



**Pruebas para la obtención de títulos de Técnico y Técnico Superior**  
**Convocatoria correspondiente al curso académico 2020-2021**

(Resolución de 12 de enero de 2021 de la Dirección General de Educación Secundaria, Formación Profesional y Régimen Especial)

DATOS DEL ASPIRANTE			FIRMA
Apellidos:			
Nombre:	D.N.I, N.I.E., o Pasaporte	Fecha:	

Código del ciclo: <sup>1</sup> <b>ELES04</b>	Denominación completa del título: (1) <b>Automatización y Robótica Industrial</b>
Clave o código del módulo: (1) <b>14AR</b>	Denominación completa del módulo profesional: (1) <b>Inglés técnico para grado superior</b>

**INSTRUCCIONES GENERALES PARA LA REALIZACIÓN DE LA PRUEBA**

Indíquese cuantas instrucciones sean necesarias para la realización de la prueba, materiales necesarios, duración y cualesquiera otros aspectos relevantes que se consideren oportunos como, entre otros, los siguientes:

- Complimentar los datos del aspirante antes del examen y firmar en todas las hojas que se entreguen.
- Tener disponible el DNI en la mesa.
- Señalar y escribir con tinta indeleble, que no sea roja, las respuestas y su desarrollo.
- Si se ha de rectificar una respuesta, trazar un aspa o tachar con una línea horizontal. No utilizar líquido corrector (Tippex)
- Utilizar solamente el papel facilitado por el examinador (con el sello y formato correspondiente).
- No utilizar material de consulta (salvo aquél que se autorice expresamente).

**CRITERIOS DE CALIFICACIÓN Y VALORACIÓN**

- Cada uno de los 4 apartados de la prueba (Reading Comprehension, Vocabulary, Listening Comprehension y Writing) tiene una puntuación de 2,5 puntos, lo que supone un total de 10 puntos.
- La valoración de cada pregunta aparece reflejada junto a su enunciado.
- En caso de penalizaciones, estas se mencionan en la pregunta a la que afectan.
- La nota final será la suma de las puntuaciones obtenidas en cada apartado. La nota mínima necesaria para superar la prueba es de 5 puntos.

**CALIFICACIÓN**

(1) Consígnense las denominaciones exactas y los códigos reflejados en el anexo 1.a o 1.b de las presentes instrucciones.



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**A) READING (2.5 points)**

Read the following job offer from the jobs website [www.recruitment.co.uk](http://www.recruitment.co.uk) and answer the questions below.

**Robotics Engineer**

**Company:** Peacock Technology Ltd

**Type:** Full-time (Variable shifts, notified at least one month in advance).

( \_\_\_\_\_ 1): £29,000 per year

**Location:** Sterling (Scotland)

**Education:** Higher Technician in Electronics

( \_\_\_\_\_ 2):

We are expanding our team and are looking for talented and motivated candidates to join us. Qualified candidates have the opportunity to work in a flexible and stimulating environment on diverse technical challenges in research and development. The successful candidate will interface closely with the project management team and sales team, as well as production and other staff.

( \_\_\_\_\_ 3):

- Develop and deploy robotic and automation systems for industrial, manufacturing, and defence clients
- Design, build and install industrial robotic and automation systems
- Develop and test new manufacturing and industrial processes
- Develop software for industrial controls and manufacturing systems
- Interact with customers to promote new business and develop technical requirements.
- Troubleshooting to solve problems related to assigned projects.

( \_\_\_\_\_ 4): The ideal candidate will:

- Demonstrate a brilliant imagination
- Display great attention to detail
- Have the ability to work in a team environment
- Show organizational skills and the ability to work on different projects simultaneously.
- Be able to solve practical problems
- Have the ability to travel 10% of the year
- Exhibit troubleshooting skills, both mechanical and electrical

( \_\_\_\_\_ 5):

- Opportunity for career growth at one of the largest and most financially stable companies in the world.
- Training opportunities
- Material rewards based on contributions
- Competitive pay and benefits that help you achieve personal and financial wellness

**1. Read the text and choose the best heading to fill the gaps. Write the gap number next to the headings below.(0.5 points)**

Essential Duties (\_\_\_)    Benefits (\_\_\_)    Salary (\_\_\_)    Preferred Skills (\_\_\_)    What we are seeking (\_\_\_)

**2. Say if the following sentences are True or False. Write the sentence that justifies your answer. (1 point)**

1. The tasks that you will perform in the company are mundane and simple. \_\_\_\_\_

2. The person who gets the job will be in contact with other departments in the company. \_\_\_\_\_

3. They will give you the possibility of improving your skills and acquiring new ones. \_\_\_\_\_



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4. The company designs home automation systems. \_\_\_\_\_

