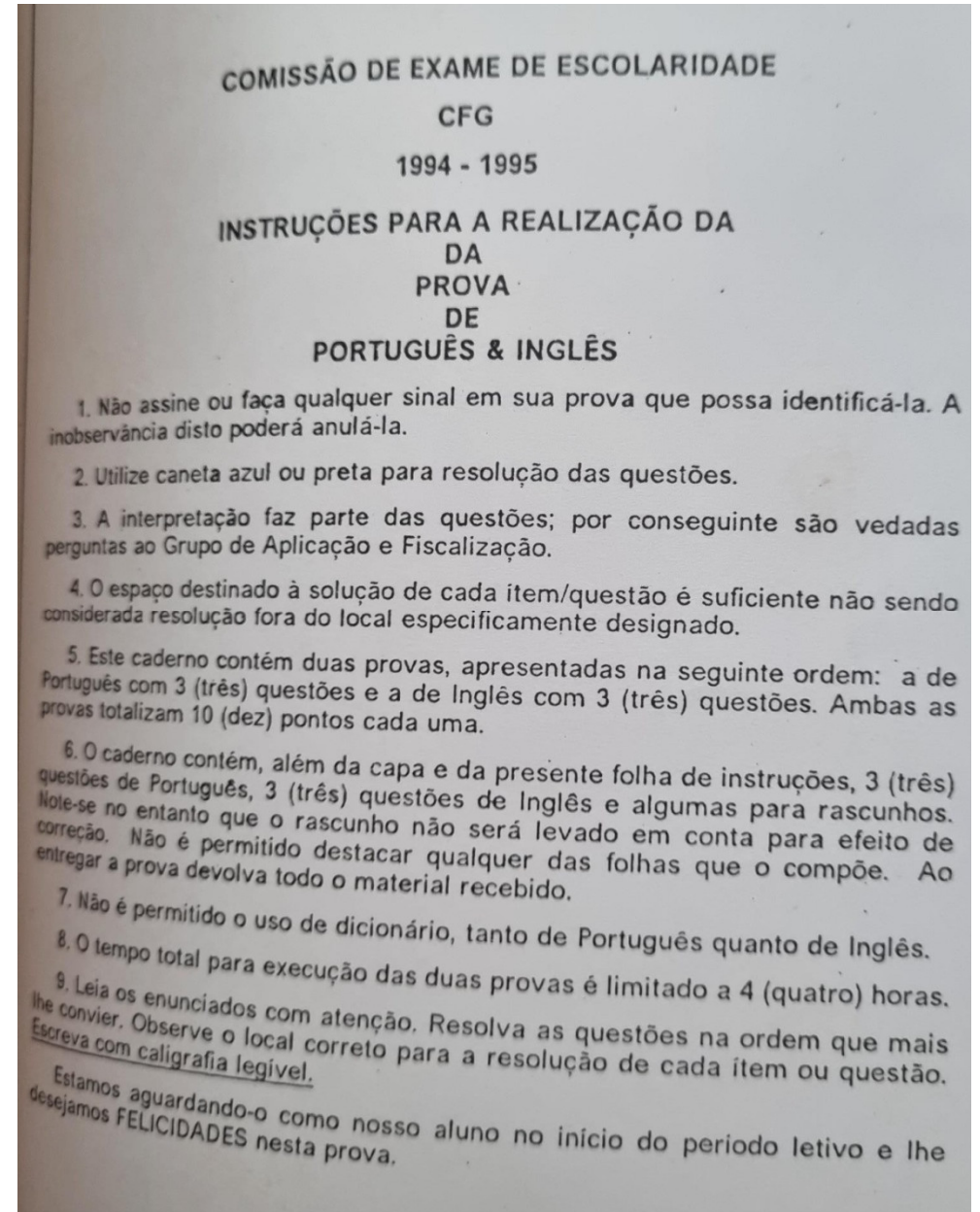
