

**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 2012

Examination: Third Year Semester VI

Course Code: CPC601 and Course Name: System Programming and Compiler Construction

Time: 1 hour

Max. Marks: 50

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

Q1.	Macro' in an assembly level program is
Option A:	sub program
Option B:	a complete program
Option C:	a hardware portion
Option D:	relative coding
Q2.	In a two-pass assembler, the task of the Pass II is to
Option A:	Separate the symbol, mnemonic opcode and operand fields
Option B:	Build the symbol table
Option C:	Construct intermediate code
Option D:	Synthesize the target program
Q3.	Assume an instruction A AC <sub>5</sub> =F'5' What does '=' represent here?
Option A:	Data
Option B:	Literal
Option C:	Symbol
Option D:	Opcode
Q4.	The time required for execution of a macro is ..... that of procedure
Option A:	less than
Option B:	equal to
Option C:	Greater than
Option D:	Greater than equal to
Q5.	Which of the following statements is incorrect?
Option A:	complete code of instruction string is inserted at each place, wherever the macro

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	name appears
Option B:	macro requires less time of execution than that of procedure
Option C:	macro uses stack memory
Option D:	macro name can be anything except registers and mnemonics
Q6.	Which of the following must reside in memory under all situations
Option A:	Assembler
Option B:	Linker
Option C:	Loader
Option D:	Compiler
Q7.	Program that links several programs is called
Option A:	Linker
Option B:	Loader
Option C:	Translator
Option D:	Compiler
Q8.	A grammar that produces more than one parse tree for some sentence is
Option A:	Ambiguous
Option B:	Unambiguous
Option C:	Regular
Option D:	parser error
Q9.	The analysis part collects information about the source program and stores it in a data structure called a -----
Option A:	symbol table
Option B:	lexical analyser
Option C:	parsing table
Option D:	syntax analyser
Q10.	Three address code generations must contain
Option A:	Three address statements
Option B:	Three statements or less than it
Option C:	Three addresses
Option D:	Less than three addresses
Q11.	In the statement $x=op\ y$ , $op$ is a -----operator
Option A:	Binary

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Option B:	Unary
Option C:	Normal
Option D:	Sequentially
Q12.	Identify the correct order of language processing activity
Option A:	Preprocessor→Compiler→Assembler→Linker→Loader
Option B:	Loader→ Preprocessor→Compiler→Assembler→Linker
Option C:	Loader→ Linker→ Preprocessor→Compiler→Assembler
Option D:	Assembler →Loader→ Linker→ Preprocessor→Compiler
Q13.	Which of the following is not a function of pass1 of an assembler?
Option A:	generate data
Option B:	keep track of LC
Option C:	remember literals
Option D:	remember values of symbols until pass 2
Q14.	Which of the following instructions is used to set the EV's(Expansion Time Variables)
Option A:	ANOP
Option B:	SET
Option C:	AIF
Option D:	AGO
Q15.	During macro expansion the macro call statement is replaced by a sequence of _____
Option A:	Machine code statements
Option B:	assembly statements
Option C:	Programming language statements
Option D:	program name
Q16.	Which of the following statements is true?
Option A:	SLR parser is more powerfull than LALR
Option B:	LALR parser is more powerful than canonical LR parser
Option C:	Canonical LR parser is more powerful than LALR parser
Option D:	The Parsers SLR, Canonical CR, and LALR have the same power
Q17.	The concept of Finite State Automata is much used in this part of the compiler
Option A:	lexical analysis
Option B:	Parser
Option C:	code generation
Option D:	code optimization
Q18.	Static memory allocation is typically performed during

