Seat No.	

Tatyasaheb Kore Institute of Engineering and Technology, Warananagar
(An Autonomous Institute, Affiliated to Shivaji University, Kolhapur)

S.Y.B.Tech.(E & TC Engg.) (Sem-IV)
End Semester Examination, July- 2023

Course Name : Electronic Devices and Circuits-II   Course Code: ETC401
Day & Date   : **Tuesday, 4-Jul-2023**   Max Marks :   60 Marks
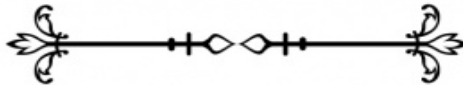Time   : **10:00 am to 12:00 pm**

Instructions: a) All questions are compulsory.
   b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)
      (L1-Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
   c) Use of non-programmable calculator is allowed.
   d) Assume suitable data if required. e) Standard Data sheet is allowed.

		Marks	B.L	CO
Q.1	**Attempt any two.**	12		
a)	Compare all negative types of feedback for Amplifier Characteristics. (Draw table)		L1	1
b)	For Current Series Feedback amplifier, hfe=50, hie=1kΩ, RL=1kΩ, Re=100, R=R1 II R2=10KΩ, Calculate feedback factor 'k' and Rif.		L5	1
c)	Design a two stage RC coupled amplifier to meet the following specifications. Load resistance-2kΩ, Source resistance-600Ω, Frequency range-20Hz to 20KHz, Voltage gain per stage>60, Supply voltage-15V.		L4	2
Q.2	**Attempt any two.**	12		
a)	Compare Class A, B, AB and C power amplifier.		L1	1
b)	With waveform explain Cross-over distortion. How to avoid it.		L2	2
c)	Design phase shift Oscillator for the following Specification: Peak to Peak Output amplitude = 5V, Frequency of Oscillation (f) = 10 KHz, Use Vcc = 10V, RL=5KΩ.		L5	3
Q.3	**Attempt any two.**	12		
a)	Draw and explain with waveforms Monostable Multivibrator.		L2	2
b)	Design an Astable multivibrator for frequency of 400Hz to give output voltage of 14 V. Use transistor BC 547 with: PD (MAX) =500mW, V_{CE} (sat) = 0.3V, I C (sat) = 5mA, hfe (Min) = 50.		L5	
c)	Compare Astable, Monostable and Bistable Multivibrator.		L6	4
Q.4	**Attempt any two.**	12		
a)	State the important features of IC78XX series.		L1	3
b)	Draw & Explain the internal block diagram of IC79XX series voltage regulator.		L2	2
c)	Draw & Explain the internal block diagram of IC78XX series voltage regulator.		L2	3

Q.5　　**Attempt any two.**　　　　　　　　　　　　　　　　　　　　　12

　　a)　Draw the circuit diagram of two stages RC coupled amplifier and explain　　**L1**　　**4**
　　　　in brief.

　　b)　An amplifier has mid frequency gain of 100 and a bandwidth of 200 KHz.　　**L6**　　**3**
　　　　i) What will be the new bandwidth and gain if 5% feedback is introduced?
　　　　ii) What should be the amount of negative feedback if the bandwidth is to
　　　　be restricted to 1 MHz?

　　c)　Derive the expression for efficiency of Class A transformed coupled　　　　**L3**　　**3**
　　　　power amplifier

　　d)　Derive the equation for Avf with positive feedback and state Barkhausens　　**L1**　　**2**
　　　　Criteria for Oscillator.

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S.Y.B.Tech.(E & TC Engg.) (Sem-IV)
End Semester Examination, July- 2023

Course Name : Communication Engineering   Course Code: ETC402
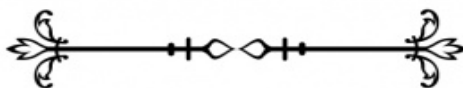Day & Date : **Thursday, 6-Jul-2023**   Max Marks : 60 Marks
Time : **10:00 am to 12:00 pm**

Instructions:
   a) All questions are compulsory
   b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)
     (L1-Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
   c) Use of non-programmable calculator is allowed
   d) Assume suitable data if required.

