

**University of Mumbai**  
**Examination 2020 under cluster 2 (FRCRCE)**

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

**University of Mumbai**  
**Examination 2020 under cluster 2 (FRCRCE)**

Program: BE Computer Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: CSC502 and Course Name: Database Management System

Time: 1hour

Max. Marks: 50

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

Q1.	Loan(Lid, Lname, Ltype, Amount, ROI), Here the Lid, Lname, Ltype, Amount, and ROI are _____and Loan is a _____
Option A:	Relations, Attribute
Option B:	Attributes, Relation
Option C:	Tuple, Relation
Option D:	Tuple, Attributes
Q2.	Which of following property ensures that the data in database can be accessed by multiple users at same point of time
Option A:	Data Recovery
Option B:	Data Integrity
Option C:	Concurrency control
Option D:	Data security
Q3.	In ER diagram Double ellipses represent which of the following
Option A:	multivalued attributes
Option B:	derived attributes
Option C:	stored attributes
Option D:	Key attributes
Q4.	In ER diagram Dotted ellipses represent which of the following

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Option A:	Multivalued attributes
Option B:	Derived attributes
Option C:	Stored attributes
Option D:	Key attributes
Q5.	In which operation resultant relation contains all pairs of tuples from the two relations, regardless of whether their attribute values match.
Option A:	Join
Option B:	Set difference
Option C:	Union
Option D:	Cartesian product
Q6.	Which of the following is not valid unary operation in the relational algebra?
Option A:	Select
Option B:	Project
Option C:	Intersection
Option D:	Rename
Q7.	In the given query which of the keyword has to be inserted? INSERT INTO employee _____ (1002,Joey,2000);
Option A:	Table
Option B:	Values
Option C:	Relation
Option D:	Field
Q8.	SELECT name _____ instructor name, course id FROM instructor, teaches WHERE instructor.ID= teaches.ID;

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	Which keyword must be used here to rename the field name?
Option A:	From
Option B:	Rename
Option C:	As
Option D:	Join
Q9.	Which of the normal form is based on multivalued dependencies?
Option A:	First
Option B:	Second
Option C:	Third
Option D:	Fourth
Q10.	If B is an attribute and $A \rightarrow B$ , Then B is said to be _____ by A
Option A:	Logically implied
Option B:	Functionally implied
Option C:	Logically determined
Option D:	Functionally determined
Q11.	If there exists a set of transactions such that every transaction in the set is waiting for another transaction in the set A system is in a _____ state
Option A:	Idle
Option B:	Ready
Option C:	Deadlock
Option D:	Waiting
Q12.	Cartesian product in relational algebra is
Option A:	Binary operator
Option B:	Unary operator

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Option C:	Ternary operator
Option D:	Not defined
Q13.	Which of these query will display the name from table employee ?
Option A:	Select employee from name
Option B:	Select name
Option C:	Select name from employee
Option D:	Select employee
Q14.	Bank customer can withdraw money from bank account using ATM machine interfaces. Which type of user is a bank customer
Option A:	Naïve user
Option B:	Application Developer
Option C:	DBA
Option D:	Programmer
Q15.	Authorized user category has different access rights on both data and as well as processing capabilities. Which of following property satisfying above condition
Option A:	Data Security
Option B:	Concurrency control
Option C:	Transaction control
Option D:	Data Independence
Q16.	What term is used to refer to a specific record in hospital management database; for instance; information stored about a specific patient?
Option A:	Relation
Option B:	Column
Option C:	Instance
Option D:	Table

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Q17.	If R and S are two relation then $R \cap S$ can be represented as
Option A:	$S - (R - S)$
Option B:	$(R \cup S) - [(R - S) \cup (S - R)]$
Option C:	$R - (S - R)$
Option D:	$(R \cup S) \cap [(R - S) \cup (S - R)]$
Q18.	Which operator is used for appending two strings?
Option A:	&
Option B:	%
Option C:	
Option D:	&&
Q19.	Tables in second normal form (2NF):
Option A:	Eliminate all partial dependencies
Option B:	Eliminate the possibility of a insertion anomalies
Option C:	Have a composite key
Option D:	Have all non key fields partially depend on the primary key
Q20.	An update log record represented with these fields
Option A:	transaction identifier,data item,old value,new value
Option B:	transaction identifier,old value,data item,new value
Option C:	transaction identifier,data item,new value,old value
Option D:	transaction identifier,new value,old value
Q21.	In an E-R, Y is the dominant entity and X is a subordinate entity. Then which of the following is incorrect ?
Option A:	operationally, If Y is deleted, so is X