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Option A:	Compilation
Option B:	Execution
Option C:	Loading
Option D:	Linking
Q19.	Which of the following Pseudo code is used to indicate to the Assembler which General Register to use as a Base
Option A:	BALR
Option B:	USING
Option C:	BR
Option D:	START
Q20.	Code optimization is -----process
Option A:	Machine independent
Option B:	Machine dependent
Option C:	Program dependent
Option D:	Program independent
Q21.	Which of following is not a design issue related to code generation.
Option A:	Selection of most efficient instructions
Option B:	Deciding on a computation order
Option C:	Deciding which register to use
Option D:	Deciding which syntax use
Q22.	Consider following macro definition : MACRO &ARG0 VARY &COUNT, &ARG1, ARG2, &ARG3 &ARG0 ADD AREG, &ARG1 AIF(&COUNT EQ 1) .FINI ADD BREG, &ARG2 AIF(&COUNT EQ 2) .FINI What will be the expanded code for the instruction: L3 VARY 1, DATA
Option A:	ADD AREG, &ARG1
Option B:	ADD AREG, DATA
Option C:	L3 ADD AREG, &ARG1
Option D:	L3 ADD AREG, DATA
Q23.	Which table holds the names of all macros defined in the program ?
Option A:	Actual Parameter Table

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Option B:	Macro Name Table
Option C:	Expansion Time Variable
Option D:	Macro definition Table
Q24.	Type checking is normally done during
Option A:	Lexical analysis
Option B:	Syntax analysis
Option C:	Syntax directed translation
Option D:	Code optimization
Q25.	The number of tokens the following C statement is <code>printf("i = %d, &amp;I = %x", i,&amp;i);</code>
Option A:	3
Option B:	26
Option C:	10
Option D:	21

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

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: MEC601 and Course Name: Metrology and Quality Engineering

Time: 1 hour

Max. Marks: 50

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

Q1.	Low accuracy measurements from a high precision instrument are normally caused by
Option A:	Bias in the measurement
Option B:	Human errors
Option C:	Instrumental defect
Option D:	Low temperature
Q2.	In which of the following length standards, parallax error is observed?
Option A:	line standard
Option B:	end standard
Option C:	Imperial standard
Option D:	Random error
Q3.	Match the following Group 1 items (Type of error) with Group 2 items (characteristics) and select the correct option 1. Gross error ----- A. Magnitude and direction vary 2. Systematic error ----- B. Caused by electrostatic fields 3. Random error ----- C. Human fault 4. Environmental error ----- D. Magnitude and direction are definite
Option A:	1-B, 2-A, 3-D, 4-C
Option B:	1-A, 2-C, 3-D, 4-B
Option C:	1-C, 2-D, 3-A, 4-B
Option D:	1-D, 2-A, 3-B, 4-C
Q4.	The secondary texture or waviness, or macro-error on surface results due to
Option A:	Normal action of the tool in production process
Option B:	Dominant direction of tool marks(Lay)
Option C:	Flaws in material
Option D:	Vibrations and non-uniformity in cutting tool

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Q5.	Overall magnification of optical comparators is given as
Option A:	$(4 d / f) \times (\text{magnification of eye piece})$
Option B:	$(2 f / d) \times (\text{magnification of eye piece})$
Option C:	$(4 f / d) \times (\text{magnification of eye piece})$
Option D:	$(2 d / f) \times (\text{magnification of eye piece})$
Q6.	Which among the following is a type of direct measuring instrument of roughness?
Option A:	Micro interferometer
Option B:	Wallace surface dynamometer
Option C:	Profilometer
Option D:	Optical comparators
Q7.	Which of the following is the incorrect condition for a perfectly flat surface when tested for interferometry?
Option A:	Monochromatic light is used.
Option B:	Viewing angle should be greater than $0^\circ$
Option C:	Optical flats are important in light wave measurement.
Option D:	For perfect flat surface alternate light and dark bands are observed.
Q8.	If the angle between optical flat and surface to be tested is very small, then what is the difference of separation between optical flat and surface between two similar adjacent fringes?
Option A:	$\lambda$
Option B:	$\lambda/2$
Option C:	$\lambda/3$
Option D:	$3\lambda/2$
Q9.	Which of the following is true for Pneumatic sensitivity in pneumatic comparators?
Option A:	Directly proportional to operating pressure
Option B:	Inversely proportion to operating pressure
Option C:	Directly proportional to geometrical area of orifice
Option D:	Independent of area of orifice and operating pressure
Q10.	Working principle of interferometer
Option A:	Reflection of light
Option B:	Refraction of light
Option C:	Polarization of light
Option D:	interference of light
Q11.	From the following, which one is not a method to find effective thread diameter?
Option A:	Thread micrometer
Option B:	Two wire method