		Marks	B.L	CO
Q.1	**Attempt any two**	12		
a)	Draw & explain basic block diagram of communication system.		L1	1
b)	Draw & explain basic reactance modulator for the generation of FM.		L2	1
c)	A 400W carrier is modulated to a depth of 75%.Calculate the total power in the modulated wave.		L5	3
Q.2	**Attempt any two**	12		
a)	Explain different sources of noise.		L1	4
b)	Draw & explain the block diagram of tuned radio frequency (TRF) receiver.		L2	2
c)	If the resistor is operating at 27^0C and the bandwidth of interest is 2 MHz, then what is the maximum noise power output of a resistor?		L5	3
Q.3	**Attempt any two**	12		
a)	Draw & explain ratio detector with its output equation.		L4	2
b)	Draw & explain balanced slope detector with output waveform.		L2	2
c)	Draw & explain amplitude limiting circuit with response characteristics.		L2	1
Q.4	**Attempt any two**	12		
a)	Explain generation of PWM signal with neat circuit diagram and waveform.		L2	2
b)	State and prove sampling theorem.		L4	1
c)	Explain time division multiplexed PAM system.		L2	2
Q.5	**Attempt any two**	12		
a)	Draw & explain suppression of carrier using balanced modulator.		L2	2
b)	Differentiate between Narrowband FM & Wide Band FM		L1	1
c)	Explain natural sampling along its waveform.		L2	2
d)	Define following receiver parameters: a) Selectivity b) Sensitivity c) Fidelity		L2	1

Seat No.	

Tatyasaheb Kore Institute of Engineering and Technology, Warananagar
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S.Y.B.Tech.(E & TC Engg.) (Sem-II)
End Semester Examination, July- 2023

Course Name : Linear Integrated Circuit　　　　　　Course Code:ETC403
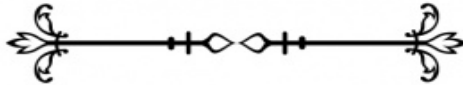Day & Date : **Saturday, 8-Jul-2023**　　　　　　Max Marks　　60 Marks
Time : **10:00 am to 12:00 pm**

Instructions:　　a) All questions are compulsory
　　　　　　　　　b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)
　　　　　　　　　c) Use of non-programmable calculator is allowed
　　　　　　　　　d) Assume suitable data if required.

		Marks	B.L.	CO
Q.1	**Attempt any two**	12		
a)	Determine I_C, V_{CE}, voltage Gain A, i/p resistance Ri & o/p resistance Ro for DIBO differential amplifier if R_C = 2.2KΩ, R_E = 4.7KΩ, V_{CC}= 10V, V_{EE} = -10V, β = 100 & V_{BE} = 0.7V.		L5	1
b)	Explain & analyze current mirror circuit.		L4	2
c)	Analyze DIBO configuration of differential amplifier (DC Analysis).		L4	1
Q.2	**Attempt any two**	12		
a)	Determine closed loop parameters A_F, R_{iF}, R_{oF}, F_F & V_{OOT} for inverting amplifier if R_1 = 470Ω, R_F = 4.7KΩ, R_i = 2MΩ, R_o = 75Ω, F_o= 5 Hz, A= $2x10^5$, V_{CC}= 15V, V_{EE} = -15V & V_{sat}= ± 13V.		L5	2
b)	Explain inverting summing amplifier as summer and averaging circuit for three input signals V_a, V_b and V_c.		L2	3
c)	Explain V-to-I converter with grounded load and floating load.		L2	2
Q.3	**Attempt any two**	12		
a)	Design following oscillator circuits for oscillating frequency fo = 1KHz 　i.　RC phase shift oscillator with C = 0.1µF 　ii.　Wein bridge oscillator with C = 0.05µF		L1	4
b)	Design 1st order wide band pass filter with f_L= 200Hz, f_H= 1KHz & pass band gain of 4. Also determine Q factor. Select C = 0.05µF		L3	4
c)	Draw Logarithmic amplifier and show that output voltage is log function of input signal		L2	4