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Option B:	operationally, if X is deleted, Y remains the same
Option C:	operationally, if X is deleted, so is Y
Option D:	X existence is dependent on Y
Q22.	Find the minimum number of tables required to represent the given ER diagram in relational model.
Option A:	4
Option B:	5
Option C:	6
Option D:	7
Q23.	The _____ is essentially used to search for patterns in target string.
Option A:	Like Predicate
Option B:	Null Predicate
Option C:	In Predicate
Option D:	Out Predicate
Q24.	Which form ensures that there are no repetitive groups:

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Option A:	1NF
Option B:	2NF
Option C:	3NF
Option D:	BCNF
Q25.	If we consider the following transaction consisting two bank accounts as A and B Read(A):A=A-30;write(A);read(B);B=B+20;write(B) The condition that sum of the accounts A and B should remain constant is
Option A:	Durability
Option B:	Consistency
Option C:	Isolation
Option D:	Atomicity



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**Examination 2020 under cluster 2 (FRCRCE)**

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: MEC502 And Course Name: Mechanical Measurements and Control

Time: 1 hour

Max. Marks: 50

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

Q1.	Example of direct method of measurement is
Option A:	Measuring Tap
Option B:	Digital Weighing machine
Option C:	Burdon-tube pressure gauge
Option D:	Thermocouple
Q2.	Uncertainty of a system is lesser when
Option A:	Desired input is more
Option B:	Interfering input is more
Option C:	Modifying input is more
Option D:	Interfering input is less
Q3.	Correction is
Option A:	Equal to error value
Option B:	Equal to true value
Option C:	Equal to observed value
Option D:	Less than true value
Q4.	If two devices have same range on scale calibration
Option A:	span will be different
Option B:	Sensitivity will be different
Option C:	Span will be same
Option D:	Resolution will be same
Q5.	LVDT consists of 1 primary winding and 2 secondary windings. The number of turns on each secondary winding is
Option A:	equal to the number of turns on primary winding
Option B:	twice of the number of turn on primary winding
Option C:	half of the number of turns on primary winding
Option D:	does not have any relation with the number of turns on the primary winding
Q6.	Which of the following instrument is used for linear as well as angular

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	displacement?
Option A:	Incremental optical encoder
Option B:	LVDT
Option C:	seismic accelerometer
Option D:	Nozzle flapper transducer
Q7.	Commutator is used in which of the following angular velocity measuring instrument
Option A:	Digital Tachometer
Option B:	D.C. Tachogenerator
Option C:	A.C. Tachogenerator
Option D:	Stroboscope
Q8.	LVDT converts
Option A:	linear displacement into electrical signal
Option B:	pressure into electrical output
Option C:	strain into electrical output
Option D:	temperature into electrical output
Q9.	Recovery of original information at the distant end from the carrier is known as
Option A:	Filtering
Option B:	Demodulation
Option C:	Modulation
Option D:	Amplification
Q10.	In a McLeod Gauge reading is
Option A:	Independent of gas composition
Option B:	dependent on gas composition
Option C:	depends on CO <sub>2</sub> content in the gas composition
Option D:	depends on mixture of oxygen and CO <sub>2</sub> content in the gas composition
Q11.	The materials used in the manufacture of thermistors are
Option A:	Oxides of manganese and cobalt
Option B:	Oxides of iron and zinc
Option C:	Carbides of silicon and germanium
Option D:	Carbides of nickel
Q12.	Bridgman's Gauge is used for
Option A:	High Pressure Measurement
Option B:	Low Pressure Measurement
Option C:	Medium Pressure Measurement
Option D:	Very low-pressure measurement
Q13.	Associative law for summing point is applicable only to those summing points which are _____ connected to each other.

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Option A:	Directly
Option B:	Indirectly
Option C:	Orthogonally
Option D:	Diagonally
Q14.	In block diagram representation, what do the lines connecting the blocks, known as?
Option A:	Branches
Option B:	Nodes
Option C:	Datum
Option D:	Sources
Q15.	An automatic toaster is a _____ loop control system.
Option A:	open
Option B:	closed
Option C:	partially closed
Option D:	Semi closed system
Q16.	Given a unity feedback with $G(s) = \frac{K}{s(s + 4)}$ The value of K for the damping ratio of 0.5 is
Option A:	1
Option B:	9
Option C:	4
Option D:	16
Q17.	In type I system, a constant output velocity at steady state will be possible, when
Option A:	There is no error
Option B:	There is a constant steady-state error
Option C:	There is a variable steady-state error
Option D:	There is a fluctuating error
Q18.	The impulse response of a system is $c(t) = 5e^{-10t}$ ; its step response is equal to
Option A:	$0.5e^{-10t}$
Option B:	$5(1 - e^{-10t})$
Option C:	$0.5(1 - e^{-10t})$
Option D:	$10(1 - e^{-10t})$
Q19.	In a bode magnitude plot, which one of the following slopes would be exhibited at high frequencies by a 4th order all-pole system?
Option A:	-80dB/decade
Option B:	-40 dB/decade
Option C:	40 dB/decade
Option D:	80 dB/decade

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Q20.	The critical value of gain for a system is 40 and gain margin is 6dB. The system is operating at a gain of:
Option A:	20
Option B:	40
Option C:	80
Option D:	120
Q21.	The roots of the characteristic equation of the second order system in which real and imaginary part represents the :
Option A:	Damped frequency and damping
Option B:	Damping and damped frequency
Option C:	Natural frequency and damping ratio
Option D:	Damping ratio and natural frequency
Q22.	For Nyquist contour, the size of radius is _____
Option A:	25
Option B:	0
Option C:	1
Option D:	$\infty$
Q23.	According to Nyquist stability criterion, where should be the position of all zeros of $q(s)$ corresponding to $s$ -plane?
Option A:	On left half
Option B:	At the center
Option C:	On right half
Option D:	Random
Q24.	In polar plots, what does each and every point represent w.r.t magnitude and angle?
Option A:	Scalar
Option B:	Vector
Option C:	Phasor
Option D:	Differentiator
Q25.	Phase lag controller:
Option A:	Improvement in transient response
Option B:	Reduction in steady state error
Option C:	Reduction in settling time
Option D:	Increase in damping constant

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**Examination 2020 under cluster 2 (FRCRCE)**

**Program:** Electronics and Telecommunication Engineering

**Curriculum Scheme:** Revised 2016

**Examination:** Third Year Semester V

**Course Code and Course Name:** ECC502, Digital Communication

Time: 1 hour

Max. Marks: 50

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Name of the Question Bank Generator: Santosh Chapaneri

College Name: St. Francis Institute of Technology

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

Q1.	A variable that can assume any possible value between two points is called _____.
Option A:	Discrete random variable
Option B:	Continuous random variable
Option C:	Discrete sample space
Option D:	Random process
Q2.	In 8 QAM, each symbol consists of
Option A:	2 bits
Option B:	4 bits
Option C:	3 bits
Option D:	$M$ bits
Q3.	For the $(n, k)$ systematic cyclic code, how many bits are present in the syndrome at the receiver?
Option A:	$k$
Option B:	$n$
Option C:	$n - k$
Option D:	$n - k + 1$
Q4.	For a noise to be White Gaussian noise, the optimum filter is known as
Option A:	Low pass filter
Option B:	Base band filter

