

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

Código del ciclo:	Denominación completa del título: TÉCNICO SUPERIOR EN MECATRÓNICA INDUSTRIAL
Clave del módulo:	Denominación completa del módulo profesional: Ingles técnico para G. S.

II INSTRUCCIONES GENERALES PARA LA REALIZACIÓN DE LA PRUEBA
<ul style="list-style-type: none">- Duración del examen: Máximo 2 horas.- Cumplimentar 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).- Cumplimentar los datos del aspirante antes del examen y firmar en todas las hojas que se entreguen.
CRITERIOS DE CALIFICACIÓN Y VALORACIÓN
<p>La calificación correspondiente a cada una de las cuestiones / ejercicios planteados está indicada en las instrucciones de cada pregunta.</p> <ul style="list-style-type: none">- La prueba se divide en cinco partes:<ul style="list-style-type: none">• Vocabulario• Gramática• Comprensión lectora• Comprensión auditiva• Expresión escrita- Hay un máximo de 100 puntos posibles entre todos los ejercicios. Para aprobar se necesita sacar un mínimo de 50 puntos sobre 100 en el cómputo global.

CALIFICACIÓN

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SECTION 1: VOCABULARY (30 POINTS)

1. Circle the correct answer a-c for each space in numbers 1-10 below. (10x1=10 points)

- What is the primary purpose of Mechanical CAD (Computer-Aided Design)?
a) To design and simulate mechanical systems using computer software.
b) To create and model manual systems using computer-aided design (CAD) software.
c) To construct mechanical systems through traditional methods, without relying on digital simulations.
- What does the field of mechatronics primarily involve?
a) The fusion of mechanical and computer science principles to design smart technologies.
b) The combination of electrical and software engineering to develop advanced automated systems.
c) The integration of mechanical, electrical, and computer engineering to create intelligent systems.
- Why is Mechatronics important in modern technology?
a) Its core idea is to create smarter, more efficient systems and machines isolating different engineering fields.
b) It focuses only on mechanical engineering.
c) It helps integrate different engineering disciplines to create more advanced and efficient systems.
- What is expected for mechatronics in the future?
a) It will focus solely on traditional mechanical systems.
b) It will likely play a key role in automation and robotics development.
c) It will no longer be relevant due to advancements in other fields.
- The logistics manager made sure the warehouse building had enough vertical _____ to accommodate the new forklifts and storage racks.
a) gap
b) emission
c) clearance
- Because the plastic was exposed to extreme cold, it turned _____ and cracked when we tried to bend it.
a) rigid
b) brittle
c) soft
- Which of the following is NOT typically included in a CV?
a) Personal hobbies and interests (if relevant to the job).
b) A detailed description of personal life.
c) Education qualifications and work experience.
- An X-ray machine is a _____ which produces images of the inside of the body to help diagnose medical conditions.
a) instrument
b) system
c) tool
- In modern spacecraft, ion thrusters are used to _____ the vehicle through space by expelling charged particles at high speed, allowing for efficient long-distance travel.
a) propel
b) release
c) pump
- What is a primary advantage of using a Li-ion battery?
a) High energy density and longer life cycle.
b) It is cheaper than other types of batteries but provides less power.
c) It cannot be recharged once used.

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2. **Complete the sentences 1-10 below with the correct word from the box. You don't need all the words.**
(10x1=10 points)

supply/collect / hazard / strengthen / attach / slash / lever / deliver / process / reflect / crane/ thrust/pulley/tension

- The automated guided vehicle (AGV) is designed to _____ components to various workstations on the factory floor with high precision.
- The system is programmed to automatically _____ the gears to the motor shaft during the assembly process.
- The robotic _____ was integrated into the automated warehouse system to lift and move heavy pallets with precision.
- Reinforcing the frame with additional supports can _____ the robotic arm and improve its stability during operation.
- By applying force to the _____, she was able to lift the heavy lid with minimal effort.
- The company is able to _____ parts for the machinery to factories around the world.
- The chemical spill in the laboratory posed a serious _____ to the workers' health and safety.
- The workers used a _____ to lift the heavy load to the top of the building.
- The aeroplane's forward _____ is controlled by the power of the plane's engine.
- If you bend an iron bar into a U shape, the outside surface of the U is under _____ as it stretches.

3. **Replace the underlined phrase with a verb from the box that has the same or similar meaning. Write the verbs in their correct form.** (6x1=6 points)

emit / solidify / extract / evaporate / reverse/ release

- The car's transmission allows it to move backward when the gear is shifted to the opposite direction. _____
- Water turns into a gas or vapor when heated. _____
- The engine sends out a loud noise when running, which can be heard from a distance. _____
- The molten metal becomes solid as it cools, forming a sturdy, rigid structure. _____
- The valve sets off the pressure from the tank, ensuring that it doesn't explode. _____
- The scientists used a special tool to take out the core samples from the rock for analysis. _____

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4. Complete the sentences 1-4 below with a word formed from the word in CAPITALS. (4x1=4)