Q.4   **Attempt any two**   **12**

   a) Draw and explain sample and hold circuit with waveform   **L5**   **5**

   b) With neat circuit diagram and waveform explain how square waveform is generated using op-amp.   **L5**   **5**

   c) Design square wave generator of frequency $f_0 = 1 KHz$ **L5**   **5**

Q.5   **Attempt any two (Unit 1 to Unit 6)**   **12**

   a) Derive the equation of differential gain of differential amplifier using op-amp   **L3**   **1**

   b) Draw instrumentation amplifier using transducer bridge and show that output voltage is directly proportional to the change in resistance of the transducer.   **L2**   **3**

   c) For all pass filter with f=1KHz, R=15.9K, C=0.001µF, find phase angle.   **L4**   **2**

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S.Y.B.Tech.(All Branches) (Sem-II)
End Semester Examination,July-2023

Course Name : (Control System Engineering)   **Course Code** ETC-404

Day & Date : Tuesday, 11-Jul-2023   **Max Marks** 60 Marks

Time : 10:00 am to 12:00 pm

Instructions:
a) All questions are compulsory
b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)(**L1-Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating**)
c) Use of non-programmable calculator is allowed
d) Assume suitable data if required.

		Marks	B.L	CO
Q.1	**Attempt any two**	12		
a)	Explain mathematical modeling of rotational mechanical system.		L2	1
b)	Define Time Response .Explain time response of 1st order System for step input.		L2	2
c)	Find overall transfer function C(S)/ R(S) of SFG.		L4	2

		Marks	B.L	CO
Q.2	**Attempt any two**	12		
a)	Comment on system stability using routh's criterion.		L4	3
	$S^5+2S^4+3S^3+6S^2+5S+3=0.$			
b)	Write Rules of Root Locus.		L2	3
c)	Sketch polor plot of **G(S)=1/(s+4)(s+2)**			3
Q.3	**Attempt any two**	12		
a)	Explain state ,state variable and state model.		L2	4
b)	Explain frequency domain specifications.		L2	4
c)	Plot bode plot of **G(s)=10/s(1+0.5s)(1+0.1s)**		L4	4
Q.4	**Attempt any two**	12		
a)	Define Compensator and Explain Lead Compensator.		L2	4
b)	Explain PLC with neat block diagram.		L2	4

c) Find error constants $G(s)H(s)=s(s+4)/s(s^3+6s^2+8s)$. **L4** **3**
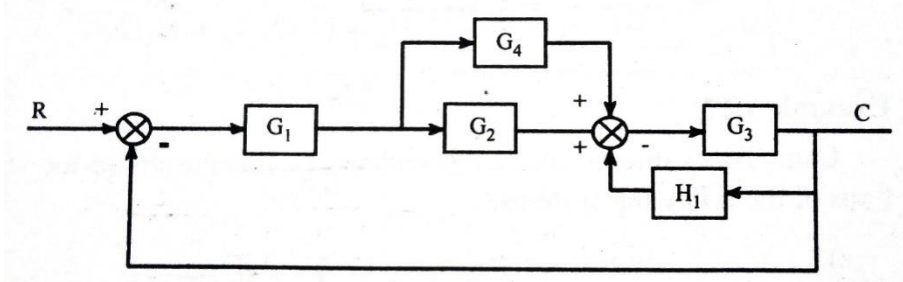
Q.5 **Attempt any two** **12**

a) Find C(S)/ R(S) using block diagram rules. **L2** **1**

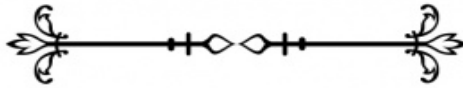b) Explain Steady State Error and Error Constants. **L2** **3**
c) Comment on system stability using routh's criterion. **L4** **3**
$S^6+2S^5+8S^4+15S^3+20S^2+16S+16=0$
d) Explain PID Controller. **L2** **4**

Tatyasaheb Kore Institute of Engineering and Technology, Warananagar

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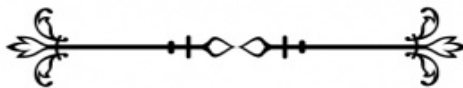
S.Y.B.Tech.(E & TC Engg.) (Sem-IV)

End Semester Examination, July- 2023

Course Name :   Data Structure & Algorithms   Course Code: ETC 405
Day & Date   :   **Thursday, 13-Jul-2023**   Max Marks   :   60 Marks
Time   :   **10:00 am to 12:00 pm**

Instructions: a) All questions are compulsory
b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)
(L1-Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
c) Use of non-programmable calculator is allowed
d) Assume suitable data if required.