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Option C:	Three wire method
Option D:	The v-piece method
Q12.	In order to measure the chordal thickness of a gear using a gear caliper, the position of the blade is set to.....
Option A:	the entire depth of the gear tooth
Option B:	addendum of the gear tooth
Option C:	dedendum of the gear tooth
Option D:	top surface of the gear tooth
Q13.	When face width of gear is too large
Option A:	Gear will have poor capacity to absorb shock loads
Option B:	There will be a possibility of concentration of load at one end of gear tooth
Option C:	There will be problem in lubricating the gear
Option D:	Staking of teeth will occur
Q14.	CMM is
Option A:	Coordination Measuring Model
Option B:	Communication Measuring Machine
Option C:	Chord Measuring Machine
Option D:	Coordinate Measuring Machine
Q15.	Gear tooth Vernier caliper used for
Option A:	Pitch measurement
Option B:	Addendum Dia
Option C:	Dedendum Dia
Option D:	Chordal Thickness
Q16.	Which of the following machine is used for rolling tests?
Option A:	Parkinson's gear tester
Option B:	Tooth caliper
Option C:	Base pitch measuring instrument
Option D:	Involute profile testing machine
Q17.	Which of the following is true for the multiple start screw threads?
Option A:	It is produced by a single helical groove
Option B:	Grooves should be different in spacing
Option C:	It gives a quick transverse
Option D:	It is formed in a transverse section on a cylinder
Q18.	"Quality in the essence is the way of managing the way of organization" statement is given by ?
Option A:	Juran
Option B:	Deming
Option C:	Hoshin

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Option D:	Feigenbaum
Q19.	PDCA is expanded as
Option A:	Plan-Define-Check-Analyze
Option B:	Plan-Define- Check -Act
Option C:	Plan-Do- Check -Act
Option D:	Plan-Do- Check -Analyze
Q20.	Quality characteristics are classified into variables and _____
Option A:	constants
Option B:	attributes
Option C:	standards
Option D:	specifications
Q21.	Which control chart pattern is/are used for assignable causes?
Option A:	Trend pattern
Option B:	C chart
Option C:	P chart
Option D:	nP chart
Q22.	The control chart used for the fraction of defective items in a sample is
Option A:	Range chart
Option B:	Mean chart
Option C:	p-chart
Option D:	c-chart
Q23.	X bar and R charts are _____ indicators of trouble.
Option A:	Trailing
Option B:	Inferior
Option C:	Leading
Option D:	Secondary
Q24.	The no-inspection alternative of sampling is used when _____
Option A:	The supplier's process is so good that defective units are never encountered
Option B:	The supplier's process is so bad that almost every unit is defective
Option C:	The component is extremely critical
Option D:	The component is moderately critical
Q25.	Generally, a _____ will increase the steepness of the OC curve.
Option A:	Increased acceptance level
Option B:	Larger batch or lot size
Option C:	Smaller sample size
Option D:	Infrequent inspection

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**Program:** Electronics and Telecommunication Engineering

**Curriculum Scheme:** Revised 2012

**Examination:** Third Year Semester VI

**Course Code and Course Name:** ETC601, Digital Communication

Time: 1 hour

Max. Marks: 50

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 Name of the Question Bank Generator: Santosh Chapaneri

