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**GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY
SELECTION TEST FOR THE ENROLLMENT OF DAY SCHOLARS - INTAKE 41**

**BACHELOR OF SCIENCE HONOURS IN ENGINEERING / COMPUTER
SCIENCE / COMPUTER ENGINEERING / SOFTWARE ENGINEERING /
DATA SCIENCE AND BUSINESS ANALYTICS DEGREE PROGRAMMES**

SUBJECT KNOWLEDGE - 2023

1. Which software performs the data entry, design, analysis, drafting, and manufacturing functions?
 - a. Graphics software
 - b. Programming software
 - c. Operating software
 - d. Application software
2. Optical fibre works on the
 - a. Principle of refraction
 - b. Total internal reflection
 - c. Scattering
 - d. Interference
3. How many cycles will an AC signal make in 2 seconds if its frequency is 100 Hz?
 - a. 50
 - b. 100
 - c. 150
 - d. 200
4. A circuit is consisting of 2Ω , 3Ω , and 4Ω resistors connected in series, and this combination is connected to a battery of emf 10V and negligible internal resistance. The potential drop across the 2Ω resistance is.
 - a. 1.8 V
 - b. 2.22 V
 - c. 3.6 V
 - d. 4.44 V

5. What is true regarding conduction?
 - a. Conduction travels without any medium.
 - b. Conduction travels in a medium but sometimes without a medium.
 - c. Conduction travels in a medium or without a medium.
 - d. Conduction travels only in a medium.

6. Thrust from a Jet engine is generated as per:
 - a. Newton's First Law
 - b. Newton's Second Law
 - c. Newton's Third Law
 - d. All of these

7. What is the protocol used to interconnect network devices on the internet?
 - a. TCP/IP
 - b. HTTP
 - c. UDP
 - d. FTP

8. Which one of the following refers to the copies of the same data (or information) occupying the memory space at multiple places?
 - a. Data Repository
 - b. Data Inconsistency
 - c. Data Mining
 - d. Data Redundancy

9. The rotation of a body along the x-axis is termed as:
 - a. pitching
 - b. rolling
 - c. yawing
 - d. None of these

10. A component that allows only unidirectional current to pass through it is,
 - a. resistor
 - b. inductor
 - c. transformer
 - d. diode

11. A speed of a processor in a computer is measured in,
 - a. Giga Hertz
 - b. Baud

- c. BPS
- d. MIPS

12. Which of the following is the binary equivalent of 25?

- a. 11010
- b. 11001
- c. 10111
- d. 10101

13. What is the probability of getting a sum 6 from two throws of a dice?

- a. $1/6$
- b. $1/9$
- c. $5/18$
- d. $5/36$

14. Which of the following items is used in the household wirings to prevent accidental fire in case of short circuits?

- a. Insulated wire
- b. Plastic switches
- c. Non-metallic coatings on conducting wires.
- d. Electric fuse

15. Which of the following is a programming paradigm that emphasizes using logical rules and deductions for problem-solving?

- a. Object-oriented programming
- b. Functional programming
- c. Procedural programming
- d. Logical programming

16. A factory cut its labour force by 16 percent but then increased it by 25 per cent of the new amount. What was the net per cent change in the size of the workforce?

- a. 5% increase
- b. 5% decrease
- c. 9% increase
- d. 9% decrease

17. Which of the following cannot be used to connect a few laptops in a LAN?

- a. External disk drive
- b. Hub
- c. Router
- d. Switch

18. What is the purpose of an index in a database?

- a. To optimize data retrieval and search operations.
- b. To store backup copies of the data.
- c. To provide a graphical user interface for data entry.
- d. To enforce data validation rules.

19. What is the purpose of version control systems in software development?

- a. To track changes and revisions in the source code.
- b. To automate the testing process.
- c. To optimize database queries.
- d. To manage user authentication and authorization.

20. Which of the following technologies is commonly used in both civil engineering and marine engineering for data collection and mapping?

- a. Geographic Information Systems (GIS)
- b. Virtual Reality (VR) technology
- c. Artificial Intelligence (AI)
- d. Unmanned Aerial Vehicles (UAVs)