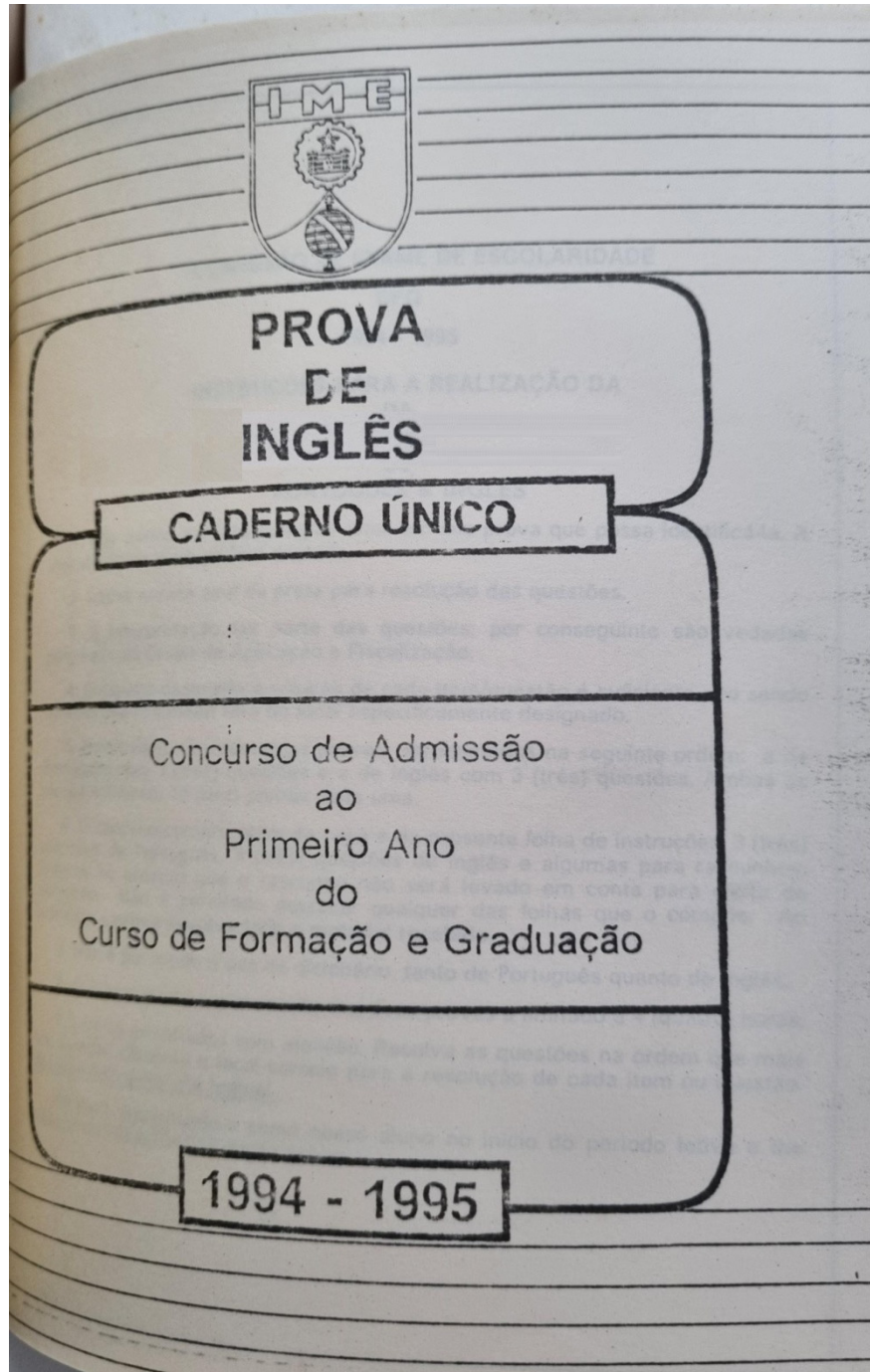


