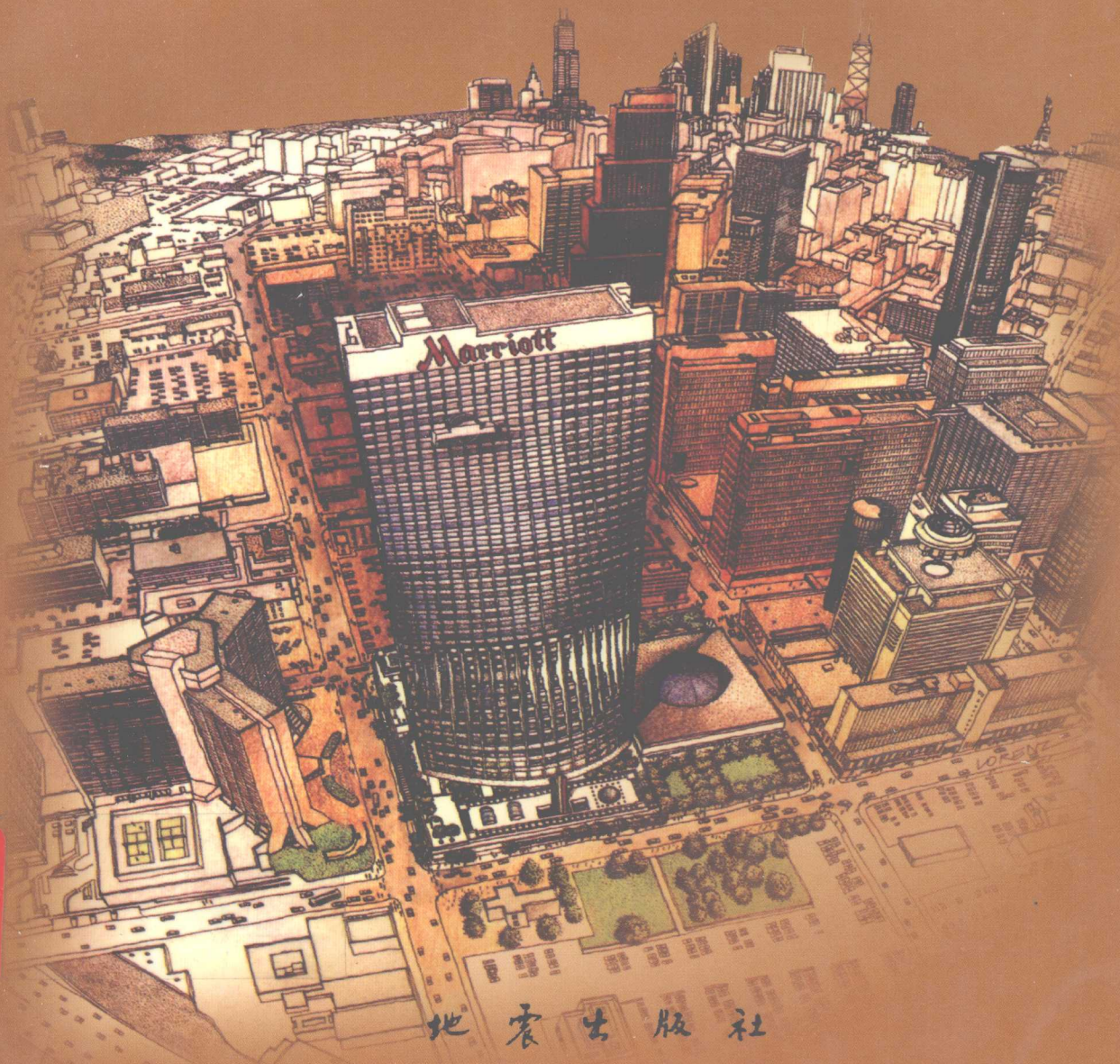


ENGLISH FOR ARCHITECTURE & CIVIL ENGINEERING

建筑工程专业英语

主编 汪德华



地震出版社

H31
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建筑工程专业英语

English for Architecture & Civil Engineering

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地震出版社

图书在版编目(CIP)数据

建筑工程专业英语/汪德华主编. —北京:地震出版社, 2003. 2
ISBN 7-5028-2228-3

I. 建… II. 汪… III. 建筑工程—英语—高等学校—教材 IV. H31

中国版本图书馆 CIP 数据核字(2003)第 005492 号

内 容 简 介

本书为适应高等院校建筑工程类专业英语的教学需要而编写,全书共 15 个单元,每个单元包括两部分:第一部分集说、写、读、译为体,练习形式多样,其中设计的句子简单,实用,易记,且附有插图,形式轻松活泼,着力培养学生对专业知识的表述能力;第二部分是阅读,内有(A)、(B)两篇阅读文章,文章选材新,文体符合一般英语原版书刊的格式,难易适中。每篇文章后附有生词、练习,书后附有练习的参考答案。