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Option C:	Matched filter
Option D:	Bessel filter
Q5.	Determine the transfer function of a rate 1/2 convolution encoder defined by $v_1 = (1, 0)$ , $v_2 = (1, 1)$ .
Option A:	$D^3 + D^4 + D^5 + \dots$
Option B:	$D + D^2 + D^3 + \dots$
Option C:	$D^2 + D^3 + D^4 + \dots$
Option D:	$D^3 + 2D^4 + 3D^5 + \dots$
Q6.	The Central Limit Theorem says that the sampling distribution of the sample mean is approximately normal if
Option A:	all possible samples are selected
Option B:	the sample size is large
Option C:	the standard error of the sampling distribution is small
Option D:	the standard error of the sampling distribution is large
Q7.	The SNR of the matched filter does not depend on the
Option A:	bandwidth
Option B:	quality of the signal
Option C:	gain
Option D:	signal waveform shape
Q8.	Orthonormal vectors are
Option A:	orthogonal and normal
Option B:	orthogonal but not normal
Option C:	normal but not orthogonal
Option D:	neither orthogonal nor normal
Q9.	In the Viterbi algorithm for decoding of convolution codes, which metric is used for decision making of optimum message?
Option A:	Galois field
Option B:	Hamming distance
Option C:	Hamming bound
Option D:	Parity check
Q10.	What is the theoretical minimum system bandwidth needed for a 10 Mbps signal using 16-level PAM without ISI?
Option A:	1.1 MHz,
Option B:	1.25 MHz,
Option C:	1.35 MHz,

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Option D:	1.5 MHz
Q11.	In Channel coding theorem, channel capacity decides the _____ permissible rate at which error free transmission is possible.
Option A:	Maximum
Option B:	Minimum
Option C:	Constant
Option D:	Infinity
Q12.	Determine the parity check polynomial for a (7, 4) cyclic code having the generator polynomial $G(x) = x^3 + x + 1$ .
Option A:	$x^4 + x + 1$
Option B:	$x^4 + x^3 + x + 1$
Option C:	$x^4 + x^3 + 1$
Option D:	$x^4 + x^2 + x + 1$
Q13.	A and B are two events such that $P(A) = 0.2$ , $P(B) = 0.4$ , and $P(A \text{ union } B) = 0.5$ . What is the value of $P(A B)$ ?
Option A:	0.10
Option B:	0.25
Option C:	0.50
Option D:	0.08
Q14.	Spectrum of BFSK may be viewed as the sum of
Option A:	Two ASK spectra
Option B:	Two PSK spectra
Option C:	Two FSK spectra
Option D:	One ASK and one FSK spectra
Q15.	Consider a (7, 4) cyclic code with the generator polynomial $G(x) = x^3 + x + 1$ . Determine the syndrome polynomial for the received codeword $R = 1111100$ .
Option A:	1
Option B:	$x + 1$
Option C:	$x^2 + x + 1$
Option D:	$x^2 + 1$
Q16.	A Gaussian channel has 1 MHz bandwidth. Calculate the maximum channel capacity if the signal power to noise spectral density ratio $S/N_0$ is $10^5$ .

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Option A:	100 kbps,
Option B:	200 kbps,
Option C:	188 kbps,
Option D:	144 kbps
Q17.	Consider a 10 Mbps signal using 16-level PAM system. How large can the roll-off factor be if the allowable system bandwidth is 1.375 MHz without ISI?
Option A:	0.05
Option B:	0.1
Option C:	0.15
Option D:	0.2
Q18.	Consider a (7, 4) linear block code with the parity check matrix given by $H = [1\ 1\ 1\ 0\ 1\ 0\ 0; 1\ 1\ 0\ 1\ 0\ 1\ 0; 1\ 0\ 1\ 1\ 0\ 0\ 1]$ . Determine the corresponding parity matrix.
Option A:	$P = [1\ 1\ 1; 1\ 1\ 0; 1\ 0\ 1; 0\ 1\ 1]$
Option B:	$P = [1\ 1\ 1; 1\ 1\ 0; 1\ 0\ 1; 1\ 0\ 0]$
Option C:	$P = [1\ 1\ 0; 1\ 0\ 1; 0\ 1\ 1; 1\ 1\ 1]$
Option D:	$P = [1\ 0\ 0; 0\ 1\ 0; 0\ 0\ 1; 0\ 1\ 1]$
Q19.	A problem in mathematics is given to three students A, B and C. If the probability of A solving the problem is $1/2$ and B not solving it is $1/4$ . The whole probability of the problem being solved, i.e. $P(A \text{ or } B \text{ or } C)$ is $63/64$ , then what is the probability of C solving it?
Option A:	$1/8$
Option B:	$1/64$
Option C:	$7/8$
Option D:	$1/2$
Q20.	Which of the following inequalities is used to determine the maximum SNR for the matched filter?
Option A:	Cauchy
Option B:	Cauchy-Schwarz
Option C:	Schwarz
Option D:	Euclidean
Q21.	Which of the following modulation schemes cannot be used over a non-linear channel?
Option A:	BPSK
Option B:	BFSK



