ILM KI DUNYA

Computer Science 9th New

Roll No.: _____

Student Name: _____

Time Allowed: 120 min

Chapters: Chapter No. 1 to 12(short Questions)

Total Marks: 200

Date: _____

Section: _____

Write short answers of any 8 parts of the question. (2x8=16)

(i) What are the components of a system?

(ii) What is the difference between natural and artificial systems?

(iii) What is the stored program concept in the Von Neumann architecture?

(iv) List and describe the types of computing systems.

(v) What is the function of the ALU?

(vi) Write any two characteristics of a system.

(vii) What are the three types of system objectives?

(viii) Define a system and list its four key components.

(ix) Give an example of a biological system.

(x) Explain the role of the environment in a system's operation.

(xi) How do social systems work?

(xii) Why is electricity essential for computing systems?

(xiii) What is the difference between a static and dynamic system environment?

(xiv) Define a system.

(xv) What is the difference between hardware and software?

(xvi) What are the three main requirements for a computing system to function?

(xvii) What is the Von Neumann bottleneck?

(xviii) What is the hexadecimal equivalent of the binary number 11011011?

(xix) Explain how a negative integer is represented in binary.

(xx) How does UTF-8 differ from UTF-16 in terms of compatibility with ASCII?

(xxi) Explain the difference between ASCII and Unicode.

(xxii) What is the main difference between UTF-8 and UTF-16?

(xxiii) What is the primary purpose of the ASCII encoding scheme?

(xxiv) Convert the decimal number 45 to binary.

(xxv) What is the difference between a Hard Disk Drive (HDD) and a Solid State Drive (SSD)?

(xxvi) Explain the purpose of Analog to Digital Conversion (ADC).

(xxvii) What is a Karnaugh map used for?

(xxviii) How does a full-adder differ from a half-adder?

(xxix) Describe the function of the AND gate with its truth table.

(xxx) How are logic levels represented in digital circuits?

(xxxi) What makes a password strong?

(xxxii) What is a common hardware issue related to cables?

(xxxiii) Describe the importance of testing a theory during the troubleshooting process. Provide an example.

(xxxiv) What is the difference between IPv4 and IPv6?

(xxxv) Explain the role of the Data Link Layer in the OSI model.

(xxxvi) Differentiate between TCP and UDP in terms of data transfer reliability.

(xxxvii) What is the difference between Half-Duplex and Full-Duplex communication?

(xxxviii) What are the main functions of the Network Layer in the OSI model?

(xxxix) Define a router and its function.

(xl) Give an example of Full-Duplex communication.

(xli) Describe the difference between packet switching and circuit switching.

(xlii) What are the advantages of using Full-Duplex communication?

(xliii) What is the primary purpose of an IP address?

(xliv) What is a MAN?

(xlv) Why is DNS important?

(xlvi) Define the role of templates in word processors.

(xlvii) Describe the difference between a GUI and a CLI.

(xlviii) What does antivirus software do?

(xlix) Differentiate between system software and application software with examples.

(l) What are the primary functions of an operating system?

(51) What is the purpose of disk cleanup software?

(52) What is the primary advantage of Apple Pages for macOS and iOS users?

(53) Name three examples of system software.

(54) What is a dry run and why is it important?

(55) Define computational thinking.

(56) Explain pattern recognition with an example.

(57) Explain the purpose of pseudocode.

(58) What is an algorithm?

(59) Describe abstraction and its importance in problem-solving.

(60) How do you differentiate between flowcharts and pseudocode?

(61) What is the role of flowcharts in computational thinking?

(62) Explain the four components of computational thinking: decomposition, pattern recognition, abstraction, and algorithm design.

(63) What are flowcharts and how are they used?

(64) What is the role of loops in algorithm design?

(65) Describe paired and unpaired tags in HTML.

(66) Differentiate between an ordered and unordered list in HTML.

(67) Describe the basic structure of an HTML document.

(68) List two tools needed to start writing HTML code.

(69) Describe how links are created in HTML.

(70) Define web development in one sentence.

(71) Explain the box model in CSS.

(72) What is the purpose of a JavaScript function?

(73) What does Natural Language Processing (NLP) enable computers to do?

(74) Name three subfields of AI.

(75) Why are regular updates important for IoT devices?

(76) List two key milestones in the historical context of AI.

(77) What is the significance of IoT?

(78) Define Search Engine Optimization (SEO).

(79) Why is iteration important in prototyping?

(80) Name one e-commerce platform mentioned in the text.

(81) Define ethical entrepreneurship in one sentence.

(82) What is Google Docs used for?

(83) What is the role of innovation in entrepreneurship?

(84) What is the meaning of the word entrepreneur and its origin?

(85) List one characteristic of Big Data.

(86) What is collaborative authoring?

(87) What is structured data?

(88) How is continuous data different from discrete data?

(89) Define nominal data and provide an example.

(90) Why are data backups essential?

(91) What are the two broad categories of data?

(92) What are the key characteristics of quantitative data?

(93) What is a key characteristic of quantitative data?

(94) What is the difference between qualitative and quantitative data?

(95) How can private browsing protect privacy?

(96) How does Two-Factor Authentication (2FA) enhance security?

(97) Give an example of a trademark.

(98) Define software piracy.

(99) What is one economic impact of computing?

(100) What is the difference between copyright, trademarks, and patents?