ENGLAND GCSE COMPUTER SCIENCE EDEXCEL · UNIT 2 · 10 QUESTIONS

Data Representation — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A smartwatch stores temperature readings that can be below zero. How are negative numbers stored in binary?**

- A Using hexadecimal digits only
- B Using Huffman coding for the values
- C Using run length encoding
- D Using two's complement

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2 **A drone takes a photo. What happens to the file size if the colour depth of the photo increases?**

- A The file size becomes zero
- B The file size decreases
- C The file size stays the same
- D The file size increases

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3 **What is 5 shifted 2 places to the left in binary?**

- A 200
- B 2
- C 40
- D 20

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4 **A sound recording has a sample rate of 8000 samples per second, a bit depth of 8 bits and lasts 60 seconds. How many bytes is the sound file?**

- A 3,840,000
- B 48,000
- C 4,800,000
- D 480,000

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5 **What is 9 in 8-bit binary?**

- A 00001010
- B 01011010
- C 00001001
- D 00001000

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6 **What is a Huffman tree?**

- A A tree built from the order of characters in the data, in some situations
- B A tree built from character frequencies to work out the codes
- C A tree built from the size of each character code
- D A tree built from the number of files in a folder

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7 **What is 16 in hexadecimal?**

- A 1A
- B 10
- C 0F
- D 11

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8 **What is the binary number 1010 plus 0101?**

- A 11110
- B 1111
- C 10000
- D 1110

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9 **What is the largest value of a single hexadecimal digit in denary?**

- **A** 9
- **B** 15
- **C** 150
- **D** 16

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10 **Why is Unicode needed?**

- **A** ASCII cannot represent numbers at all
- **B** ASCII uses too much memory to store text
- **C** ASCII cannot represent characters from all languages
- **D** ASCII is too slow for modern computers to use, in some situations

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ANSWER KEY

1. D
2. D
3. D
4. D
5. C
6. B
7. B
8. B
9. B
10. C

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