drive to reverse a brain drain and demographic decline that's dimming the prospects of a country that is otherwise experiencing strong economic growth.

A new law by the right-wing government took effect Thursday, slashing the personal income tax from 18 percent to zero for workers under the age of 26 below the income threshold. It is expected to boost the earnings of nearly 2 million Poles at home, and the government hopes it will also persuade young Poles working abroad to return home.

Prime Minister Mateusz Morawiecki recently said he hoped it would "prevent a further loss, a bleeding of the population that is especially painful for a nation, a society, when it concerns the young generation."

But there were strong doubts if the tax relief would stop the drain of talented and educated young Poles to London, Berlin and other cities that offer higher wages and other opportunities.

"I do not think it would stop me and my peers from leaving," said Paulina Rokicka, a 19-year-old in Warsaw who works part-time at a TV station. "It seems to me that we will want to leave [anyway] because there are better perspectives abroad than in Poland."

Introduced ahead of fall parliamentary elections, the exemption is part of a larger package of social benefits that has earned the government strong voter support but raised worries about strains on state finances. They

include cash bonuses to families with children and a one-off payment to pensioners.

Morawiecki said that some 1.5 million Poles, a number comparable to the population of Warsaw, have emigrated since the nation of 38 million joined the European Union in 2004. Some other estimates have put that number at 2 million but it is hard to pin down exactly due to the large number of those who go back and forth.

While wages still are far lower than in the West, Poland's economy is growing at around 4.5% and unemployment had dipped below 6%. In order to fill labor shortages companies have turned to hiring migrants, mostly Ukrainians, some 2 million of whom are estimated to be working in Poland.

The government says it is focusing on innovation where young inventive minds are highly valued.

Morawiecki recently urged a gathering of young people to "stay here, to take your future in your own hands and be enterprising."

The government estimates the program will cost the budget some 2 billion zlotys (\$519 million) a year.

Pawel Jurek, the Finance Ministry spokesman, told The Associated Press on Thursday that young Poles will now have more money left in their bank accounts to allow them to start families earlier. But he said the most important aim is to keep professionals in the country.

Maciej Biernacki, another young employee in Warsaw, also voiced doubts that the tax relief would sway many people, calling it only "one small" element that would be considered in people's life decisions. More important, he said, are issues like business predictability and how the country is run.

"I doubt that this kind of exemption would make anyone stay here in the country if he hesitates about whether to leave or stay," the 25-year-old public relations manager told the AP.

A recent survey by the National Bank of Poland showed that some 15 percent of Polish emigres would be willing to return home, especially from Britain, where the prospect of a hard Brexit threatens economic pain.



The following questions refer to « Poland Waives Tax for Young Employees to Counter Brain Drain »

- 31) According to the news article 'Poland waives tax for young employees to counter brain drain' the idea is to \_\_\_\_\_ the population losses.
- a) increase
  - b) promote
  - c) stem
  - d) develop
- 32) Worker's under 26 will be able to benefit only if they have already \_\_\_\_\_.
- a) worked for five years
  - b) lived away for five years
  - c) been unemployed for five years
  - d) No information is given
- 33) Prime Minister Morawiecki is \_\_\_\_\_ the situation.
- a) regretful about
  - b) happy with
  - c) positive about
  - d) neutral about
- 34) Young Poles like Rokicka are \_\_\_\_\_ that the exemption policy will stop people leaving.
- a) convinced
  - b) positive
  - c) skeptical
  - d) confident
- 35) The estimate of Poles who have emigrated is \_\_\_\_\_.
- a) certain
  - b) uncertain
  - c) accurate
  - d) No information is given
- 36) To plug the national shortfall of workers, companies are employing people from \_\_\_\_\_.
- a) other countries
  - b) just one other country
  - c) other regions of Poland
  - d) other Polish cities
- 37) The Prime Minister has asked young people \_\_\_\_\_.
- a) to leave and come back skilled
  - b) to remain in education
  - c) to rely on the state budget
  - d) to be entrepreneurial
- 38) Poland's Finance Ministry \_\_\_\_\_ the move will prevent more people leaving.
- a) is hopeful
  - b) is certain
  - c) is unsure
  - d) is doubtful
- 39) Another young worker in Warsaw was \_\_\_\_\_ about the government's performance.
- a) critical
  - b) positive
  - c) unbiased
  - d) happy



40) \_\_\_\_\_ of the Polish emigres have expressed they would return to their birth country.

