ENGLAND GCSE COMPUTER SCIENCE EDEXCEL · FINAL EXAM · 50 QUESTIONS

Final Exam — 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 laptop runs a search to find a file by name. The files are not in any order. Which search should it use?**

- A Merge sort used for sorting only
- B Linear search
- C Binary search
- D Bubble sort

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2 **A smartwatch shows a colour code in hexadecimal. Why is hexadecimal used instead of binary?**

- A It is shorter and easier for people to read
- B It can hold larger numbers than binary can
- C It uses less memory than binary to store data
- D It runs faster than binary on a computer

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3 **A smartphone stores photos in the cloud. What is a disadvantage of cloud storage?**

- A Files can only be stored in one place at a time
- B Files take up space on the computer hard disk
- C Files cannot be reached with no internet access
- D Files are stored on a disk that can break

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4 **Headphones are used with a program that stores a list of songs. What data structure holds the list of songs?**

- A A Boolean value
- B A single variable
- C An array
- D A constant

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5 **A games console program counts how many numbers in the list 5, 15, 8, 22 are greater than 10. What is the count?**

- A 1
- B 2
- C 3
- D 20

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6 **A router sends a text message. The text is stored with Huffman coding. What does Huffman coding do?**

- A It removes every second character from a file to shrink it, in some situations
- B It replaces runs of the same character with a count
- C It gives shorter codes to characters that appear most often
- D It gives the same code to every character in a file

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7 **A printer receives a file to print over the network. What is an IP address?**

- **A** A unique number that identifies a computer on a network
- **B** A name given to a website on the internet, in some situations
- **C** A password used to log on to a network
- **D** A unique number built into a network card

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8 **A games console is thrown away with household rubbish. What should happen to it instead?**

- **A** It should be taken to a recycling centre for e-waste
- **B** It should be left on the street
- **C** It should be buried in the garden
- **D** It should be burned to save space, in some situations

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9 **What is decomposition?**

A Finding things that are the same in different problems

B Writing out the steps of a solution in order

C Breaking a problem into smaller parts

D Removing detail from a problem to focus on what matters

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10 **How many colours can a colour depth of 8 bits per pixel show?**

A 2560

B 255

C 128

D 256

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11 **What is a brute force attack?**

A Tricking someone in person into giving away details

B Trying many passwords until the right one is found

C Sending fake messages to trick people into details

D Flooding a network with traffic to stop it working

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12 **What does iteration do in a program?**

A It repeats instructions while a condition is true or a set number of times

B It joins two strings together end to end

C It chooses which instructions run based on a condition, which can happen in some cases

D It stores data in a named store for later use

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13 **What is an advantage of a linear search?**

A It is always faster than a binary search

B It works on a list that is not sorted

C It sorts the list as it searches through it

D It only ever checks one item in the list

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14 **How many bytes are in 8 kilobytes?**

A 819

B 81,920

C 8,000

D 8,192

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15 **A CPU runs at 5 gigahertz. How many cycles does it carry out each second?**

- A 5,000,000,000
- B 50,000,000,000
- C 5,000,000
- D 500,000,000

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16 **What is an index in an array?**

- A The number of items in the array in total
- B The name given to the array as a whole
- C The value stored at a position in the array
- D The position of an item in the array

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17 **Which of these is a way of representing an algorithm?**

- A Pseudocode
- B A database of records
- C A web page about the problem
- D A spreadsheet of results

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18 **A sound recording has a sample rate of 22050 samples per second, a bit depth of 16 bits and lasts 5 seconds. How many bytes is the sound file?**

- A 2,205,000
- B 220,500
- C 22,050
- D 1,764,000

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19 What is multitasking?

A Running one program on more than one computer, in some situations

B Connecting more than one user to a network

C Running more than one program at the same time

D Saving more than one file at the same time

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20 What is a constant?

A A fixed number written into the program code

B A word that starts a loop in the program

C A named store that holds a value that can change, in some situations

D A named store that holds a value that never changes

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21 **A program sets total to 0, then adds each number in the list 8, 8, 8 in turn. What is the value of total at the end?**

- A 240
- B 23
- C 25
- D 24

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22 **What is the denary value of the binary number 101?**

- A 6
- B 50
- C 5
- D 4

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23 **A file of 90 megabytes is downloaded in 30 seconds. What is the bandwidth in megabits per second?**

- A 24
- B 25
- C 12
- D 240

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24 **Which data type should be used to store whether a light is on or off?**

