KITH & KIN INTERNATIONAL COLLEGE
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BE RESOURCEFUL

FIRST TERM EXAMINATION 2025/2026 ACADEMIC SESSION

NAME					
SUBJECT	COMPUTER STUDIES	CLASS	SS 2	DURATION	2 HOURs

SECTION A: Objectives   **Answer ALL questions**

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Q1. Which of the following **best** describes a spreadsheet package?

 A. A program used for typing letters
 B. A program used to organize, analyze and store data in tabular form
 C. A program used for designing graphics
 D. A program used only for internet browsing

Q2 Use the information below to answer question 2.

Item	Price	Quantity	Total
Pen	50	3	=B2*C2
Book	120	2	=B3*C3
Eraser	30	5	=B4*C4

In the worksheet above, the **Total** column is calculated using the formula **=Price*Quantity.** If you type **=SUM(D2:D4)** in cell D6, what result will Excel display?

A. 200
B. 460
C. 450
D. 540

Q3. Which of these is NOT a feature of Microsoft Excel?

A. Ability to perform automatic calculations using formulas

B. Capability to create charts and graphs
C. Providing an environment form programming in java directly
D. Storing and retrieving large datasets

Q4. If cell A1 contains 50 and cell B1 contains 30, which of the following formulas will correctly calculate the percentage of B1 relative to A1?

 A. =B1/A1*100
 B. =A1/B1*100
 C. =A1*B1/100
 D. =(A1+B1)/100

Q5. A school uses excel to calculate students scores automatically, format results, and print report sheets. Whichj of the following best describes the use of Excel?

A. Word processing
B. Database management
C. Spreadsheet application
D. Presentation software

Q6. Which of the following is NOT a numeric function in Excel?

A. SUM
B. AVERAGE()
C. LEN()
D. ROUND()

Q7. What does the NOW() function return in excel?

A. Only the current date
B. Only the current time
C. The current date and time
D. A user defined timestamp

Q8. Which of the following is a valid lookup function in excel?

A. VLOOKUP()
B. TEXTJOIN()
C. TIME()
D. MID()

Q9. Which function would you use to return the last 4 characters of text in cell A1?

A. LEFT(A1, 4)
B. RIGHT(A1, 4)
C. MID(A1, 4)
D. LEN(A1, 4)

Q10. Which function is commonly used in excel to search for a value in the first column of a table and return a value in the same row from another column?

A. =SUM()
B. =VLOOKUP()
C. =COUNT()
D. =LEFT()

Q11. Which of the following **best** describes the scope of a variable in Java?

A. The type of value stored in the variable
B. The time during which the variable exists in memory
C. The part of the program where the variable can be accessed
D. The process of converting data types

Q12. What happens if you convert a **double** value into an **int** using explicit casting?

A. The decimal part is rounded up automatically
B. The decimal part is truncated
C. A compilation error will always occur
D. Java automatically converts it without loosing data

Q13. Which of the following is the smallest unit of data storage?

A. Byte
B. Bit
C. Kilobyte
D. Megabyte

Q14. How many bytes are there in 1 kilobyte(KB)?

A. 10
B. 100
C. 512
D. 1024

Q15. Convert 2MB to kilobytes

A. 2000 KB
B. 2048 KB
C. 4096 KB
D. 1000 KB

Q16. A file size is 5 gigabytes (GB), How many megabytes (MB) is this file?

A. 5000 MB
B. 5120 MB
C. 524 MB
D. 50 MB

Q17. If a text document is 8192 bytes in size, how many kilobytes (KB) is it?

A. 8 KB

B. 80 KB
C. 0.8 KB
D. 81.92 KB

Q18. WWW stands for -------

A. Wide World Web
B. World Wide Web
C. Web World Wide
D. Wireless Web Wide

Q19. Who is credited with inventing the World Wide Web?

A. Bill Gates
B. Tim Berners – Lee
C. Steve Jobs
D. Mark Zuckerberg

Q20. Which of the is **true** about the world wide web?

A. It is the same as the internet
B. It is a collection of web pages accessible via the internet
C. It refers only to email communication
D. It works without using web browsers

Q21. Which of the following **best** describes the differences between the internet and the World Wide Web?

A.
B.
C.
D.

A. The internet is hardware, while the web is software
B. The web connects devices, while the internet stores websites
C. The internet is the physical network, while the web is a service running on the internet
D. The web uses cables, while the internet uses wireless connectors

Q22. In which year was the World Wide Web first proposed by Tim Berners – Lee?