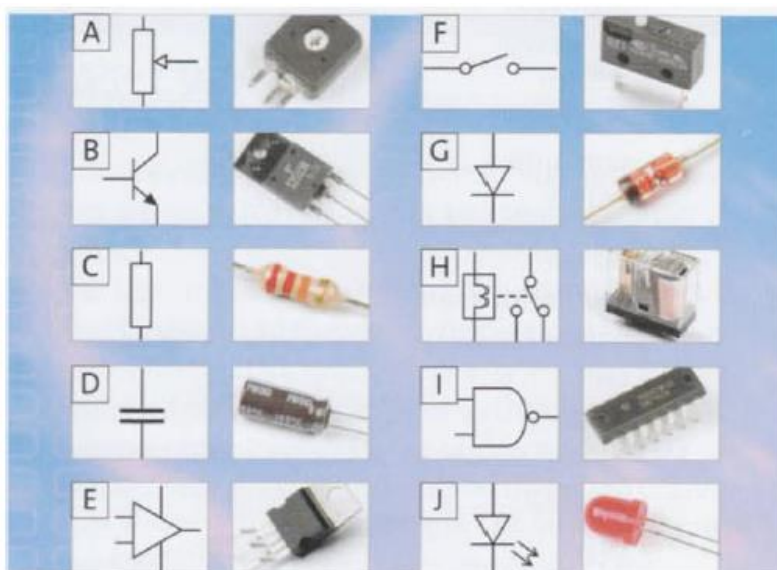
**3. Find a word in the completed text which means the same as: (1 point)**

1. Looking for: \_\_\_\_\_
2. Identifying and resolving problems: \_\_\_\_\_
3. Group of people working together: \_\_\_\_\_
4. Show: \_\_\_\_\_
5. Abilities: \_\_\_\_\_

**B) VOCABULARY (2.5 points)**

**1. Match 1-10 with the circuit symbol diagrams A-J. (1 point)**

- |                               |   |
|-------------------------------|---|
| 1. amplifier (___)            | 6. NAND logic gate (___)                    |
| 2. capacitor (___)            | 7. relay (___)                              |
| 3. diode (___)                | 8. npn transistor (___)                     |
| 4. resistor (___)             | 9. switch (single-pole, single-throw) (___) |
| 5. light-emitting diode (___) | 10. potentiometer (pot) (___)               |





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**2. Complete the extract about current and power calculations using the words in the box. (1.2 points)**

amps	conductor	current	resistance	voltage		
wattage	components	circuit	ohms	supply	volts	watts

In electrical calculations, electromotive force is expressed by the letter E, resistance by the letter R, and current by the letter I (which comes from the word “intensity”).

According to Ohm’s Law:  $I=E/R$

In other words, the (1) ..... flowing through a (2) ..... measured in (3) ....., equals the (4) ..... of the electrical (5) ..... measured in (6) ..... divided by the total (7) ....., measured in (8) ..... To work out the value of R, it is necessary to calculate the total resistance of all the (9) ..... and connecting lengths of (10) ..... that make up the circuit.

Once both the voltage and amperage are known, it is possible to work out the power, measured in (11) ..... that will be consumed. Power (P) can be calculated using the equation  $P=EI$ . Therefore (12) ..... equals voltage multiplied by amperage.

Answers:

1.	2.	3.	4.
5.	6.	7.	8.
9.	10.	11.	12.

**3. Choose the correct option. (0.30 points)**

1. .... is the measurement of frequency and it is usually described as events per second.

- A Polarity
- B Inductance
- C Hertz

2. A .... is made by turning a signal on and off repeatedly.

- A sine wave
- B square wave
- C sawtooth wave

3. .... adjust the voltage coming into the appliance to the proper level and pump electricity through the appliance to keep it operating properly.

- A Capacitors
- B Transformers
- C Hertz



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### C) LISTENING COMPREHENSION (2.5 points)

1. **Chips (Integrated Circuits).** Listen and choose the correct option (questions 1-4) and answer the question below (5) (1.25 points)

1 What stage is the project currently in?

- A the planning stage
- B the production stage
- C the development stage
- D the testing stage

2 Which of the following is the company NOT planning on producing?

- A fans
- B graphics cards
- C electronic devices
- D microchips

3 How will the chip work differently than it does now?

- A It will be faster.
- B It will be smaller.
- C It will have more transistors.
- D It will have better working fans.

4. The project is expected to be completed...

- A within the next month.
- B by November of next year.
- C in December.
- D in 2021.

5. What types of chips are mentioned? \_\_\_\_\_

(Electronics, Career Paths)

2. **Robotic vacuum cleaners.** Listen and complete the chart (1.25 points).

Dimension sensors	determine the (1) _____ of the room using (2) _____
Object sensors	use (3) _____ sensors which will send signals to the (4) _____ so that it changes direction.
Cliff sensor	protect the robot from (5) "_____" using (6) _____ directed downwards.
Wall sensors	let the robot go (7) _____ objects but without (8) _____ them.
Dirt sensors	use (9) _____ sensors . Dirt causes (10) _____ that the sensors detect, making the robot clean the area again.

(Adapted from *Technology 2*, OUP)



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### D) WRITING (2.5 points)

1. Apply for the job described in the Reading Comprehension text on page 1. (Each spelling mistakes will deduct 0.2 points). (Total 2.5 points)

Write the covering letter/email (100-150 words) following the proper layout used in formal letter/email writing and include the following information:

- why you are writing;
- where you learnt about the position;
- how you are qualified for it;
- what relevant skills and/or experience make you a good candidate;
- why you want the job.

To: [peacock@recruitment.co.uk](mailto:peacock@recruitment.co.uk)

Subject: