

**Note: “These are sample MCQs to indicate pattern, may or may not appear in examination”**

Program: BE Computer Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: **CSC703** and Course Name: **Artificial Intelligence and Soft Computing**

Time: 1 hour

Max. Marks: 50

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Note to the students: - All the Questions are compulsory and carry equal marks.

Q1.	“The train is running fast”. Here ‘fast’ can be represented by
Option A:	Fuzzy Set
Option B:	Crisp Set
Option C:	Fuzzy and Crisp Set
Option D:	Classical Set
Q2.	How to define perceptron learning rule?
Option A:	The learning signal is the difference between the desired output(response) and actual output (calculated response)
Option B:	The learning signal is the difference between the input and actual output.
Option C:	Rule states that the modification in sympatric weight of a node is equal to the multiplication of error and the input.
Option D:	It is an unsupervised learning rule
Q3.	Which data structure conveniently used to implement DFS?
Option A:	Stacks
Option B:	Queues
Option C:	Priority Queues
Option D:	Trees
Q4.	What can operate over the joint state space?
Option A:	Decision-making algorithm
Option B:	conditional algorithm
Option C:	Complex algorithm
Option D:	Simple algorithm
Q5.	Which condition is used to cease the growth of forward chaining?
Option A:	Atomic sentences
Option B:	Complex sentences
Option C:	No further inference
Option D:	Compound Sentence

Q6.	A constructive approach in which no commitment is made unless it is necessary to do so, is _____
Option A:	Least commitment approach
Option B:	Most commitment approach
Option C:	Nonlinear planning
Option D:	Opportunistic planning
Q7.	Heuristic function $h(n)$ is _____
Option A:	Lowest path cost
Option B:	Cheapest path from root to goal node
Option C:	Estimated cost of cheapest path from root to goal node
Option D:	Average path cost
Q8.	A plan that describe how to take actions in levels of increasing refinement and specificity is _____
Option A:	Problem solving
Option B:	Planning
Option C:	Non-hierarchical plan
Option D:	Hierarchical plan
Q9.	A _____ point of a fuzzy set A is a point $x \in X$ at which $\mu_A(x) = 0.5$
Option A:	Problem Space
Option B:	Problem Instance
Option C:	Problem Space Graph
Option D:	Admissibility
Q10.	How to eliminate the redundant rule matching attempts in the forward chaining
Option A:	Decremental forward chaining
Option B:	Incremental forward chaining
Option C:	Data complexity
Option D:	Variable complexity
Q11.	What is Time Complexity of Breadth First search algorithm?
Option A:	b
Option B:	$b^d$
Option C:	$b^2$
Option D:	$b^b$
Q12.	Which of the following is NOT a component of Learning Agent
Option A:	Critic
Option B:	Learning element
Option C:	Performance element
Option D:	Goal
Q13.	Rule based system also known as?

Option A:	Knowledge based system
Option B:	Mycin based system
Option C:	Human based system
Option D:	Convention based system
Q14.	Properties of fuzzy sets is
Option A:	Intersection
Option B:	Union
Option C:	Compliment
Option D:	Commutative
Q15.	Three main basic features involved in characterizing membership function are
Option A:	Intuition, Inference, Rank Ordering
Option B:	Fuzzy Algorithm, Neural network, Genetic Algorithm
Option C:	Core, Support, Boundary
Option D:	Weighted Average, center of Sums, Median
Q16.	How many outputs Fuzzy Logic produce?
Option A:	2
Option B:	3
Option C:	4
Option D:	5
Q17.	Which of the following is not the style of inference?
Option A:	Forward Chaining
Option B:	Backward Chaining
Option C:	Resolution Refutation
Option D:	Modus Ponem
Q18.	What are the two basic types of inferences?
Option A:	Reduction to propositional logic, Manipulate rules directly
Option B:	Reduction to propositional logic, Apply modus ponem
Option C:	Apply modus ponem, Manipulate rules directly
Option D:	Convert every rule to Horn Clause, Reduction to propositional logic
Q19.	Which search algorithm imposes a fixed depth limit on nodes?
Option A:	Depth-limited search
Option B:	Depth-first search
Option C:	Iterative deepening search
Option D:	Bidirectional search
Q20.	The adjective “first-order” distinguishes first-order logic from _____ in which there are predicates having predicates or functions as arguments, or in which one or both of predicate quantifiers or function quantifiers are permitted.
Option A:	Representational Verification

Option B:	Representational Adequacy
Option C:	Higher Order Logic
Option D:	Inferential Efficiency
Q21.	A type of fuzzy relation is
Option A:	Normalization
Option B:	Ant reflexive
Option C:	Union
Option D:	identity
Q22.	Rules are expressed as a set of?
Option A:	Switch statement
Option B:	Using Loop
Option C:	if-then statements
Option D:	Using continue statement
Q23.	A fuzzy set whose membership function has at least one element $x$ in the universe whose membership value is unity is called
Option A:	sub normal fuzzy sets
Option B:	normal fuzzy set
Option C:	convex fuzzy set
Option D:	concave fuzzy set
Q24.	How many levels of fuzzifier is there?
Option A:	4
Option B:	5
Option C:	6
Option D:	7
Q25.	Which of the following is not a type of Membership function?
Option A:	S-shape
Option B:	Bell shape
Option C:	Truncated Gaussian
Option D:	Center of Sums

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: MEC703 and Course Name: Production Planning and Control

Time: 1hour

Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	Loading may be defined as
Option A:	Sending the raw material to the machine
Option B:	Sending the finished material to the store
Option C:	Assign the work to the facilities
Option D:	Uploading a software in machine control panel
Q2.	Master schedule is prepared for
Option A:	Single product continuous production
Option B:	Multi product batch production
Option C:	Assembly product continuous production
Option D:	Single product batch production
Q3.	What is the first phase of PPC cycle
Option A:	Preplanning
Option B:	Planning
Option C:	Controlling
Option D:	Designing
Q4.	The first step in time-series analysis is to
Option A:	perform preliminary regression calculations.
Option B:	calculate a moving average
Option C:	plot the data on a graph.
Option D:	identify relevant correlated variables
Q5.	The root-mean-square error is a measure of
Option A:	sample size
Option B:	moving average periods
Option C:	exponential smoothing
Option D:	forecast accuracy
Q6.	An aggregate planner requires information on constraints. Which of the following is one of the typical constraints for an aggregate planner?
Option A:	Labor/machine hours required per unit
Option B:	Stock-out or backlog cost
Option C:	Inventory holding cost

Option D:	Limits on overtime
Q7.	Utilization is measured by
Option A:	Effective capacity / Design capacity
Option B:	Actual output / Effective capacity
Option C:	Actual output / Design capacity
Option D:	Design capacity / Actual output
Q8.	'Buffer stock' is the level of stock
Option A:	Half of the actual stock
Option B:	At which the ordering process should start
Option C:	Minimum stock level below which actual stock should not fall
Option D:	Maximum stock in inventory
Q9.	Re-ordering level is calculated as
Option A:	Maximum consumption rate x Maximum re-order period
Option B:	Minimum consumption rate x Minimum re-order period
Option C:	Maximum consumption rate x Minimum re-order period
Option D:	Minimum consumption rate x Maximum re-order period
Q10.	An example of purchasing costs include
Option A:	incoming freight
Option B:	storage costs
Option C:	insurance
Option D:	spoilage
Q11.	In case of ABC analysis "C" class items constitute _____% of total items
Option A:	50-60%
Option B:	70-80%
Option C:	60-70%
Option D:	15-25%
Q12.	Machine output is related to cycle time as
Option A:	Directly proportional
Option B:	Inversely proportional
Option C:	Directly proportional to square of cycle time
Option D:	Inversely proportional to square of cycle time
Q13.	Which of this is not step involved in man power planning
Option A:	Man power demand forecasting
Option B:	Manpower supply forecasting
Option C:	Manpower audit
Option D:	Material specification
Q14.	Which of this is important factor in line balancing
Option A:	sale

Option B:	forecasting
Option C:	balance delay
Option D:	quality
Q15.	Station time is called as
Option A:	standard time to perform task
Option B:	the smallest grouping of work that can be assigned to a workstation.
Option C:	total standard work content of specific workstation
Option D:	a task that must be performed before performing another task
Q16.	In PERT, the distribution of activity times is assumed to be
Option A:	Normal
Option B:	Beta
Option C:	Gamma
Option D:	Exponential
Q17.	In CPM, the cost slope is determined by
Option A:	Crash cost/ normal cost
Option B:	$(\text{Crash cost} - \text{Normal cost}) / (\text{Normal time} - \text{crash time})$
Option C:	normal cost/ crash cost
Option D:	$(\text{Crash cost} - \text{Normal cost}) / (\text{crash time} - \text{normal time})$
Q18.	An optimum project schedule implies
Option A:	Optimum utilization of men, machines and materials
Option B:	Lowest possible cost and shortest possible time for project
Option C:	Timely execution of project
Option D:	To produce best results under given constraints
Q19.	The statistical tool that depicts a project's tasks and the relationships between those tasks is known as
Option A:	Milestone
Option B:	Goal
Option C:	Gantt chart
Option D:	PERT chart
Q20.	Actual performance of a task is called
Option A:	An event
Option B:	An activity
Option C:	A duration
Option D:	A duration
Q21.	An MRP system that provides feedback to the capacity plan, master production schedule, and production plans is called
Option A:	closed-loop MRP
Option B:	system nervousness
Option C:	lot-sizing



Option D:	load report
Q22.	Inventory record file gives the following information
Option A:	lot size
Option B:	machine details
Option C:	customer name
Option D:	supplier name
Q23.	_____ are the basic materials which have not undergone any conversion since their receipt from suppliers.
Option A:	Work in process parts
Option B:	Raw materials
Option C:	Finished parts
Option D:	Work made parts
Q24.	Who are the primary users of ERP systems?
Option A:	Sales, marketing, customer service
Option B:	Accounting, finance, logistics, and production
Option C:	Customers, resellers,
Option D:	Partners, suppliers, and distributors
Q25.	Which of the following is not true for forecasting?
Option A:	Forecasts are rarely perfect
Option B:	The underlying casual system will remain same in the future
Option C:	Forecast for group of items is accurate than individual item
Option D:	Short range forecasts are less accurate than long range forecasts

Program: BE Electronics & Telecommunication Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: ECC703 and Course Name: Optical Communication

Time: 1hour

Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	Single-mode step-index cable has a core diameter in the range of.
Option A:	100 to 1000 micrometer
Option B:	50 to 100 micrometer
Option C:	5 to 15 micrometer
Option D:	8 to 10 micrometer
Q2.	For lower bandwidth applications
Option A:	Single mode fiber is advantageous
Option B:	Photonic crystal fibers are advantageous
Option C:	Coaxial cables are advantageous
Option D:	Multimode fiber is advantageous
Q3.	EMD is best described by which statement?
Option A:	70 percent of the core diameter and 70% of the fiber NA should be filled with light
Option B:	70 percent of the fiber diameter and 70% of the cone of acceptance should be filled with light
Option C:	50 percent of input light should be measured at the output
Option D:	70 percent of the unwanted wavelengths should be attenuated by the fiber
Q4.	The difference between the modes' refractive indices is called as _____
Option A:	Polarization
Option B:	Cutoff
Option C:	Fiber birefringence
Option D:	Fiber splicing
Q5.	In single-mode fibers, how does the fraction of energy traveling through bound mode appear in the cladding?
Option A:	As a crescent wave
Option B:	As a gibbous wave
Option C:	As an evanescent wave
Option D:	As a normal wave
Q6.	OTDR stands for:

Option A:	Optical Transmit Direction Return
Option B:	Optical Time Domain Reflectometer
Option C:	Optical Time Domain Time Regeneration
Option D:	Overtime Direct Reference
Q7.	Bending loss in optical fiber depends on:
Option A:	Material of Optical fiber
Option B:	Radius of curvature of bending
Option C:	Size of Core
Option D:	Refractive index of core
Q8.	For measuring the shape of input pulse in time-domain intermodal dispersion method, the test fiber is replaced by another fiber whose length is less than ____ of the test fiber.
Option A:	1%
Option B:	5%
Option C:	10%
Option D:	2%
Q9.	The optical bandwidth is _____ the electrical bandwidth.
Option A:	Smaller than
Option B:	Greater than
Option C:	Same as
Option D:	Zero with respect to
Q10.	In practical LEDs, increase in the temperature of the LED leads to
Option A:	Increase in the output power
Option B:	Decrease in the linewidth
Option C:	Increase in the peak emission wavelength
Option D:	Increase in the external quantum efficiency
Q11.	A perfect semiconductor crystal containing no impurities or lattice defects is called as _____
Option A:	Intrinsic semiconductor
Option B:	Extrinsic semiconductor
Option C:	Excitation
Option D:	Valence electron
Q12.	What is the need to achieve population Inversion
Option A:	To excite most of atoms
Option B:	To bring most of atoms to ground state
Option C:	To achieve stable condition
Option D:	To reduce the time of production of laser
Q13.	Which of the following is a unique property of laser?
Option A:	Directional
Option B:	Speed

Option C:	Coherence
Option D:	Wavelength
Q14.	It is a resonant cavity formed by two parallel reflecting mirrors separated by a mirror separated by a medium such as air or gas is?
Option A:	Optical cavity
Option B:	Wheatstone's bridge
Option C:	Oscillator
Option D:	Fabry-perot resonator
Q15.	How should be the photocurrent of an optical detector?
Option A:	Less
Option B:	More
Option C:	Linear
Option D:	Nonlinear
Q16.	Silicon has indirect band gap energy of _____.
Option A:	1.2eV
Option B:	2eV
Option C:	1.14eV
Option D:	1.9eV
Q17.	A large secondary current _____ in n-p-n InGaAs phototransistor is achieved.
Option A:	Between base and Collector
Option B:	Between emitter and collector
Option C:	Between Base and Emitter
Option D:	Plasma
Q18.	The liquid-phase melting technique is used for the production of fibers _____.
Option A:	With a core diameter of 50 $\mu$ m
Option B:	With a core diameter less than 100 $\mu$ m
Option C:	With a core diameter more than 200 $\mu$ m
Option D:	With a core diameter of 100 $\mu$ m
Q19.	What is the use of an index-matching material in the connector between the two jointed fibers?
Option A:	To decrease the light transmission through the connection
Option B:	To increase the light transmission through the connection
Option C:	To induce losses in the fiber
Option D:	To make a fiber dispersive
Q20.	In modified chemical vapor deposition (MCVD), vapor phase reactant such as _____ pass through a hot zone. MCVD process is also called as an inside vapor phase oxidation (IVPD) technique?. Is the statement true or false. Choose the appropriate option respectively
Option A:	Halide and oxygen, True