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

Q1.	Consider two sources $X$ and $Y$ with marginal entropies given by $H(X)$ , $H(Y)$ , joint entropy given by $H(X, Y)$ and the conditional entropies given by $H(X Y)$ and $H(Y X)$ . What is the correct expression for the mutual information $I(X;Y)$ ?
Option A:	$H(X) - H(Y X)$
Option B:	$H(X) - H(X,Y)$
Option C:	$H(X) - H(X Y)$
Option D:	$H(X,Y) - H(Y X)$
Q2.	What is the modulation scheme in which the amplitude of the carrier is varied based on the digital signal?
Option A:	ASK
Option B:	BPSK
Option C:	QPSK
Option D:	FSK
Q3.	A slow FH /MFSK signal is characterized by having _____ symbols transmitted per hop.
Option A:	Multiple
Option B:	Single
Option C:	Less than one
Option D:	Zero
Q4.	The parity check matrix of (6, 3) LBC is given by $H = [1\ 0\ 1\ 1\ 0\ 0; 1$

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	1 0 0 1 0; 0 1 1 0 0 1]. How many errors can be detected and corrected by this code, respectively?
Option A:	1, 2
Option B:	1, 1
Option C:	2, 2
Option D:	2, 1
Q5.	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
Q6.	A matched filter is used to provide _____ signal-to-noise power ratio for a given transmitted symbol waveform.
Option A:	minimum
Option B:	equal
Option C:	moderate
Option D:	maximum
Q7.	Which modulation scheme is referred to as ON-OFF keying?
Option A:	ASK
Option B:	BPSK
Option C:	QPSK
Option D:	QAM
Q8.	The carrier frequency will change or hop several times during the transmission of one symbol in
Option A:	DSSS
Option B:	Time hopping spread spectrum
Option C:	Slow frequency hopping spread spectrum
Option D:	Fast frequency hopping spread spectrum
Q9.	Consider a (7, 4) cyclic code with the generator polynomial $G(x) = x^3 + x + 1$ . Determine the syndrome polynomial for the received codeword $R = 0011100$ .
Option A:	1
Option B:	$x + 1$
Option C:	$x^2 + x + 1$

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Option D:	$x^2 + 1$
Q10.	The filter used for recovering the pulse with less ISI is called as
Option A:	Recovery filter
Option B:	Correlator filter
Option C:	Elliptic Filter
Option D:	All Pass Filter
Q11.	The discrete memory less source refers to
Option A:	no previous information
Option B:	no message storage
Option C:	emitted message is independent of previous message
Option D:	unpredictable
Q12.	Consider a 1/2 rate convolution encoder defined by $v_1 = (1, 1, 1)$ and $v_2 = (1, 0, 1)$ . Determine the impulse response of this encoder.
Option A:	111100
Option B:	111011
Option C:	110101
Option D:	101011
Q13.	Minimum bandwidth is occupied by
Option A:	ASK
Option B:	BPSK
Option C:	QPSK
Option D:	FSK
Q14.	An FHSS system has its frequency synthesizers controlled by 5 stage shift registers with feedback connection taken from the 2nd and 5th stages. The number of slots available for frequency hopping is
Option A:	32
Option B:	31
Option C:	24
Option D:	28
Q15.	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:	$x^4 + x^2 + x + 1$

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Q16.	Consider the duobinary decoder where precoder was used in the corresponding encoder. Decode the received code {2, 2, 0, -2, 0, 0, -2} using duobinary decoding rules.
Option A:	0, 0, 1, 0, 1, 1, 0
Option B:	1, 0, 1, 1, 1, 0, 0
Option C:	1, 1, 1, 0, 0, 1, 1
Option D:	0, 1, 0, 0, 1, 1, 1
Q17.	In OQPSK, the odd and even bit streams are offset by
Option A:	$T_b$
Option B:	$2 T_b$
Option C:	$0.5 T_b$
Option D:	$1.5 T_b$
Q18.	Using the Viterbi algorithm, decode the convolution codeword 0100010000 for the convolution code defined by $v_1 = (1, 1, 1)$ , $v_2 = (1, 0, 1)$ .
Option A:	00010
Option B:	10010
Option C:	00001
Option D:	00000
Q19.	What does the width of eye opening indicate?
Option A:	Time interval may be sampled without error
Option B:	Fading
Option C:	White noise
Option D:	no distortion
Q20.	In BFSK, 0 and 1 are encoded respectively as
Option A:	+A and -A
Option B:	0 and +A
Option C:	-A and +A
Option D:	0 and -A
Q21.	We define _____ space characterized by a set of 'N' linearly independent functions.
Option A:	Pre-defined
Option B:	Orthogonal
Option C:	Sample
Option D:	Orthonormal

