**FINAL TEST**

|  |
| --- |
| **PART I. READING** |

**TASK 1.**

***You are going to read a text about IT technologies. For questions   1–5, choose the answer from the list (A–H) to complete the text. There are*** *TWO EXTRA ITEMS* ***that you do not need to use. There is an example at the beginning (0).***

***Example:***

|  |  |
| --- | --- |
| **0** | **H** |

**OPPORTUNITIES AND CHALLENGES OF NEW TECHNOLOGIES**

Whenever a new technology (0) with the potential to change the way people live and work emerges, it sparks lively debate about its impact on our world and concern over how widely it should be adopted. Some people will view the technology (1) \_\_\_\_\_f)\_\_\_\_\_, while others will view it as threatening and disruptive. When the telephone was first introduced, (2) \_\_\_\_\_d)\_\_\_\_\_, dissolve communities, erode privacy, and encourage selfish, destructive behaviour. Others thought the telephone was a liberating and democratizing force that would create new business opportunities and bring society together. The Internet brings many of these arguments back to life. Some optimists view the Internet (3) \_\_\_\_\_g)\_\_\_\_\_. They believe the Internet will bring about unprecedented economic (4) \_\_\_\_\_c)\_\_\_\_\_, richer communication between people, a cultural renaissance, and a new era of economic prosperity and world peace. At the other extreme, (5) \_\_\_\_\_b)\_\_\_\_\_, the death of privacy, and a decline in values and social standards.

1. since the Internet knows no borders
2. pessimists think the Internet will result in economic and cultural exploitation
3. and political empowerment
4. many critics thought it would disrupt society
5. and society— companies will still need to make a profit
6. as humanity's greatest invention – an invention on the scale of the printing press
7. with tremendous optimism
8. with the potential to change the way people live and work

**\_\_\_ out of 5** points (1 point each)

|  |  |  |
| --- | --- | --- |
| **PART II. WRITING**  **TASK 2.**  ***For questions 6–10, complete the second sentence so that it has a similar meaning to the first sentence. Use the word given and other words to complete each sentence. Do not change the word order. There is an example at the beginning (0).***  ***Example:***   |  |  | | --- | --- | | **0** | AFFECTED THE WAY |   **0** Social media have influenced people’s interacting with each other.  **affected**  Social media have AFFECTED THE WAY people interact with each other.  **6.** If I take a software developer job I will have to move to Europe.  **means**  Taking a software developer job means moving to Europe.  **7.** Although virtual reality is continuously being applied to the gaming industry, we can implement these concepts into business and finance areas.  **spite**  Spite of the fact that virtual reality is continuously being applied to the gaming industry, we can implement these concepts into business and finance areas.  **8.** The Big Data projects being so globally advanced, IT start-ups require more profound technical skills and knowledge from their employees.  **due**  Due to the fact that the Big Data projects are so globally advanced, IT start-ups require more profound technical skills and knowledge from their employees.  **9.** If the robotic revolution replaced most manual jobs, the changes could be rather unexpected for the whole humanity.  **long**  The changes could be rather unexpected for the whole humanityin the long runthe robotic revolutionreplaced most manual jobs**.**  **10.** The top developed countries look forward to advancing green technology in order to spur economic growth and improve the lives of their citizens.  **aimed**  The top developed countries look forward to advancing green technology aimed ateconomic growth and improve the lives of their citizens**.** |

**\_\_\_\_out of 5 points** (1 point each)

|  |
| --- |
| **PART III. USE OF ENGLISH** |

**TASK 3.**

***For questions 11–20,* read the text below and use the word given in bold at the end of each line to form a word that fits in the space on the same line. *There is an example at the beginning (0).***

***Example:* powerful**

**How the Internet Is Changing Our Lives**

|  |  |
| --- | --- |
| The Internet is the single most **(0) \_\_\_\_** vector of change in recent history.  In the words of Arthur Clarke, “Any (11) sufficiently advanced technology is indistinguishable from magic.” The swiftness and reach of the changes wrought by the Internet (12) \_\_\_\_ have a touch of magic about them.  As a tool available to a (13) reasonably wide public, the Internet is only twenty years old, but it is already the (14) fundamental catalyst of the broadest based and fastest technological (15) revolution in history. It is the broadest base because over the past two decades its effects have touched upon practically every citizen in the world.  And it is the (16) fastest one because its mass adoption is swifter than that of any earlier technology.  To put this into perspective – it was only 70 years after the (17) invention of the airplane that 100 million people travelled by air; it took 50 years after the invention of the telephone for 100 million people to use this form of (18) communication. The 100-million user mark was achieved by PCs after 14 years. The Internet made 100 million users after just 7 years. The cycles of adoption of Internet-related technologies are even shorter – Facebook acquired 100 million users in 2 years. It is (19) possibility today to imagine the world without the Internet: it enables us to do things which only a few years ago would be (20) unthinkable, and impinges on every sphere of our lives. | *(0)* ***POWER***  (11) **SUFFICIENT**  (12) **DEED**  (13) **REASON**  (14) **FUNDAMENT**  (15) **REVOLT**  (16) **FAST**  (17) **INVENT**  (18) **COMMUNICATE**  (19) **POSSIBLE**  (20) **THINK** |

