

PORTUGUÊS1a. QUESTÃO - ITEM ÚNICO

Valor 5,0

ENUNCIADO:

Redija, no máximo de 25 linhas, suas idéias sobre um dos temas abaixo:

- O I.M.E. e a Universidade Brasileira
- A Técnica e a Civilização Moderna
- A Importância Social do Engenheiro

INGLÊS2a. QUESTÃO - ITEM 1

Valor 1,0

ENUNCIADO:

Traduza: The Evolution of Galaxies

It is not quite 40 years since E. Hubble, using the 100 - inch reflecting telescope on Mount Wilson, conclusively demonstrated that the Great Nebula in Andromeda was not a mass of glowing gas but a galaxy -- a huge system of stars outside our own. Subsequently Hubble examined thousands of galaxies recorded on Mount Wilson plates and classified them according to their appearance. He was careful never to suggest that his classification scheme represented an "evolutionary" series.

2a. QUESTÃO - ITEM 2

Valor 1,0

ENUNCIADO:

Traduza:

In northern Europe, there had always been plenty of water; in the Eastern United States, where americans learned to farm, abundant rain supplied all the water needs of their crops. But when the plow crossed the Missouri River, they came to an arid country where water was more precious than land; its presence meant life, its absence death. Today water problems are part of the national consciousness, and most americans are aware that the future development of their country is intimately related to the wise use of water resources.

2a. QUESTÃO - ITEM 3

Valor 1,0

ENUNCIADO:

Traduza:

Brazil's participation in the Electronic Age is relatively recent, but our progress in that field has been enormous. The only Latin America telecommunications station via satellite is in our country. As for computers and other communication and control systems, Brazil has long occupied a position of leadership in the continent. A choice corps of technicians and engineers is spread through about a hundred electronic industries installed all over the country. The 30,00 workers of these industries manufactured almost half a million TV's a year, and besides over a million radios.

3a. QUESTÃO - ITEM 1

Valor 1,0

ENUNCIADO:

Traduza:

Les Particularités du Tungstène

Le tungstène est le plus réfractaire des métaux (point de fusion  $3410^{\circ}\text{C}$ ). Il possède un poids atomique élevé et une densité de 19,3 qui en fait un des métaux les plus lourds, le plus lourd peut-on dire des métaux industriels. Laminé ou étiré, il a une forte résistance mécanique qu'il conserve à des températures relativement élevées. Ces propriétés en font un métal de choix dans le domaine des hautes températures et il trouve ses applications dans la fabrication des lampes d'éclairage, des tubes électroniques, etc.

3a. QUESTÃO - ITEM 2

Valor 1,0

ENUNCIADO:

Traduza:

La formation de l'ingénieur doit être concrète et non abstraite. Il faut lui enseigner les idées générales et les lois qui en découlent, non seulement pour qu'il les comprenne mais pour qu'il sache les appliquer; avant tout il faut lui apprendre à se servir de son bon sens et de sa raison. Avant d'aborder pour lui un problème par le côté mathématique il faut épuiser tout ce que peuvent donner le raisonnement et le bon sens. Il y a des phénomènes qui ne peuvent se traduire que par des fonctions relevables expérimentalement: c'est le cas de tous les phénomènes magnétiques.