建筑工程专业英语

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出版发行:地震出版社

北京民族学院南路 9 号

邮编:100081

发行部:68423031 68467993

传真:68423031

门市部:68467991

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总编室:68462709 68423029

传真:68467972

E-mail: seis@ht.rol.cn.net

经销:全国各地新华书店

印刷:河南新丰公司印刷

版(印)次:2003年2月第一版 2003年2月第一次印刷

开本:787×1092 1/16

字数:346千字

印张:13.5

印数:0001~2000

书号:ISBN 7-5028-2228-3/G·246 (2796)

定价:23.00元

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前 言

根据大学英语教学大纲的要求, 大学英语教学分基础阶段和专业阅读阶段。在完成基础英语的学习后, 应在第五至第七学期开设专业英语课。通过专业英语课学习, 使学生能以英语为工具顺利阅读并正确理解有关专业书籍和文章。

编者在多年的建筑工程专业英语教学实践中, 发现学生在学习时普遍存在下列问题:

第一, 词汇难。建筑工程专业英语的词汇与建筑结构、材料、设备、施工等密切相关, 日常基础英语很少涉及这些专业化的词汇, 加上学生专业知识有限, 因而生词量很大。

第二, 句子难。专业英语采用正式文体, 逻辑性强, 每个句子包含的信息量大, 容量大, 句子多为长句, 语法结构复杂, 从而增加了理解的难度。

第三, 表达难。实践发现, 大多数学生都存在表达难的问题。排除生词、语法构成的障碍, 文章的大意也可意会, 却不能用流畅准确的英语或汉语表达出来。

针对专业英语的特点及在学习中的问题, 编者认为建筑工程专业英语的学习应立足于在有限的时间内充分调动学生学习的积极性和主动性, 培养学生的学习兴趣, 只有学中有趣, 才能克服畏难心理, 自觉、自如地阅读专业书籍和文章, 完成教学大纲所要求的专业英语阅读阶段的任务, 并为今后工作打下扎实的基础。

本书以培养学生的学习兴趣为主导思想, 既注重知识结构的完整性, 又突出所选材料的趣味性。全书课文以建筑工程为主线, 系统地介绍该专业所包括的基本内容。全书共 15 个单元, 每单元的第一部分集说、写、读、译为体, 练习设计的句子简单, 实用, 易记, 且附有插图, 形式轻松活泼, 着力培养学生对专业知识的表述能力; 第二部分是阅读, 选材新颖, 文体符合一般英语原版书刊的格式, 难易适中, 注重使学生提高专业英语阅读能力的同时还扩大专业知识面。

本书由汪德华规划全书结构、选编材料及担任主审。Alexandra Harrer (奥地利) 参与了部分材料的选编, 并为本书的文字排版、校对、审核做了大量的工作。马哲、阎清生、王卫军对书中的专业插图进行了绘制、校审, 并编制课后练习。

由于编者水平有限, 书中难免出现一些错误, 谨请读者谅解, 并恳请广大读者和同行专家提出宝贵批评意见。

编 者

2002 年 10 月

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UNIT 1 INTRODUCTION

Part 1 Activities

1. Here are some examples of basic forms, read them aloud and explain them in Chinese.



a cube



a hemisphere



a triangular prism



a pyramid



a rectangular prism



a cone



a cylinder



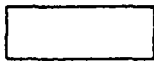
a square shape



a circular shape



a semi-circular shape



a rectangular shape



a triangular shape

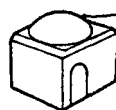
2. Look at the drawings of buildings and building components, and complete the sentences following the example.



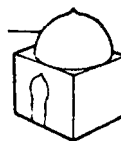
a hotel



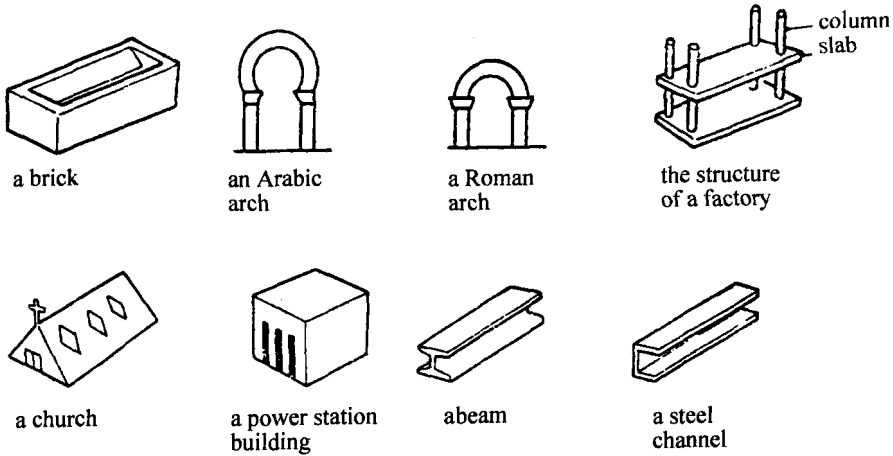
a minaret



an Egyptian house



a mosque



Example: The brick is shaped like a rectangular prism.

- a) The hotel is shaped like a _____.
- b) The top of the minaret...
- c) The dome of the Egyptian house...
- d) The column...
- e) The slab...
- f) The church ...
- g) The power station building...

Make sentences using the phrases given in the table below:

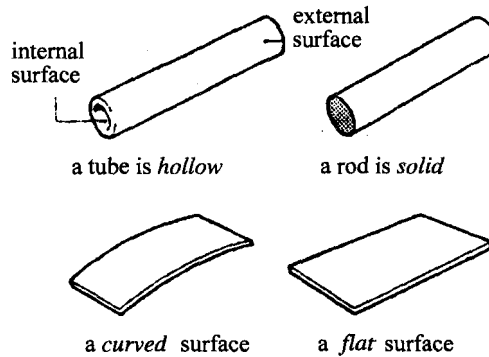
The cross-section of the	brick hotel top of the minaret	is	square circular semi-circular	in shape.
The longitudinal section of the	column church		rectangular triangular	

3. Now answer these questions about the drawings in exercise 2.

- a) Which building is pencil-shaped?
- b) Which building component is I-shaped in cross-section?
- c) Which building component is C-shaped in cross-section?
- d) Which dome is egg-shaped?

- e) Which arch is horseshoe-shaped?
- f) Which building has diamond-shaped windows?

4. Look and read.



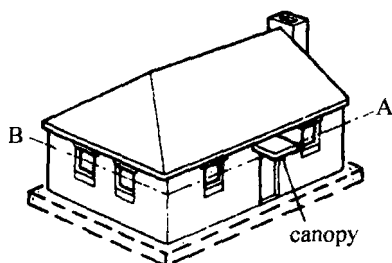
5. Now describe the following buildings and components in a similar way.

The power station building is hollow. It has five flat external surfaces.

- a) The church...
- b) The slab...
- c) The column...
- d) The mosque...
- e) The steel beam...

6. Look and read.

Look at this drawing of a single-storey house:



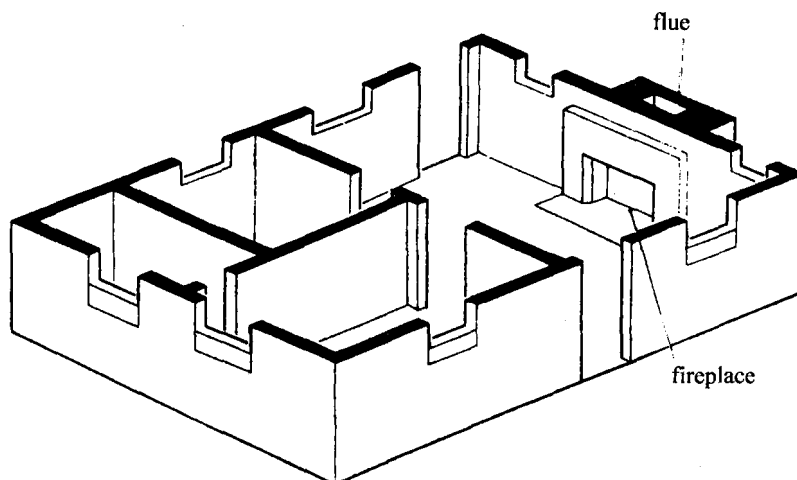
The sidewalls are perpendicular to the front wall.

