FBQ1: The AND _____ is an electronic circuit that provides a high output (1) only if all its inputs are high.
Answer: *Gate*

FBQ2: An input/ output _____ also called I/O components allows data input and reporting of the results in proper format.
Answer: *System*

FBQ3: The binary number 10110 is equivalent to _____ in decimal. (numeric answer only)
Answer: *22*

FBQ4: The octal number (23)8 is equivalent to _____ in decimal. (numeric answer only)
Answer: *19*

FBQ5: The hexadecimal number (E2)16 is equivalent to _____ in decimal system. (numeric answer only)
Answer: *226*

FBQ6: The equivalent of the decimal number 14 in binary is _____.
Answer: *1110*

FBQ7: With regards to binary numbers, the 2's complement of 1010 is equivalent to _____?
Answer: *0110*

FBQ8: A von Neumann machine has only a single path between the main _____ and the control unit (CU). This feature/constraint is referred to as the von Neumann bottleneck
Answer: *Memory*

FBQ9: _____ algebra is used for designing and analysing digital circuits.
Answer: *Boolean*

FBQ10: [A.(B.C) = (A.B).C] and [A+ (B+C) = (A+B)+C] are examples of _____ law in Boolean algebra
Answer: *Associative*

FBQ11: The floating-point number representation consists of two parts. The first part of the number is called the mantissa, and the second part is termed an _____.
Answer: *Exponent*

FBQ12: Given the logic gate symbol above, if A = 1, and B = 1, what is the output Q?   (numeric answer only)
Answer: *1*

FBQ13: Given the logic gate symbol above, if A = 0, and B = 0, what is the output Q? (numeric answer only)
Answer: *1*

FBQ14: Given the logic gate symbol above, if A = 1 and B = 0, what is the output Q? (numeric answer only)
Answer: *1*

FBQ15: A _____ bit is an extra bit added with binary data such that it makes the total number of 1's in the data either odd or even.
Answer: *Parity*

FBQ16: _____ is defined loosely as any exceptional event that causes the CPU to temporarily transfer its control from the currently executing program

to a different program which provides service to the exceptional event.
Answer: *Interrupt*

FBQ17: Typical, Redundant Array of Independent Disks (RAID) implementations have
_____ levels
Answer: *6*

FBQ18: A/An _____ set is a collection of all the instructions a CPU can
execute.
Answer: *Instruction*

FBQ19: When considering instructions sets, _____ processing
instructions are used for arithmetical and logic operations in a machine.
Answer: *Data*

FBQ20: When considering instruction sets, _____ instructions are used
for testing the status of computation through Processor Status Word (PSW).
Answer: *Control*

FBQ21: The term "_____ scheme" refers to the mechanism employed for
specifying operands.
Answer: *Addressing*

FBQ22: When considering 'Status and Control ____', the sign flag indicates
whether the sign of a previous arithmetic operation was positive (0) or negative
(1)
Answer: *Registers*

FBQ23: _____ circuits are interconnected circuits of gates according to a
certain rule to produce an output depending on its input value.
Answer: *Combinational*

FBQ24: The _____ is one of the basic building units of a computer system
which connects multiple input lines to a single output line.
Answer: *Multiplexer*

FBQ25: _____ are used by the control unit for determining the status of
the CPU.
Answer: *Flags*

FBQ26: _____ circuits are logic circuits whose present output depends on
the past inputs.
Answer: *Sequential*

FBQ27: The microinstruction cycle typically consists of two basic cycles; the
fetch andthe _____ cycle.
Answer: *execute *

FBQ28: The _____ unit is responsible for initialising various registers
during the start-up of the machine
Answer: *Control*

FBQ29: Flip-flops and counters are both examples of _____ circuits.
Answer: *Sequential*

FBQ30: The information from memory devices can be accessed in the following
ways: Random Access; Sequential Access; and _____ Access.
Answer: *Direct*

FBQ31: When considering the access time on disk, _____ time is the
time required by a sector to reach below the read/write head.
Answer: *Latency*

FBQ32: Instructions are represented as sequence of _____.