Option B:	Halide and hydrogen, False
Option C:	Halide and silica, True
Option D:	Hydroxides and oxygen, False
Q21.	Mie Scattering occurs when the size of the scattering center becomes
Option A:	Very Smaller than wavelengths at which Rayleigh Scattering occurs
Option B:	Larger than wavelengths at which Rayleigh Scattering occurs
Option C:	Equal to wavelengths at which Rayleigh Scattering occurs
Option D:	Doesn't depend on wavelength
Q22.	Dispersion limitations of optical link is determined by
Option A:	Key link parameters
Option B:	Link power budget
Option C:	Fall time budget
Option D:	Rise time budget
Q23.	The InGaAs pin and APD photodiodes have a responsivity of
Option A:	0.95 A/W
Option B:	0.75 A/W
Option C:	0.55 A/W
Option D:	0.45 A/W
Q24.	Which type of fiber optic cable has/have its/their core with the size of about 480 $\mu\text{m}$ to 980 $\mu\text{m}$ & made up of poly methyl methacrylate (PMMA)?
Option A:	Glass fiber optic cable
Option B:	Plastic fiber optic cable
Option C:	Plastic clad silica fiber optic cable
Option D:	Silica clad silica fiber optic cable
Q25.	In index-guided photonic crystal fiber structure, the dark areas are air holes. What does white areas suggests?
Option A:	Air
Option B:	Plasma
Option C:	Silica
Option D:	Water

Program: BE Information Technology

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: **ITC 703** and Course Name: **Artificial Intelligence**

Time: 1 hour

Max. Marks: 50

Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	Part picking Robot is the example of?
Option A:	Fully Observable environment
Option B:	Partial Observable Environment
Option C:	Both a and b
Option D:	None of these
Q2.	Satellite Image Analysis System is.
Option A:	Fully Observable environment
Option B:	Partial Observable Environment
Option C:	Both a and b
Option D:	None of these
Q3.	Which Agent Deal with Happy and Unhappy states
Option A:	Table Driven Agent
Option B:	Simple Reflex Agent
Option C:	Goal based Agent
Option D:	Utility based Agent
Q4.	For the Given Example If Vacuum Cleaner Agent working in the room with Two tiles then How many possible states will be existing.
Option A:	Two
Option B:	Four
Option C:	Six
Option D:	Eight
Q5.	Which of the following is used in Depth first search?
Option A:	Linked list
Option B:	Priority queue
Option C:	Stack
Option D:	Queues
Q6.	Strategies that know whether one non-goal state is “more promising” than another are called _____.
Option A:	Informed & Uninformed Search
Option B:	Uninformed Search
Option C:	Heuristic & Uninformed Search

Option D:	Informed & Heuristic Search
Q7.	Which search algorithm imposes a fixed depth limit on nodes?
Option A:	Depth-limited search
Option B:	Depth-first search
Option C:	Iterative deepening search
Option D:	Bidirectional search
Q8.	_____ is simply a combination of depth first with generate and test where a feedback is used here to decide on the direction of motion in the search space.
Option A:	DFS
Option B:	Hill climbing
Option C:	BFS
Option D:	Iterative depending
Q9.	Which condition is used to stop the expansion of forward chaining?
Option A:	Atomic sentences
Option B:	Complex sentences
Option C:	No further inference
Option D:	All of the mentioned
Q10.	Translate the following statement into FOL. "For every a, if a is a PhD student, then a has a master degree"
Option A:	$\forall a \text{ PhD}(a) \rightarrow \text{Master}(a)$
Option B:	$\exists a \text{ PhD}(a) \rightarrow \text{Master}(a)$
Option C:	A is true, B is true
Option D:	A is false, B is false
Q11.	Which of the mentioned point are not valid with respect to a Propositional Logic?
Option A:	In propositional logic, the sentence can have answers other than True or False
Option B:	In propositional Logic, each sentence is a declarative sentence
Option C:	Propositional Logic is a type of knowledge representation in AI
Option D:	None of the above
Q12.	What are the two basic types of inferences
Option A:	Reduction to propositional logic, Manipulate rules directly
Option B:	Reduction to propositional logic, Apply modus ponens
Option C:	Apply modus ponens, Manipulate rules directly
Option D:	Convert every rule to Horn Clause, Reduction to propositional logic
Q13.	In PEAS, which parameter play the role of Effectors Stand for?
Option A:	P
Option B:	E
Option C:	A
Option D:	S

