华南师范大学

计算机 学院 2015 -2016 学年（ 上 ）学期期末考试答案

《 计算机科学技术导论 》答题卷（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 (C).
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 (B) 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 (D).
A. engineering   B. top-down design   C. simplicity   D. abstraction

4. 813 is not a number in (C) number system.
A. hexadecimal   B. decimal   C. octal   D. 12-base

5.The information in real world is often (A) while computer can only represent (D) information. This is a limitation of computing.
A. analog   B. decimal   C. binary   D. digital

6. The following are audio formats except (C).
A. mp3   B. wav   C. gif   D. au

7.English is represented in (D) character set.
A. ASCII   B. Unicode   C. neither ASCII nor Unicode
D. either ASCII or Unicode

8. Images can be represented in (C).
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 (D).
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: What can be (efficiently) automated?

2. The place value of digit '1' in 1039 in 16-base number system is 16^3.

3. Negative decimal number -10 is represented as 10001010 in 8-bit sign-magnitude binary, and represented as 11110110 in 8-bit 2's complement.

4. Suppose a language containing 200 characters. To represent this language in computer, we need at least   8   bits to represent each character.

5.The yellow color is represented as the RGB value   (255,255,0)   .

6. The key problem in representing video information in computer is CODEC/compression .

7. As for the following circuit, the Boolean expression of the output is A·B+(A+B)   .When A is 0 and B is 1, the output is   1   .
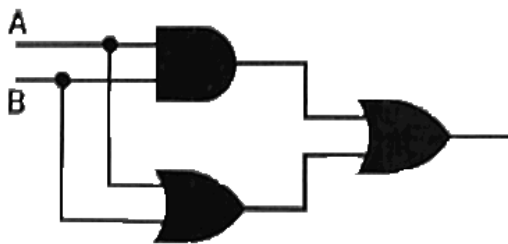
8. One approach to developing an algorithm is using the top-down design methodology which breaks a problem up into a set of subproblems, the solutions of which create a solution to the overall problem. This approach results in a   hierarchical/tree   structure of modules.

9.In Pep/8 virtual computer, if we want to load a decimal number 7 into A register, the instruction should be written as 11000000 00000000 00000111 .

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   FF00   (in hexadecimal).

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

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   (web) browser   to be shown as a web page.

三、Word Explanation（每题 5 分，共 10 分）

1．A binary tree is a tree data structure in which each node has at most two children, which are referred to as the left child and the right child.

2. Polymorphism: the ability of a language to have duplicate method names in an inheritance hierarchy and to apply the method that is appropriate for the object to which

the method is applied.

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

1. The word "it" on Line 1 means (　　B　　).
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　　).
A. 1　　B. 0　　C. neither A nor B　　　D. either A or B

3. In a computer using an **even**-parity system, when (　　C　　), 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, (　　D　　).
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 (　　C　　).
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 **5** 分，共 **10** 分）

1. Convert decimal number 1019 and 2150 to octal numbers. Then add these two numbers in octal number system.

$1019 = 1773_8$

$2150 = 4146_8$

(以上 6)

$1773_8 + 4146_8 = 6141_8$

（以上 4）

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?

C++ is a high-level programming language. Programs written in it must be translated into machine code to be run by the computer.

compiler or interpreted:　translates C++ program into object file or machine code file .exe

(linker: link the object file and library codes into an executable file .exe)

machine code file is loaded into memory by loader .