Note: "These are sample MCQs to indicate pattern, may or may not appear in examination."

Program: BE Computer Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: (CPC603) and Course Name: Distributed Databases

Time: 1 hour Max. Marks: 50

==========

==========

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

Q1.	A sophisticated locking mechanism known as 2-phase locking which includes Growing phase and .....
Option A:	Shrinking Phase
Option B:	Release phase
Option C:	Commit phase
Option D:	Acquire Phase
Q2.	The transactions are always ..... if it always locks a data item in shared mode before reading it.
Option A:	well formed
Option B:	well distributed
Option C:	well locked
Option D:	well shared
Q3.	The total ordering of operations across groups ensures .....of transactions.
Option A:	Serializability
Option B:	Synchronizability
Option C:	Atomicity
Option D:	Durability
Q4.	The .....is responsible for ensuring correct execution in the presence of failures.
Option A:	Database Manager
Option B:	Transaction Manager
Option C:	Recovery Manager
Option D:	Executive Manager
Q5.	A database administrator can manually force the COMMIT or ROLLBACK of a local ..... distributed transaction.
Option A:	in-force

Option B:	in-doubt
Option C:	in-local
Option D:	in-manual
Q6.	..... is an essential part of any backup system.
Option A:	Filter
Option B:	Recovery
Option C:	Security
Option D:	Scalability
Q7.	The ..... consists of the various applications and database that play a role in a backup and recovery strategy.
Option A:	Recovery Manager environment
Option B:	Recovery Manager suit
Option C:	Recovery Manager file
Option D:	Recovery Manager database
Q8.	The enrolling of a database in a recovery catalogue is called .....
Option A:	set up
Option B:	Registration
Option C:	start up
Option D:	Enrolment
Q9.	An ..... is an exact copy of a single datafile, archived redo log file, or control file.
Option A:	image copy
Option B:	datafile copy
Option C:	copy log
Option D:	control copy
Q10.	..... known as memory-style error correcting-code(ECC) organization, employs parity bits.
Option A:	RAID level 1
Option B:	RAID level 2
Option C:	RAID level 3
Option D:	RAID level 4
Q11.	The remote backup site is sometimes called the ..... site.
Option A:	Primary
Option B:	Secondary
Option C:	Ternary
Option D:	Ordinary
Q12.	EXP command is used .....
Option A:	to take Backup of the Oracle Database

Option B:	to import data from the exported dump file
Option C:	to create Rollback segments
Option D:	to create Schedule
Q13.	The simplest approach to introducing redundancy is to duplicate every disk is called .....
Option A:	Mirroring
Option B:	Imaging
Option C:	Copying
Option D:	Deleting
Q14.	Which of the following is an attribute that can uniquely identify a row in a table?
Option A:	Secondary key
Option B:	Candidate key
Option C:	Foreign key
Option D:	Alternate key
Q15.	A_____ is a query that retrieves rows from more than one table or view:
Option A:	Start
Option B:	End
Option C:	Join
Option D:	Between
Q16.	Which join refers to join records from the write table that have no matching key in the left table are include in the result set:
Option A:	Left outer join
Option B:	Right outer join
Option C:	Full outer join
Option D:	Half outer join
Q17.	A line of PL/SQL text contains groups of characters known as
Option A:	Lexical Units
Option B:	Literals
Option C:	Textual Units
Option D:	Identifiers
Q18.	In _____ of Oracle, the database administrator creates a user account in the database for each user who needs access.
Option A:	Operating System Authentication
Option B:	Internal Authentication
Option C:	External Authentication
Option D:	Database Authentication

Q19.	Assume that the departments are 'Finance', 'Production', and 'Design'. If there is one more application which accesses the informatoin frequently based on the 'Finance' department, what would be the number of valid minterm fragments?
Option A:	5
Option B:	6
Option C:	7
Option D:	8
Q20.	A heterogeneous distributed database is which of the following?
Option A:	The same DBMS is used at each location and data are not distributed across all nodes.
Option B:	The same DBMS is used at each location and data are distributed across all nodes
Option C:	A different DBMS is used at each location and data are not distributed across all nodes
Option D:	A different DBMS is used at each location and data are distributed across all nodes.
Q21.	A distributed database is which of the following?
Option A:	A single logical database that is spread to multiple locations and is interconnected by a network
Option B:	A loose collection of file that is spread to multiple locations and is interconnected by a network
Option C:	A single logical database that is limited to one location
Option D:	A loose collection of file that is limited to one location.
Q22.	Which of the following is not a XML storage option?
Option A:	Native storage as XML data type
Option B:	Mapping between XML and relational storage
Option C:	Small object storage
Option D:	Large object storage
Q23.	Which of the following feature of SQL Server was used before XML technology for semi structured data?
Option A:	Stored Procedure
Option B:	Dynamic management views
Option C:	In memory database
Option D:	Static management views
Q24.	Which is not a XML function?
Option A:	Transport Information
Option B:	Store Information
Option C:	Structure Information
Option D:	Style Information

Q25.	Which of the following XML fragments are well-formed?
Option A:	. <?xml?>
Option B:	<?xml version="A.0"?>
Option C:	<?xml encoding="JIS"?>
Option D:	<?xml encoding="JIS" version="A.0"?>

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code:MEC603 Course Name: MECHANICAL VIBRATIONS

3009_R12_Mech_V_MEC603_QP2

Time: 1 hour Max. Marks: 50

==========

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

Q1.	Which of the following is a example of undamped free vibration?
Option A:	Simple Pendulum oscillating in water
Option B:	A spring and Mass system suspended freely
Option C:	A spring mass and damper system
Option D:	Shock absorber of a two-wheeler
Q2.	Longitudinal vibrations are said to occur when the particles of a body move
Option A:	perpendicular to its axis
Option B:	parallel to its axis
Option C:	in a circle about its axis
Option D:	in a radial direction
Q3.	Which of the following statements is/are true?
Option A:	Torsional vibrations do not occur in a three rotor system, if rotors rotate in same direction
Option B:	Shaft vibrates with maximum frequency when rotors rotate in same direction
Option C:	Zero node behavior is observed in rotors rotating in opposite direction
Option D:	Torsional vibrations occur in a three rotor system
Q4.	The rate of decay of amplitude per cycle in case of coulomb damping is?
Option A:	Linearly increases
Option B:	Linearly decreases
Option C:	Remains constant
Option D:	Exponentially decreases

Q5.	Three rotors X,Y,Z are mounted on same shaft,if rotor X and rotor Z rotate in same direction and rotor Y rotates in opposite direction, then specify the type of node vibration.
Option A:	Three node vibration
Option B:	Two node vibration
Option C:	Single node vibration
Option D:	Zero node vibration
Q6.	In which direction does the damping force acts?
Option A:	Opposite to the motion
Option B:	Along the motion
Option C:	Perpendicular to motion
Option D:	Variable
Q7.	In a machine rotating at 800 rpm, force transmitted to foundation is $1/10^{th}$ of impressed force. Find natural frequency of machine. Neglect damping.
Option A:	50 rad/sec
Option B:	25 rad/sec
Option C:	75 rad/sec
Option D:	100 rad/sec
Q8.	The distance between the center of gravity of the rotor and its geometric center is called as
Option A:	Static deflection
Option B:	Dynamic deflection
Option C:	Eccentricity
Option D:	Centricity
Q9.	Measure of vibration has become important. Which of the following statement is not the reason for the same?
Option A:	Measurement of natural frequencies is important to select operational speed of a machine.
Option B:	Measure is important so that machines should not be designed to run at high speeds.
Option C:	Measure helps in design of vibration isolation systems.
Option D:	Impact of magnitude of natural calamities can be estimated.
Q10.	For an undamped system, the velocity leads the displacement by
Option A:	π
Option B:	$\pi/2$
Option C:	2π
Option D:	$\pi/4$

Q11.	A mass *m* is attached to two identical springs having spring constant *k* attached parallel then the natural frequency ω of this single degree of freedom system is
Option A:	$\sqrt{\frac{k}{m}}$
Option B:	$\sqrt{\frac{2k}{m}}$
Option C:	$\sqrt{\frac{4k}{m}}$
Option D:	$\sqrt{\frac{k}{2m}}$
Q12.	A vehicle suspension system consists of a spring and a damper. The stiffness of the spring is 3.6 kN/m and the damping constant of the damper is 400 Ns/m. If the mass is 50 kg, then the damping factor (d) and damped natural frequency (fn), respectively, are
Option A:	0.471 and 1.19 Hz
Option B:	0.471 and 7.48 Hz
Option C:	0.666 and 1.35 Hz
Option D:	0.666 and 8.50 Hz
Q13.	With regards to rotor dynamics (without damping), the rotating shaft with a disc, experiences _____ & _____
Option A:	Gyroscopic Force & Restoring Force
Option B:	Gyroscopic Force & Centrifugal Force
Option C:	Gyroscopic Force & Gravitational Force
Option D:	Centrifugal Force & Restoring Force
Q14.	In a system damping factor is 0.25, natural frequency is 20 rad/sec, frequency of periodic excitation is 40 rad/sec. Find transmissibility ratio
Option A:	12.5 %
Option B:	30.8 %
Option C:	44.7 %
Option D:	18.90%
Q15.	An automobile having a mass of 2000 kg deflects its suspension springs 0.02 m under static conditions. Determine the natural frequency of the automobile in the vertical direction by assuming damping to be negligible.

Option A:	316.23 rad/s
Option B:	40 rad/s
Option C:	392.4 rad/s
Option D:	22.15 rad/s
Q16.	The process of correcting or eliminating, either partially or completely, the effects due to resultant inertia forces and couples acting on the machine parts or components is called
Option A:	Damping
Option B:	Restoring
Option C:	Balancing
Option D:	Precession
Q17.	An instrument used for measuring amplitude of a machine running at 1000 rpm shown a reading of 0.5 mm. The instrument has natural frequency 20 rad/sec. Neglect damping. What is displacement of machine?
Option A:	0.05 mm
Option B:	0.48 mm
Option C:	0.004 mm
Option D:	0.3 mm
Q18.	For a two rotor system, the mass moment of inertia of one shaft(A) is twice the other(B), then what is the relation between the length of the shafts.
Option A:	2L(A) = L(B)
Option B:	L(A) = 2L(B)
Option C:	L(A) = L(B)
Option D:	2L(A) = 3L(B)
Q19.	The dynamic forces arising due to unbalance is
Option A:	$F = mr\omega^2$
Option B:	$F = k.x$
Option C:	$F = m.g$
Option D:	$F = c.v$
Q20.	An accelerometer will give true value of measured acceleration of vibration when frequency ratio is
Option A:	Less than 1
Option B:	Equal to 1
Option C:	Greater than 1
Option D:	Greater than 3
Q21.	While balancing of several masses rotating in different planes graphically,

Option A:	Centrifugal Force Polygon is drawn first
Option B:	Couple Polygon is drawn first
Option C:	Polygons are not required in graphical method
Option D:	The sequence doesn't matter
Q22.	In which of the following condition torsional vibration will not take place, considering 3 rotors A, B and C. A is rotating in clockwise direction.
Option A:	B in clockwise C in anticlockwise
Option B:	C in clockwise B in anticlockwise
Option C:	B and C in clockwise
Option D:	B and C in anticlockwise
Q23	Conditions for Complete balancing of Multi-Cylinder Inline Engines
Option A:	$\Sigma Fp = 0$ & $\Sigma Cp = 0$
Option B:	$\Sigma Fs = 0$ & $\Sigma Cs = 0$
Option C:	$\Sigma Fp = 0$ & $\Sigma Cp = 0$
Option D:	$\Sigma Fp = 0$, $\Sigma Fs = 0$, $\Sigma Cp = 0$ & $\Sigma Cs = 0$
Q24.	Which of the following cannot be used as material for isolator?
Option A:	Rubber
Option B:	Cement
Option C:	Iron
Option D:	Felt
Q25.	Calculate coefficient of viscous damper, if the system is critically damped. Consider the following data: 1. Mass of spring mass damper system = 350 kg 2. Static deflection = 2×10^{-3} m 3.Natural frequency of the system = 60 rad/sec
Option A:	100.5×10^3 N-s/m
Option B:	80×10^3 N-s/m
Option C:	42×10^3 N-s/m
Option D:	30×10^3 N-s/m

Program: BE -Electronics & Telecommunication - Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester-VI

Course Code: _ETC603 and Course Name: Computer Communication Networks

Time: 1hour Max. Marks: 50

==========

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

Q1.	**How many bits are there in the Ethernet address**
Option A:	64 bits
Option B:	48 bits
Option C:	32 bits
Option D:	16 bits
Q2.	The physical layer is concerned with _____
Option A:	Bit-by-bit delivery
Option B:	Process to process delivery
Option C:	Application to application delivery
Option D:	Port to port delivery
Q3.	Which sub layer of the data link layer performs data link functions that depend upon the type of medium?
Option A:	Logical link control sub layer
Option B:	Media access control sub layer
Option C:	Network interface control sub layer
Option D:	Error control sub layer
Q4.	**Bridge works in which layer of the OSI model**
Option A:	Application layer
Option B:	Transport layer
Option C:	Network layer
Option D:	Data link layer
Q5.	When the mail server sends mail to other mail servers it becomes _____
Option A:	Master
Option B:	SMTP server
Option C:	Peer
Option D:	SMTP client
Q6.	Beyond IP, UDP provides additional services such as
Option A:	Routing and
Option B:	Sending and receiving of packets

Option C:	Switching
Option D:	De multiplexing and error checking
Q7.	Which of the following is Transport layer protocol?
Option A:	ICMP
Option B:	HTTP
Option C:	FTP
Option D:	TCP
Q8.	Which of the following protocol contains a field called Source Port Number?
Option A:	UDP
Option B:	IP
Option C:	PPP
Option D:	ICMP
Q9.	Multiplexing/ De multiplexing is a service provided by
Option A:	Application layer
Option B:	Transport layer
Option C:	Network layer
Option D:	Data link layer
Q10.	What is the minimum header size of an IP packet?
Option A:	16 bytes
Option B:	10 bytes
Option C:	20 bytes
Option D:	32 bytes
Q11.	What is the range of Class C addresses in network layer ?
Option A:	1-126
Option B:	129-193
Option C:	203-239
Option D:	192-223
Q12.	IP is _____ datagram protocol.
Option A:	Connection oriented and reliable
Option B:	Connectionless and unreliable
Option C:	Connectionless and reliable
Option D:	Connection oriented and unreliable
Q13.	Which class of IP address provides a maximum of only 254 host addresses per network ID in network layer
Option A:	Class A
Option B:	Class B
Option C:	Class C
Option D:	Class D
Q14.	Which one of the following is not a function of network layer?
Option A:	Routing

Option B:	Inter-networking
Option C:	Congestion control
Option D:	Error control
Q15.	What is the use of sub netting in network layer?
Option A:	Divide large network into smaller one
Option B:	Divide network into smaller classes
Option C:	Speed up the network
Option D:	Speed down the network.
Q16.	IPv6 address in network layer consists of
Option A:	32 bytes
Option B:	128bytes
Option C:	128bits
Option D:	32bits
Q17.	What does SDLC Stands for in Data link layer
Option A:	Synchronous data link layer
Option B:	Starting data link layer
Option C:	Sharing data link layer
Option D:	Sync data link layer
Q18.	CRC stands for _____
Option A:	Cyclic redundancy check
Option B:	Code repeat check
Option C:	Code redundancy check
Option D:	Cyclic repeat check
Q19.	Error control in the data link layer is based on
Option A:	ARQ
Option B:	Manually repeat request
Option C:	Situation based
Option D:	Both ARQ & manually repeat request
Q20.	A _____ is a device that forwards packets between networks by processing the routing information included in the packet.
Option A:	Bridge
Option B:	Firewall
Option C:	Router
Option D:	Hub
Q21.	Which transmission media provides the highest transmission speed in a network?
Option A:	Coaxial cable
Option B:	Twisted pair cable
Option C:	Optical fiber
Option D:	Electrical cable

Q22.	A subset of a network that includes all the routers but contains no loops is called
Option A:	Spanning tree
Option B:	Spider structure
Option C:	Spider tree
Option D:	Special tree
Q23.	Which of the following tasks is not done by data link layer?
Option A:	Framing
Option B:	Error control
Option C:	Flow control
Option D:	Channel coding
Q24.	DSL is an example for _____connection.
Option A:	Wireless
Option B:	Broadband
Option C:	Network
Option D:	Internet
Q25.	A loss of power of a satellite downlink signal due to earth's atmosphere is_____.
Option A:	Radiation loss and atmospheric loss
Option B:	Radiation loss
Option C:	Atmospheric loss
Option D:	Path loss

Program: TE Information Technology Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: TEITC603 and Course Name: System and Web Security
Max. Marks: 50

==========

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

Q1.	What is a role of Certification Authorities (CA)?
Option A:	To establish a shared secret key between two parties
Option B:	To bind a public key to a specific entity
Option C:	To securely relay a message from one side to the other
Option D:	To securely distribute shared public-/private key to multiple entities
Q2.	What is one benefit of introducing role-based access control in large networked environments?
Option A:	Higher security
Option B:	Higher bandwidth
Option C:	User friendliness
Option D:	Lower cost
Q3.	In which of the following protocol does a website encrypt the session with digital certificate.
Option A:	TCP
Option B:	HTTPS
Option C:	XHTTP
Option D:	SHTTP
Q4.	The Equal Error Rate is equivalent to what?
Option A:	The point at which false acceptance and false rejection meet
Option B:	The crossover error rate minus 10 percent
Option C:	The point at which false acceptance is at its highest and false rejection is at its lowest
Option D:	The point at which false acceptance is at its lowest and false rejection is at its highest
Q5.	What's represented by the access control matrix?
Option A:	Rows-Objects, Columns-Domains
Option B:	Rows-Domains, Columns-Objects
Option C:	Rows-Access List, Columns-Domains
Option D:	Rows-Domains, Columns-Access list

Q6.	The illegal combining of one level of sensitivity and need-to-know data with data of a lower level of sensitivity or separate need-to-know is referred to as
Option A:	Data Seepage
Option B:	Data Contamination
Option C:	Data Aggregation
Option D:	Commingling
Q7.	Which of the following best describes a federated identity?
Option A:	Simply another term for SSO
Option B:	It is restricted to use within a specific domain or area of the network
Option C:	Type I authentication (something you know).
Option D:	It is portable and can be used across business boundaries
Q8.	Which of the following protocol uses port number 443 and 80 respectively.
Option A:	HTTP and HTTPS
Option B:	XHTML and DHTML
Option C:	DHTML and XHTML
Option D:	HTTPS and HTTP
Q9.	To maintain Integrity of the message over the network in public key cryptosystem which of the following key will be used?
Option A:	Receiver's public key
Option B:	Receiver's private key
Option C:	Sender's public key
Option D:	Sender's private key
Q10.	Which one of the following describes an environment for covert timing channel?
Option A:	Modulated medium to carry an unintended information signal that can only be detected by special, sensitive receivers.
Option B:	Used by a supervisor to monitor the productivity of a user without their knowledge.
Option C:	Provides the timing trigger to activate a malicious program disguised as a legitimate function.
Option D:	Allows one process to signal information to another by modulating its own use of system resources.
Q11.	Key exchanged between sender and receiver using Diffie Hellman algorithm for the following values. g=13,n=37,a=10,b=7 is ----------.
Option A:	33
Option B:	32
Option C:	30
Option D:	43
Q12.	Old UNIX mkdir is an example of which flaw?

Option A:	Buffer overflow
Option B:	Incomplete mediation
Option C:	Race condition
Option D:	Virus
Q13.	A secret undocumented entry point into a program used to grant access without normal methods of access authentication.
Option A:	Logic Bomb
Option B:	Trap Door
Option C:	Virus
Option D:	Rabbit
Q14.	A Web site that allows users to enter text, such as a comment or a name, and then stores it and later displays it to other users, is potentially vulnerable to a kind of attack what attack is it?
Option A:	Cross-site scripting
Option B:	Cross-site scoring scripting
Option C:	Cross-site request forgery
Option D:	Two-factor authentication
Q15.	Which of the following component of SSL is responsible for ensuing confidentiality and message integrity?
Option A:	Handshake Protocol
Option B:	Change Cipher Spec Protocol
Option C:	Record Protocol
Option D:	Alert Protocol
Q16.	Secure cookies are
Option A:	Not encrypted
Option B:	Plain text
Option C:	Encrypted
Option D:	Hex code
Q17.	In a RSA cryptosystem a particular A uses two prime numbers p = 13 and q =17 to generate her public and private keys. If the public key of A is 17 Then the private key of A is _____.
Option A:	23
Option B:	113
Option C:	45
Option D:	103
Q18.	In the alert protocol of SSL, the first byte takes the value 1 or 2 which corresponds to _____ and _____ respectively.
Option A:	Select, Alarm
Option B:	Warning, Fatal
Option C:	Select, Fatal

Option D:	Warning, Alarm
Q19.	Bank calculates interest on accounts – rounding down interest calculations and placing the difference in your account is an example of
Option A:	Linearization attack
Option B:	Salami attack
Option C:	Time Bomb
Option D:	Buffer overflow
Q20.	DRM in software security stands for
Option A:	Data Right Management
Option B:	Digital Right Management
Option C:	Distributed Right Management
Option D:	Defense Management
Q21.	What can be described as a table of subjects and items showing what behaviour can be taken by individual subjects on individual objects?
Option A:	A capacity table
Option B:	An access control list
Option C:	A capability table
Option D:	An access control matrix
Q22.	A method that uses two independent pieces/processes of information to identify a user is known as?
Option A:	Authentication through encryption
Option B:	Password-method authentication
Option C:	Two-method authentication
Option D:	Two-factor authentication
Q23.	For a bank teller, an access control procedure is an example of enforcing which one of the following?
Option A:	rule-based policy
Option B:	identity-based policy
Option C:	user-based policy
Option D:	role-based policy
Q24.	There is a machine the local ip address of which is 192.168.0.6. You need to block connections on port 21, 22 to your machine. What will you do?
Option A:	iptables INPUT -s 192.168.0.6 -p tcp --dport 21,22 -j DROP
Option B:	iptables -A OUTPUT -s 192.168.0.6 -p tcp -m multiport --dport 21,22,23,80 -j ACCEPT
Option C:	iptables -A INPUT -s 192.168.0.6 -p tcp -m multiport --dport 21,22 -j DROP
Option D:	iptables -A INPUT -s 192.168.0.6 -p tcp --dport 21,22,23,80 DROP
Q25.	What is the drawback of anomaly-based IDS?
Option A:	It doesn’t detect novel attacks

Option B:	It is very slow at detection
Option C:	It detects based on signature
Option D:	It generates many false alarms.

Program: BE Instrumentation Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: ISC603 and Course Name: Digital Signal Processing

Time: 1hour Max. Marks: 50

==========

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

Q1.	1. If x(n) and X(k) are an N-point DFT pair, then X(k+N)=?
Option A:	X(-k)
Option B:	-X(k)
Option C:	X(k)
Option D:	X(K+N)
Q2.	If $X_1(k)$ and $X_2(k)$ are the N-point DFTs of $X_1(n)$ and $x_2(n)$ respectively, then what is the N-point DFT of $x(n)=ax_1(n)+bx_2(n)$?
Option A:	$X_1(ak)+X_2(bk)$
Option B:	$aX_1(k)+bX_2(k)$
Option C:	$e^{ak}X_1(k)+e^{bk}X_2(k)$
Option D:	$X_1(k)+X_2(k)$
Q3.	What is the DFT of the sequences $X_1(n)=\{2,1,2,1\}$
Option A:	{6,0,2,0}
Option B:	{14,16,14,16}
Option C:	{14,14,16,16}
Option D:	{12,11,12,11}
Q4.	is the circular convolution of the sequences $X_1(n)=\{2,1,2,1\}$ and $x_2(n)=\{1,2,3,4\}$?
Option A:	{14,14,16,16}
Option B:	{16,16,14,14}
Option C:	{2,3,6,4}
Option D:	{14,16,14,16}
Q5.	If x(n) is a real sequence and X(k) is its N-point DFT, then which of the following is true?
Option A:	X(N-k)=X(-k)
Option B:	X(N-k)=X*(-k)
Option C:	X(-k)=X*(-k)
Option D:	X(K)=X(-K)