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Option C:	QPSK
Option D:	QAM
Q22.	In QPSK, each symbol consists of
Option A:	1 bit
Option B:	2 bits
Option C:	4 bits
Option D:	$M$ bits
Q23.	Huffman coding technique is adopted for constructing the source code with _____ redundancy.
Option A:	Maximum
Option B:	Constant
Option C:	Minimum
Option D:	Unpredictable
Q24.	Determine the output of the duobinary encoder with precoder if the input message is 0010110.
Option A:	-2, 2, 0, -2, 0, 2
Option B:	0, -2, 2, -2, 0, 2
Option C:	-2, 0, 2, 2, -2, 2
Option D:	-2, 0, 2, 0, 0, 2
Q25.	When the output of the matched filter is sampled at _____, a proportional voltage to the received signal energy is produced for detection and post-detection.
Option A:	$t = nT$
Option B:	$t = T$
Option C:	$t = n/T$
Option D:	$T = n/t$

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**Examination 2020 under cluster 2 (FRCRCE)**

Program: BE Information Technology

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: ITC502 and Course Name: Internet Programming

Time: 1 hour

Max. Marks: 50

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

Q1.	For changing the content of given HTML element select the correct JavaScript code. <p id="demo">This is a Paragraph.</p>
Option A:	#demo.innerHTML="Internet Programming";
Option B:	document.getElement("p").innerHTML="Internet Programming";
Option C:	document.getElementByName("p").innerHTML="Internet Programming";
Option D:	document.getElementById("p").innerHTML="Internet Programming";
Q2.	Which element may be used within content to represent material that is tangential?
Option A:	aside
Option B:	cite
Option C:	article
Option D:	class
Q3.	What is the purpose of setting .py?
Option A:	To configure settings for the Django project
Option B:	To configure settings for an app
Option C:	To set the date and time on the server
Option D:	To sync the database schema
Q4.	What is advantages of Mashing with JSON?
Option A:	Numbers of API's does not support JSON
Option B:	JSON is Readable
Option C:	Browser directly communicates with partner site.
Option D:	There is no possibility of data on the server.
Q5.	Which one of the following function is used to start a session?
Option A:	start_session()
Option B:	session_start()
Option C:	begin_session()
Option D:	start()

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Q6.	What is the name of object used for AJAX request?
Option A:	HttpRequest
Option B:	xmlRequest
Option C:	XMLHttpRequest
Option D:	RequestObject
Q7.	The three different application logic components are which of the following?
Option A:	Presentation, client and storage
Option B:	Presentation, client and processing
Option C:	Presentation, processing and storage
Option D:	Presentation, processing and network
Q8.	Which of the following HTTP method should be used to delete resource using REST-ful web service?
Option A:	GET
Option B:	POST
Option C:	PUT
Option D:	DELETE
Q9.	What will be the output of the following PHP code? <pre>&lt;?php for (\$cnt = -1; \$cnt &lt; 10;--\$cnt) {     print \$cnt; } ?&gt;</pre>
Option A:	123456789101112
Option B:	12345678910
Option C:	1234567891011
Option D:	infinite loop
Q10.	Django is free and open source
Option A:	Content Management System (CMS)
Option B:	Learning Management System (LMS)
Option C:	Web framework and a programming tool
Option D:	Client side programming
Q11.	WSDL Stands for _____.
Option A:	Web Services Development Language
Option B:	Web Services Design Language
Option C:	Web Services Description Language
Option D:	Web Services Derived Language
Q12.	Which of the following XML documents are well-formed?
Option A:	<firstElement>some text goes here <secondElement>another text goes here</secondElement>