- A Integer
- B Boolean
- C Character
- D Real

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25 **In a bubble sort, which items are compared?**

A The first item and the last item only

B Items chosen at random from the list

C The middle item and the items around it

D Items next to each other in the list

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26 **What is the denary value of the hexadecimal number E2?**

A 225

B 227

C 226

D 2,260

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27 **What can slow down a wireless network?**

A Too little storage space on the devices, in some situations

B Too few cables connecting the devices

C Too many computers switched off at once

D Interference from other devices and walls in the way

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28 **An array holds 10 items. What is the index of the last item?**

A 10

B 90

C 8

D 9

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29 **A bubble sort sorts a list of 6 items. How many passes does it need at most?**

A 50

B 5

C 6

D 4

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30 **What is lossy compression?**

A The file is split into parts that cannot be joined

B The file is made larger so it is easier to read

C Some data is lost and the original cannot be fully restored

D No data is lost and the original can be fully restored, in some situations

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31 **A router sends data between networks. What does a router do?**

- A It checks computers on a network for malware
- B It stores files shared on a network
- C It connects computers inside one network only
- D It sends data between networks

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32 **A smartwatch sends its data to a phone using Bluetooth. What is Bluetooth?**

- A A short range wireless connection
- B A type of cable
- C A wired network
- D A satellite link, in some situations

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33 **In an insertion sort, where is each new item placed?**

- **A** At the start of the list every time, in some situations
- **B** At the end of the list every time
- **C** In the correct place among the items already sorted
- **D** In a random place in the list

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34 **What is colour depth?**

- **A** The number of bits used for each pixel
- **B** The number of colours in the whole photo
- **C** The number of pixels in a photo
- **D** The number of bytes in a photo file

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35 Why should software be updated?

- A Updates fix security holes that attackers could use
- B Updates remove the need for anti-malware software, in some situations
- C Updates make files take up less storage space
- D Updates make old hardware run like new hardware

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36 What is string concatenation?

- A Changing a string into a number
- B Splitting a string into single characters
- C Joining two strings together end to end
- D Finding how many characters a string has

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37 **A program counts how many numbers in the list 3, 30, 6 are greater than 10. What is the count at the end?**

A 1

B 20

C 0

D 2

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38 **How many bytes are in 2 kilobytes?**

A 20,480

B 2,048

C 204

D 2,000

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39 **A server stores files for a school network. What is a LAN?**

- **A** A network with only one computer in it
- **B** A network covering a small area such as a home or school
- **C** A network covering the whole world
- **D** A network covering a large area such as a country, in some situations

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40 **A smartwatch program checks whether the wearer has reached 10,000 steps. Which programming construct makes the decision?**

- **A** A variable with no value
- **B** A loop that never ends
- **C** A comment in the code
- **D** Selection with IF

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41 **Which of these is the most efficient way to find an item in a long sorted list?**

A Bubble sort

B Linear search

C Checking every item in a random order

D Binary search

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

A 200

B 2

C 40

D 20

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43 **A CPU runs at 4 gigahertz. How many cycles does it carry out each second?**

- A 4,000,000
- B 400,000,000
- C 40,000,000,000
- D 4,000,000,000

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44 **Which of these is a comparison operator?**

- A AND
- B Greater than
- C MOD
- D Plus, in some situations

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45 **A program sets total to 0, then adds each number in the list 20, 10, 5 in turn. What is the value of total at the end?**

- A 35
- B 36
- C 350
- D 34

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46 **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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47 **A connection runs at 24 megabits per second for 20 seconds. How many megabytes are downloaded?**

- A 600
- B 70
- C 60
- D 30

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48 **What is a field in a record?**

- A One piece of data in the record
- B The name given to the record as a whole
- C The position of an item in the record
- D The number of items in the record in total

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49 **What is pseudocode?**

- **A** A real programming language that runs on a computer, in some situations
- **B** A way of testing a program to find its errors
- **C** A way of writing an algorithm using structured English
- **D** A visual way of showing an algorithm with symbols

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

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

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ANSWER KEY

1. B
2. A
3. C
4. C
5. B
6. C
7. A
8. A
9. C
10. D
11. B
12. A
13. B
14. D
15. A
16. D
17. A
18. B
19. C
20. D
21. D
22. C
23. A
24. B
25. D
26. C
27. D
28. D
29. B
30. C
31. D
32. A
33. C
34. A
35. A
36. C
37. A
38. B
39. B
40. D
41. D
42. D
43. D
44. B
45. A
46. B
47. C
48. A
49. C
50. B

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