Q6.	What is the lowest order of the Butterworth filter with a pass band gain K_P=-1 dB at Ω_P=4 rad/sec and stop band attenuation greater than or equal to 20dB at Ω_S = 8 rad/sec?
Option A:	4
Option B:	5
Option C:	6
Option D:	3
Q7.	Which of the following is a frequency domain specification?
Option A:	$0 \geq 20 \log\|H(j\Omega)\|$
Option B:	$H(j\omega)$
Option C:	$\log\|H(j\Omega)\| \leq KS$
Option D:	H(S)
Q8.	. What is the order of the normalized low pass Butterworth filter used to design a analog band pass filter with -3.0103dB upper and lower cutoff frequency of 50Hz and 20KHz and a stop band attenuation 20dB at 20Hz and 45KHz?
Option A:	2
Option B:	3
Option C:	4
Option D:	5
Q9.	What is the stop band frequency of the normalized low pass Butterworth filter used to design a analog band pass filter with -3.0103dB upper and lower cutoff frequency of 50Hz and 20KHz and a stop band attenuation 20dB at 20Hz and 45KHz?
Option A:	2 rad/sec
Option B:	2.25 Hz
Option C:	2.25 rad/sec
Option D:	2 Hz
Q10.	What is the cutoff frequency of the Butterworth filter with a pass band gain K_P=-1 dB at Ω_P=4 rad/sec and stop band attenuation greater than or equal to 20dB at Ω_S=8 rad/sec?
Option A:	3.5787 rad/sec
Option B:	1.069 rad/sec
Option C:	6 rad/sec
Option D:	4.5787 rad/sec
Q11.	What is the formula for chebyshev polynomial $T_N(x)$ in recursive form?
Option A:	$2T_{N-1}(x) - T_{N-2}(x)$
Option B:	$2T_{N-1}(x) + T_{N-2}(x)$
Option C:	$2xT_{N-1}(x) + T_{N-2}(x)$
Option D:	$2xT_{N-1}(x) - T_{N-2}(x)$
Q12.	If all the poles have small magnitudes, then the rate of decay of signal is _____
Option A:	Slow

Option B:	Constant
Option C:	Rapid
Option D:	Random
Q13.	What is the value of chebyshev polynomial of degree 0?
Option A:	1
Option B:	0
Option C:	-1
Option D:	2
Q14.	What is the value of chebyshev polynomial of degree 0?
Option A:	1
Option B:	0
Option C:	-1
Option D:	2
Q15.	If one or more poles are located near the unit circle, then the rate of decay of signal is _____
Option A:	Slow
Option B:	Constant
Option C:	Rapid
Option D:	Random
Q16.	. If the ROC of the system function is the exterior of a circle of radius $r < \infty$, including the point $z = \infty$, then the system is said to be _____
Option A:	Stable
Option B:	Causal
Option C:	Anti causal
Option D:	None of the mentioned
Q17.	A linear time invariant system is said to be BIBO stable if and only if the ROC of the system function _____
Option A:	Includes unit circle
Option B:	Excludes unit circle
Option C:	Is an unit circle
Option D:	None of the mentioned
Q18.	In bilinear transformation, the left-half s-plane is mapped to which of the following in the z-domain?
Option A:	Entirely outside the unit circle $\|z\|=1$
Option B:	Partially outside the unit circle $\|z\|=1$
Option C:	Partially inside the unit circle $\|z\|=1$
Option D:	Entirely inside the unit circle $\|z\|=1$
Q19.	If all the poles of H(z) are inside the unit circle, then the system is said to be _____
Option A:	Only causal
Option B:	Only BIBO stable

Option C:	BIBO stable and causal
Option D:	BIBO unstable
Q20.	Which of the following rule is used in the bilinear transformation?
Option A:	Simpson's rule
Option B:	Backward difference
Option C:	Forward difference
Option D:	Trapezoidal rule
Q21.	. If $s=\sigma+j\Omega$ and $z=re^{j\omega}$, then what is the condition on σ if $r<1$?
Option A:	$\sigma > 0$
Option B:	$\sigma < 0$
Option C:	$\sigma > 1$
Option D:	$\sigma < 1$
Q22.	If $s=\sigma+j\Omega$ and $z=re^{j\omega}$ and $r=1$, then which of the following inference is correct?
Option A:	LHS of the s-plane is mapped inside the circle, $\|z\|=1$
Option B:	RHS of the s-plane is mapped outside the circle, $\|z\|=1$
Option C:	Imaginary axis in the s-plane is mapped to the circle, $\|z\|=1$
Option D:	$\|Z\|=1$, for all
Q23.	The cost of the digital processors is cheaper because
Option A:	Processor allows time sharing among a number of signals
Option B:	The hardware is cheaper
Option C:	Require less maintenance
Option D:	Less power consumption
Q24.	If $s=\sigma+j\Omega$ and $z=re^{j\omega}$, then what is the condition on σ if $r>1$?
Option A:	$\sigma > 0$
Option B:	$\sigma < 0$
Option C:	$\sigma > 1$
Option D:	$\sigma < 1$
Q25.	In DSP processors, which among the following maintains the track of addresses of input data as well as the coefficients stored in data and program memories?
Option A:	Data Address Generators (DAGs)
Option B:	Program sequences
Option C:	Barrel Shifter
Option D:	MAC