ENGLAND GCSE COMPUTER SCIENCE AQA · 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 robot needs to repeat a task until its battery is low. Which loop should its program use?**

- A FOR
- B IF used for selection only
- C SUBROUTINE used for reusable code only
- D WHILE

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2 **A laptop program adds up numbers with the line total = total + number. What is this an example of?**

- A Validation of the input
- B Iteration
- C Assignment
- D Selection

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3 **A tablet adds the binary numbers 00001101 and 00000011. What is the result?**

- A 00010001
- B 00001000
- C 00010000
- D 00001111

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4 **A laptop receives a fake email asking for its password. What is this attack called?**

- A A Trojan pretending to be a real program
- B A denial of service attack
- C A brute force attack
- D Phishing

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

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

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6 **A smartphone app gives 17 DIV 5 as part of a calculation. What is the result?**

- A 3
- B 5
- C 2
- D 3.4

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7 **A smartphone stores a photo. What is the number of pixels in the photo called?**

- A Colour depth
- B Resolution
- C Bit depth used for sound
- D Sample rate

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8 **A robot is locked by ransomware. What has the ransomware done?**

- A It has copied itself by attaching to files, in some situations
- B It has pretended to be a real program
- C It has watched what the user types
- D It has locked the files until a payment is made

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9 **What is pattern recognition?**

- A Writing a program that runs without any errors
- B Breaking a problem into smaller parts
- C Finding things that are the same in different problems
- D Removing detail from a problem to focus on what matters

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10 **What is 100 MOD 7 in AQA pseudocode?**

- A 14
- B 30
- C 3
- D 2

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

A A washing machine controller

B A desktop computer in an office

C A laptop used for school work

D A tablet used for browsing the web

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12 **What is a table in a database?**

A A set of records about one kind of thing, shown in rows and columns

B A single piece of data in a record, which is one possibility in some situations

C A single record about one thing

D A file stored on a hard disk

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13 **A program counts how many numbers in the list 30, 40 are greater than 10. What is the count at the end?**

A 1

B 30

C 2

D 3

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14 **What is a nested loop?**

A A loop that never stops running

B A loop inside another loop

C A loop that runs exactly once

D A loop with no instructions inside it

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15 **What is character encoding?**

- **A** Checking that text has no spelling errors
- **B** Giving each character a binary code so a computer can store it
- **C** Compressing a text file to make it smaller
- **D** Changing text from one language to another, which can happen in some cases

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16 **A star network has 12 computers, each connected to the central switch by one cable. How many cables are needed?**

- **A** 120
- **B** 11
- **C** 12
- **D** 13

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17 **A binary search checks a sorted list of 64 items. After one check, at most how many items can still need checking?**

- A 64
- B 16
- C 640
- D 32

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18 **What is 41 DIV 3 in AQA pseudocode?**

- A 13
- B 2
- C 14
- D 130

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19 **An image is 800 pixels wide and 300 pixels high with a colour depth of 24 bits. How many bytes does the image take up before compression?**

- **A** 7,200,000
- **B** 360,000
- **C** 1,440,000
- **D** 720,000

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20 **What is e-waste?**

- **A** Electronic devices thrown away when they are no longer wanted
- **B** Waste heat from a computer that is running, in some situations
- **C** Waste data stored on a hard disk
- **D** Waste paper from printing documents

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21 **A program sets total to 0, then adds each number in the list 3, 7, 2, 9 in turn. What is the value of total at the end?**

- A 22
- B 20
- C 210
- D 21

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22 **What is an integer data type used for?**

- A A single letter or symbol
- B A whole number
- C A value that is only True or False
- D A number with a decimal point

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23 **What does a left binary shift do to a number?**

- **A** It adds 1 to the number for each place shifted
- **B** It multiplies the number by 2 for each place shifted
- **C** It changes the sign of the number
- **D** It divides the number by 2 for each place shifted, in some situations

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24 **A file of 200 MB is downloaded at 50 MB per second. How many seconds does the download take?**

- **A** 3
- **B** 40
- **C** 5
- **D** 4

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25 **A bubble sort makes its first pass over the list 4, 1, 2, 3, comparing each pair of neighbours and swapping them if they are in the wrong order. How many swaps are made in this pass?**

- A 30
- B 2
- C 4
- D 3

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26 **In AQA pseudocode, which keywords start a selection?**