A. 1980
B. 1989
C. 1995
D. 2000

Q23. Match the items in column A with the correct descriptions in column B

Structure of www (Column A)	How www works (Column B)
1, Client	A. Uses HTTP/HTTPS to request web pages
2. Server	B. Processes requests and sends responses
3. Browser	C. Displays retrieved information

A. 1→A, 2→B, 3→C
B. 1→B, 2→C,3 →A
C. 1→C, 2→A, 3→B
D. 1→A, 2→C, 3→B

Q24. Which of the following correctly represents the structure of the World Wide Web?

A. Client→Server→Response
B. Data→information→knowledge
C. Input→Process→Output
D. Sender →Channel→Receiver

Q25. If cell B2 contains 15 and C2 contains 5, what will be displayed in D2 if you type =B2*C2?
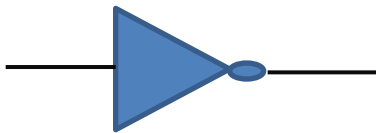
A. 3
B. 10
C. 20
D. 75

Q26. Study the function below in excel::
=SUM(A1:A4), What does this formula calculate?

A. Adds values in A1 through A4
B. Finds the average of A1 through A4
C. Multiplies A1 through A4
D. Divides only A1 by A4

Q27. You entered the following in E2.
=IF(D2>50, "PASS", "FAIL"). If D2 = 47,
what will Excel display in E2?

A. 50
B. Pass
C. Fail
D. Error

Q28. What is the name of the logic gate below?

A. OR gate
B. AND gate
C. Buffer
D. NOT gate

Q29. The Boolean expression for the gate is-

A. $Y = A \oplus B$
B. $Y = \overline{A}$
C. $Y = A,B$
D. $Y = A+B$

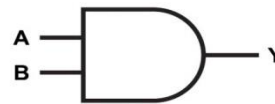Q30. Which gate is known as the Universal gate because it can be used to construct any other basic gate?

A. OR gate
B. NOT gate

C. XOR
D. NAND gate

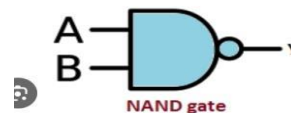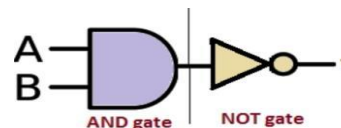Q31. Which logic gate outputs **HIGH (1)** only when **all** inputs are **HIGH(1)?**

A. OR gate
B. AND gate
C. NOT gate
D. NAND gate

Q32. What is the correct output Y below when inputs A =1 and and B= 0?

A. 0
B. 1
C. 01
D. 10

Q33. Refer to the image below. If A=0, and B=1, what will be the output at Y?

A. 0
B. 1
C. Both 0 and 1 alternatively
D. Impossible to determine

Q34. Logic gates are called building blocks of digital electronics because------

A. They are only used oin computers
B. They perform arithmetic operations automatically

C. They process binary input signals to make decisions

D. They work without electrical power

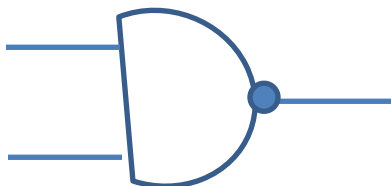Q35. Which of these is **not** a standard logic gate?

A. AND

B. OR

C. NAND

D. NOT

Q36. The output of a NOR gate is HIGH only when -----

A. Both inputs are LOW(0)

B. Both inputs are HIGH(1)

C. Any input is HIGH(1)

D. Any input is LOW(0)

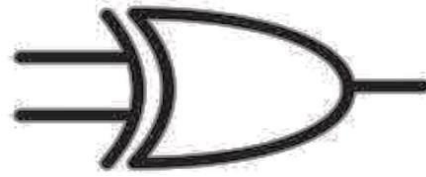Q37. Which alternative gate behaves as the opposite of XOR (exclusive OR)

A. NOR

B. NOT

C. NAND

D. XNOR

Q38. From the image below, if both inputs are 1, what is the output of this gate?

A. 0

B. 1

C. Cannot be determined

D. Alternate between 0 and 1

Q39. Which truth table correctly represents the output of the gate below if the two inputs are A and B?

A. A=0, B=0 → Outout=1

B. A=1, B=0, → Output=1

C. A=1, B=1, →Output→1

D. A=0, B=1, →Output→0

Q40. Java is classified as which type of programming language?