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Q22.	The impulse response of the matched filter in terms of the input signal $s(t)$ , with $T =$ bit duration, is given as
Option A:	$s(T-t)$
Option B:	$s(-T)$
Option C:	$s(-t)$
Option D:	$s(t+T)$
Q23.	In the Viterbi algorithm for decoding of convolution codes, which rule is used for decision making of optimum message?
Option A:	Maximum likelihood decoding
Option B:	Hamming distance
Option C:	Hamming bound
Option D:	Parity check
Q24.	A complex low-pass signal has a bandwidth of 400 kHz. What is the minimum sampling rate for this signal?
Option A:	200000 samples per second
Option B:	1600000 samples per second
Option C:	800000 samples per second
Option D:	400000 samples per second
Q25.	In a good modulation scheme, the distance between points in signal space representation should be
Option A:	Zero
Option B:	More
Option C:	Less
Option D:	Does not matter

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

Program: BE Information Technology

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: TEITC601 and Course Name: Software Engineering

Time: 1 hour

Max. Marks: 50

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

Q1.	What is the unit of measurement that is used to measure the size of a user story for an Agile project?
Option A:	Function points
Option B:	Story points
Option C:	Work breakdown points
Option D:	Velocity points
Q2.	Which of the following is not the risk mitigation strategy
Option A:	Risk acceptance
Option B:	Risk transference
Option C:	Risk modification
Option D:	Risk avoidance
Q3.	The ____ transforms structural elements of the software architecture into a procedural description of software components
Option A:	Data design
Option B:	Architectural design
Option C:	Interface design
Option D:	Component level Design
Q4.	How is Agile planning different from the traditional approach to planning?
Option A:	Agile planning is done only once
Option B:	Agile planning is non iterative
Option C:	Agile planning places emphasis on the plan
Option D:	Agile planning places emphasis on planning and is iterative
Q5.	Which of the following is not White box technique?
Option A:	Equivalence Partitioning
Option B:	Decision Testing
Option C:	Condition Coverage
Option D:	Statement Testing



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Q6.	_____ Consist of previously defined entities, attributes, and relationships are used to design the database structure, including all of the necessary details (like the number of tables, columns, and data types needed).
Option A:	Logical Data model
Option B:	Physical Data model
Option C:	Conceptual Data model
Option D:	Application Data model
Q7.	'The degree of uncertainty that the product will meet its requirements and be fit for its intended use', can be considered as which type of risk?
Option A:	Performance risk
Option B:	Cost risk
Option C:	Support risk
Option D:	Schedule risk
Q8.	The Unified Modeling Language (UML) has become an effective standard for software modeling. How many different interaction models it have?
Option A:	Three
Option B:	Four
Option C:	Six
Option D:	Two
Q9.	Word Processing Software Development is an example of which Process Model?
Option A:	Incremental Process Model
Option B:	Prescriptive Process Model
Option C:	Evolutionary Process Model
Option D:	Specialized Process Model
Q10.	Some software teams do not develop a formal RMMM document. Rather, each risk is documented individually using
Option A:	Risk Innovation Sheet
Option B:	Risk Management Sheet
Option C:	Risk Information Sheet
Option D:	Risk Monitoring Sheet
Q11.	Which of the following is not a phase of CMMI?
Option A:	Initial
Option B:	Defined
Option C:	Integrated
Option D:	Quantitatively Managed
Q12.	Verification is:
Option A:	Checking that we are building the system right
Option B:	Checking that we are building the right system
Option C:	Making sure that it is what the user really wants

