المملكة المغربية

Royaume du Maroc

Ministère de l'Éducation Nationale, de la Formation professionnelle,
de l'Enseignement Supérieur et de la Recherche Scientifique
Secrétariat d'État chargé de l'Enseignement Supérieur et de la Recherche Scientifique

Présidence du Concours National d'Accès aux Écoles de Management
Ecole Nationale de Commerce et de Gestion de Marrakech – **ENCG 2019**

Concours National d'Accès aux Écoles de Management

CNAEM 2019

ENCG Marrakech

English Test

Duration: **2 hours**

EXAM INSTRUCTIONS

Before looking at the test questions, read the instructions carefully.

- The exam is divided into three sections:

  Section I: Critical Reading

  Section II: Translation

  Section III: Writing

- If you decide to change an answer, erase your old answer completely and write the new one.
- Enough space is provided for the answers to each item. **Do not exceed that space.**
- Make sure your handwriting is clear.

NB. You are not allowed to use any document, electronic device or communicate with anyone during the exam session. Evidence of cheating (during exam administration or paper correction) will automatically disqualify the candidate.

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Source: www.wadifa-info.com/fr/modele-concours/2565 - Wadifa Info - page 1/4

Read The Text Below and Answer the Questions that Follow:

Predictive environments of Industry 4.0

Produced by (E) BrandConnect

The world of manufacturing is being revolutionised by the advent of Industry 4.0, a digital transformation that crosses the physical, digital and biological worlds. Founded upon the Industrial Internet of Things (IIoT), it uses advanced technologies such as automated robotics, artificial intelligence (AI), 5G connectivity, sensors and data analytics to create smart factories. But it's not just about machines: as a recent study by Intel's Internet of Things Group noted, the future belongs to a "co-evolution" of workers and manufacturing operations.

According to the study, the Internet of Things (IoT) is rapidly transforming how humans work, operate and interact with machines, especially in manufacturing. In fact, manufacturing is becoming more digitally intense, and the promise of the "intelligent factories" – where analytics, artificial intelligence and IoT converge to drive intelligent decision-making and optimize productivity – is now real. The research-based findings and insights will help Intel's technology and solution development in many ways. The researchers also recognize the value of these insights to manufacturing leaders as they transform their operations and create the digital culture that will be so important to successful implementation and deployment of IIoT. Likewise, they may also uncover pain points, desires, concerns, and expectations of these individuals as they and their companies pursue the promise of the intelligent factory.

One example of humans and machines working together comes in the form of so-called collaborative robots ('cobots'), which can carry out tedious and/or dangerous tasks alongside their human colleagues in a shared workspace. Cobots tend to be easier to program than traditional industrial robots, and do not require safety cages, because they are able to sense objects around them. In the future, the connectivity speed and low latency of 5G will allow cobots to become more agile and to make quicker decisions, adjusting to different situations in real time.

Human inspection of anomalies on a production line is subject to a certain amount of error. However, machine vision allows inspections to be completed as fast as the line can move – with greater safety and with close to 100 percent accuracy. A partnership between Intel and Alibaba added machine learning and edge computing into the mix, and the technology was first deployed by YuMei, a world-leading aluminium alloy die-casting specialist. The result? A five-fold increase in defect detection capability.

The combination of machine learning and edge computing also allows a piece of equipment to rapidly adjust itself based on its own analysis of outside factors, such as environmental conditions or the speed of a production line. Manufacturers benefit from actionable insights exactly where they are needed in the production process. And machines can also monitor themselves for potential problems and even reorder their own new parts. If they are forced offline, they will route workflow to another machine.

Lack of visibility into the status of products in the supply chain can be a major headache for manufacturers and logistics companies. However, new technology such as Intel's Connected Logistics Platform allows sensors attached to packages to communicate wirelessly and provide near real-time status updates on a range of parameters, including location, temperature, humidity and exposure to light. Shippers can use the alerts to make real-time decisions that reduce operational costs, and also gain a better understanding of the conditions that cause damage, making it possible to mitigate future issues.

Retrieved/adapted from: *https://worldin2019.economist.com/industry4_0*

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SECTION 1: CRITICAL READING

COMPREHENSION

Answer the following question from the text. Reproduction of the language of the author is penalised.

1.1. In your own words, explain how the future of humans and machines is prospering in the world of manufacturing.

COMMENTARY

1.3. Comment on the statement below. **Do not exceed 75-word paragraph**.

"As we get more creative with technology and develop new methods of communication, it's important to keep one eye on the future and the other on the past and present".

SECTION 2: TRANSLATION

Theme:

Translate into English the extract below:

"Le développement de l'Intelligence Artificielle (IA), plus exactement des machines intelligentes caractérise la nouvelle étape dans l'évolution de l'humanité: après les avoir déchargé de l'usage de la force par les animaux puis par les machines, après avoir délocalisé leurs savoirs dans les livres, maintenant les êtres humains peuvent délocaliser en partie leur mémoire et leur intelligence dans des machines intelligentes capables de décider, d'apprendre, de piloter des robots, de travailler individuellement ou connectées en réseaux, avec ou sans êtres humains usagers (ex: tramway sans conducteur à Lyon.

Extrait de : *https://www.echosciences-grenoble.fr/communautes/memoires-du-futur/articles/delocaliser-l-intelligence-humaine-dans-des-machines-intelligentes-avec-quels-risques-pour-quels-enjeux*

Version:

*Traduire en Français à partir de : **"The combination of machine** (line 28) jusqu'à "**...another machine** (End of line 32).*

SECTION 3: WRITING

*Choose **ONE** of the writing topics below:*

1. "Protect your planet even if they don't". Write a 4 paragraph ***persuasive*** essay stating your attitude in favour of this statement.
2. "Social media creates isolation, unrealistic expectations of relationships and marriage or even attempts to build influence or scare the public?" Write a 4 paragraph ***argumentative*** essay in favour or against this statement.

END OF TEST

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