- a) More than half
- b) Just less than half
- c) A majority
- ☒ d) A minority



*M.C.Q test n°2 Physics*

Notes: the values  $q$  and  $Q$  are considered positive.

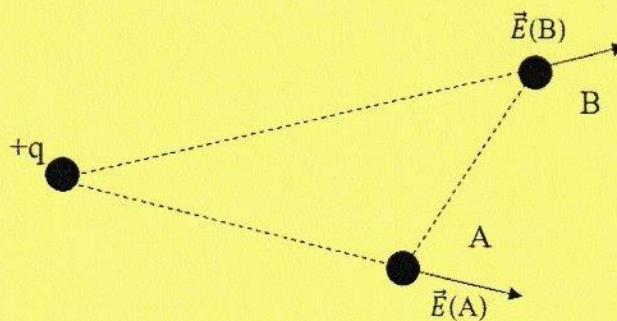
41 - The electrostatic field  $\vec{E}(M)$  is linked to the electrostatic potential  $V(M)$  by the expression:

- a)  $\vec{E}(M) = \overrightarrow{\text{grad}}(V)$     ☒ b)  $\vec{E}(M) = -\overrightarrow{\text{grad}}(V)$     c)  $V(M) = \overrightarrow{\text{grad}}(\vec{E})$

42 - The hydrogen atom is composed of one electron and one proton. The electric force applied to the electron is:

- a) Null    ☒ b) Repulsive    c) ☒ Attractive

43 - Two distant points A and B are subject to the electric field  $\vec{E}$  created by a positive charge  $q$  as sketched bellow.



The difference of electric potential between A and B  $V_B - V_A$  is equal to:

- a)  $\int_A^B \vec{E} \cdot d\vec{l}$   
☒ b)  $-\int_A^B \vec{E} \cdot d\vec{l}$   
 c) Neither of both suggestions

44 - The distribution of question 43 is still considered. As sketched the distance between the point B and the charge  $+q$  is longer than the distance between the point A and the charge  $+q$ . Which electric potential is higher:  $V(A)$  at the point A or  $V(B)$  at the point B?

- ☒ a)  $V(A)$   
 b)  $V(B)$   
 c) It depends on the signs of the charges at the points A and B

45- The electric field lines created by a charge  $q$  are :

- a) Circles    ☒ b) Half straight lines    c) Ellipse

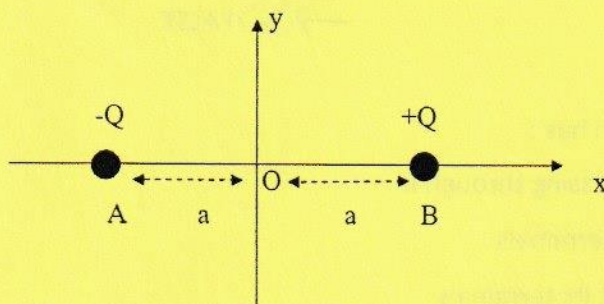




46 - A negative potential  $V(M)$  at the point M is considered. Which particle at this point M has the smallest energy?

