1. What is a system's primary purpose?
a) To interact with its components b) To achieve its objective
c) To remain static
d) To communicate with the environment

2. Which of the following is a subsystem of the human body?
a) DNA
b) The respiratory system
c) The Internet
d) A car engine

3. What is the speed of information traveling in the human brain?
a) 150 miles per hour
b) 200 miles per hour
c) 268 miles per hour
d) 300 miles per hour

4. Which property describes a static environment?
a) Changes occur randomly
b) No changes occur without system output
c) Changes occur independently of the system
d) The environment is dynamic

5. What is the human brain's approximate number of neurons?
a) 10 billion
b) 50 billion
c) 86 billion
d) 100 billion

6. Which type of system is characterized by uncertainty in outcomes?
a) Deterministic
b) Non-deterministic
c) Static
d) Predictable

7. What does DNA measure in length when extended from a single human cell?
a) 1 meter
b) 2 meters
c) 10 meters
d) 5 kilometres

8. What does the Von Neumann architecture use for storing data and instructions?
a) Separate memory units
b) Peripheral devices
c) A single memory
d) Cloud storage

9. Which of the following is a dynamic environment?
a) A thermostat system
b) A library catalog system
c) Weather conditions
d) A mathematical formula

10. What is an example of system communication in the human body?
a) A car engine converting fuel to energy b) DNA creating proteins
c) Neurons sending signals
d) A thermostat adjusting temperature

11. What is a system?
a) A single component that performs a specific task
b) A set of components that work together to achieve a common goal
c) A collection of unrelated components
d) A complex process

12. Which of the following is NOT a basic component of a system?
a) Objectives
b) Components
c) Communication among components
d) History

13. What is the primary purpose of a system's objective?
a) To define the system's structure
b) To define the system's purpose or goal
c) To define the system's environment
d) To define the system's components

14. Which of the following is an example of a system with a specific goal?
a) A computer network
b) A transport system
c) A thermostat system
d) All

15. What is the environment of a system?
a) The system's internal components
b) The system's external components
c) The system's objectives
d) Everything external to the system that interacts with it

16. What are the two main types of systems?
a) Natural and physical systems
b) Artificial and biological systems
c) Natural and artificial systems
d) Chemical and psychological systems

17. What is an example of a natural system?
a) A computer network
b) A weather forecasting system
c) A forest ecosystem
d) A transportation system

18. What type of system is governed by the laws of physics?
a) Chemical system
b) Biological system
c) Physical system
d) Psychological system

19. What type of system involves substances and their interactions?
a) Physical system
b) Chemical system
c) Biological system
d) Psychological system

20. What type of system consists of living organisms and their interactions?

a) Physical system

b) Chemical system

c) Biological system

d) Psychological system

21. Which of the following is a natural system?

a) A robot   b) An ocean   c) A smartphone   d) A car

22. What governs physical systems?

a) Economic laws

b) Laws of physics

c) Psychological principles

d) Social norms

23. Which of the following is an example of a chemical system?

a) A cell phone

b) A water molecule

c) A forest ecosystem

d) A galaxy

24. What process governs biological systems?

a) Chemical reactions

b) Biological processes like growth and reproduction

c) Psychological behaviour

d) Social interactions

25. Psychological systems emerge from which type of system?

a) Physical systems

b) Biological systems

c) Artificial systems

d) Chemical systems

26. What are artificial systems designed to do?

a) Operate independently of human intervention

b) Exist naturally in ecosystems

c) Fulfill specific human needs or purposes   d) Govern natural processes

27. Which of the following is NOT an example of a natural system?

a) A tree   b) A mountain   c) A computer   d) An atom

28. What combines to form hydrogen gas (H_2)?

a) Two protons

b) Two electrons

c) An electron, a proton, and a neutron   d) Two neutrons

29. What principle governs the formation of water (H_2O)?

a) Laws of physics

b) Laws of chemistry

c) Laws of biology

d) Psychological principles

30. What is a key characteristic of psychological systems?

a) They form galaxies.   b) They are governed by economic laws.

c) They involve thoughts, emotions, and behaviours.

d) They depend on artificial intelligence.

31. What are artificial systems?

a) Systems that exist in nature   b) Systems created by humans

c) Systems that are complex and difficult to understand

d) Systems that are only used in engineering

32. What is the primary purpose of knowledge systems?

a) To capture and manage information

b) To solve complex engineering problems

c) To improve efficiency in business processes

d) To develop new software applications

33. What is software engineering?

a) The process of designing, developing, and maintaining software

b) The study of electrical engineering systems

c) The application of chemical engineering principles

d) The development of mechanical engineering systems

34. What is the main purpose of artificial systems?

a) To replace natural systems

b) To solve specific problems and improve processes

c) To mimic biological systems   d) To disrupt traditional practices

35. Which of the following is a knowledge system?

a) A water treatment plant   b) An online library management tool

c) A relational database like MySQL   d) A robotic arm in a factory

36. What is an example of a civil engineering system?

a) A robotic arm   b) A home automation system

37. What does a mechanical engineering system utilize to accomplish work?

a) Raw materials   b) Electric signals

c) External forces   d) Stored data

38. What is the focus of electrical engineering systems?

a) Managing data   b) Utilizing chemical reactions

c) Applying electricity and electromagnetism d) Building bridges and roads

39. Which of the following is an example of a software engineering system?

a) A robotic arm   b) A smartphone app for home automation

c) An online tool for tracking library books   d) A water treatment plant

40. What does a knowledge system facilitate?

a) Managing information resources effectively

b) Constructing houses and bridges

c) Building robotic devices   d) Automating home appliances

41. What type of database system is MongoDB?

a) Relational database   b) Chemical database

c) NoSQL database   d) Logical database

42. Which artificial system involves the application of logic?

a) A home automation system   b) A database management system

c) A theoretical model for reasoning d) A robotic assembly line

43. Which artificial engineering system in Lahore provides efficient transportation?
a) Virtual Reality
b) Metro Train System
c) Electric traffic lights
d) Smart sensors