PROVA DE INGLÊS DO VESTIBULAR 1994/1995 DO INSTITUTO MILITAR DE ENGENHARIA



1ª Questão:

Valor: 3,5

TRADUZA

HEAT EXCHANGE

The "temperature" of a substance is a measure of the internal energy of motion per atom. When a temperature-sensing device - a "thermometer" - is placed in good thermal contact with the substance, motional or heat energy is exchanged between the thermometer and the substance until both have about the same internal energy of motion per atom, i.e. the same temperature. A mercury thermometer senses temperature by measuring small changes in the volume of the mercury as the temperature changes. A glass bulb containing a relatively large volume of mercury is connected to a small diameter tube so that, as the mercury in the bulb expands or contracts, the excess flows into or out of the tube. If the tube diameter is sufficiently small, this produces measurable changes in the length of mercury in the tube. The length of the mercury column thus indicates the "temperature" of the thermometer. Other thermometers sense the temperature by measuring changes in the voltage, current, or resistance of a device such as thermocouple or semiconductor junction.

(Adapted from "Physics Laboratory Manual", New Mexico Institute of Mining and Technology, 1989).

2ª Questão:

Valor: 3,5

TRADUZA

HALLOWEEN

Every year on October 31, Halloween scenes occur throughout the United States. American children love to dress up in costumes and go "trick-or-treating." If an adult refuses to supply a treat - candy, cookies, fruit, or money - the children may play a trick. Typical Halloween pranks are soaping windows, writing on doors with crayons, and sticking pins into doorbells to keep them ringing.

Masquerading, begging, and many other Halloween customs are now mainly for the amusement of children. But hundreds of years ago these customs were performed quite seriously by adults as parte of their religion. In 835 A.D., the Roman Catholic Church declared November 1 a church holiday to honor all saints. The name "Halloween" is a short way of saying "All. Hallow's Eve", the night before All Saints' Day. "Hallow" means holy or sacred. But although Halloween gets its name from a Christian festival, its customs are of pagan origin. They come from two different sources: an ancient Celtic festival in honor of Samhain, lord of death, and a Roman festival in honor of Pomona, goddess of gardens and orchards. The Halloween colors, black and orange, suggest both ideas: death and harvest.

3ª Questão:

Valor: 3,0

LEIA E INTERPRETE O TEXTO

In the warm enclosed waters of farm ponds, conditions are very likely to be lethal for fish when insecticides are applied in the vicinity. As many examples show, the poison is carried in by rains and runoff from surrounding lands. Sometimes the ponds receive not only contaminated runoff but also a direct dose as crop-dusting pilots neglect to shut off the duster in passing over a pond. Even without such complications, normal agricultural use subjects fish to far heavier concentrations of chemicals than would be required to kill them. In other words, a marked reduction in the poundages used would hardly alter the lethal situation, for applications of over 0.1 pound per acre to the pond itself are generally considered hazardous. And the poison, once introduced is hard to get rid of. One pond that had been treated with DDT to remove unwanted shiners remained so poisonous through repeated drainings and flushings that it killed 94 percent of the sunfish with it was later stocked. Apparently the chemical remained in the mud of the pond bottom.

In some parts of the world the cultivation of fish in ponds provides an indispensable source of food. In such places the use of insecticides without regard for the effects on fish creates immediate problems. In Rhodesia, for example, the young of an important food fish, the Kafue bream, are killed by exposure to only 0.04 parts per million of DDT in shallow pools. Even smaller doses of many other insecticides would be lethal. The shallow waters in which these fish live are favorable mosquito-breeding places. The problem of controlling mosquitoes and at the same time conserving a fish important in the Central African diet has obviously not been solved satisfactorily.

UTILIZANDO UNICAMENTE AS INFORMAÇÕES CONTIDAS NO TEXTO ANTERIOR, ASSINALE COM UM "X" A ÚNICA OPÇÃO QUE RESPONDE CORRETAMENTE À PERGUNTA FORMULADA.

- 1) Qual seria o melhor título para este texto?
 - (a) A Água dos Viveiros de Peixes de Fazenda
 - (b) Os Efeitos dos Inseticidas sobre os Peixes
 - (c) Os Usos do DDT
 - (d) O Cultivo de Peixes como Alimento
 - (e) A Salvação dos Suprimentos Alimentícios Africanos

- 2) O espírito do autor pode ser melhor descrito como sendo:
 - (a) jornalístico
 - (b) sarcástico
 - (c) zangado
 - (d) condenatório
 - (e) melancólico

- 3) De acordo com o texto, quais são os responsáveis pela presença de inseticidas nos viveiros de peixes?
 - I. As condições meteorológicas
 - II. O erro humano
 - III. Os métodos de cultivo comuns
 - (a) Apenas I
 - (b) Apenas III
 - (c) Apenas I e II
 - (d) Apenas I e III
 - (e) I, II e III

- 4) O autor utiliza o caso do peixe da Rodésia, principalmente, para:
- (a) mostrar os efeitos nocivos de inseticidas na matança de peixes
 - (b) provar que os problemas são os mesmos em todos os lugares
 - (c) avaliar as práticas agrícolas africanas
 - (d) considerar o problema do controle de mosquitos
 - (e) comparar os usos de inseticidas por africanos e americanos

- 5) No texto, o autor trata de tudo menos de:
- (a) expor um problema
 - (b) propor uma solução
 - (c) dar exemplos
 - (d) relacionar causas
 - (e) apresentar os efeitos