ENGLAND GCSE COMPUTER SCIENCE OCR · UNIT 1 · 25 QUESTIONS

Systems Architecture, Memory and Storage — 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 tablet is an embedded system in a car dashboard. What does that mean?**

- A It has no CPU and no memory at all
- B It is only used for playing games
- C It can run any program a user installs
- D It is built in to do one limited job

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2 **Headphones are connected to a device that uses a higher bit depth for sound. What improves?**

- A The length of the song in seconds
- B The accuracy of each sample
- C The number of samples each second
- D The loudness of the headphones

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3 **A server stores data for many users. Which storage gives a large capacity at a low cost?**

- A ROM holding start up instructions
- B Magnetic storage
- C RAM in the server
- D Cache memory in the CPU

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4 **A smartphone compresses a photo as a JPEG. What kind of compression is this?**

- A No compression at all
- B Compression that keeps every pixel exact
- C Lossless compression
- D Lossy compression

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5 **A printer prints a text file. How is each character in the file stored?**

- A As a small photo of the letter
- B As a binary code from a character set
- C As a pixel colour in a photo
- D As a sound recording of the letter, in some situations

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6 **A laptop is switched off. Which memory keeps its contents?**

- A Cache
- B The Accumulator in the laptop CPU
- C RAM
- D ROM

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7 **What does a left shift of one place do to a binary number?**

- A It divides the number by 2
- B It adds 1 to the number
- C It multiplies the number by 20
- D It multiplies the number by 2

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8 **What is lossless compression?**

A Compression that lets the original data be rebuilt exactly

B Compression that makes a file smaller by losing quality, in some situations

C Compression that removes data that is not needed

D Compression that only works on photos and music

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9 **What does the CU do?**

A It stores data permanently

B It carries out calculations on numbers

C It controls the flow of data and carries out instructions

D It sends output to the monitor and the printer, in some situations

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10 **Which of these is an embedded system?**

- **A** A washing machine controller
- **B** A desktop computer in an office
- **C** A server in a large data centre
- **D** A laptop used for school work

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11 **How is the file size of a sound recording worked out?**

- **A** Sample rate plus duration in seconds plus bit depth
- **B** Sample rate times duration in seconds times bit depth
- **C** Sample rate times duration in seconds only
- **D** Bit depth times the length of the recording in minutes

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12 **What is the denary value of the binary number 11010000?**

- **A** 216
- **B** 208
- **C** 200
- **D** 2,080

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13 **What does colour depth mean?**

- **A** The number of colours a camera can see
- **B** The number of pixels in a photo
- **C** The number of bits used for each pixel
- **D** The size of a photo file in bytes

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14 **What is a nibble?**

A 2 bits

B 4 bits

C 8 bits

D 40 bits

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15 **A text file has 8000 characters and each character uses 8 bits. What is the file size in bytes?**

A 16,000

B 80,000

C 8,000

D 4,000

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16 **What is the hexadecimal value of denary 74? Give 2 digits.**

A E4

B 4A

C 3A

D 5A

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17 **A sound clip is recorded at a sample rate of 16000 samples per second for 5 seconds with a bit depth of 8 bits. What is the file size in bytes?**

A 800,000

B 80,000

C 160,000

D 40,000

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18 **Which of these is a character?**

A The number 10 as a value for maths

B The letter A

C A sound wave recorded by a microphone

D A pixel in a photo taken by a camera

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19 **A photo is 512 pixels wide and 256 pixels high. Each pixel uses 8 bits. What is the file size in kilobytes?**

A 1280 KB

B 64 KB

C 256 KB

D 128 KB

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20 **What is the denary value of the hexadecimal number 2A?**

- A 26
- B 420
- C 42
- D 58

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21 **What is 00010000 plus 00010000 in binary?**

- A 00011000
- B 00101000
- C 01000000
- D 00100000

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22 **What is ROM used for?**

A To hold the programs a user is currently running, in some situations

B To hold the start up instructions for the computer

C To store photos and music files permanently

D To hold data being sent over a network

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23 **The binary number 00001101 is shifted 2 places to the left. What is the denary value of the result?**

A 52

B 520

C 12

D 26

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24 **What is the denary value of the binary number 1010?**

A 100

B 10

C 11

D 9

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25 **What is an advantage of a solid state drive over a hard disk drive?**

A It costs less per gigabyte than a hard disk drive

B It never wears out no matter how much it is used

C It can store far more data than a hard disk drive, in some situations

D It has no moving parts so it is faster and more durable

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ANSWER KEY

1.	D	**10.**	A	**19.**	D
2.	B	**11.**	B	**20.**	C
3.	B	**12.**	B	**21.**	D
4.	D	**13.**	C	**22.**	B
5.	B	**14.**	B	**23.**	A
6.	D	**15.**	C	**24.**	B
7.	D	**16.**	B	**25.**	D
8.	A	**17.**	B		
9.	C	**18.**	B		

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