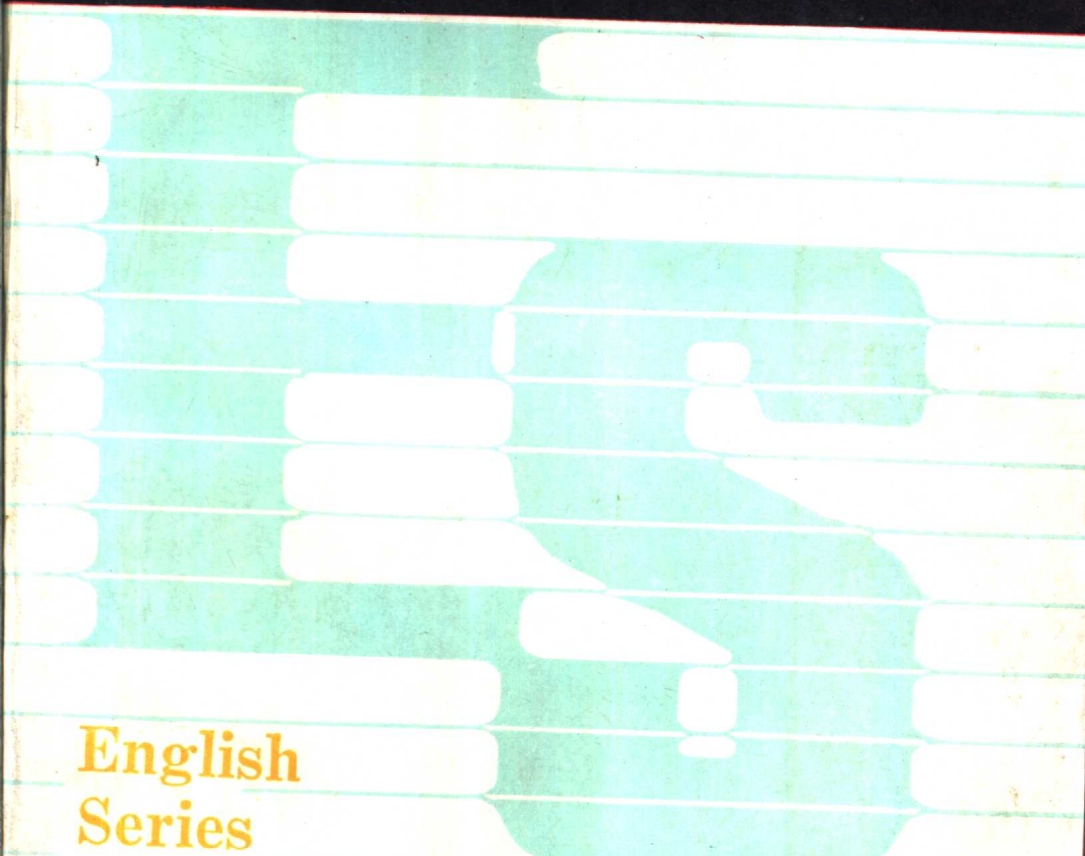


土木建筑 系列英语

中国建筑工业出版社

第二级 通用



English
Series
in Architecture
and Civil Engineering

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顾惠民 主编 余善沐 编

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顾惠民主编

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《土木建筑系列英语》 第二级 通 用

审 稿 者：贺善镛（主审）

杨匡汉

Mary Jo Bauermeister

责任编辑：杨 军

致 读 者

土木建筑行业是我国社会主义经济的重要支柱之一。土木建筑行业职工素质如何,对这个行业发展关系极大。全国土木建筑行业职工约 2000 万人,其中工程技术人员和管理人员约 300 万人。随着对外开放的不断扩大,我国同世界各国之间的人员往来、学术交流、信息传播、经济活动以及工程承包等业务日益频繁,土木建筑行业不同领域不同层次的读者,尤其是中青年知识分子,学习和进修英语的要求越来越迫切。奉献在读者面前的《土木建筑系列英语》读本,正是为满足这样的需要而编撰的。

《土木建筑系列英语》是一套结合土木建筑类各专业的英语分级读本,整个系列按文章难度分为四级。第一、二级,不分专业,内容为土木建筑方面的浅显易懂的科学普及文章。第三级暂分八个专业,即:建筑学与城市规划、工业与民用建筑、给水与排水、供热与通风、道路与桥梁、工程机械、管理工程、计算机与自动化,每个专业一册,其他专业视情况再行编撰;内容为各有关专业一般性的科学普及或科学技术文章。第四级内容选收专业性较强的科学技术文章;目前暂出版建筑学与城市规划、工业与民用建筑专业各一册,其他专业留待以后考虑。