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	<code>&lt;/firstElement&gt;</code>
Option B:	<code>&lt;firstElement&gt;some text goes here&lt;/firstElement&gt;</code> <code>&lt;secondElement&gt; another text goes here&lt;/secondElement&gt;</code>
Option C:	<code>&lt;firstElement&gt;some text goes here</code> <code>&lt;secondElement&gt; another text goes here&lt;/firstElement&gt;</code> <code>&lt;/secondElement&gt;</code>
Option D:	<code>&lt;/firstElement&gt;some text goes here</code> <code>&lt;/secondElement&gt;another text goes here</code> <code>&lt;firstElement&gt;</code>
Q13.	What is the output of the following code? <pre>&lt;?php \$x=5; echo \$x++; ?&gt;</pre>
Option A:	5
Option B:	6
Option C:	4
Option D:	3
Q14.	Which of the following selector is used to select the element that is the first child of its parent that is of its type?
Option A:	<code>:nth-child(n)</code>
Option B:	<code>::first-line</code>
Option C:	<code>:last-of-type</code>
Option D:	<code>:first-of-type</code>
Q15.	How do you make a list that lists its items with squares?
Option A:	<code>list-style-type:square;</code>
Option B:	<code>list-type:square;</code>
Option C:	<code>list:square;</code>
Option D:	<code>style:square;</code>
Q16.	What will be the output of the following PHP code? <pre>&lt;?php \$o = 1; print(\$o); print \$o; ?&gt;</pre>
Option A:	01
Option B:	11
Option C:	10
Option D:	Error
Q17.	Django is a free and open source web application framework, written in
Option A:	Python.
Option B:	C++

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Option C:	Java
Option D:	Javascript
Q18.	What is the Django command to view a database schema of an existing (or legacy) database.
Option A:	manage.py legacydb
Option B:	django-admin.py schemadump
Option C:	manage.py inspect
Option D:	manage.py inspectdb
Q19.	How do you add background color to all <h1> elements
Option A:	h1.all {background-color:#FFFFFF}
Option B:	h1 {background-color:#FFFFFF}
Option C:	all.h1 {background-color:#FFFFFF}
Option D:	h1 {bgcolor:#FFFFFF}
Q20.	What does XML stand for?
Option A:	eXtra Modern Link
Option B:	X-Markup Language
Option C:	Example Markup Language
Option D:	eXtensible Markup Language
Q21.	Which Boolean attribute will allow video automatically seek back to the start after reaching at the end.
Option A:	Autobuffer
Option B:	Preload
Option C:	Loop
Option D:	Controls
Q22.	What is AJAX of processing steps?
Option A:	XMLHttpRequest object → HTTP Request → Web Server → XML Data
Option B:	XMLHttpRequest object → FTP Request → Web Server → XML Data
Option C:	XMLHttpRequest object → GET Request → Web Server → XML Data
Option D:	XMLHttpRequest object → Callback Function → Web Server → XML Data
Q23.	<pre> &lt;?php     \$number1 = "1";     \$number2 = "2";     print \$number1+\$number2; ?&gt; </pre>
Option A:	3
Option B:	1+2
Option C:	12
Option D:	Error
Q24.	Which three parameters are use the sequence of AJAX Call?

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Option A:	Method, URL, True / False
Option B:	POST, Location, True/sync
Option C:	GET, Format, Async/sync
Option D:	Method, Address, False/Async
Q25.	To start a list at the count of 5, use
Option A:	<code>&lt;ol begin="5"&gt;</code>
Option B:	<code>&lt;ol list="5"&gt;</code>
Option C:	<code>&lt;ol start="5"&gt;</code>
Option D:	<code>&lt;ol num="5"&gt;</code>

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**Examination 2020 under cluster 2 (FRCRCE)**

Program: BE Instrumentation Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: ISC502 and Course Name: Applications of Microcontroller