Q14.	The components of Partial order Planning are
Option A:	Action, plan
Option B:	Situation, action, goal
Option C:	Goal, Binding, causal link
Option D:	Goal, literals
Q15.	Literals in Planning Graph can be defined as
Option A:	Literals are those that could be true at that time step, depending upon actions taken at succeeding step
Option B:	Literals are those that could be incomplete step, depending upon actions taken at preceding step.
Option C:	Literals are those that could be true at that time step, depending upon actions taken at preceding step.
Option D:	Literals are the actions.
Q16.	Planning Graph works well for
Option A:	Propositional Planning with variables
Option B:	Propositional Planning with no variables
Option C:	Strategic Planning
Option D:	Task Planning
Q17.	The Sussman Anomaly shows the limitation of
Option A:	Simple planning methods
Option B:	Primitive planning methods
Option C:	Interleaved planning methods
Option D:	Non Interleaved planning methods
Q18.	Data structure which represents dependencies among variables and gives concise specification of any full joint probability distribution is:
Option A:	Digital Network
Option B:	Bayesian Network
Option C:	Array
Option D:	Linked List
Q19.	What are the dimensions of the joint probability distribution table if one variable has 4 probabilities and the second variable has 2 probabilities?
Option A:	8 X 4
Option B:	8 x 1
Option C:	4 X 2
Option D:	4 X 8
Q20.	Probability distributions for continuous variables are called:
Option A:	Continuous functions
Option B:	Density functions
Option C:	Distribution functions
Option D:	Probability density functions



Q21.	Which of the following is <b>not</b> a type of typical random variable?
Option A:	Boolean random variable
Option B:	Periodic random variable
Option C:	Discrete random variable
Option D:	Continuous random variable
Q22.	The system that learns to take next action based on trial and error uses -----.
Option A:	Supervised learning
Option B:	Unsupervised learning
Option C:	Reinforcement learning
Option D:	Adaptive learning
Q23.	Which of the following statement is incorrect?
Option A:	Language model is a probability distribution over sequences of words
Option B:	Language modeling is used in speech recognition,
Option C:	Acoustic model is an example of language model
Option D:	n-gram model assumes that the probability of a word only depends on the previous n words
Q24.	Which type of analytics can be used to identify the trends in sales activities.
Option A:	Descriptive analytics.
Option B:	Predictive analytics
Option C:	Prescriptive analytics.
Option D:	Diagnostic analytics.
Q25.	The TAUM-METEO system, which translates weather reports from English to French, follows _____ machine translation.
Option A:	Rough translation.
Option B:	Restricted-source translation.
Option C:	Predicted translation.
Option D:	Literary translation

Program: BE Instrumentation Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: ISC703 Course Name: Industrial Automation

Time: 1hour

Max. Marks: 50

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Note to the students:- All Questions are compulsory and carry equal marks .

Q1.	To manufacture variety of products and varying product design requirements following is used
Option A:	Fixed automation
Option B:	Programmable automation
Option C:	Integrated automation
Option D:	Flexible automation
Q2.	Opto- isolator in discrete input module is required to .....
Option A:	drop voltage to logic level
Option B:	convert optical signal to digital signal
Option C:	prevent voltage transients from damaging processor
Option D:	rectification of signal
Q3.	In DCS, Critical control I/O s are connected to .....
Option A:	Local control unit
Option B:	Local console
Option C:	Multiplexers
Option D:	Dedicated card controller
Q4.	For achieving greater control and visibility for managing product lifecycle, following is used.
Option A:	Enterprise Resource planning
Option B:	distributed control system