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Option D:	Performed by an independent test team
Q13.	The UML supports event-based modeling using _____ diagrams.
Option A:	Deployment
Option B:	Collaboration
Option C:	State chart
Option D:	Class diagram
Q14.	A graphical technique for finding if changes and variation in metrics data are meaningful is known as?
Option A:	DRE (Defect Removal Efficiency)
Option B:	Function points analysis
Option C:	Control Chart
Option D:	COCOMO
Q15.	Collection that defines a set of activities, actions, work tasks, work product and related behavior required to develop Computer Software is called?
Option A:	Process Cell
Option B:	Process Pattern
Option C:	Cell Pattern
Option D:	Bit Pattern
Q16.	Exhaustive testing is
Option A:	impractical but possible
Option B:	practically possible
Option C:	always possible
Option D:	impractical and impossible
Q17.	Which of the following is not included in External failure costs?
Option A:	Testing
Option B:	Help line support
Option C:	Warranty work
Option D:	Complaint resolution
Q18.	Which one of the following is NOT desired in a good Software Requirement Specifications (SRS) document?
Option A:	Functional Requirements
Option B:	Non-Functional Requirements
Option C:	Goals of Implementation
Option D:	Algorithms for Software Implementation
Q19.	Testing that tests the high levels of system before testing its detailed components.
Option A:	Top-down testing
Option B:	Bottom-up testing

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Option C:	Thread testing
Option D:	Stress testing
Q20.	Project's LOC Metric stands for:
Option A:	Lines of Code
Option B:	Location of Code
Option C:	Latency of Code
Option D:	Language of Code
Q21.	What is the full form of CMMI?
Option A:	Capability Maturity Model Integration
Option B:	Capability Managed Maturity Integration
Option C:	Capability Maturity Model Integrator
Option D:	Capability Maturity Model Interpretation
Q22.	_____ Builds the model using requirements elicited from the customer
Option A:	Team lead
Option B:	Analyst
Option C:	Tester
Option D:	Owner of company
Q23.	Which one of the following is not the Indirect Software measure?
Option A:	Quality
Option B:	Complexity
Option C:	Efforts
Option D:	Efficiency
Q24.	_____provides us with representations of software that can be assessed for quality.
Option A:	Design
Option B:	Testing
Option C:	Standards
Option D:	Product
Q25.	Which one is not Software Configuration Management Process
Option A:	Change Control
Option B:	Version Control
Option C:	Object identification
Option D:	Inspection

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

Program: BE Instrumentation Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: ISC601 and Course Name: Process Instrumentation System

Time: 1hour

Max. Marks: 50

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

Q1.	The optimum process performance can be judged by ----- criteria
Option A:	Decay ratio
Option B:	Subsidence ration
Option C:	Integral absolute error
Option D:	Any one of the above
Q2.	The time for the process-control loop to make necessary adjustments to the final control element
Option A:	Dead time
Option B:	Control lag
Option C:	Process lag
Option D:	Settling time
Q3.	If a controller outputs a 4- to 20-mA current signal to the final control element and has a $p=25\%$ , then what is the corresponding current?
Option A:	19 mA
Option B:	10 mA
Option C:	8 mA
Option D:	6 mA
Q4.	If the error is zero, the output stays fixed at a value equal to what it was when the error went to zero.
Option A:	Integral-Control Mode
Option B:	Proportional-Control Mode
Option C:	Derivative-Control Mode
Option D:	On off-Control Mode
Q5.	The proportional bias ( $P_o$ ) is added to proportional action for -----
Option A:	Making error zero
Option B:	To minimize reset windup
Option C:	To handle positive as well as negative errors
Option D:	Making the action proportional
Q6.	Setting the PID controller parameters for optimum process performance is-
Option A:	Tuning