		Marks	B.L	CO
Q.1	**Attempt any two**	12	L1	3
a)	What is Data structure ?What are types of data structures ?		L2	1
b)	What is record ? Explain record structure .		L1	2
c)	Write an algorithm for traversing linear array.			
Q.2	**Attempt any two**	12	L3	4
a)	What is linked list ?Differentiate array & linked list		L2	1
b)	What is Stack ? What are different operations on stack ?		L1	3
c)	Write an algorithm for Push & Pop operations			
Q.3	**Attempt any two**	12	L6	3
a)	What is binary trees ? How to represent binary trees in memory ?		L4	2
b)	What are different traversal methods used in Binary trees.		L1	2
c)	Write an algorithm for traversing Linked list			
Q.4	**Attempt any two**	12	L2	2
a)	What is graph ? What are different types of graphs ?		L5	3
b)	Explain BFS traversing method for graph.		L6	2
c)	What is linear searching ? What is complexity of Linear searching ?			
Q.5	**Attempt any two (Unit 1 to Unit 6)**	12	L1	1
a)	What are different Data structure operations ?		L2	2
b)	Explain sparse Matrices.		L4	2
c)	What is recursion ? Write an algorithm for recursion		L6	4
d)	Explain Header linked list		L1	3

Tatyasaheb Kore Institute of Engineering and Technology, Warananagar
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T.Y.B.Tech.(All Branches) (Sem-II)
End Semester Examination, July- 2023

Course Name :	Signal Processing	Course Code:ETC601	
Day & Date :	**Monday, 3-Jul-2023**	Max Marks	60 Marks
Time :	**10:00 am to 12:00 pm**		

Instructions:
a) All questions are compulsory
b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)
   (L1-Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
c) Use of non-programmable calculator is allowed
d) Assume suitable data if required.

		Marks	B.L	CO
Q.1	**Attempt any two**	12		
a)	Explain properties of signals		L1	1
b)	Explain Fourier Transform and its properties		L1	2
c)	Explain stability of system and its impulse response		L1	1
Q.2	**Attempt any two**	12		
a)	Draw signal flow graph for 8-Point Radix-2 DIF FFT		L3	2
b)	Explain Frequency sampling method for FIR filter design.		L3	3
c)	If x(n)={1, 2, 1 ,2} find its DFT		L3	2
Q.3	**Attempt any two**	12		
a)	Explain ROC and properties of ROC		L1	4
b)	If x(n)= {1,2,3,4 } , find its ZT X(z)		L3	4
c)	Explain ZT of Unit step and its ROC		L2	4
Q.4	**Attempt any two**	12		
a)	Explain Direct Form-II realization of System		L1	5
b)	Explain realization of typical second order System		L1	5
c)	Explain Cascade Form realization of System		L1	5
Q.5	**Attempt any two (Unit 1 to Unit 6)**	12		
a)	If $x(t)= e^{j(\pi/6)t}$ find whether it is periodic or not. If yes find its period.		L3	1
b)	Explain Bilinear Transformation		L2	3
c)	Explain DFT using Twiddle Factor		L1	2
d)	Explain s-plan to z-plan mapping.			

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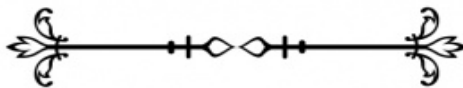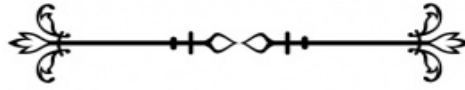
T.Y.B.Tech.(E & TC Engg.) (Sem-VI)
End Semester Examination, July- 2023

Course Name : **Power Electronics**   Course Code: **ETC602**
Day & Date : **Wednesday, 5-Jul-2023**   Max Marks : **60 Marks**
Time : **2:00 pm to 4:00 pm**

Instructions:
  a) All questions are compulsory
  b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)
    (L1-Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
  c) Use of non-programmable calculator is allowed
  d) Assume suitable data if required.