我们在编撰《土木建筑系列英语》时,力求使这套读本具有自己的特点。

首先,起点低。这套系列读本的起点为 1000 个单词。凡初中毕业或具有同等英语程度的读者,都可以从第一级开始自修或听课。这就大大地拓宽读者面,使土木建筑行业多数人员有条件有兴趣利用这套读本来学习英语。

其次,便于自学。编撰的四级读本尽量保持一个较为平缓的“坡度”。全部课文均附参考译文,每个练习都有答案。争取使读者在普通英语的“浅基础”上,一步一步地学会阅读专业英语。通过学习第一、二级读本,可以掌握土建类科技英语最常用的 2500 个单词以及阅读科技英语书刊和有关资料所必需的基本语法知识。继之,通过学习第三级读本,可以累计掌握本专业最常用的 3500 个单词和比较系统的英语构词法知识,获得阅读本专业英语书刊和有关资料的能力。最后,通过学习第四级读本,可以累计掌握本专业 4500 个单词和比较全面的英译汉知识;这样,比较流利地阅读和翻译本专业英语书刊和有关资料,就有了比较牢固的语言基础。

这套系列英语读本第一、二级均配有录音磁带,由英、美文教专家朗诵,口音纯正,声质清晰,语调自然,使读者听来亲切、生动。

第三, 适应性强。各级英语读本既彼此衔接, 又相对独立, 可以适应各种不同程度的读者的需要。一般读者如果从第一级学起, 循序渐进, 持之以恒, 每周自修或听课 3~4 小时, 经过一年半左右, 便可学完前三级读本, 为阅读本专业英语书刊和有关资料创造条件。有意深造的读者, 再用半年左右, 攻读第四级读本, 就可以达到比较流利地阅读和翻译本专业英语书刊和有关资料的目的。对于英语基础较好的读者, 如高等院校高年级学生, 可把第一、二级读本作为泛读教材, 第三、四级读本作为精读教材来学。对于硕士研究生或具有同等英语程度的工程技术人员, 则可直接阅读第三、四级读本; 在掌握英语构词法和英译汉技巧方面, 这两级读本对他们会有所帮助。而广播电视大学、函大、夜大、职大、业大及其有关中等专业学校的学生, 也可依照自己的水平和需要, 选学有关读本。

第四, 语言规范可靠。这套系列读本的全部课文, 均选自近年来面世的英语国家的出版物。但为了适应系统地学习英语的需要, 编撰者对不少课文作了必要的删改和加工; 而在删改和加工之后, 均送各校聘请的英、美文教专家审阅, 使之保持规范的科普或科技文体的现代英语的特点。全部练习均由编撰者按统一要求编写, 目的在于帮助读者更好地掌握课文中重要的语言材料。全部参考译文均由有关专业教师一一校阅, 术语比较准确, 行文比较通达。

《土木建筑系列英语》读本是集体智慧的结晶。十几所土木建筑高等院校的五十多位英语教师和专业教师参加了编撰、审订工作, 其中某些分册还聘请校外的有关专家过目。哈尔滨建筑工程学院、重庆建筑工程学院、北京建筑工程学院、沈阳建筑工程学院、吉林建筑工程学院、南京建筑工程学院、山东建筑工程学院、西北建筑工程学院、苏州城市建设环境保护学院和河北建筑工程学院等, 都对编撰、审订工作表示关怀和支持。各学院聘请的十多位英、美文教专家也提出过宝贵的意见。对此, 我们表示深切的谢意。

本书有四十课, 八个阶段练习, 出现新词 1288 个, 常用词组 243 个。课文内容广泛而又不过于专深, 大都属于土建工程各专业的基础知识。每课包括课文、注释、练习等。每阶段练习都采用专题小结的形式集中练习某个语法内容, 并与第一级通用读本衔接。

目前, 尚未见到紧密结合本学科、本专业编撰的系列英语分级读本, 我们只是做了初步的尝试。万事开头难。尽管编撰、审订人员做了大量的细致的工作, 但这套《土木建筑系列英语》读本还不是尽善尽美, 毫无瑕疵的。我们期待着读者和同行们的批评和指正。

《土木建筑系列英语》编审委员会
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Lesson 1

Building a House

We all like to watch work going on.① Work on buildings, whether houses, offices, factories, roads or bridges, interests us because there are so many men doing different things.②

Some men and machines are digging. Some are carrying away earth or rock. Some are putting together the steel frame, some are mixing and pouring concrete, and some are laying bricks.

