Republic of the Philippines
SULTAN KUDARAT STATE UNIVERSITY
College of Computer Studies
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IS111 – Fundamentals of Information Systems
Midterm Examination
October 16 -18, 2024

Name: _____ **Course & Section** _____ **Score:** _____

Read each question carefully before selecting the best answer. Choose the single best answer for each question by encircling A, B, C, or D.

1. Which of the following best describes the role of people in an information system?
A) They only input data
B) They are passive receivers of system output
C) They design, build, and manage systems
D) They are irrelevant once automation is introduced

2. A bank uses a system that updates account balances after each ATM withdrawal. What type of system is this?
A) Executive Information System
B) Transaction Processing System
C) Knowledge Management System
D) Decision Support System

3. In a university, students use an online portal to enroll in classes, view grades, and pay tuition. This portal is an example of:
A) Knowledge Work System
B) Executive Support System
C) Enterprise System
D) Artificial Intelligence System

4. A company collects customer feedback through surveys. Before analyzing it, this feedback is classified as:
A) Information
B) Processed knowledge
C) Raw data
D) Executive summary

5. CASE STUDY:
A business executive needs a system to summarize sales data and highlight areas needing attention. She requires real-time dashboards and graphical displays.
Which system should the executive use?
A) Transaction Processing System
B) Decision Support System

C) Executive Information System
D) Office Automation System

6. Cloud computing allows organizations to:
A) Build their own servers in-house
B) Reduce dependency on internet services
C) Access computing resources via the internet on demand
D) Only store data without processing capabilities

7. CASE STUDY:
A retail company wants to forecast which products will sell best during holidays. They analyze past years' sales, customer demographics, and market trends.
Which system supports this kind of analysis?
A) Transaction Processing System
B) Decision Support System
C) Enterprise Resource Planning System
D) Knowledge Management System

8. In which situation would an ERP system be least useful?
A) Coordinating inventory between warehouses
B) Managing payroll and HR information
C) Automating customer online ordering
D) Editing a personal blog for fun

9. Which of the following is NOT a basic component of a computer system?
A) CPU
B) Monitor
C) Internet
D) Memory

10. The "brain" of the computer, responsible for processing instructions, is called:
A) Hard Drive
B) Central Processing Unit (CPU)
C) Random Access Memory (RAM)
D) Motherboard

11. In which unit are input data converted into useful output information?
A) Storage Unit
B) Output Unit
C) Processing Unit
D) Input Unit

12. If a computer's RAM is full, what happens?
A) The computer will crash immediately
B) The computer will slow down or use virtual memory
C) The computer will speed up
D) The processor will upgrade automatically

13. Which one is NOT a function of a computer?
A) Input
B) Processing
C) Storage
D) Decoration

14. What is the purpose of storage devices in a computer system?
A) Perform calculations
B) Accept user commands
C) Save data and programs permanently or temporarily
D) Display information on screen

15. A user inputs data through a keyboard, processes it through the CPU, and stores it on a hard drive. What sequence of computer functions is followed?
A) Storage ➔ Input ➔ Processing
B) Input ➔ Processing ➔ Storage
C) Processing ➔ Output ➔ Storage
D) Output ➔ Storage ➔ Input

16. CASE STUDY:
You are designing a computer for an artist who needs a system with strong graphics processing. Which type of computer system would be most appropriate?
A) Tablet
B) Workstation
C) Mainframe
D) Embedded System

17. Supercomputers are mainly used for:
A) Personal entertainment
B) Word processing
C) Complex scientific calculations
D) Sending emails

18. Embedded systems are mainly found in:
A) Smartphones
B) Washing machines
C) Gaming consoles
D) Desktop computers

19. What is a major benefit of cloud computing in modern systems?
A) It requires expensive local hardware
B) It provides access to resources anytime, anywhere
C) It increases data loss risks significantly
D) It reduces the need for internet connections

20. Artificial Intelligence (AI) enables computers to:
A) Store data only
B) Make decisions and learn from data
C) Transfer files faster
D) Upgrade hardware automatically

21. CASE STUDY:
A company uses smart sensors connected to the internet to monitor and manage equipment remotely. This setup is an example of:
A) Artificial Intelligence
B) Cloud Computing
C) Internet of Things (IoT)
D) Supercomputing

22. Which trend in computing mainly deals with connecting everyday devices to the internet?
A) Big Data
B) Cloud Computing
C) Artificial Intelligence
D) Internet of Things (IoT)