Option C:	Manufacturing Execution system
Option D:	system application and products
Q5.	In a current sinking DC input module
Option A:	The current flows out of the input field device
Option B:	The current flows out of the input module
Option C:	AC sources be used with mechanical switches
Option D:	Currents can flow in either direction at the input module
Q6.	For SIL 3, Probability of failure on demand is between
Option A:	0.001-0.0001
Option B:	0.1-0.01
Option C:	0.1-0.001
Option D:	0.0001-0.00001
Q7.	In PLC programming, a retentive function is one that:
Option A:	Comes last in the program
Option B:	Defaults to the “off” state
Option C:	Cannot be edited or deleted
Option D:	Is not reset after a power cycle
Q8.	Stand- alone controllers are at following level of industrial control system
Option A:	Level 1
Option B:	Level 2A
Option C:	Level 3
Option D:	Level 3B
Q9.	Following are graphical programming languages
Option A:	Instruction list and structured text

Option B:	Ladder diagram and Function block diagram
Option C:	Instruction list and Ladder Diagram
Option D:	structured list and function block diagram
Q10.	SCADA systems are used for
Option A:	factory automation control
Option B:	discrete and analog process control
Option C:	Long distance monitoring and control
Option D:	chemical process control
Q11.	Function blocks are building blocks for
Option A:	continuous and discrete algorithms
Option B:	calculating parameters
Option C:	signal communication
Option D:	sequential algorithms
Q12.	Dikes is under following Protection layer
Option A:	basic process control
Option B:	physical protection
Option C:	community
Option D:	safety instrumented system
Q13.	Supervisory control is intended for following
Option A:	Calculation of yield and efficiency
Option B:	discrete I/O control
Option C:	Analog I/O control
Option D:	detailed display
Q14.	For 20,000 bits to move @data rate of 1200 bps with 40 % communication Efficiency, SCAN Interval is

Option A:	896 seconds
Option B:	17 seconds
Option C:	1.7 seconds
Option D:	42.5 seconds
Q15.	PLC processor senses process information status through
Option A:	Input Module
Option B:	Output module
Option C:	Input image table
Option D:	output image table
Q16.	The signal that Leave the RTU are
Option A:	Analog setting instructions
Option B:	0-24 V Equipment status
Option C:	pulse train meter signals
Option D:	pulse train stepping motor control
Q17.	Detailed display represents
Option A:	Portion of a process
Option B:	single loop control function
Option C:	Multiple loop control functions
Option D:	Chart records
Q18.	PLC is used for following
Option A:	Discrete I/O control
Option B:	Analog I/O control
Option C:	Discrete as well as Analog I/O control
Option D:	single loop control

Q19.	When process is distributed over several sites, following communication system is used
Option A:	wide area network
Option B:	Local area Network
Option C:	Radio Transmission
Option D:	cable transmission
Q20.	For scanning purpose following memory is used
Option A:	Data memory
Option B:	Executive memory
Option C:	system memory
Option D:	I/O status memory
Q21.	Typical SCADA system hardware consist of
Option A:	MTU, RTU , Field devices, communication subsystem
Option B:	MTU, LCU ,Data Highway
Option C:	DDC, SLC, DCS
Option D:	HMI, PT, PSU.
Q22.	Field instruments are connected to DCS at
Option A:	Console
Option B:	Processor Card
Option C:	Power supply card
Option D:	Marshalling cabinet
Q23.	In TIMER block for Time base of 0.1 second and Preset setting of 100, Time delay is
Option A:	10 seconds
Option B:	100 seconds
Option C:	0.1 seconds

Option D:	1 second
Q24.	Following devices are controlled by PLC
Option A:	Push button and selector switch
Option B:	Relay and solenoid
Option C:	Proximity sensor and photoelectric sensor
Option D:	contactor and fiber optic sensor
Q25.	To trigger the counting action, counters usually use
Option A:	Low to High transition from an Input
Option B:	High to Low transmission from an input
Option C:	Low to high transition from Done bit
Option D:	High to Low transition from output