The roof must be covered. All the pipes for water, gas and drainage have to be laid. The woodwork has to be made and fitted. The electricity has to be brought in and the lights and electric points fixed. Before the work is finished, painting has to be done.

Before any of the building can begin, plans have to be drawn to show what the building will be like, the exact place in which it is to go and how everything is to be done.

Suppose that you wanted to have a new house built. You would find a piece of land, the right size and in the right place, which you would then have to buy. To make quite certain that both you and the owner of the land were agreed about where it was, you would have to find it on a map or plan.

The first thing you would look at on the map would be the scale. This tells you what length a line must be on the map to show a certain distance on the ground. If the map has a large scale—when, for instance, twenty-five inches on the map stands for one mile—we call it a plan. Maps showing all the land in the country may be bought in the shops.

The person whose skill you would need to help you build your house would be an architect. He makes drawings to show what the house will be like. There will be a plan for each floor. This shows the kind of view you would have if you could take the roof off and look into the house from a helicopter.

He will also draw views from the side. These are called elevations.

These plans and elevations have on them everything the builder will want to know. They are often on the scale of four feet to one inch.

Now the architect has to find out how much of each material the building will need, how much cement, how many bricks, how much wood, how much steel, how much cable for the electricity, how many feet of pipe for water and gas, how many tiles for the roof and many other things. He may do this himself or he may have the help of an expert in this work called a Quantity Surveyor.③

When all these lists are ready a builder will say how much it will cost to build the house and, if the price is agreed, everything is put down on paper. This paper is called a contract and the builder and the buyer of the house both sign it to show that they have agreed on everything.

New Words

- | | |
|---|--|
| 1. building ['bɪldɪŋ] <i>n.</i> 建筑
物, 房屋; 营造 | 9. helicopter ['helɪkɒptə] <i>n.</i>
直升飞机 |
| 2. carry ['kæri] <i>v.</i> 搬运, 装运 | 10. tile [taɪl] <i>n.</i> 瓦, 瓦片 |
| 3. woodwork ['wʊdwɜ:k] <i>n.</i>
木建部分; 木工活, 细木活 | 11. quantity ['kwɒntəti] <i>n.</i> 数
量; 额; 值 |
| 4. painting ['peɪntɪŋ] <i>n.</i> 上色;
涂油漆; 粉刷 | 12. surveyor [sə:'veɪə] <i>n.</i> 检
查
员; 调查员 |
| 5. exact [ɪg'zækt] <i>a.</i> 准确的 | quantity ~ 估算员 |
| 6. certain ['sɜ:tən] <i>a.</i> 确定(无
疑)的; 某一, 一定的 | 13. contract ['kɒntrækt] <i>n.</i> 合
同 |
| 7. scale [skeɪl] <i>n.</i> 比例; 比例尺 | 14. buyer [baɪə] <i>n.</i> 买主; 采
购
员 |
| 8. architect ['ɑ:kɪtekt] <i>n.</i> 建
筑师, 设计师 | |

Phrases and Expressions

- | | |
|--------------------------------------|-------------------------|
| 1. put ... together 把...放在一
起, 组装 | 2. electric points 电源接头 |
| | 3. for instance 例如 |

4. stand for 代表

5. on the scale of ... to ... 按...
比...的比例

6. agree on ... 对...意见一致, 同
意, 商定

Notes

- ① We all like to watch work going on. 句中 to watch work going on 是带现在分词的复合结构。work 是宾语, going on 是宾语补足语。
- ② Work on buildings, whether houses, offices, factories, roads or bridges, interests us because ... 一句中词组 work on 的意思是“从事(某工作)”, whether (they are) houses ... 是 whether 引导的让步从句的省略形式。
- ③ ... an expert in this work called a Quantity Surveyor. 介词短语 in this work 和分词 called 都是说明 expert 的后置定语。

Exercises

I. Comprehension

Fill in the blanks without looking at the text.

- 1. work on buildings interests us because _____.
 - A. there are so many different kinds of materials
 - B. there are so many men doing different things
 - C. there is so much noise
 - D. there is so much dust
- 2. After walls have been built, the _____ must be covered.
 - A. pipes for water
 - B. drainage
 - C. roof
 - D. wires
- 3. Before any of the building can begin, _____ have to be drawn to show what the building will be like.
 - A. plans
 - B. maps
 - C. elevations
 - D. oil paintings
- 4. If you want to have a new house built, the first thing you should do is to find a piece of _____.
 - A. work
 - B. road
 - C. land
 - D. news
- 5. Maps showing all the land in the country may be bought from _____.