- a) The electron
- ☒ b) The proton
- c) Both particles

47 - The following dipole is considered, the point O being located at the middle of AB:



The electric potential at the point A is:

- a)  $V(A) = k \frac{Q}{a}$
- b)  $V(A) = -k \frac{Q}{2a}$
- ☒ c)  $V(A) = k \frac{Q}{2a}$

48 - The distribution of question 47 is still considered. The electric potential energy of the charge located at the point A is:

→ a)  $E_{pe}(A) = k \frac{Q^2}{2a}$

☒ b)  $E_{pe}(A) = -k \frac{Q^2}{2a}$

c)  $E_{pe}(A) = -k \frac{Q^2}{4a^2}$

d)  $E_{pe}(A) = 0$

49- The gradient of the function  $f(x, y, z) = x^2 - z \cdot \ln(y)$  is :

a)  $\overrightarrow{\text{grad}}(f) = 2 \cdot x - \frac{z}{y} - \ln(y)$

→ ☒ b)  $\overrightarrow{\text{grad}}(f) = 2 \cdot x \cdot \vec{u}_x - \frac{z}{y} \cdot \vec{u}_y - \ln(y) \cdot \vec{u}_z$

c)  $\overrightarrow{\text{grad}}(f) = 2 \cdot x \cdot \vec{u}_x - \ln(y) \cdot \vec{u}_y + \frac{z}{y} \cdot \vec{u}_z$

50 - What is the definition of the gradient?

→ ☒ a)  $\overrightarrow{\text{grad}}(f) = \frac{\partial f}{\partial x} \vec{u}_x + \frac{\partial f}{\partial y} \vec{u}_y + \frac{\partial f}{\partial z} \vec{u}_z$

b)  $\overrightarrow{\text{grad}}(f) = \frac{\partial f}{\partial r} \vec{u}_r + \frac{\partial f}{\partial \theta} \vec{u}_\theta + \frac{\partial f}{\partial z} \vec{u}_z$ , where  $(r, \theta, z)$  are the cylindrical coordinates.

c)  $\overrightarrow{\text{grad}}(\vec{F}) = \frac{\partial F_x}{\partial x} \vec{u}_x + \frac{\partial F_y}{\partial y} \vec{u}_y + \frac{\partial F_z}{\partial z} \vec{u}_z$



## MCQ test n°2 Electronics – InfoS3 ENG

Mind to well read the questions AND the answers suggested (be careful about the answers numbering).

**Q1.** The intensity of the current that enters the passive dipole is superior to the intensity of the current that is getting out of the dipole.

a- TRUE

→ ☒ b- FALSE

**Q2.** An open electric switch has :

a- An infinite current passing through it

b- A null voltage at its terminals

c- An infinite voltage at its terminals

→ ☒ d- Neither of these answers

**Q3.** The doping allows the semi-conductor resistivity decrease

☒ a- TRUE

b- FALSE



**Q4.** If the Silicon is taken as semi-conductor and it is doped with Silicon, then the result is :

a- N doping

d- PN doping

→ ☒ b- No doping

c- P doping

**Q5.** Two types of doping are qualified by letters P and N. What does the letters correspond to ?

→ ☒ a- To the charges of the charge carrier in excess

b- To the type of ions injected into the semi-conductor

c- They are the initials of the electronic scientists that discovered semi-conductors

d- To nothing



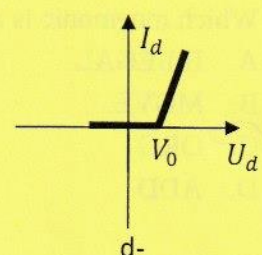
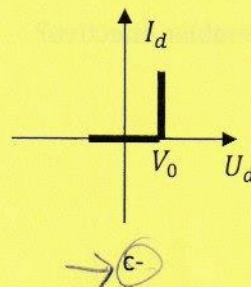
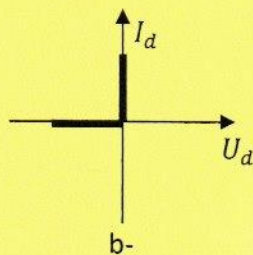
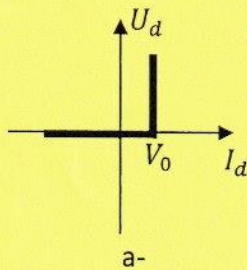
**Q6.** In order to show that a diode is blocking by using logic and absurdity, it is necessary to :

- ☒ a- Suppose that the diode is blocked and show that the voltage at its terminals is superior to its threshold voltage.
- ☒ b- Suppose that the diode is conducting and show that the voltage at its terminals is superior to its threshold voltage.
- c- Suppose that the diode is conducting and show that the current passing through it from the anode to the cathode is positive.
- ☒ d- Suppose that the diode is conducting and show that the current passing through it from the anode to the cathode is negative.

