

**AGA KHAN UNIVERSITY EXAMINATION BOARD**

**SECONDARY SCHOOL CERTIFICATE**

**CLASS X EXAMINATION**

**APRIL/ MAY 2017**

**Computer Science Paper I**

**Time: 35 minutes    Marks: 25**

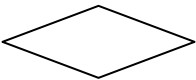

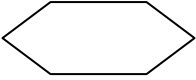

**INSTRUCTIONS**

1. Read each question carefully.
2. Answer the questions on the separate answer sheet provided. DO NOT write your answers on the question paper.
3. There are 100 answer numbers on the answer sheet. Use answer numbers 1 to 25 only.
4. In each question there are four choices A, B, C, D. Choose ONE. On the answer grid black out the circle for your choice with a pencil as shown below.

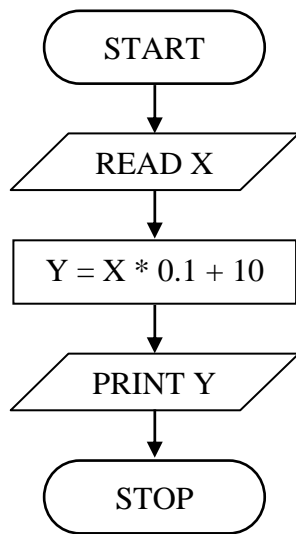
| Correct Way |                         |                         |                                  | Incorrect Ways |                         |                         |                                  |
|-------------|-------------------------|-------------------------|----------------------------------|----------------|-------------------------|-------------------------|----------------------------------|
| 1           | <input type="radio"/> A | <input type="radio"/> B | <input checked="" type="radio"/> | 1              | <input type="radio"/> A | <input type="radio"/> B | <input checked="" type="radio"/> |
|             |                         |                         | <input type="radio"/> D          | 2              | <input type="radio"/> A | <input type="radio"/> B | <input checked="" type="radio"/> |
|             |                         |                         |                                  | 3              | <input type="radio"/> A | <input type="radio"/> B | <input checked="" type="radio"/> |
|             |                         |                         |                                  | 4              | <input type="radio"/> A | <input type="radio"/> B | <input checked="" type="radio"/> |

**Candidate's Signature**

5. If you want to change your answer, ERASE the first answer completely with a rubber, before blacking out a new circle.
6. DO NOT write anything in the answer grid. The computer only records what is in the boxes.

1. The device between a computer and a telephone line which performs both analog to digital and digital to analog conversions of data is called
  - A. hub.
  - B. modem.
  - C. modulator.
  - D. demodulator.
2. The act of using someone else's work and showcasing it as one's own is called
  - A. hacking.
  - B. phishing.
  - C. intrusion.
  - D. plagiarism.
3. Which of the following is TRUE about anti-virus software?
  - A. It removes viruses from ROM.
  - B. It removes viruses from RAM.
  - C. It deletes the infected files only.
  - D. It deletes all .exe files in computer.
4. The hardware or software which monitors the incoming and outgoing network traffic (data) based on some predefined criteria is known as
  - A. modem.
  - B. firewall.
  - C. anti-virus.
  - D. user login.
5. Which of the following is an appropriate positive impact of computer technology on society?
  - A. People are using social media sites.
  - B. People are getting dependent on computers.
  - C. Computers are replacing people at work place.
  - D. Computers have simplified the process of education for many people.
6. All of the following are symbols for a program flowchart EXCEPT
  - A. 
  - B. 
  - C. 
  - D. 

7. Study the given flowchart.



If the input value is 10 for this flowchart, then the output value will be

- A. 10  
B. 11  
C. 20  
D. 21
8. With reference to computer programming, debugging is the process of
- A. running a programming code.  
B. renaming a programming code file.  
C. finding specific code lines in a program.  
D. finding and removing errors in a program.
9. In programming, the error due to which a program violates one or more grammatical rules of the programming language is known as
- A. logic error.  
B. syntax error.  
C. memory error.  
D. execution error.
10. A GW-BASIC program can be written by using either commands or statements, depending upon the mode it is operated in.
- Which of the following is/ are GW-BASIC commands?
- I. PRINT 30/5  
II. 10 CLS  
III. END
- A. I only  
B. II only  
C. I and II  
D. I and III