- A. book shops B. drug stores C. supermarkets
D. post offices
6. The first thing you would look at on the map would be the _____.
A. scale B. size C. direction D. distance
7. The person whose skill you need in building your house is an _____.
A. artist B. architect C. astronaut D. assistant
8. The plans and elevations are often on the scale of _____.
A. 25 inches to one mile B. one inch to one foot
C. one inch to 25 miles D. one inch to four feet
9. The architect has to find out _____ of each material the building will need.
A. how much B. how many C. how little D. how few
10. If the price is agreed, everything is _____ on a contract.
A. put up B. put down C. put on D. put off

II. Cloze Test

The following passages, taken from the text you have just read, have words omitted from it. Fill in the blanks without looking back at the text.

- 1) The roof must be 1. All the pipes for water, gas and 2 have to be 3. The woodwork has to be made and 4. The electricity has to be 5 in and the lights and electric points have to be 6. Before the work is 7, painting has to be 8.
- 2) Now the architect has to find out how 1 of each material the building will need, how 2 cement, how 3 bricks, how 4 wood, how 5 steel, how 6 cable for the electricity, how 7 feet of pipe for water and gas, how 8 tiles for the roof and many other things.

III. Vocabulary

The following words have been taken from the text you have just read. Choose the best meaning or synonym for the word used in the selection.

1. certain

This tells you what length a line must be on the map to show *a certain* distance on the ground.

A. settled B. having no doubt C. not described D. some

2. view

He will also draw *views* from the side.

A. natural scenery B. opinions
C. purpose D. engineering drawings

3. quantity

He may do this himself or he may have the help of an expert in this work called a *Quantity* Surveyor.

A. the property of things B. an amount or number
C. a large amount or number
D. a maths symbol

4. contract

This paper is called a *contract*.

A. acquirement B. becoming smaller
C. agreement D. becoming tighter

Lesson 2

A Roof over Our Heads (1)

Man has three basic needs: food, clothing and shelter. If a man lives in a warm climate, clothing is not absolutely necessary. However, man cannot live without food, and he has little chance of survival without shelter. Mankind needs shelter to protect him from the weather, wild animals and his enemies.

Long before man learned how to build houses, he looked for natural shelters, as the animals did①. He found that he could protect himself by climbing up into trees or by crouching under the overhanging edges of cliffs, or by crawling into caves. The first shelters or homes actually built by man were very simple. For his building materials, he used what he could find easily around him: rocks, tree branches, dried grasses, animal skins. It was a long time, however, before man began to build permanent shelters because, until man learned to farm, he lived by hunting. And, in order to follow game, he had to be able to move from one hunting ground to another. Thus, the first man-made shelters were those that could be easily transported.

The first permanent shelters were probably built twenty to forty thousand years ago by fish-eating people who lived in one place as long as the fish supply lasted. Fish-eaters could stay in one place for several years. Once man learned to farm, he could live even longer in one place. Thus he was able to build a permanent home. Once again, he built his home with the materials he found at hand②. In Egypt, for example, wood was scarce, so most houses were built of bricks made of dried mud, with a roof supported by palm tree trunks.

When the Norsemen came from Scandinavia to northern Europe, they found many forests, so they built homes with a framework of heavy tree trunks and they filled the space between the trunks with clay. The Eskimos, on the other hand, lived in a land where there was little or no

wood. They learned to adapt their homes perfectly to their surroundings. In the winter time, when everything was covered with snow and ice, the Eskimos built their homes with blocks of ice. When the warm weather came and melted the ice, the Eskimos lived in a tent made of animal skins.

The weather is man's worst natural enemy. He has to protect himself from extremes of heat and cold and from storms, wind and rain.

Where the weather is hot and dry, the house is generally made of clay bricks. The windows are small and high up, so that the heat stays outside. There is often a flat roof, where people can find a cool place to sleep. In hot, humid areas, on the other hand, people need to be protected from the rain, as well as the heat. In such places, houses are built with wide, overhanging roofs, balconies or verandas.

Where there are torrential rains, houses are either built on piles to keep them off the ground, or they have steep thatched roofs to drain off the rain. People living in the Congo River region have found that steep, heavily-thatched roofs^③ drain off the jungle rains more quickly. Other people in Africa have found that a roof of broad leaves sheds rain^④ quickly.