A. Procedural programming language

B. Functional programming language

C. Object Oriented programming language

D. Assembly language

Q41. Which of the following is an **advantage** of Java compare to other programming languages?

A. It must be compiled separately for every operating system

B. It cannot be used for mobile development

C. It is platform independent through the Java Virtual Machine(JVM)

D. It only works on Windows

Q42. Which of the following is a **real life application** of Java?

A. Creating handwritten notes

B. Developing Android applications

C. Only used to design logos

D. Written in Microsoft word

Q43. Why is Java considered **secured** compared to many other languages?

A. It hides all the source code from the programmer
B. It automatically updates without permission
C. It runs inside a virtual machine and has built in memory management
D. It does not allow variables to be declared

Q44. Which of these **best explains** Object Oriented Programming language (OOP) in Java"

A. Running Java programs without a single continuous block
B. Organizing codes into objects that have both data (fields) and behavior(methods)
C. Running Java programs without compiling them
D. Writing programs using only mathematical equations

Q45. The acronym JDK stands for -----

A. Joint Development Kilobyte
B. Java Division Kit
C. Java Development Kernel
D. Java Development Kit

Q46. Which of the following is the **first step** to start writing a Java program?

A. Drawing a flowchart
B. Launching a Java IDE
C. Installing an antivirus
D. Switching off the computer

Q47. In Java, which data type is used to stotre whole numbers?

A. double
B. string

C. int
D. Boolean

Q48. What is the piurpose of the "**Run** " button in a Java IDE"

A. To save the source code only
B. To compile and execute the Java program
C. To delete unused files
D. To create diagrams

Q49. Which of these Java variable declarations is correct?

A. int number = 5
B. string name = "Ada"
C. boolean isReady = true
D. double price = true

Q50. A student launched a Java IDE and wrote the program:

public class Hello {

    public static void main(String[] args) {
        int a = 5;
        int b = 3;

        System.out.println(a+b);
    }
}

What will be displayed when the student runs the program?

A. a+b
B. 53
C. 8
D. Hello

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: THEORY

Instruction: : Answer any **FOUR (4)** from this section. All questions carry equal marks.

Question 1

(a) Define bit.   (2 marks)

(a) Define byte.   (2 marks)

(b) Convert 2048 bytes into kilobytes. Show working.   (3 marks)

(c) State three reasons why understanding data storage units is important.   (3 marks)

Question 2

(a) Differentiate between WWW and Internet.   (3 marks)

(a) Mention three milestones in the development of WWW.   (3 marks)

(b) With a labeled diagram, briefly explain the client-server relationship

in the WWW.   (4 marks)

Question 3

Study the Microsoft Excel spreadsheet shown below and answer the questions that follow.

	A	B	C	D	E	F
1	STUDENT	MATHS	ENGLISH	SCIENCE	TOTAL	GRADE
2	John	85	78	92		
3	Mary	92	88	85		
4	Peter	76	82	89		
5	Sarah	89	91	87		
6	David	82	79	84		
7						
8	AVERAGE					
9	HIGHEST					
10	LOWEST					

The spreadsheet consist of student test scores in three subjects(Maths, English and Science.
Some cells contain formulas that need to be completed.

a) What formulas should be entered in cell **B2** to calculate John's total score?   (2 marks)

b) Write the formulas that should be placed in cell **F2** to automatically assign a grade based on the following criteria: (3 marks)

Grade Criteria:

90 and above = "**A**"

80 – 89 = "**B**"

70 - 79 = "**C**"

Below 70 = "**F**"

c) What formula would you use in cell **B8** to calculate the average maths score for all students? … (2 marks)

d) Write the formula for cell **B9** that will the highest Maths score among all students (1 marks)

e) Identify **TWO** advantages of using formulae instead of manually calculating these values in excel. (2 marks)

Question 4
(a) Draw symbols for AND, OR, and NAND gates. (3 marks)
(b) Construct truth tables for each gate in (a) (3 marks)
(c) State two practical uses of logic gates. (2 marks)
(d) Simplify the Boolean expression A · (B + C). (2 marks)

Question 5
(a) State three reasons why Java is described as OOP. (3 marks)
(b) Mention two advantages of Java over COBOL or BASIC. (2 marks)
(c) Write a simple Java program that displays: Welcome SS2 Students! (5 marks)

Question 6
(a)(i) Differentiate between local and instance variables. (3 marks)
(a)(ii) Explain type casting with a short Java example. (3 marks)
(b) Write a Java program segment that checks if a number is positive, negative, or zero using if-else. (4 marks)