The front wall is parallel to the back wall.

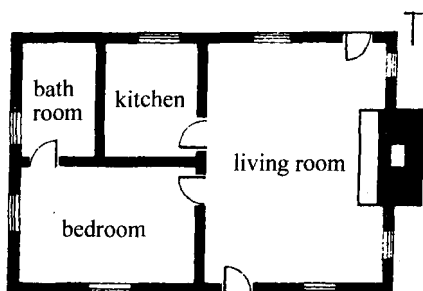
The ground slab foundation extends beyond the perimeter walls.

The roof of the house is removed by cutting along line AB that is parallel to the floor.

Now look at a cut-away view of the interior of the same house.



A view looking straight down on a cut-away view of the interior a building is known as a plan.



Looking north, the living room is on the right of the house.

Looking north, the bedroom is to the left of the living room.

The kitchen is next to the living room.

Viewed from the front, the kitchen is behind the bedroom (or the bedroom is in front of the kitchen).

7. Read this description of House A.

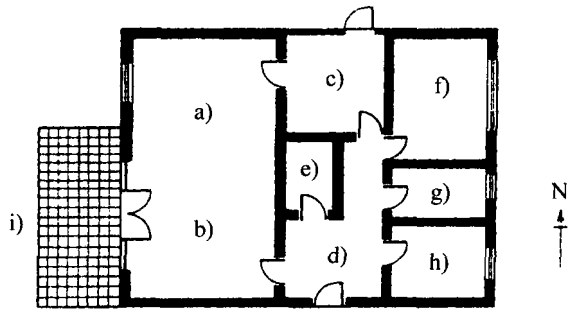
House A is a single-storey building with a square-shaped plan. It contains seven rooms. The entrance, which is located on the south side, leads into a hall. On the left of the hall is the living room and beyond that in the northwest corner is the dining area. The kitchen is adjacent to the dining area. A terrace is situated outside the living room on the west side. A toilet is located in the center of the house. Access to the toilet is from the hall. The two bedrooms are located on the

east side with a bathroom between them. There is also an entrance to the kitchen on the north side.

Exercises

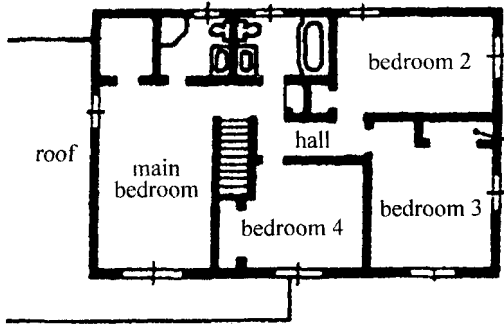
Match the letters with the names of the areas:

- a) _____
- b) _____
- c) _____
- d) _____
- e) _____
- f) _____
- g) _____
- h) _____
- i) _____

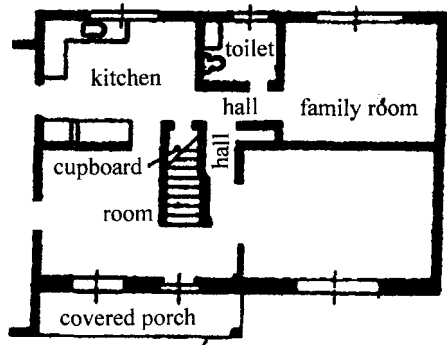


Ground floor plan of House A

8. Now write a description of House B.



First floor plan of House B



Ground floor plan of House B

9. Now decide whether these statements are true or false. Correct the false ones.

- a) The dining room is located under the main bedroom.
- b) A hall is located in the center of the first floor.
- c) There are three adjacent bathrooms on the first floor.

