FCIS-Ain Shams University
Subject: Introduction to Computers
Final: First- Term Exam
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Offering Department: Computer Systems
First Year Students

Answer the following Questions: **(total marks 105)**
Calculators are not allowed

Attempt the following Questions

Choose the right answer for each of the following questions:

1. The use of computers and computer programs to replace teachers and the time-place limitations of learning is called e-education.

A) True	B) False.

2. The programs that enable a computer to work properly are known as windows software.

A) True	B) False.

3. Input, processing, output, and storage are collectively called the information processing cycle.

A) true	B) False.

4. Network is a group of two or more computer systems that are connected.

A) true	B) False.

5. Supercomputers are ultrafast systems that can process at a speed of over one petaflop-over one million billion calculations per second.

A) true	B) False.

6. The most important and well-recognized type of application software is the computer's operating system.

A) true	B) False.

7. Hardware reliability and accuracy are two advantages of computers.

A) true	B) False.

8. The failure to perform backups on data, information, and software on a regular basis should not be a concern of computer users.

A) true	B) False.

9. The F2 key is often referred to as the help key because it opens the help option in most programs.

A) true	B) False.

10. The USB flash drive is considered legacy technology.

A) true	B) False.

11. A disk cleanup utility will search for and delete unusable files, along with any files in the recycle bin.

A) true	B) False.

12. A toggle key has two positions: on and off.

A) true	B) False.

13. POST checks to see that the hardware is operating appropriately.

A) true	B) False.

14. System utilities are loaded before the operating system is loaded.

A) true	B) False.

15. The word "COMPUTER" needs 8 bytes to be represented using ASCII code.

A) true	B) False.

16. The CPU:

C) plays a minimal role in processing data.	D) is a fairly simple device.
E) is different from a microprocessor.	F) is an integrated chip capable of processing signals.

17. A CPU's word size is important because it determines which _____ the CPU can use.

A) application software	B) disk storage	C) input devices	D) operating system

18. Damaged areas of a disk that can no longer hold data are called:

A) bad sectors.	B) damaged clusters.	C) inaccessible bytes.	D) spoiled tracks.

19. Which of the following types of storage uses two laser beams to create a three-dimensional image?

A) Fiber optic	B) Integrated circuit	C) Graphical	D) Holographic

20. The four-step process of fetch, decode, execute, and store is called a(n):

A) arithmetic operation.	B) machine cycle.	C) instruction cycle.	D) logical operation.

21. $(1110100011101000 1)_2$ equals

A) $(1D1D1)_{16}$	B) $(1E8E)_{16}$	C) $(E8E1)_{16}$	D) $(D1D11)_{16}$

22. $(0111.101)_2$=(……)$_{10}$

A) 7.14	B) 7.75	C) 7.875	D) 7.625

23. Result of $DD_{16}+7_{10}$

A) $(11100100)_2$	B) $(4E)_{16}$	C) $(B1)_{16}$	D) $(225)_{10}$

24. The largest decimal number that can be written in 5 bits

A) 64	B) 32	C) 23	D) 31

25. Using 2's complement $(20_{10}-14_{10})$ is (……)

A) 1100	B) 0110	C) 1001	D) 1011

26. The number of combinations that can be represented using 3 digits in base 4

A) 81	B) 64	C) 63	D) 80

27. In a 4 bit computer, the 2's complement representation of (……) is (1011)

A) 10	B) -5	C) -3	D) -11

28. $(50)_{10}$=(……)

A) $(32)_{16}$	B) $(001011)_2$	C) $(1110100)_2$	D) $(43)_{16}$

29. $(50)_{10}$=(……)

A) $(21)_7$	B) $(26)_8$	C) $(12)_7$	D) $(62)_8$

30. $(584)_{16}+(917)_{16}$= (……)16

A) 9EB	B) E9B	C) B9E	D) EB9

31	Program instructions in their original form as written by the programmer are known as: A) flowcharts. B) heuristics. C) object code. D) source code.	32	Which of the following types of language is representative of the first generation of programming languages? A) Assembly B) Machine C) Procedural D) Object-oriented
33	Which of the following is NOT a general feature of third-generation procedural languages? A) They are translated into machine language by tools such as compilers and interpreters. B) Their use frees programmers from needing to know all the details of how the computer processes data. C) They use familiar English words such as PRINT or IF. D) The programmer describes what he or she wishes to accomplish, and the language automatically generates code to accomplish the task.	34	When the compiler translates code, it: A) determines the number of lines of code. B) checks for the programmer identification. C) translates source code into object code. D) calculates the amount of disk space
		35	An interpreter translates code _____ at a time. A) one module B) one line C) one block D) all lines
		36	Which of the following types of programming uses a set of quality standards that make programs more readable and maintainable? A) Low-level B) Unstructured C) Algorithmic D) Structured
37	Which of the following is the best definition of spaghetti code? A) It is code characterized by loops in which blocks of code repeat. B) It is code containing many GOTO statements that cause unconditional jumps from one section of code to another. C) It is code containing many IF statements in which different statements are executed, depending on the state of the data. D) It is the term for an inefficient program, often written by a novice programmer.	38	Which of the following is the purpose of information hiding in software development? A) It protects source code from the eyes of competitors. B) It frees the programmer from dealing with hardware issues such as memory management. C) It allows one programmer to use a module written by another without having to be concerned with its inner details. D) It prevents data from being inadvertently destroyed during execution of a program.
39	With object-oriented programming, information hiding is also known as: A) conversion. B) encapsulation. C) translation. D) inheritance.	40	Structured query language (SQL) used in conjunction with databases is often used as an example of a _____-generation language. A) first B) second C) third D) fourth