PLEASE TURN OVER THE PAGE

11. The CORRECT representation of the given arithmetic expression in GW-BASIC programming is

$$A = (B^2 \times C) \div 17$$

- A.  $A = (B^2 * C) / 17$
  - B.  $A = (B^2 \times C) / 17$
  - C.  $A = (B^{\wedge}2 * C) / 17$
  - D.  $A = (B^{\wedge}2 * C) \div 17$
12. Which of the following is an example of a valid string variable name in GW-BASIC?
- A. FirstName\$
  - B. First Name\$
  - C. FirstName%
  - D. First Name%
13. Which of the following commands enables the error trapping feature of GW-BASIC?
- A. ON ERROR GOTO
  - B. WHILE...WEND
  - C. ON ERROR OFF
  - D. ON...GOTO
14. Consider the given GW-BASIC code.

```
10 CLS
20 INPUT "Value of X", X
30 INPUT "Value of Y", Y
40 IF X >= Y THEN PRINT "TRUE" : END
50 PRINT "FALSE"
60 END
```

If  $X = 10$  and  $Y = 9$ , then the output of this code will be

- A. 9
  - B. 10
  - C. TRUE
  - D. FALSE
15. Which of the following statements is used for more than one transfer points in GW-BASIC programs?
- A. GOTO
  - B. IF...THEN
  - C. ON...GOTO
  - D. ON ERROR GOTO

16. Consider the following program.

```

10   For i = ? to? step?
20   Print i
30   Next i
    
```

What values should be assigned to the loop to produce the following series of numbers?

100, 98, 96, 94, ..... 6, 4, 2

- A. For i = 2 to 100 Step 2  
 B. For i = 100 to 2 Step 2  
 C. For i = 2 to 100 Step -2  
 D. For i = 100 to 2 Step -2
17. Consider the GW-BASIC code given below.

```

10   X = 0
20   WHILE X <= 20
30   PRINT X
40   X = X + 3
50   WEND
60   END
    
```

The output of this code will be

| A | B | C  | D  |
|---|---|----|----|
| 0 | 3 | 0  | 0  |
|   |   | 2  | 3  |
|   |   | 4  | 6  |
|   |   | 8  | 9  |
|   |   | 12 | 12 |
|   |   | 16 | 15 |
|   |   | 20 | 18 |

18. The following code line is an example of declaring two dimensional array in GW-BASIC.

`DIM U(2, 5)`

If the subscript of the first element is (0, 0), then the maximum number of elements that can be stored in the array declared above is

- A. 18  
 B. 10  
 C. 9  
 D. 7

19. Which of the following is the CORRECT syntax to extract three letters from the right hand side of the string?

- A. Print Right ("Pakistan",3)
- B. Print Extract ("Pakistan",3)
- C. Print Right\$ ("Pakistan",3)
- D. Print Extract\$("Pakistan",3)

20. Which GW-BASIC statement will draw a horizontal line?

- A. LINE (10, 90) – (90, 100)
- B. LINE (10, 50) – (100, 100)
- C. LINE (10, 10) – (100, 100)
- D. LINE (50, 100) – (150, 100)

21. What would be the output of the given GW-BASIC code line?

10 PRINT 3 ^ 3 + 3 \* 3

- A. 36
- B. 54
- C. 90
- D. 2187

22. Read the GW-BASIC code given below.

|    |                              |
|----|------------------------------|
| 10 | A = 10                       |
| 20 | B = 20                       |
| 30 | C = 30                       |
| 40 |                              |
| 50 | PRINT "The Average is:", AVG |

This code is required to calculate the average of three values. Which of the following statements should be placed in Line 40 to CORRECTLY complete the program?

- A.  $AVG = A + B + C / 3$
- B.  $AVG = (A + B + C) / 3$
- C.  $AVERAGE = A + B + C / 3$
- D.  $AVERAGE = (A + B + C) / 3$

23. Consider the given GW-BASIC code.

|    |              |
|----|--------------|
| 10 | LET X = 9    |
| 20 | WHILE X >= 0 |
| 30 | PRINT X      |
| 40 | X = X - 3    |
| 50 | WEND         |
| 60 | END          |

The number of times the WHILE loop will perform repetition is

- A. 3  
B. 4  
C. 8  
D. 9
24. There are different types of logic gates.

The Boolean expression to represent an AND operation is

- A.  $X + Y = Z$   
B.  $X \cdot Y = Z$   
C.  $X * Y = Z$   
D.  $X' + Y = Z$
25. If  $A = 1$  then what would be the result of Boolean expression  $(A \cdot \bar{A}) + A$

- A.  $-A$   
B.  $\bar{A}$   
C. 0  
D. 1

Please use this page for rough work

AKU-EB May Examination 2017