- d) There is a toilet between the kitchen and the dining room.
- e) Bedroom 2 is situated over the family room.
- f) There is a cupboard under the stairs.
- g) Bedrooms occupy most of the ground floor.
- h) Viewed from the front, the dining room is on the left of the entrance.
- i) Viewed from the rear, the living room is behind the family room.
- j) From the garage, you pass through the living room to enter the family room.
- k) The entrance is situated at the bottom of the stairs.
- l) The kitchen and family room are located on either side of the toilet.
- m) A door in the garage leads to the kitchen.

Part 2 Reading

(A) HOUSES

A house is a building that provides home for one or more families. Its main function is to provide shelter, but a house usually serves many more purposes. It is a center of family activities, a place for entertaining friends, and a source of pride in its comfort and appearance.

Many private houses built in the United States are designed by builders, rather than by professional architects. For this reason, family houses are most easily classified by the type of layout or the floor plan, not by reference to architectural styles. Here are some examples of commonly used styles of family homes in the United States.

Cape Cod. The Cape Cod house is usually small and has a sharply sloping roof. Many Cape Cods have three or four rooms on the ground floor and two small rooms on the second floor. In the modified Cape Cod the second floor is made larger by decreasing the slope of the roof in the rear and by adding dormers, or gabled extensions with windows, in the front. The Cape Cod originated in colonial New England.

Two-Story House. Before World War I , the usual one-family house had two full stories, as well as a basement and an attic. This type of house is probably still the most common house, and many new ones are being built following this design. It usually has a square floor plan and a central hall, and it is often called a Colonial house.

Ranch House. The ranch house is long and low, and all the rooms are at ground level. Some ranch houses have no basement. The ranch house originated in the West and Southwest of the United States and became popular in the building boom that followed World War II .

Split-level House. The split-level house has two or more levels, separated from each other by half flights of steps. The kitchen and family room may be on one level. The living room on a second level, and the bedrooms on a third level. This house was developed in the building boom that followed World War I , and it is probably the most popular type being built.

Attached Houses. Houses for two families are often called duplex houses, because they have two stories. One family may live on each story, or each family may have both upstairs rooms and downstairs rooms, with the two parts of the house separated by a wall through the middle.

Row houses. In towns and cities there are often rows or two-story houses attached to each other. These are called row houses. Each unit in a row may be a one-family or two-family house.

The basic function of housing is to provide shelter from the element. In the mid-1960s a most important value in housing was sufficient space both inside and outside. A majority of families preferred single-family homes on about half an acre of land, which would provide space for spare-time activities outdoors. Many families preferred to live as far away from the center of a metropolitan area as possible, even if the wage earners had to travel some distance to their work. About four out of ten families preferred country housing to suburban housing because their chief aim was to get far away from noise, crowding, and confusion of

the city center. The accessibility of public transportation had ceased to be a decisive factor in housing because most workers drove their cars to work. People were chiefly interested in the arrangement and size of rooms and the number of bedrooms.

However people today require much more than this of their housing. A family moving into a new neighborhood will be interested to find out about the district they are moving to. In regard to safety, health, and comfort people's requirements have increased. A family may also ask how near the housing is to churches, schools, stores, the library, a movie theatre, and the community center. It has become more and more popular to choose the new location for a family home according to the living standard of the neighborhood.

NEW WORDS

entertain <i>v.</i>	招待,款待,请客
layout <i>n.</i>	布局,安排,设计
slope <i>n.</i>	斜面,斜坡;倾斜,斜度
rear <i>n. a.</i>	后部,尾部,背面;后方
dormer <i>n.</i>	天窗
colonial <i>a.</i>	殖民的
attic <i>n.</i>	阁楼
ranch house <i>n.</i>	平房建筑
boom <i>n.</i>	托架;起重臂;吊杆;弦杆
duplex house <i>n.</i>	二联住宅
acre <i>n.</i>	英亩
decisive <i>a.</i>	决定性的

Exercises

1. Translate the following phrases into Chinese:

1) a one-family house

- 2) to provide shelter
- 3) classified by the type of layout or the floor plan
- 4) a sharply sloping roof
- 5) separated by half flights of steps
- 6) the number of bedrooms

2. True or False?

Decide whether the following statements are true (T) or false (F) according to the passage given above.