41	What is the output of the following code char symbol[3]={'a','b','c'}; for (int index=0; index<3; index++) cout << symbol [index]; A) a b c B) "abc" C) abc D) 'abc	42	The last phase of the program development life cycle is concerned with: A) documentation. B) coding. C) designing the solution. D) implementation and maintenance.

43	for (int x = 1; x <= 10; x++) {
	if (x == 5)
	continue;
	cout << x << " ";
	}
	A)1 2 3 4 6 7 8 9 10 B) 1 2 3 4 5
	C)1 2 3 4 D)1 2 3 4 5 6 7 8 9 10
		44	If an array is declared as
			int a[4] = {3, 0, 1, 2}, then values assigned to a[0] & a[4] will be
			A) 3, 2 B) 0, 2
			C) 3, 0 D) 0, 4

45	Which statement gets affected when i++ is changed to ++i? A) i = 20; i++; B) for (i = 0; i<20; i++) { } C) a = i++; D) while (i++ = 20) cout <<i;	46	The break statement causes an exit A) from the innermost loop only. B) only from the innermost switch. C) from all loops & switches. D) from the innermost loop or switch.

47	What is the output of given code fragment?
	int f=1, i=2;
	while(++i<5)
	f*=i;
	cout<<f;
	(A) 12 (B) 24 (C) 6 (D) 3
		48	for (; ;)
			A) means the test which is done using some expression is always true
			B) is not valid
			C) will loop forever
			D) should be written as for( )

49	What is the missing in the following code?
	int data , sum;
	cin>>data;
	While (data !=0){
	Sum+=data;
	// ---------- missing line
	}
	A) data ++; B) cin>>data;
	C) data =data +1; D)cout<<sum;
		50	What will be the values of x, m and n after the execution of the following statements? int x, m, n;
			m = 10; n = 15;
			x = ++m + n++;
			A) x=25, m=10, n=15
			B) x=26, m=11, n=16
			C) x=27, m=11, n=16
			D) x=27, m=10, n=15

51	int i = 0;
	while (++i) {
	cout <<"H"; }
	A) H
	B) H is printed infinite times
	C) Compile time error
	D) None of the mentioned
		52	What will be the output of the following?
			#include<iostream.h>
			void main()
			{ float x=5,y=2;
			int result; result=x % y;
			cout<<result; }
			A) 1 B) 1.0 C) Error message D) 2.5

53	What's wrong? for (int k = 2, k <=12, k++) A) the increment should be ++k B) the variable must always be the letter i when using a for loop C) there should be a semicolon at the end of the statement D) the commas should be semicolons	54	What's wrong? while((i < 10) && (i > 24)) A). the logical operator && cannot be used in a test condition B) the while loop is an exit-condition loop C) the test condition is always false D)the test condition is always true
55	A continue statement causes execution to skip to A) the return 0; statement B) the first statement after the loop C) the statement following the continue statement D) the next iteration of the loop	56	Which looping process checks the test condition at the end of the loop? A) for B) while C) do-while D) no looping process checks the test condition at the end
57	Expression C=i++ causes A) Value of i assigned to C and then i incremented by 1 B) i to be incremented by 1 and then value of i assigned to C	58	Which looping process is best used when the number of iterations is known? A) for B) while C) do-while D) all looping processes require that the iterations be known

	C) Value of i assigned to C D) i to be incremented by 1		
59	An array element is accessed using A) a first-in-first-out approach B) the dot operator C) a member name D) an index number	60	Which of the following formulas can be used to generate random integers between 1 and 10? A) 1 + rand() % (10 - 1 + 1) B) 1 + (10 - 1 + 1) % rand() C) 10 + rand() % (10 - 1 + 1) D) 10 + rand() % (10 + 1)

61	What will be output if you will compile and execute the following code?
	#include<stdio.h>
	int main(){
	int a=5.2;
	if(a==5.2)
	COUT<<"Equal";
	else if(a<5.2)
	COUT<<"Less than";
	else
	COUT<<"Greater than";
	return 0;}
	A) Equal B) Less than
	C) Greater than D) Compiler error
		62	Find out the error in following code.
			If (x = 100)
			Cout << "x is 100";
			