Time: 1hour

Max. Marks: 50

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

Q1.	1. Which of the following are examples of embedded systems?
Option A:	Laptop
Option B:	Washing machine
Option C:	Computational server
Option D:	Computer
Q2.	What is meant by ALU?
Option A:	Arithmetic Logic Unit
Option B:	Automatic Logic Unit
Option C:	Arithmetic Local Unit
Option D:	Automatic Local Unit
Q3.	If RS0 = 0 and RS1 = 1, the register bank address range is
Option A:	00H-07H
Option B:	08H-0FH
Option C:	10H-17H
Option D:	18H-1FH
Q4.	If CY = 1, A = 95H, and B = 4FH prior to the execution of "SUBB A, B", what will be the contents of A after the subtraction?
Option A:	46H
Option B:	45H
Option C:	BAH
Option D:	B9H
Q5.	A compiler for a high-level language that runs on one machine and produces code for a different machine is called _____
Option A:	Optimizing compiler
Option B:	One pass compiler
Option C:	Cross compiler
Option D:	Multipass compiler
Q6.	The number of timers in an 8051 microcontroller is
Option A:	2
Option B:	5

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Option C:	1
Option D:	0
Q7.	In serial communication which of the following mode of operation receives/transmits 10 bits?
Option A:	Mode 0
Option B:	Mode 1
Option C:	Mode 2
Option D:	Mode 3
Q8.	How many rows and columns are present in a 16*2 alphanumeric LCD?
Option A:	rows=2, columns=32
Option B:	rows=16, columns=2
Option C:	rows=16, columns=16
Option D:	rows=2, columns=16
Q9.	8 input DAC has _____
Option A:	8 discrete voltage levels
Option B:	64 discrete voltage levels
Option C:	124 discrete voltage levels
Option D:	256 discrete voltage levels
Q10.	External Access is used to permit _____
Option A:	Peripherals
Option B:	Power supply
Option C:	ALE
Option D:	Memory interfacing
Q11.	While interfacing stepper motor, how many port pins are required?
Option A:	4
Option B:	3
Option C:	2
Option D:	8
Q12.	For traffic light control using 8051, following components are required for indication.
Option A:	7-segment display
Option B:	ADC
Option C:	Relay
Option D:	DAC
Q13.	For microcontroller based weighing machine, following components are used.
Option A:	Load cell,ADC,microcontroller
Option B:	Load cell,microcontroller,amplifier,power supply
Option C:	Load cell,ADC,micronctroller,power supply
Option D:	Load cell,ADC,micronctroller,amplifier,power supply
Q14.	Which of the following relations among bits, nibbles, bytes, and words for an



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	8086 microprocessor is a valid one?
Option A:	1 byte = 4 bits; 1 nibble = 2 bytes; 1 word = 4 nibbles; 1 long-word = 8 bytes
Option B:	1 byte = 2 nibbles; 1 word = 2 nibbles; 1 nibble = 2 bytes; 1 long-word = 4 bytes
Option C:	1 byte = 8 bits; 1 nibble = 4 bits; 1 word = 2 nibbles; 1 long-word = 4 nibbles
Option D:	1 byte = 2 nibbles; 1 word = 2 bytes; 1 long-word = 8 nibbles; 1 nibble = 4 bits
Q15.	Which of the following is NOT a criterion in choosing a microcontroller?
Option A:	Number of pins
Option B:	On-chip debugging
Option C:	Easy availability
Option D:	High cost
Q16.	What will be the contents of the registers R5 and R6 after the following instructions are executed? MOV DPTR, #23FF H MOV R5, DPL MOV R6, DPH
Option A:	R5 = 23H, R6 = FFH
Option B:	R5 = 24H, R6 = FFH
Option C:	R5 = FFH, R6 = 23H
Option D:	R5 = FFH, R6 = 24H
Q17.	How many times the instruction CPL A is executed in the following program of an 8051? MOV A, #F0H MOV R1, #60 NEXT: MOV R6, #10H AGAIN: CPL A DJNZ R6, AGAIN DJNZ R1, NEXT END
Option A:	600 times
Option B:	900 times
Option C:	690 times
Option D:	960 times
Q18.	In which port external registers are used?
Option A:	Port 2
Option B:	Port 0
Option C:	Port 1
Option D:	Port 3
Q19.	For interfacing relay with 8051, how much current required by relay to run?
Option A:	1 mA
Option B:	2 mA
Option C:	10 mA
Option D:	5 mA