Answer: *Bits*

FBQ33: An instruction _____ is used to define the layout of the bits allocated to these elements of instructions.
Answer: *Format*

FBQ34: The arithmetic-logic unit (ALU), registers and the control unit are all components of the _____
Answer: *CPU*

FBQ35: In Wilkes' microprogram control unit, the microinstruction has two major components: the control field, and the _____ field
Answer: *Address*

Multiple Choice Questions (MCQs):
MCQ1: The following options are all key features of a Von Neumann machine EXCEPT _____?
Answer: It uses a stored-program concept.

MCQ2: Which of the following options is NOT a basic function component of the CPU?
Answer: Input Unit

MCQ3: Which of the following options is not an example of a mechanical or electro-mechanical computer?
Answer: The Difference Engine

MCQ4: The following options are all trends encountered during the era of first generation computers EXPECT?
Answer: Centralised control in a single CPU

MCQ5: The second generation computers started with the advent of _____?
Answer: Transistors

MCQ6: Which of the following options is NOT an error detection or correction code?
Answer: Parity Bit

MCQ7: The following options are examples of typical CPU registers EXCEPT _____?
Answer: Program Counter (PC)

MCQ8: Which of these options is NOT a typical action performed on fetched instructions loaded into an instruction register?
Answer: Data Transfer

MCQ9: Interrupts generated internally by the CPU, on certain exceptional events during instruction execution are called?
Answer: Program interrupts or traps

MCQ10: The following options are all basic logical identities used in Boolean algebra EXCEPT:
Answer: Commutative law

MCQ11: _____ gate is an electronic circuit that gives a high output (1) only if all its inputs are high.
Answer: NAND

MCQ12: All the following options are typical logic gate symbols EXCEPT?
Answer:

MCQ13: _____ typically represents the logic gate symbol for NAND gates.
Answer:

MCQ14: _____ represents the logic gate symbol for NOR.
Answer:

MCQ15: Which of the following options is NOT a method used for the
simplification of Boolean expressions (minimisation of gates)?
Answer: Algebraic simplification

MCQ16: Which of these options is NOT an example of sequential circuits?
Answer: Flip-flop

MCQ17: Which of the following options is the term used to refer to the situation
when the next micro-instruction which is executed is the one following the
current micro-instruction?
Answer: Non-branching

MCQ18: Which of the following options is NOT a scheme for bus arbitration?
Answer: Daisy chaining

MCQ19: When considering the memory hierarchy of the computer system, which of
the following options has the fastest access time?
Answer: Registers

MCQ20: The terminology used for identifying the comparative behaviour of the
various memory devices and technologies is …………
Answer: Cycle time

MCQ21: Information from memory devices can be accessed in all the following ways
EXCEPT?
Answer: Random Access

MCQ22: Which of the following options does NOT increase the bandwidth of the
processor-memory interface?
Answer: Insert a cache between the main memory and the processor

MCQ23: Which option is NOT a typical function of the Input / Output (I/O)
Module?
Answer: Provision of control and timing signals

MCQ24: An input/output module is used for all the following reasons EXCEPT:
Answer: Diversity and variety of I/O devices reduce the flexibility to use new
technology if connected directly

MCQ25: The following are operands which can be used in an instruction EXCEPT
_____
Answer: Address

MCQ26: Which of the following options is NOT a valid classification scheme for
register architecture?
Answer: Accumulator Machines

MCQ27: Which of the following options is NOT an input to the control unit?
Answer: Master clock signal

MCQ28: When selecting addressable bits, all EXCEPT _____considered?
Answer: Number of addressing modes

MCQ29: The following options are all examples of 'program visible registers'
EXCEPT:
Answer: Data registers

MCQ30: The following options are all examples of the various categories of
micro-operations performed by a machine on the data stored in the registers
EXCEPT:
Answer: Register transfer micro-operations

MCQ31: Which of the following options is NOT a characteristic representation of a typical 32 bit floating point number?
Answer: The leftmost bit is the sign bit of the number

MCQ32: Which of the following options is NOT a basic responsibility of the control unit?
Answer: data exchange of the CPU with the memory or I/O modules

MCQ33: Which of the following options is NOT a classification of the different types of computer memory?
Answer: Optical memory

MCQ34: The characteristic of 'Highly Encoded Microinstructions' include all EXCEPT _____
Answer: The encoded bits needed in microinstructions are high

MCQ35: When designing sequencing techniques for micro-instructions, which of the following is not a factor influencing the length of the micro-instruction?
Answer: Means of specifying the address of the next micro-instruction