			A)100 should be enclosed in quotations
			B)There is no semicolon at the end of first line
			C)Equals to operator mistake
			D)Variable x should not be inside quotation

63	What is the output of the following code? int k; for (k = -3; k < -5; k++) cout<< "Hello); A)Hello B)Infinite hello C)Run time error D) Nothing	64	Which of the following is false for switch statement ? A) It uses labels instead of blocks B) we need to put break statement at the end of the group of statement of a condition C) we can put range for case such as case 1..3 D)None of above

65	Observe the following block of code and determine what happens when x=2
	switch (x){
	case 1:
	case 2:
	case 3:
	cout<< "x is 3, so jumping to third branch";
	goto thirdBranch;
	default:
	cout<<"x is not within the range, so need to say Thank You!";
	}
	A) Program jumps to the end of switch statement since there is nothing to do for x=2
	B) The code inside default will run since there is no task for x=2, so, default task is run
	
	C) Will display x is 3, so jumping to third branch and jumps to thirdBranch.
	
	D) None of above
		66	Consider the following two pieces of codes and choose the best answer
			CODE 1:
			switch (x) {
			case 1:
			cout <<"x is 1";
			break;
			case 2:
			cout <<"x is 2";
			break;
			default:
			cout <<"value of x unknown";
			}
			CODE 2
			If (x==1){
			Cout <<"x is 1";
			}
			Else if (x==2){
			Cout << "x is 2";
			}
			Else{
			Cout <<"value of x unknown"; }
			A)Both of the above code fragments have the same behavior
			B) Both of the above code fragments produce different effects
			C) The first code produces more results than second
			D) The second code produces more results than first.

67	The file iostream includes A) The declarations of the basic standard input-output library. B) The streams of includes and outputs of program effect. C) Both of these D) None of these	68	Which of the following can not be used as identifiers? A) Letters B) Digits C) Underscores D) Spaces

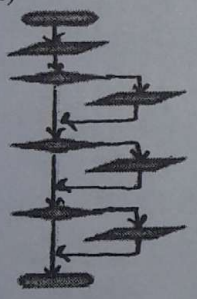
69	which of the statements is true? const int pathwidth=100; A)Declares a variable pathwidth with 100 as its initial value B) Declares a construction pathwidth with 100 as its initial value C) Declares a constant pathwidth whose value will be 100	70	Which of the header file must be included to use rand ()? A) <iostream> B) <string> C) < cstdlib> D) <sstream>

71	int x;
	for (x = 1; x <= 10; x++) {
	if (x == 5)
	break;
	cout << x << " "; }
	A) 1 2 3 4 5 6 7 8 9 10 B) 1 2 3 4
	C) 1 2 3 4 5 D) 2 4 6 8
		72	Algorithm is
			
			A)step by step execution of program
			B)Object file
			C)Executable file
			D)Source file

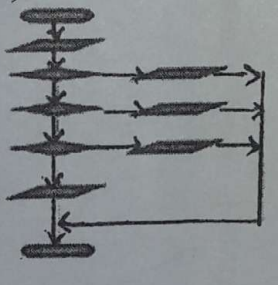
73	Flowcharts and Algorithms are used for
	
	A)Better Programming
	B)Easy testing and Debugging
	C)Efficient Coding
	D)All
		74	What is the output of the following code ?
			int i,j;
			for (i=1;i<=5;i++) {
			for(j=1; j<=i; j++)
			{
			Cout<<"1";
			}
			Cout<<"\n" ;
			}
			(a) 1
			11
			111
			1111
			111111
			(b)11111
			(b) 1
			1
			1
			1
			1
			(c) 11111
			1111
			111
			11
			1

75) Select which flow chart matches the following code

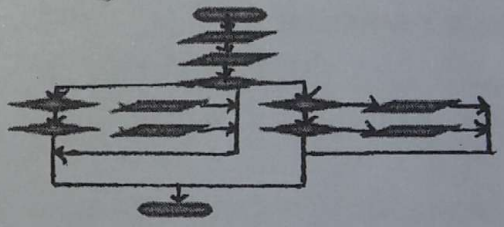
A)



B)



C)



```
day  = input("Is today a weekend or weekday?")
mood = input("How are you feeling today?")
if mood == "happy":
  if day == "weekend":
    print("I'm glad you're enjoying your weekend.")
  elseif day == "weekday":
    print("Cool, you must enjoy your job!")
elseif mood == "sad":
  if day == "weekend":
    print("Cheer up! It's the weekend!")
  elseif day == "weekday":
    print("Hopefully you are happier in the weekend!")
```

76) What is the output if the user input "happy and weekday"

A) I'm glad you're enjoying your weekend.	B) Cheer up! It's the weekend!	C) Hopefully you are happier in the weekend!	D) Cool, you must enjoy your job!

With all our best withes