**\_\_\_\_\_out of 10 points** (1 point each)

**TASK 4*.***

***For questions 21–30, read the text below and choose the most appropriate word from the list (A–M) for each gap. There are*** *TWO EXTRA WORDS* ***that you do not need to use.***

***There is an example at the beginning (0).***

|  |  |
| --- | --- |
| **0** | **M** |

**Robot Hand-Eye Coordination Problem**

Autonomous Robots supported by traditional artificial intelligent (0) algorithms have been able to execute complicated tasks. However, for robots to be truly autonomous they must be capable of continuously developing (21) within their environments. To achieve this continuous development, robots must create their own internal representations. In artificial intelligence, this idea was introduced into robotics. Developmental robotics draws inspiration from various aspects of developmental psychology and neuroscience, e.g., sensory-motor (22) coordination , emergent behaviour and social interaction, etc. We are interested in the very early development and growth of sensory-motor control and skills, robotic hand-eye coordination, in particular, because early experiences and structures are (23) likely to underpin all subsequentgrowth in crucial ways.

Robotic hand-eye coordination, which is a sub-category of robotic sensory-motor coordination, is one of the most important skills for intelligent robots to survive and work in unconstrained(24) environments. Moreover, robotic hand**-**eye coordination is extensively used in a wide range of applications, such as vehicle(25) manufacturing, space exploration, food packaging, and even oncological surgery. A number of studies on robotic (26) reaching ability and hand-eye coordination have been performed recently. In their research, attempted to have their robot autonomously build a distinct “eye-to-hand”formula for reaching. These approaches (27) dealt with the robot’s kinematic redundancy.

A new type of constructive neural network was created to build a mappingsystem, in which visual perception was transformed into hand motor values. In studies, a developmental learning algorithm was (28) applied to obtain this type of transformation. Other developmental robotic hand-eye coordination systems have used different neural networks to (29) simulate some of the brain control loops. Such research indicates that introducing brain-like structures into developmental robotics is regarded as an effective solution to robotic cognition. However, we believe that several infant behavioural (30) patterns have a significant effect during human development. In this case, we propose to apply an infant behavioural feature into our robotic learning phase.

|  |  |  |
| --- | --- | --- |
| **A**. likewise  **B**. coordination  **C**. throughout  **D**. reaching | **E**. applied  **F**. within  **G**. manufacturing  **H**. likely | **I**. dealt  **J**. environments  **K**. patterns  **L.** simulate  **M.** *algorithms* |

**\_\_\_\_out of 10 points** (1 point each)

**TASK 5.**

***For questions 31–40, read the text below and decide which answer (A, B, C, or D) best fits each gap. There is an example at the beginning (0).***

|  |  |
| --- | --- |
| **0** | **A** |

**NEW GYM OPENS TO TRAIN ROBOTS**

A group of business people has opened a **(0) A** of gym for robots. The group is headed by Elon Musk, who is the bossof the electric car company Tesla Motors and the space tourism company SpaceX. Mr Musk also **(31) \_\_\_\_\_\_** the online payments website PayPal. His latest project is called OpenAI Gym. It is a platform for researchers and code writers to test their **(32) \_\_\_\_\_\_** work. It is an open platform, which means people are free to test their ideas for artificial intelligence (A.I.) **(33) \_\_\_\_\_\_** it. In particular, researchers can test and share their algorithms for A.I. Algorithms are special sets of rules in a computer program that can solve problems and quickly **(34) \_\_\_\_\_\_** with large amounts of information.

Mr Musk wrote about the OpenAI Gym project and why his team decided to put it online **(35) \_\_\_\_\_\_**  free. He said: "Our goal is to advance digital intelligence in the way that is most likely to benefit **(36) \_\_\_\_\_\_** as a whole, [without the] need to generate financial return." The OpenAI Gym follows the idea of giving **(37) \_\_\_\_\_\_** for successful learning – similar to giving a dog a **(38) \_\_\_\_\_\_** when it learns something new. This is called reinforcement learning. If an algorithm does well in the gym, it gets a reward. If the algorithm fails, it gets no reward and it has to try something different. The **(39) \_\_\_\_\_\_** of the gym is to develop a multi-task algorithm, which can do many things at the same time – **(40) \_\_\_\_\_\_** than be good at doing just one thing.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **0** | **A** KIND | **B** chop | **C** sort | **D** grade |
| **31** | **A** founded | **B** set up | **C** established | **D** arranged |
| **32** | **A** newest | **B** latest | **C** innovative | **D** up to date |
| **33** | **A** to | **B** at | **C** for | **D** on |
| **34** | **A** consider | **B** regard | **C**  deal | **D** judge |
| **35** | **A** for | **B** by | **C** on | **D** at |
| **36** | **A** humankind | **B** mortality | **C** human race | **D** humanity |
| **37** | **A** dainties | **B** rewards | **C** chummagies | **D** awards |
| **38** | **A** refreshment | **B** treat | **C** need | **D** gratuities |
| **39** | **A** introduction | **B** mission | **C** aim | **D** target |
| **40** | **A** enough | **B** instead | **C** better | **D** rather |

**\_\_\_\_\_\_\_out of 10 points** (1 point each)