- A WHILE DO
- B IF THEN
- C REPEAT UNTIL used for a loop only
- D FOR TO

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27 **What does the accumulator hold?**

A The address of the memory location being used

B The address of the next instruction to be carried out, in some situations

C The result of a calculation carried out by the arithmetic logic unit

D The data being read from or written to memory

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28 **What is the difference between HTTP and HTTPS?**

A HTTPS works only on wireless networks, in some situations

B HTTPS needs no web server at all

C HTTPS is faster than HTTP

D HTTPS encrypts the data, HTTP does not

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29 **How does a binary search work?**

- A It sorts the list and then checks the first item
- B It checks only the first and last items in the list
- C It checks each item in turn from the start
- D It checks the middle item and then halves the list

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30 **Why is testing important before a program is released?**

- A To find errors before users meet them
- B To make the program run faster
- C To remove the need for any input from the user
- D To make the program use less memory

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31 **A robot shifts the binary number 00000101 one place to the left. What is the result?**

- A 00000110
- B 00001001
- C 00001010
- D 00000010

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32 **A keyboard is used to type a web address. What does the router do with the request?**

- A It sends the packets between networks
- B It stores the web page for a long time
- C It displays the web page on a screen
- D It connects computers inside one network to a switch

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33 **A bubble sort sorts a list of 5 items. How many passes does it need at most?**

- **A** 5
- **B** 40
- **C** 3
- **D** 4

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34 **In AQA pseudocode, what does USERINPUT do?**

- **A** It compares two values to see if they are equal
- **B** It reads a value typed in by the user
- **C** It prints a value on the screen for the user
- **D** It stores a value in a file for later use

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35 **What is the binary number for denary 5?**

- A 00000101
- B 00000100
- C 00001010
- D 00000110

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36 **What is phishing?**

- A Tricking a user into giving away details with a fake email or message
- B Copying a program without permission from its owner
- C Guessing a password by trying every possible one
- D Flooding a server with requests until it stops working, in some situations

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37 **What is pseudocode?**

A A way of testing a program to find its errors

B A real programming language that runs on a computer, in some situations

C A way of writing an algorithm using structured English

D A visual way of showing an algorithm with symbols

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38 **What is the value of 5 + 5 * 5?**

A 30

B 29

C 300

D 50

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39 **A laptop shows the colour of a pixel as the hexadecimal number 1A. What is its denary value?**

- **A** 110
- **B** 26
- **C** 16
- **D** 11

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40 **A games console connects to other players over the internet. What is the internet?**

- **A** A network inside one school building
- **B** A worldwide network of networks
- **C** A program that writes documents for the user
- **D** A cable that connects a computer to a printer

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41 **A merge sort splits a list of 8 items in half again and again until each list has one item. How many lists of one item are there?**

- A 3
- B 8
- C 80
- D 4

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42 **What is sequence in a program?**

- A A named block of code that can be called when needed
- B Instructions carried out one after another in order
- C A block of instructions repeated until a condition is met
- D A choice between two paths in a program

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43 What does the arithmetic logic unit do?

- A It controls the flow of data around the CPU
- B It stores the address of the next instruction, in some situations
- C It carries out arithmetic and logic operations
- D It fetches instructions from memory

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44 Why is a primary key needed?

- A So each record can be sorted into order
- B So each record can be printed on paper
- C So each record can be linked to another table, which can happen in some cases
- D So each record can be found without confusion with another record

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

- A The middle item and the items around it
- B The first item and the last item only
- C Items next to each other in the list
- D Items chosen at random from the list

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46 **What is a string data type used for?**

- A A sequence of characters such as a name
- B A value that is only True or False
- C A whole number with no decimal point, in some situations
- D A number with a decimal point

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47 What is the largest denary number that can be stored in 4 bits?

- A 16
- B 15
- C 8
- D 4

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48 A database table has 25 records and each record has 6 fields. How many values does the table hold in total?

- A 150
- B 156
- C 144
- D 1,500

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

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

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50 **In AQA pseudocode, what does DIV do?**

- **A** It gives the whole number part of a division
- **B** It gives the remainder after a division
- **C** It multiplies two numbers together
- **D** It gives the answer as a decimal number, in some situations

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ANSWER KEY

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

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