- 1 The steel was _____ to give it extra strength. REINFORCE
- 2 This material has _____ heat-resistant properties. EXCEPT
- 3 The new game uses voice _____ software. RECOGNISE
- 4 We need a material with a lot of _____. ELASTIC

SECTION 2: GRAMMAR / LANGUAGE (40 POINTS)

5. Circle the correct answer a-d for each space in numbers 1-40 below. (40x1=40 points)

- 1 Here is the pilot _____ flew the plane.
a) there b) which c) where d) who
- 2 They will _____ arrive today but not we're not sure.
a) possibly b) probable c) likely d) certainly
- 3 The power _____ by pressing this button.
a) switch on b) is switched c) switched on d) is switched on
- 4 The company _____ a new factory nearby earlier this week.
a) open b) has opened c) opening d) opened
- 5 If we want to _____ to the event, we need to leave home now.
a) gone b) go c) went d) going
- 6 After the capsule _____ a safe altitude, the parachute opens up.
a) reach b) has reached c) is reaching d) reaching
- 7 He's _____ some important work at the moment. He'll call you back soon.
a) completing b) complete c) going to complete d) going to be completing
- 8 Strangely, the new bridge is _____ the old one.
a) narrower as b) narrower than c) more narrow than d) more narrow that
- 9 I've been at the factory from 2020 _____ last summer, and I want to work here for another two years.
a) until b) for c) since d) to
- 10 There's a strange noise when I press the pedal. I think you _____ to check the brake pads.
a) must b) should c) will d) need
- 11 Only overtake a car _____ you check in the mirror that it's safe to do so.
a) when b) after c) unless d) before
- 12 We _____ to finish this job soon. The deadline is on Friday.
a) 'll have b) must c) can d) 'll be able to

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- 13 We need to cut costs due _____ the price of oil.
a) by b) of c) to d) as
- 14 They _____ her that she needed to go through the security gate.
a) said b) explained c) ordered d) told
- 15 The man _____ out of the door when the alarm sounded.
a) was b) was going c) was gone d) go
- 16 The boat crew _____ taken to the hospital yesterday after the accident.
a) were b) are c) have been d) be
- 17 They are connected to electricity _____ means of a sub-sea cable.
a) by b) with c) using d) for
- 18 The acceleration in my new car is _____ faster than my old one.
a) as b) great deal c) slightly d) little
- 19 This building is _____ tall of the four high-rise buildings in the city centre.
a) the less b) less c) least d) the least
- 20 We're not sure but the flooding _____ have been caused by a leak in one of the pipes.
a) would b) must c) can d) could
- 21 If you had worn a helmet, you _____ hurt your head in the accident.
a) had been b) hadn't been c) wouldn't be d) would not have
- 22 The cover _____. You don't need use force on it.
a) easy to remove b) removes easily c) can be removed easily d) can remove easily
- 23 By the year 2050 the world temperatures will _____ by about 1.5 degrees Celsius.
a) be rising b) rise c) have risen d) have been risen
- 24 We have _____ these machines for several years now.
a) using b) be using c) being used d) been using
- 25 The oilfields, _____ about 35 km off the coast of Brunei, are difficult to drill.
a) are b) which locate c) which are located d) locate
- 26 If you read the instructions before using the machine, you _____ make mistakes.
a) not b) would c) wouldn't d) didn't
- 27 We're sorry to let you know that the car _____ by the mechanics.
a) is still being checked b) is still checked c) has still been checked d) is still checking
- 28 The bridge _____ by local builders, who used stone from the area.
a) was constructed b) construct c) is constructed d) being constructed

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- 29 The plastic softens as a result _____ the increase of temperature from the heaters.
a) in b) of c) from d) by
- 30 It is highly _____ that some oil will be found off the coast.
a) impossible b) definite c) certain d) probable
- 31 To put it another way, this material has _____ water resistance
a) the best b) the most c) the better d) better
- 32 _____ cars, planes have joysticks to steer them.
a) Unlike b) Instead c) Compared d) While
- 33 A: What's the job of a technical supervisor?
B: He _____ the work of the technical team.
a) is monitoring b) monitors c) monitored d) has monitored
- 34 Aluminium is significantly _____ iron, which makes it a preferred material in industries like aerospace and automotive manufacturing.
a) more light than b) lighter than c) the lightest d) light than
- 35 Solar panels are the basic components _____ solar energy into electrical energy.
a) to converting b) for convert c) for converting d) acting as
- 36 A transmitter _____ signals to the receiver, enabling wireless communication between devices like radios or cell phones.
a) is for sending b) is used to send c) is to send d) used to send
- 37 This material has the _____ of resisting chemicals, so we should use it.
a) ability b) inability c) capability d) capacity
- 38 The world is working on reducing carbon emissions _____ global warming.
a) result of b) caused by c) because d) owing
- 39 The oil platform was secured to the seabed by _____ nine very long cables.
a) use b) result c) purpose d) means of
- 40 The new solar-powered vehicle is _____ from earlier models.
a) similar b) much like c) just as d) different

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SECTION 3: READING (10 POINTS)

6 Read the following text and answer questions 6.1, 6.2 and 6.3 below.

Mini Electric

Mini started making electric cars in 2008 with the Mini

E. It looked like the standard Mini Cooper, except that, under the bonnet, instead of a petrol engine, was a 150 kW electric motor. The lithium-ion battery which provided the energy for the car was located behind the rear seat, but this reduced legroom for the passengers sitting at the back and also space in the boot of the car.