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Option B:	Correction
Option C:	Optimizing
Option D:	Performance Setting
Q7.	..... action is not preferred when noise is present on the process that is to be controlled
Option A:	Derivative
Option B:	Integral
Option C:	Proportional
Option D:	On/off
Q8.	In which control scheme the secondary loop should be at least 3 times faster than the primary loop.
Option A:	Auctioneering Control
Option B:	Feedforward control
Option C:	Cascade control
Option D:	Ratio control
Q9.	If process is not known well, we need to evaluate the objective function online using the values of the controlled output.
Option A:	Self-adaptive control
Option B:	Split range control
Option C:	Override control
Option D:	Selective control scheme
Q10.	It changes from normal control action and attempt to prevent a process variable from exceeding an allowable upper or lower limit.
Option A:	Cascade control
Option B:	Ratio control
Option C:	Split range control
Option D:	Override control
Q11.	..... controller is a special type of feedforward controller
Option A:	Model Reference Adaptive
Option B:	Cascade
Option C:	Ratio
Option D:	Split Range
Q12.	Which control scheme involves two controlled variables, but only one valve?
Option A:	Feedforward control
Option B:	Cascade control
Option C:	Ratio control
Option D:	Feedback control
Q13.	A control scheme select among several similar measurements the one with the highest value and feed it to the controller.
Option A:	Ratio control
Option B:	Auctioneering Control

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Option C:	adaptive control
Option D:	Override control
Q14.	When the coil is energized, the contacts are not energized until the time delay has lapsed.it is-
Option A:	off-delay timer relay
Option B:	on-delay timer relay
Option C:	Control relay
Option D:	Internal relay
Q15.	A discrete-state process is one for which the process variables can take on only ..... states
Option A:	Four
Option B:	Two
Option C:	one
Option D:	six
Q16.	If there are three input variables and three output variables then there is a total of ..... possible states
Option A:	36
Option B:	64
Option C:	06
Option D:	09
Q17.	It can be used as an energy-level translator
Option A:	Solenoids
Option B:	Relays
Option C:	limit switches
Option D:	coils
Q18.	For two non-interacting first order systems connected in series, the overall transfer function is the.....of the individual transfer function
Option A:	Ratio
Option B:	Product
Option C:	Sum
Option D:	Difference
Q19.	A schematic way of describing the sequence of events of a discrete state control system.
Option A:	event
Option B:	schematic diagram
Option C:	process diagram
Option D:	ladder diagram
Q20.	Which of the following in not an advantage of cascade control?
Option A:	The system reacts to disturbances more quickly
Option B:	More efficient control of the primary variable
Option C:	It is a cheap control scheme to implement

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Option D:	The effects of dead time and phase lag time are reduced in the system
Q21.	RGA is useful for process engineers because it allows us to determine:
Option A:	Which matrix size to use.
Option B:	What eigenvalues and eigenvectors are paired
Option C:	What input and output pairs to use
Option D:	When feed forward control is preferred over feedback control.
Q22.	The open loop transfer function of control system is $KR/(1+TS)$ . This represents-
Option A:	A first order system
Option B:	Dead time system
Option C:	A first order time lag
Option D:	A second order system
Q23.	For MIMO systems
Option A:	Control loops are isolated
Option B:	Each controlled variable is only manipulated by one variable
Option C:	Decoupling the system makes it more complicated
Option D:	Manipulated variables may affect several controlled variables
Q24.	The number of operational amplifiers require for designing of an electronic PID controller is-
Option A:	5
Option B:	6
Option C:	2
Option D:	4
Q25.	The variable which is adjusted for making process variable equal to the desired value is-
Option A:	Set point
Option B:	Measured variable
Option C:	Controlled variable
Option D:	Manipulated variable