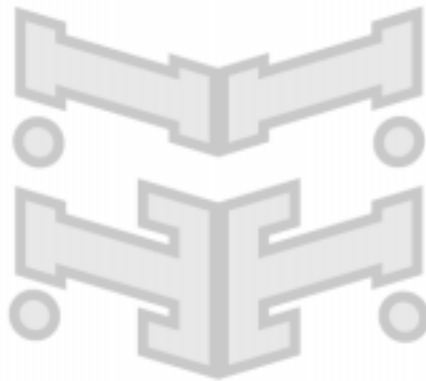




MULTIPLE CHOICE | FREE RESPONSE QUESTIONS

Information Technology Foundation Course

I N F O R M A T I O N R E P R E S E N T A T I O N **L**



World ORT Union





DO



I.T.



Information Technology Foundation Course

MULTIPLE CHOICE QUESTIONS

INFORMATION REPRESENTATION

Answer the questions by putting the chosen letter in the box on the answer sheet or by circling the correct letter.

- 1 How many single digit numbers/symbols, excluding zero, would be needed for a number system with a base or radix of 60?
A. 59
B. 60
C. 61
- 2 In a base 60 system what would the number 11 be as a decimal number?
A. 9
B. 17
C. 61
- 3 What is the 8-bit binary value of the decimal number 85?
A. 10101010
B. 01100101
C. 01010101
- 4 What is the decimal value of the binary number 1111?
A. 15
B. 4
C. 64
- 5 What is the decimal value of the octal number 215?
A. 327
B. 141
C. 97
- 6 What is the decimal value of the hexadecimal number FF?
A. 30
B. 255
C. 256
- 7 What is the hexadecimal value of the decimal number 1476?
A. 4C5
B. 1B7
C. 5C4
- 8 What does 'BCD' coding of numbers mean?
A. Basic Coding Description
B. Binary Coded Decimal
C. Bit Code Design
- 9 What is the binary sum of 01011 and 00101?
A. 10000
B. 01112
C. 01110
- 10 What is the two's complement of the binary number 11010000?
A. 00101111
B. 00110000
C. 10000001



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FREE RESPONSE QUESTIONS

These questions do not appear in the interactive DO IT course. If you want help to answer them you can use the navigation buttons to move to the relevant unit of the course. You may prefer to use the Contents listings. Write your answers on paper.



INFORMATION REPRESENTATION

Information

- 1 Write about a supermarket stock system where coded information is used to produce data.
Explain what useful information can be obtained from a stock system and how the information might affect decisions on the running of the supermarket. You should consider the input devices that might be used to input data into the computer and the different departments that might make use of this information.
- 2 The owner of a small village store and post office gets his stock from a central distributor who supplies many similar small shops. How could the shop owner make use of his home computer in his business to make it more efficient and profitable?

Number systems

- 1 Convert the decimal number 7542 to:
 - a. binary
 - b. octal
 - c. hexadecimal numbers
- 2 Convert to decimal:
 - a. the binary number 10101101
 - b. the octal number 2753
 - c. the hexadecimal number 4D7E

Codes

- 1 Write the word FADE in ASCII code.
Write the decimal number 4579 in BCD code

Computer arithmetic

Perform binary addition and subtraction on the following problems:

- 1 a. Binary Addition

i.

$$\begin{array}{r} 1010 \\ +0011 \\ \hline \end{array}$$

ii.

$$\begin{array}{r} 0110 \\ +0011 \\ \hline \end{array}$$

iii.

$$\begin{array}{r} 0110 \\ +0111 \\ \hline \end{array}$$

FREE RESPONSE QUESTIONS

Computer arithmetic

1 b. Binary Subtraction

i.

$$\begin{array}{r} 1111 \\ -0111 \\ \hline \end{array}$$

ii.

$$\begin{array}{r} 1010 \\ -0101 \\ \hline \end{array}$$

iii.

$$\begin{array}{r} 1111 \\ -1010 \\ \hline \end{array}$$