

**BREVET DE TECHNICIEN SUPERIEUR**

**Groupement XV**

**session 2000**

**ANGLAIS**

**Durée : 2 h**

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**- SUJET -**

*L'usage d'un dictionnaire bilingue est autorisé.*

LVE 6 AN

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## TRAVAIL DEMANDÉ

### I - COMPREHENSION

Faire, en français, un compte rendu du texte en 150 mots ( $\pm 10\%$ ).

(10 pts)

### The big one

Geologically, what happened in August 1999 in Turkey was well understood : a strike-slip movement<sup>1</sup> along the North Anatolian Fault, which runs right through the densely populated industrial heart of northern Turkey. The Izmit quake, in which the ground moved nearly 10 feet laterally in places, measured 7.4 on the Richter scale, according to calculations by the U.S. Geological Survey.

Thousands of buildings collapsed, although they were not huts or shanties, but apartment houses for the workers in Turkey's automotive and petrochemical industries. Most of them had been built in recent decades, under modern, earthquake resistant standards.

Modern building codes include devices to limit earthquake damage: while a quake can destroy an unreinforced building by making it sway from side to side, diagonal steel beams and dampers placed under the foundation of the building dissipate much of the lateral force (*see pictures 1 and 2*).

"The new building codes they're using in Turkey are very similar to what we're using in California," says Susan Tubbesing, director of the Earthquake Engineering Research Institute in Oakland, California. The difference from California, many authorities suspect, is that some Turkish contractors apparently prefer to erect substandard buildings, and there's no inspection process to stop them. It is a simple matter to add more sand and less cement to a batch of concrete, or to use a thinner grade of steel-reinforcing bar, without anyone's noticing the difference, at least until a 7.4 earthquake comes along.

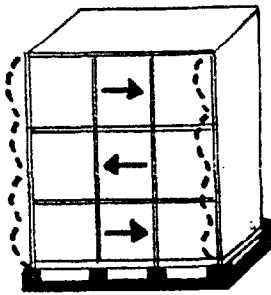
MURDERERS! The national daily *Hurriyet* thundered in a front-page headline, just a day after the disaster. "All those seen responsible will be brought before justice," Justice Minister Hikmet Sami Turk proclaimed righteously, although he was quick to add that responsibility had to be spread among "several factors, including mistakes in urban planning, construction without license..." Crooked contractors might well conclude that

they don't have much to fear from a prosecutor who begins his brief by citing "mistakes in urban planning."

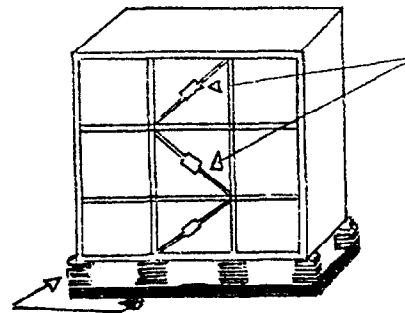
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<sup>1</sup> a strike-slip earthquake is an earthquake in which blocks slip past each other horizontally

Modern building codes include devices to limit earthquake damage :



**1. Unsafe :** A quake can destroy an unreinforced building by making it sway from side to side



**2. Safe:** Diagonal steel beams and dampers under the foundation dissipate much of the lateral force

Adapted from NEWSWEEK, August 30, 1999

## II - EXPRESSION

Choose **one** of the following questions (a, b, or c) and answer it (about 150 words). (10 pts)

- The text refers to the absence of "inspection process" in Turkey. Do you think that high safety standards for house-building are a luxury that only fully-developed countries can afford ?
- Do you think it is reasonable to allow people to build their homes and live in areas where earthquakes are very likely to occur ?
- In your profession, can incompetence and carelessness have serious consequences ?