

DMUK Computing Challenge

Ignite Your Future

Guidelines for Round 1 Competition

Date: 19th October 2024

Mode: Online

Guidelines:

This online competition for school students covers a range of subjects, including Information Technology, Number Systems, Logical Reasoning, HTML, and Basic Mathematics. This competition is designed to challenge and engage students, allowing them to showcase their knowledge and problem-solving skills.

- The competition consists of a total of **40 questions** covering the following subjects:
 - ❖ Information Technology
 - ❖ Number Systems
 - ❖ Logical Reasoning
 - ❖ HTML
 - ❖ Basic Mathematics
 - ❖ Basic overview of emerging technologies
 - ❖ Ethical Computing (Responsible use of technologies)
 - ❖ Fundamental networking concepts
 - ❖ Cyber Security basics
- The questions will be of various types, including multiple-choice, multi-select, true/false, and fill-in-the-blanks.
- The competition will last for 60 minutes. Students are required to complete all 40 questions within this time frame.

Sample Questions

- 1) Which of the following is an example of an Internet search engine?
 - a) google
 - b) chat GPT
 - c) MS Word
 - d) Linux
 - e) Windows

- 2) Which of the following are not an output device (Select all correctly)?
- a) scanner
 - b) speaker
 - c) monitor
 - d) printer
 - e) keyboard
- 3) Linux is an example for:
- a) System Software
 - b) Utility Software
 - c) Application Software
 - d) Library Software
 - e) Multimedia Software
- 4) Which of the following is the property of the Computer's RAM (Select all correct)?
- a) Permanent Storage
 - b) Volatile
 - c) It is portable
 - d) it has large storage
 - e) Main Memory
- 5) Which of the following is an extension of an image file?
- a) .pdf
 - b) .jpg
 - c) .docx
 - d) .xlsx
 - e) .mp3
- 6) Which of the following memory of the computer is volatile?
- a) RAM
 - b) ROM
 - c) EPROM
 - d) CMOS
 - e) SSD
- 7) The Physical Part of the computer is called_____
- a) Hardware
 - b) Software

- c) Userware
 - d) somewhere
 - e) shareware
 - f) None of the above
- 8) Microsoft Office acts as an interface between the user and the computer
- a) True
 - b) False
- 9) A _____ is a software program that attaches itself to other programs and alters their behaviour
- a) Computer Firmware
 - b) Computer virus
 - c) backdoor
 - d) Firewall
 - e) IDS/IPS
- 10) What does the abbreviation HTML stand for?
- a) Hyper Text Markup Language
 - b) High Text Markup Language
 - c) Hyper Text Makeup Language
 - d) Hyper Text Markdown Language
- 11) Which number comes next in the series 2, 6, 15, 31, 56,___
- a) 92
 - b) 93
 - c) 94
 - d) 95
 - e) 100
- 12) The day before yesterday was Friday. What will be the day after tomorrow?
- a) Sunday
 - b) Monday
 - c) Tuesday
 - d) Wednesday
 - e) Thursday
 - f) Saturday
- 13) What smallest number should be subtracted from 9545 so that it is divisible by 7?
- a) 5

- b) 6
- c) 2
- d) 4
- e) 1

14) What is the decimal equivalent of the binary number 11000001?

- a) 223
- b) 201
- c) 204
- d) 193
- e) 197

15) The sum of four consecutive even numbers is 612, so which is the smallest number among them?

Answer: _____

16) What is the solution of equations $2x - y = 1$ and $x + y = 5$?

- a) $x = 2, y = 3$
- b) $x = 3, y = 2$
- c) $x = 1, y = 4$
- d) $x = 4, y = 1$

17) Which of the following is a prime number?

- a) 27
- b) 31
- c) 33
- d) 35

18) What is the area of a circle with a circumference of 24π cm?

- a) 36π cm²
- b) 48π cm²
- c) 64π cm²
- d) 96π cm²

19) If we change the shape of an object from a sphere to a cylinder, then the volume of the cylinder will

- a) Increase
- b) Decrease
- c) Remains unchanged
- d) Doubles

20) If $\sin\theta = x$ and $\sec\theta = y$, then $\tan\theta$ is equal to

- a) xy
- b) x/y
- c) y/x
- d) $1/xy$

21) The LCM of the two numbers is 1200. Which of the following cannot be their HCF?

- a) 200
- b) 500
- c) 600
- d) 400

22) You have three products: Product A, Product B, and Product C. Product A is packaged in boxes of 24 units each, Product B in boxes of 36 units each, and Product C in boxes of 48 units each. Calculate the LCM of the quantities of each product to determine the minimum number of boxes needed to arrange all products together for transportation.

- a) 64 Units
- b) 72 Units
- c) 90 Units
- d) 80 Units

23) If the radius of the circle is increased three times, how many times will its circumference increased

- a) 2 times
- b) 3 times
- c) $1/3$ times
- d) 9 times

24) In a single throw of two dice, the probability of getting a total of 8 is

- a) $5/36$
- b) $1/36$
- c) $7/36$
- d) None of these

25) In a throw of two dice, the probability of getting a sum of 10 is :

- a) $1/12$
- b) $1/36$
- c) $1/6$
- d) $1/4$

Answers:

1	A	6	A	11	A	16	A	21	A
2	A, E	7	A	12	C	17	B	22	A, B
3	A	8	B	13	D	18	B	23	B
4	B, E	9	B	14	D	19	C	24	A
5	B	10	A	15	150	20	A	25	A