**Q7.** Which model leads to the less precise diode representation :

- ☒ a- The ideal model (switch)
- b- The threshold model (ideal voltage generator)
- c- The realistic model (imperfect voltage generator)
- d- The three models are equivalent

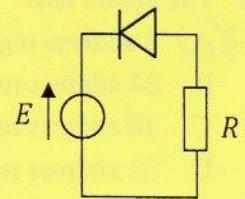
**Q8.** Which one of these characteristics corresponds to the current/ voltage characteristic of the diode threshold model (ideal voltage generator) :



**Q9.** The following circuit is considered with an ideal diode (switch)

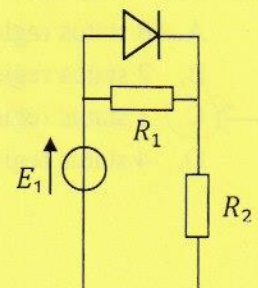
What is the voltage at the terminals of  $R$  if  $E = 10V$ ,  $R = 100\Omega$ .

- ☒ a- 0 V
- b- 10 V
- c- 1 kV
- d- 0,1 V



**Q10.** The following circuit is considered. Choose the correct affirmation if  $E_1 = 10V$ ,  $R_1 = 100\Omega$ ,  $R_2 = 100\Omega$  and if the diode is considered as ideal (switch):

- a- The diode is blocking and the voltage at its terminals is equal to 5V.
- ☒ b- The diode is conducting and the current passing through it is equal to 100mA.
- c- The diode is conducting and the current passing through it is equal to 50mA
- d- The diode is conducting and the current passing through it is equal to 5A.





## Test 2

# Computer Architecture

Monday 7 October 2019

For all the questions, one or more answers are possible.

11. The term 'assembler' can refer to:

- ☒ A. A program that converts a source code into machine code.
- B. A very smart person.
- ☒ C. A programming language.
- D. A very fast microprocessor.

12. The address bus of the 68000 is:

- A. 64 bits wide
- ☒ B. 24 bits wide
- C. 16 bits wide
- D. 32 bits wide

13. Which mnemonic is an assembler directive?

- A. ILLEGAL
- B. MOVE
- ☒ C. ORG
- D. ADD

14. The 68000 has:

- ☒ A. 8 address registers
- B. 64 address registers
- C. 16 address registers
- D. 32 address registers

15. The 68000 has:

- A. 8 status registers
- B. 2 status registers
- ☒ C. 1 status register
- D. 4 status registers



16. Let us consider the following instruction: `MOVE.W (A0)+,D0`
- A. A0 does not change.
  - B. A0 is incremented by 1.
  - C. A0 is incremented by 2.
  - D. A0 is incremented by 4.
17. Let us consider the following instruction: `MOVE.W 2(A0),D0`
- A. A0 does not change.
  - B. A0 is incremented by 1.
  - C. A0 is incremented by 2.
  - D. A0 is incremented by 4.
18. Which addressing modes do not specify a memory location?
- A. Direct mode.
  - B. Indirect mode.
  - C. Immediate data.
  - D. Absolute mode.
19. Let us consider the following instruction: `MOVE.W $50,D0`. What is the value \$50?
- A. 8-bit immediate data.
  - B. A 16-bit address.
  - C. 32-bit immediate data.
  - D. A 32-bit address.
20. Let us consider the following addition:  $A + B = C$ . The V flag is set to 1 if:
- A. A is positive, B is positive, C is positive.
  - B. A is positive, B is positive, C is negative.
  - C. A is positive, B is negative, C is positive.
  - D. A is negative, B is negative, C is positive.