New Words

- | | |
|---|---|
| <p>1. absolutely ['æbsəlu:tli] <i>ad.</i>
绝对地, 完全地</p> <p>2. survival [sə'vaɪvəl] <i>n.</i> 生存</p> <p>3. weather ['weðə] <i>n.</i> 天气, 气候</p> <p>4. crouch [kraʊtʃ] <i>v.</i> 蹲伏, 蜷缩</p> <p>5. overhang ['əʊvəhæŋ] <i>v.</i> 悬于...之上; 突出于...之上</p> <p>6. cliff [klɪf] <i>n.</i> 悬崖, 峭壁</p> <p>7. fish-eating ['fɪʃ'i:tɪŋ] <i>a.</i> 吃鱼的</p> <p>8. fish-eater ['fɪʃ'i:tə] <i>n.</i> 吃鱼</p> | <p>的人, 以鱼为食的人</p> <p>9. palm [pɑ:m] <i>n.</i> 棕榈; 棕榈叶</p> <p>10. Norseman ['nɔ:smən] <i>n.</i>
(复Norsemen)古代斯堪的纳维亚人; 北欧人(尤指挪威人)</p> <p>11. adapt ['ædæpt] <i>v.</i> 使适应, 使适合</p> <p>12. extreme [iks'tri:m] <i>a.</i> 末端的; 极度的; 极端的 <i>n.</i> 极端</p> <p>13. veranda [və'rændə] <i>n.</i> 游廊, 外廊</p> <p>14. torrential [tɔ'renʃəl] <i>a.</i> 奔</p> |
|---|---|

流的, 急流的

15. steep [sti:p] *a.* 陡峭的, 峻峭的 *n.* 悬崖, 峭壁

16. thatch [θætʃ] *v.* 用茅草等盖 (屋顶)

17. region ['ri:dʒən] *n.* 地区

Egypt ['i:dʒɪpt] *n.* 埃及

Scandinavia [skændi'neivjə] *n.* 斯堪的纳维亚(半岛)

Congo River ['kɒŋɡəʊ] *n.* 刚果河(即扎伊尔河)

Africa ['æfrikə] *n.* 非洲

Phrases and Expressions

1. long before 很久以前, 在...以前很久

2. follow game 追逐猎物

3. hunting ground 猎场

4. as long as 长达...(之久); 只要

5. at hand 近在手边, 在附近

6. on the other hand 另一方面; 相反

7. keep off 不接近; 远离; 避开

Notes

① Long before man learned how to build houses, he looked for natural shelters, as the animals did.

本句为复合句。long before引导时间状语从句; as引导方式状语从句。

② Once again, he built his home with the materials he found at hand. 句中 he found at hand 与 around him 意思基本相同, 表示“就地取材”。

③ heavily-thatched roofs 是“用厚厚的茅草覆盖的屋顶”。这里 heavily 的意思是“大量地”, “稠密地”。

④ shed rain 等于 drain off rain (排雨)。

Exercises

I. Comprehension

Fill the blanks without looking back at the text.

1. The first people to have permanent shelters were probably _____.

A. hunters

B. farmers

C. meat-eating people

D. fish-eaters

2. Man's most urgent need, in building a house, is protection from

- _____.
- A. enemies B. the weather C. earthquakes D. floods
3. A house with a steep sloping roof is more likely to be found

- _____.
- A. in the desert B. near the coast
C. in a windy country D. in a rainy country
4. Houses with roofs of broad leaves can be found in _____.
A. Asia B. Africa C. the Philippines D. Scandinavia
5. The Norsemen who came to Northern Europe built their houses with _____.
A. rocks B. wooden roofs and stone walls
C. wood D. wooden walls and thatched roofs

II. Cloze Test

The following passage, taken from the text you have just read, has words omitted from it. Fill in the blanks without looking back at the text.

Subject Matter Words Missing

Long before man learned how to 1 houses, he looked for 2 shelters, as the animals did. He found that he could 3 himself by climbing up into trees or by crouching under the 4 edges of cliffs, or by crawling into 5. The first shelters or homes actually built by man were very 6. For his building materials, he used what he could find 7 around him: rocks, tree branches, dried grasses, animal skins. It was a long 8, however, before man began to build 9 shelters because, until man learned to farm, he lived by 10.

III. Vocabulary

The following words have been taken from the text you have just read. Choose the best meaning or synonym for the word used in the selection.

1. survival

Man cannot live without food, and, he has little chance of *survival* without shelter.

- A. not being hurt B. remaining alive