23. The computers of the first generation used:
A) Vacuum tubes
B) Transistors
C) Microprocessors
D) Integrated Circuits

24. Which generation of computers is associated with Artificial Intelligence (AI) developments?
A) First
B) Second
C) Fourth
D) Fifth

25. Transistors were used in which computer generation?
A) First Generation
B) Second Generation
C) Third Generation
D) Fourth Generation

26. The major technology in third generation computers was:
A) Transistors
B) Vacuum Tubes
C) Integrated Circuits
D) Microprocessors

27. Which of the following is NOT a feature of the second generation of computers?
A) Use of vacuum tubes
B) Smaller size compared to first generation
C) Lower heat production
D) Increased reliability

28. Which generation introduced the concept of multitasking and operating systems?
A) First Generation
B) Second Generation
C) Third Generation
D) Fifth Generation

29. CASE STUDY:
A school is upgrading from fourth-generation desktop PCs to cloud-based computing services. This transition represents a move toward which computing trend?
A) Miniaturization
B) Networked and distributed computing
C) Use of vacuum tubes
D) Standalone systems

30. Fourth generation computers use which of the following technologies?
A) Vacuum Tubes
B) Transistors

C) Microprocessors
D) Integrated Circuits

31. A major advantage of fifth generation computers is:
A) Mechanical speed
B) High-level machine learning and AI capability
C) Larger size and higher power consumption
D) Use of vacuum tube memory

32. CASE STUDY:
A researcher needs a computer system capable of natural language processing and reasoning. Which computer generation best suits this need?
A) First
B) Third
C) Fifth
D) Fourth

33. Which factor MOST influenced the transition from vacuum tubes to transistors?
A) Cost reduction and miniaturization
B) Increase in power consumption
C) Decrease in processing speed
D) Bigger machine sizes

34. What technology is considered a hallmark of the evolution from third to fourth generation computers?
A) Integrated Circuits
B) Vacuum Tubes
C) Microprocessors
D) Cloud Computing

35. Which statement best describes the impact of early computers?
A) They immediately made computers affordable for everyone.
B) They revolutionized industries despite being slow and massive.
C) They decreased the demand for scientific research.
D) They were easy to manufacture.

36. As computers evolved through generations, a common trend observed was:
A) Increase in physical size
B) Increase in speed and decrease in cost
C) Decrease in user-friendliness
D) Less emphasis on networking

37. The base of the binary number system is:
A) 2
B) 8
C) 10
D) 16

38. Which number system uses digits from 0 to 7?
A) Decimal
B) Octal
C) Binary
D) Hexadecimal

39. What is the base of the hexadecimal number system?
A) 8
B) 10
C) 16
D) 2

40. CASE STUDY:
You are designing a microprocessor. Which number system would you mainly use internally for operations?
A) Decimal
B) Binary
C) Hexadecimal
D) Octal

41. What is the decimal equivalent of the binary number 1011?
A) 10
B) 11
C) 12
D) 13

42. Convert the decimal number 15 into binary:
A) 1100
B) 1101
C) 1110
D) 1111

43. Which of the following represents the hexadecimal number "A"?
A) 8
B) 9
C) 10
D) 11

44. CASE STUDY:
A software engineer is troubleshooting memory addresses that appear in hexadecimal form. Why is hexadecimal preferred over binary for this purpose?
A) It is slower but more accurate
B) It shortens long binary strings
C) It causes fewer system crashes
D) It increases processor speed

45. Which number system is primarily used by humans for daily counting?
A) Binary
B) Octal
C) Decimal
D) Hexadecimal

46. What is the binary equivalent of the decimal number 9?
A) 1000
B) 1001
C) 1100
D) 1010

47. CASE STUDY:
A digital watch shows time using a combination of binary and decimal systems. What is the main

advantage of using binary internally?
A) Easier human interpretation
B) More complex circuits
C) Simpler and faster electronic design
D) Requires higher voltage

48. In binary addition, what is 1 + 1?
A) 10
B) 11
C) 100
D) 1

49. In binary subtraction, what is 10 - 1?
A) 1
B) 0
C) 10
D) 11

50. What does the digit "F" represent in hexadecimal?
A) 14
B) 15
C) 16
D) 13

51. Which best explains why computers prefer binary systems?
A) Binary is faster to input manually
B) Binary requires fewer storage devices
C) Binary matches the ON/OFF behavior of electronic components
D) Binary allows infinite processing speed

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