The improved Mini Electric first went on sale in 2020. It has a 32.6 kW electric motor and the battery, which isn't as big as other similar electric cars, is packed beneath the floor, under the rear seat. However, since the back seat has been raised to fit the battery under it, there is less head room for passengers sitting at the back.

The benefit of having a small battery makes the Mini Electric very economical to run compared with similar cars of its size, but the range is only about 190 km before recharging. You can charge the battery at home, at work, at shared parking areas or at public networks. Mini Electric's battery has a usable capacity of 28.9 kWh from empty, and it takes from 14 hours, using a normal home charger, to about 30 minutes for a 0–80 percent top-up from a 50 kW public CCS charger.

Electric cars are quicker, smoother and quieter to accelerate than petrol cars. The Mini Electric can go from 0–62 mph in 7.2 seconds. As soon as you take your foot off the accelerator, the speed quickly decreases, and this switches the motor into a generator to recover the energy to recharge the battery.

The interior of the Mini Electric keeps the stylish retro design of the classic Minis. There is a 14 cm digital screen set behind the steering wheel, making it easy to check when you need to recharge the battery and how fast you are going. There is also a 22 cm infotainment screen in the middle of the dashboard, which, in the standard model, includes Bluetooth connectivity, DAB radio and sat-nav.

6.1. Comprehension. Are the following sentences 1-4 true (T) or false (F)? Correct the false ones. (4x1=4 points).

- 1 The electric motor is now situated behind the passengers sitting at the back.
- 2 The Mini Electric is a cheap car to run.
- 3 It can take about half an hour to fully charge the Mini Electric using a public charger.
- 4 It's easy to get information.

6.2. Comprehension. Answer the following questions 1-2 using your own words. Do not copy directly from the text. Your answer must be as complete as possible. (2x2=4 points).

- 1 Why is the Mini Electric considered economical to run, and what is one drawback of its battery size?

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2 What features in the Mini Electric help drivers monitor performance and navigation inside the car?

6.3 Vocabulary. Find a word from the text that means the same as the words 1-4 below. (4x0.5=2 points).

1 small (paragraph 1):

3 reduces (paragraph 4):

2 available (paragraph 3):

4 regular (paragraph 5):

Section 4: LISTENING (10 points)

7 Listen to the conversation between Nadia, Jeff and Danielle talking about ideas to reach the company's targets and circle the correct answers a-d or write the correct answer in questions 1-10. You will listen to the recording twice. (10x1=10 points)

- What is the UK government's long-term goal for greenhouse gas emissions?**
- What specific change did Nadia suggest for the HVAC system?**
 - Centralise and automate temperature control.
 - Let staff control settings manually.
 - Increase heating levels during winter.
 - Putting up notices for the staff.
- Why does Nadia reject the idea of emailing staff about energy use?**
 - She thinks it's ineffective.
 - She wants to avoid blaming individuals.
 - It's already been tried before.
 - The company doesn't use email.
- What percentage of the vehicle fleet is planned to be replaced with EVs by May?**
- What concern does Jeff raise about the EV replacement deadline?**
 - The vehicles are too expensive.
 - The target date is too soon.
 - The staff won't accept EVs.
 - Some cars are old and need replacing already.
- When do they plan to start installing EV charging points?**
- Why does Jeff want to change the energy supplier?**
 - They only use non-renewable sources.
 - They don't offer EV support.
 - They use little non-renewable energy.
 - They use mostly non-renewable energy.
- What is the company's current level of green investment in the pension scheme?**
- When does the company's current energy contract end?**

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10. What new investment is proposed for the pension scheme?

- a) Wind and hydroelectric power. b) Biofuels and recycling programs.
c) Carbon capture and storage. d) Solar panel manufacturing.

SECTION 5: WRITING (10 POINTS)

8 Choose one of the options either a or b below and write around 100-150 words on the topic given.

- a) Read the information in the table. Complete the description below. Use expressions for making comparisons.

High-speed trains: 2020

	France	Japan	China
High-speed rail network	4,327.1 km	2,764.6 km	40,267 km
Tracks under construction	560.1 km	657.1 km	29,733 km
Average speed	320 kph (LGV) 220 kph (upgraded)	320 kph	350 kph

The table compares...

- b) Use the notes below and write a checklist of things to do before and at a job interview. Use as many time clauses (*as soon as / first / once / next / when / finally / after finishing*) as you can.

Before interview: 1 check skills / experience match job advert → research company (on internet) / 2 write list of questions (to ask interviewer) / (interviewer (possibly) ask you) / 3 → practise interview – answer interview questions with friend

At interview: 4 tell interviewer what you know about company – show interest in job / 5 Interviewer asks questions → provide full answers to them (Strongly recommended!) / 6 give reasons why want job (Don't forget!) / 7 end of interview – thank interviewer (Say why)