44. What technology is used in modern traffic systems to enhance safety?
a) Manual controls
b) Smart sensors and AI
c) Steam engines
d) Virtual Reality

45. Where were the first electric traffic lights built?
a) New York City, USA
b) London, England
c) Cleveland, Ohio, USA
d) Lahore, Pakistan

46. What is an example of an AI system that recognizes human speech?
a) MySQL
b) Siri
c) Virtual Reality
d) Robotic Arm

47. What does Virtual Reality (VR) enable users to do?
a) Control traffic systems
b) Explore and interact with immersive digital worlds
c) Communicate through AI
d) Build bridges

48. Which of the following is NOT an application of VR technology?
a) Gaming
b) Teaching
c) Astronaut training
d) Traffic light systems

49. What year were the first electric traffic lights installed?
a) 1905
b) 1914
c) 1925
d) 1930

50. Which technology can make users feel as if they are physically present in a digital environment?
a) Artificial Intelligence
b) Virtual Reality
c) Robotics
d) Chemical Engineering

51. Which of the following AI systems can recognize and respond to human speech?
a) Siri and Google Maps
b) Siri and Alexa
c) Alexa and Google Maps
d) Google Maps and YouTube

52. What is Virtual Reality (VR) used for?
a) Only for gaming
b) Only for teaching
c) Only for astronaut training
d) For gaming, teaching, and astronaut training

53. Which of the following is an example of a social system?
a) A forest ecosystem
b) A government institution
c) A computer network
d) A biological system
Answer: b) A government institution

54. What is the primary goal of social systems?
a) To create artifacts
b) To improve transportation

c) To maintain order and provide services   d) To develop software systems

55. What is the nature of natural science?

a) Descriptive   b) Prescriptive   c) Constructive   d) Abstract

56. What is the focus of design science?

a) Describing natural phenomena   b) Creating artifacts to solve problems

c) Observing natural systems   d) Managing ecosystems

57. Which science type follows the regulative cycle?

a) Natural science   b) Design science

c) Political science   d) Social science

58. What is the main objective of a computer?

a) To perform computations and process data

b) To provide entertainment and play games

c) To communicate with other computers

d) To control other devices

59. Which of the following is a component of a computer?

a) Power supply   b) Interface components

c) Internet connection   d) Software application

60. What is the function of the CPU in a computer?

a) To store data and instructions

b) To provide input and output operations

c) To perform computations and execute commands

d) To control the flow of data

61. What is the role of the operating system in a computer?

a) Input and output operations

b) Determine the appropriate actions to take

c) To store data and instructions

d) To control the flow of data

62. Which of the following is an example of an algorithm studied in computer science?

a) Virtual Reality   b) Quicksort c) DBMS   d) Computer architecture

63. What is an example of a tool developed through design science?

a) A sorting algorithm   b) A new programming language

c) A natural rule governing computation   d) A physical hard drive

64. Which science involves creating tools to solve specific problems in computer science?

a) Natural science   b) Design science

c) Social science   d) Political science

65. Which device connects external peripherals to a computer?

a) CPU   b) System bus c) Power supply   d) Motherboard

66. What connects the CPU to other computer components?

a) Peripherals   b) System bus c) Operating system d) Power supply

67. Which of the following is an example of an input device?
a) Monitor   b) Printer   c) Keyboard   d) Speaker

68. What is an example of an input device?
a) Monitor   b) Mouse   c) Printer   d) Hard drive

69. What is an example of an output device in Von Neumann architecture?
a) Keyboard   b) Mouse   c) Monitor   d) CPU

70. Which part of the CPU performs computations?
a) (CU)   b) Address Bus   c) ALU   d) System Bus

71. What is the advantage of the Von Neumann architecture?
a) Improved security   b) Simplified design and flexibility
c) Increased processing speed   d) Enhanced data storage capacity

72. What is one of the primary objectives of a computer network?
a) Data encryption   b) Resource sharing

73. Which is an example of a physical medium used for data transfer in a computer network?
a) Protocols   b) Network cables
c) Operating systems   d) Switches

74. Which type of network connects computers over larger geographic regions?
a) LAN   b) MAN   c) WAN   d) PAN

75. What is the core protocol governing data transmission over the internet?
a) TCP/IP   b) FTP   c) POP   d) UDP

76. Which protocol is used for retrieving emails from a server or network?
a) FTP   b) POP   c) HTTP   d) SMTP

77. Which protocol is used for file transfers between computers?
a) UDP   b) FTP   c) POP   d) TCP

Answers:

1	2	3	4	5	6	7	8	9	10	11	12
B	B	C	B	C	B	B	C	C	C	B	D
13	14	15	16	17	18	19	20	21	22	23	24
B	D	D	C	C	C	B	C	B	B	B	B
25	26	27	28	29	30	31	32	33	34	35	36
B	C	C	C	B	C	B	A	A	B	C	C
37	38	39	40	41	42	43	44	45	46	47	48
C	C	C	A	C	C	B	B	C	B	B	D
49	50	51	52	53	54	55	56	57	58	59	60
B	B	B	D	B	C	A	B	B	A	B	C

61	62	63	64	65	66	67	68	69	70	71	72
B	B	B	B	D	B	C	B	C	C	B	B

73	74	75	76	77
B	C	A	B	B