- 1) A house is a building that provides home for one or more families. (),
- 2) In the United States all private houses are designed by professional architects. ()
- 3) Before World War I, the usual one-family house had 3 full stories, as well as a basement and an attic. ()
- 4) A split-level house has two or more levels, separated from each other by a full flight of steps. ()
- 5) Houses attached to each other in towns and cities are called row houses. ()
- 6) The basic function of housing is to provide shelter e. g. against wind, rain and sun. ()
- 7) In the mid-1960's, many families preferred to live in the center of a metropolitan area, even if it was noisy and dirty. ()
- 8) Nowadays sufficient space both inside and outside is the most important value for housing. ()

3. Answer the following questions:

- 1) What is the main function of a building? Give some examples of additional functions.
- 2) Who can design buildings in the United States?

- 3) What styles of family homes do you know according to the reading passage?
- 4) What is the name of a small house with three or four rooms on the ground floor, two small rooms on the second floor and a sharply sloping roof?
- 5) What is the name of the house with all the rooms on the ground level?
- 6) What is the name of a house with several levels that are separated by half flights of steps, kitchen and family room on the ground floor, living room on a second and bedrooms on a third level?
- 7) Which house has added dormers or gabled extensions with windows in the front?
- 8) In what way have the requirements for family housing changed during the last decades?

(B) A CAREER IN ARCHITECTURE

Why would a career in architecture attract you? Well, if you are the kind of person who is curious about your surroundings, then you might just be interested in learning how to improve them. As an architect you would have the power and the responsibility to shape the environments in which people spend their daily lives. This makes architecture one of the most influential professions in today's society. We are living in a rapidly changing world, and so we need people with the imagination to create the buildings and cities our society needs to keep pace with progress. If you are someone who is excited by change, then you could grasp the opportunity to build the future the way you want it.

Read about the career profile of Isabel Allen, a female architect from Great Britain, who is working as editor of the architectural magazine "Architect's Journal".

"After completing an economics degree at Manchester University, I took a degree in architecture at the University of Westminster. This was followed by working as an architectural assistant in Singapore, where I worked on various

projects including the Open University building in Singapore, a nursery school in China, and various housing developments in China and Singapore. I returned to England to take a post-graduate diploma in architecture at South Bank University. I completed the course in 1996 and immediately joined the Architects' Journal as Buildings Editor. My job was to decide which buildings to publish, source photographs and articles or write them myself.

In 1999 I became editor of the Architects' Journal. I am responsible for a team of 12 editorial staff members. My job changes according to the day of the week. On Monday morning I have a meeting with people who represent the commercial side of the magazine to discuss how we are doing financially. There is a commercial aspect to my job - talking to the advertising team about advertising opportunities, meeting advertisers and making sure that we don't spend more than we can afford.

Monday and Tuesday are our press days and the whole team tends to concentrate on that week's issue. On the other days I have meetings with architects or advertisers and I plan and prepare features for future issues - we are working on twelve different issues at any given time. Every Friday the editorial team meets to discuss future issues and any problems, which have come up during the week.

There are various public duties, which go with the job, such as acting as a judge for architectural competitions, visiting schools of architecture, or giving interviews to newspapers, television or radio when there is an architectural story in the news. But my main responsibility is to make sure that the content of the Architects' Journal is always interesting, intelligent and accurate."

NEW WORDS

architect	<i>n.</i>	建筑师
influential	<i>a.</i>	有影响的
profile	<i>n.</i>	侧面,剖面;剖面图,外形,
diploma	<i>n.</i>	证书

assistant	<i>n.</i>	助手, 助理, 副手
source	<i>n.</i>	源点
commercial	<i>a.</i>	商业的
accurate	<i>a.</i>	精确的

Exercises

1. Translate the following phrases into Chinese:

- 1) a career in architecture
- 2) to keep pace with progress
- 3) to complete a degree at the university
- 4) to take a post-graduate diploma in architecture at the university
- 5) to concentrate on the week's issue
- 6) to take part in architectural competitions

2. True or False?

Decide whether the following statements are true (T) or false (F) according to the passage given above.

1. If you are the kind of person who is always interested in your surroundings, then a career in architecture will attract you. ()

2. As an architect you are able to change the shape of buildings and consequently influence the daily lives of people. ()

3. Isabel Allen studied architecture at many universities around the world such as the South Bank University in Great Britain and the Open University in Singapore. ()

4. In 1996 she became editor of the Architects' Journal and since then she is responsible for a team of 12 editorial staff members. ()

5. The task of a Buildings Editor is to decide which buildings to publish, to check the source of photos and articles or sometimes even write some articles. ()