

华南师范大学

计算机学院 2015-2016 学年（上）学期期末考试试卷

《计算机科学技术导论》试卷（A 卷）

专业_____ 年级_____ 班级_____ 姓名_____ 学号_____

题号	一	二	三	四	五	六	七	八	九	十	总分
得分											

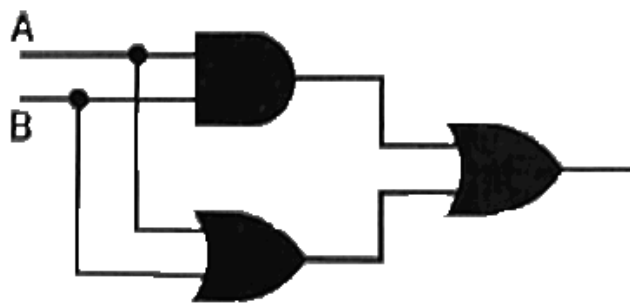
一、Multiple Choice (每题 2 分, 共 20 分)

1. Turing Machine is ().
A. the very first electronic computer B. the first general-purpose computer
C. an abstract mathematical model D. the first commercial computer
2. The transistor was used to make the main processing component in the hardware in the () generation of computer.
A. first B. second C. third D. fourth
3. In computing discipline we always analyse problems by removing complexity and details, leaving only the necessary information. This mental thinking way is ().
A. engineering B. top-down design C. simplicity D. abstraction
4. 813 is not a number in () number system.
A. hexadecimal B. decimal C. octal D. 12-base
5. The information in real world is often () while computer can only represent () information. This is a limitation of computing.
A. analog B. decimal C. binary D. digital
6. The following are audio formats except ().
A. mp3 B. wav C. gif D. au
7. English is represented in () character set.
A. ASCII B. Unicode C. neither ASCII nor Unicode
D. either ASCII or Unicode

8. Images can be represented in ().
- A. raster-graphics format B. vector-graphics format
 C. either A or B D. neither A nor B
9. The most fundamental operations performed by computer hardware is ().
- A. logical functions such as NOT, AND and OR
 B. arithmetic operations such as addition, subtraction and multiplication
 C. instructions such as load, store and process
 D. on or off of an electrical flow

二、Fill in the Blanks. (每题 2 分, 共 30 分)

1. The fundamental question underlying all of computing is: _____
2. The place value of digit '1' in 1039 in 16-base number system is _____.
3. Negative decimal number -10 is represented as _____ in 8-bit sign-magnitude binary, and represented as _____ in 8-bit 2's complement.
4. Suppose a language containing 200 characters. To represent this language in computer, we need at least _____ bits to represent each character.
5. The yellow color is represented as the RGB value _____ .
6. The key problem in representing video information in computer is _____.
7. As for the following circuit, the Boolean expression of the output is _____. When A is 0 and B is 1, the output is _____ .



8. One approach to developing an algorithm is using the _____ methodology which breaks a problem up into a set of subproblems, the solutions of which create a solution to the overall problem. This approach results in a _____ structure of modules.

9. In Pep/8 virtual computer, if we want to load a decimal number 7 into A register, the instruction should be written as _____ .

10. In Pep/8 virtual computer, given the following state of memory (in hexadecimal),

0001 A2

0002 11

0003 FF

0004 00

After the execution of the instruction “11000001 00000000 00000011”, the content of the A register is _____ (in hexadecimal).

11. The network protocol that breaks messages into packets, reassembles them at the destination, and takes care of errors is _____ .

12. Web pages are created using HTML, a language that uses tags to indicate the nature of a piece of information and how it should be displayed. Every HTML document is interpreted by _____ to be shown as a web page.

三、Word Explanation (每题 5 分, 共 10 分)

1. Binary tree

2. Polymorphism

四、Reading Comprehension (每小题 4 分, 共 20 分)

Is there a way for the CPU to detect whether *it* is receiving erroneous data? Detection is accomplished by using a parity(校验) bit----an extra bit automatically added to a byte for purpose of testing accuracy. There are even (偶数)-parity systems and odd(奇数)-parity systems. In a computer using an even-parity system, the parity bit is set to either 0 or 1 so that the number of 1s is even. For instance, when the letter W is

pressed on the keyboard, the signal 01010111 is emitted(发出). Before the signal is sent to the CPU, the number of 1s is counted---in this case, 5. A parity bit is added to the front and set to 1, thereby making the number of 1s even. The signal 101010111 is sent. When the signal is received by the CPU, the number of 1s is checked again. If it is odd, it means an error has occurred. This is called a parity error.

1. The word “it” on Line 1 means ().
A. way B. CPU C. erroneous data D. detection
2. The ASCII value of “Z” is 01011010. In a computer using an **odd**-parity system, its parity bit should be set to be ().
A. 1 B. 0 C. neither A nor B D. either A or B
3. In a computer using an **even**-parity system, when (), there must have been a parity error.
A. the parity bit is 1 B. the parity bit is 0
C. the number of 1s is odd D. the number of 1s is even
4. If a parity system doesn’t detect an error, ().
A. there must not have been even numbers of errors
B. there may have been odd numbers of errors
C. the CPU must be receiving correct data
D. the CPU may be receiving correct data
5. The title of the paragraph should be ().
A. the detection principle of CPU B. how does computer find errors?
C. the parity system D. how does computer work?

五、Answer The Following Questions (每小题 10 分, 共 20 分)

1. Convert decimal number 1019 and 2150 to octal numbers. Then add these two numbers in octal number system.
2. When we create a C++ program as a .cpp file in Visual C++6.0 and click “run” to run the program, what actually happens?