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Q20.	Why Vref is set of ADC0848 to 2.56 V if analog input is connected to the LM35?												
Option A:	to set the step size of the sampled input												
Option B:	to set the ground for the chip												
Option C:	to provide supply to the chip												
Option D:	to provide reference voltage												
Q21.	Which of the following statements regarding a microcomputer, a microprocessor, and a microcontroller is TRUE?												
Option A:	A microcomputer is a computer on a single chip with a microprocessor, a memory unit, and I/Os.												
Option B:	A microcontroller is a computer on a single chip with a microcomputer, a memory unit and I/Os.												
Option C:	A microprocessor is a computer on a single chip with an ALU, register circuits and control circuits.												
Option D:	A microcontroller is a computer on a single chip with a microprocessor, a memory unit and I/Os.												
Q22.	With respect to an 8051 microcontroller, match Column X with Column Y. <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Column X</td> <td style="width: 50%; border: none;">Column Y</td> </tr> <tr> <td style="border: none;">1. MOV A, #25H</td> <td style="border: none;">1. Indexed Addressing Mode</td> </tr> <tr> <td style="border: none;">2. MOV R6, A</td> <td style="border: none;">2. Register Indirect Addressing Mode</td> </tr> <tr> <td style="border: none;">3. MOV 56H, A</td> <td style="border: none;">3. Register Addressing Mode</td> </tr> <tr> <td style="border: none;">4. MOV @R0, A</td> <td style="border: none;">4. Direct Addressing Mode</td> </tr> <tr> <td style="border: none;">5. MOVC A, @A+DPTR</td> <td style="border: none;">5. Immediate Addressing Mode</td> </tr> </table>	Column X	Column Y	1. MOV A, #25H	1. Indexed Addressing Mode	2. MOV R6, A	2. Register Indirect Addressing Mode	3. MOV 56H, A	3. Register Addressing Mode	4. MOV @R0, A	4. Direct Addressing Mode	5. MOVC A, @A+DPTR	5. Immediate Addressing Mode
Column X	Column Y												
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4. MOV @R0, A	4. Direct Addressing Mode												
5. MOVC A, @A+DPTR	5. Immediate Addressing Mode												
Option A:	X1 – Y1, X2 – Y2, X3 – Y3, X4 – Y4, X5 – Y5												
Option B:	X1 – Y2, X2 – Y3, X3 – Y4, X4 – Y5, X5 – Y1												
Option C:	X1 – Y5, X2 – Y3, X3 – Y4, X4 – Y2, X5 – Y1												
Option D:	X1 – Y5, X2 – Y4, X3 – Y3, X4 – Y2, X5 – Y1												
Q23.	Assume that the word “USER” is burned into ROM locations starting at 2004H, and that the program is burned into ROM locations starting at 0. What will be the contents of the Accumulator after the following set of instructions are executed? MOV DPTR, #2004H MOV A, #4H MOVC A, @A + DPTR												
Option A:	‘U’												
Option B:	‘S’												
Option C:	‘E’												
Option D:	‘R’												
Q24.	The following program generates a square wave on pin P1.5 Using timer 1. Find the frequency. Consider XTAL = 11.0592 MHz. MOV TMOD, #10H AGAIN: MOV TL1, #26H MOV TH1, #71H SETB TR1 BACK: JNB TF1, BACK CLR TR1												

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	CPL P1.5 CLR TF1 SJMP AGAIN END
Option A:	12.087 Hz
Option B:	12.601 Hz
Option C:	13.504 Hz
Option D:	14.705 Hz
Q25.	While programming the ADC0804 IC what steps are followed?
Option A:	select the analog channel, start the conversion, monitor the conversion, display the digital results
Option B:	select the analog channel, activate the ALE signal (L to H pulse), start the conversion, monitor the conversion, read the digital results
Option C:	select the analog channel, activate the ALE signal (H to L pulse), start the conversion, monitor the conversion, read the digital results
Option D:	select the channel, start the conversion, end the conversion