

Technical English examination (Time: 1h30)

Full Name:.....

Specialty:.....

A. Complete the following using these words (03.5P):

steam, power, usage ,typhoon , harnessed , as can , ships, most, produced

The force of the wind can be very strong, **as can** be seen after the passage of a hurricane or a **typhoon**. Historically, people have **harnessed** this force peacefully, its **most** important ...**usage**. probably being the propulsion of **ships**.. using sails before the invention of the **steam** engine and the internal combustion engine.

B. Give the translation to the following (English-French) words (05P):

Renewable energy	Energie renouvelable
Low power factor	Faible facteur de puissance
Ratio of transformer	Rapport du transformateur
Electric car	Voiture électrique
PV cell	Cellule photovoltaïque
The bridge rectifier	<b>Pont redresseur</b>
polluting emissions	<b>Emissions polluantes</b>
internal combustion engine	<b>Machine a combustion interne</b>
Step up transformer	<b>Transformateur élévateur</b>
diode is forward biased and conducts	<b>Diode est polarisée en direct et conductrice</b>

C. How to read the following (01.5P):

3/7	<b>Three sevenths</b>
$(x+y)^3$	<b>X plus y all cubed</b>
$x \leq y$ :	x is less than or equal to y

D. Put the verbs into the correct form (Present perfect) (01P):

- 1- She ...**has become**.... (to become) more jealous since the birth of her brother.
- 2- I... **have bought**..... (buy) this magazine.

E. Choose the past perfect, or the past simple: (01P):

- 1- We had already eaten when John .....**came**.....(come) home.
- 2- Last year Juan .....**passed**..... (pass) all his exams.

F. Write down the correct form of the word in brackets (adjective or adverb) (01 P):

- He acted (excellent).....**excellently**.....He's an...**excellent**.....actor.
- Tom is (**slow**).....slow.. He works slowly

**G . Make the singular nouns into plural nouns(01.5P):**

1-The (library) ...**libraries**.... have a collection of rare books

4-You can put (sugar) ...**sugar** in your tea.

**H. Translate the following into arabic (01.5P):**

If a negative voltage is applied to the cathode and a positive voltage to the anode, the diode is forward biased and conducts. The diode acts nearly as a short circuit. If the polarity of the applied voltage is changed, the diode is reverse biased and does not conduct. The diode acts very much as an open circuit.

إذا تم تطبيق الجهد السلبى على المهبط والجهد الموجب على المصعد ، يكون الصمام الثانى مستقطب مباشرة و يسمح بمرور التيار. تقريبا الصمام الثانى بمثابة دائرة قصيرة.  
إذا تم تغيير قطبية الجهد المطبق ، يكون الصمام الثانى مستقطب عكسيا لا يسمح بمرور التيار. يعمل الصمام الثانى كدائرة مفتوحة.

**I. Translate the following into French (01,5 P):**

The PID controller is the most common form of feedback. It was an essential element of early governors and it became the standard tool when process control emerged in the 1940s.

Le régulateur PID est le plus utilisé dans les boucles de régulation. C'était un élément essentiel des anciens (premiers) régulateurs et qui est devenu un outil standard de commande de processus lors de son apparition durant les années 1940.

**J. Written Expression (03P):**

Write a short paragraph (6-8 lines) giving the advantages of Electric cars.

Electric cars are increasingly seen as a mode of transport, offering many benefits to individuals and businesses alike, There are **many** reasons why people are moving to Electric Vehicles (EV) to get them to the places they need to be. These include:

- EVs are fun to drive because they are **fast** and smooth.
- Many studies show that the emissions from burning fossil fuels such as gasoline produce harmful greenhouse gases. EV's produce no smelly fumes or harmful greenhouse gases.
- EVs are innovative and cool.
- EVs only cost approximately \$360 a year to operate compared to \$3600 for a gasoline vehicle.
- EVs are a smart and convenient choice.

Although the previous benefits, it's very important to say that the price still expensive compared to gasoline vehicle, also the public charging stations is not wide spread in the word.

*Good Luck*

*S.Messalti*