		Marks	B.L	CO
Q.1	**Attempt any two**	**12**		
a)	Draw static characteristics of SCR. Define latching current, holding current, forward breakover voltage with reference to SCR	6	L1	1
b)	With the help of circuit diagram explain how dv/dt and di/dt protection is achieved in SCR.	6	L1,L2	1
c)	With the help of block diagram and waveform explain cosine based firing circuit.	6	L1	1
Q.2	**Attempt any two**	**12**		
a)	Explain with necessary waveforms single phase bridge converter with R load. Derive the equation of average output voltage.	6	L1	2
b)	For 230V,1 phase semiconverter with RL load, load current is continuous and ripple free. It is observed that average output voltage is 50% that of maximum possible average output voltage. Calculate: i) firing angle ii) Average output vol. iii) RMS output vol. iv) Rectification efficiency.	6	L5	2
c)	Explain in detail operation of single-phase full bridge inverter with R load. Also derive the equation of rms output voltage.	6	L1	2
Q.3	**Attempt any two**	**12**		
a)	Explain the operation of step down chopper with R load. Derive the equation of output voltage.	6	L1	3
b)	Explain the control techniques of chopper.	6	L1	3
c)	Explain the operation of step up chopper and derive the equation of output voltage.	6	L1	3
Q.4	**Attempt any two**	**12**		
a)	Draw and explain characteristics of DC motor.	6	L1,L2	4
b)	Explain single phase full converter drives.	6	L1	4
c)	Explain speed torque characteristics of induction motor.	6	L1	4
Q.5	**Attempt any two (Unit 1 to Unit 6)**	**12**		

a) Explain different voltage control technique of inverter. **6** **L1** **3**

b) Explain construction detail & VI characteristic of TRIAC. **6** **L1** **1**

c) Differentiate forced and natural commutation methods of SCR. **6** **L1** **2**

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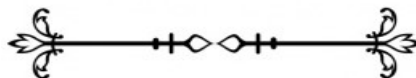### (An Autonomous Institute, Affiliated to Shivaji University, Kolhapur)

T.Y.B.Tech.(E & TC Engg.) (Sem-II)
End Semester Examination, July- 2023

Course Name : ANTENNA AND WAVE PROPAGATION   Course Code: ETC603
Day & Date   : **Friday, 7-Jul-2023**   Max Marks : 60 Marks
Time   : **2:00 pm to 4:00 pm**

Instructions:
 a) All questions are compulsory
 b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)
   (L1-Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
 c) Use of non-programmable calculator is allowed
 d) Assume suitable data if required.

		Marks	B.L	CO
Q.1	**Attempt any two**	12		
a)	Derive Friss formula of radio communication link		L5	CO1
b)	Calculate maximum effective aperture of antenna which is operating at wavelength of 2 m and directivity 100		L5	CO2
c)	Derive the expression to calculate the field at far point due to array of two point sources with equal amplitude and opposite phase		L4	CO3
Q.2	**Attempt any two**	12		
a)	With diagram explain Log periodic antenna.		L2	CO1
b)	Explain how the reflection of EM waves varies with roughness of earth		L1	CO2
c)	Write note on Radio horizon of antenna and derive the expression for radio horizon distance		L1	CO3
Q.3	**Attempt any two**	12		
a)	Explain the ionosphere structure		L1	CO1
b)	Explain virtual height concept		L5	CO2
c)	Define (i) Critical frequency (ii) Maximum Usable Frequency		L4	CO3
Q.4	**Attempt any two**	12		
a)	Explain basic principle of RADAR		L2	CO1
b)	Derive RADAR range equation		L5	CO3
c)	Describe the applications of RADAR.		L1	CO2
Q.5	**Attempt any two**	12		
a)	Explain ionosphere and its irregular variations		L1	CO1
b)	Briefly explain parameters which affect the field strength in space wave propagation		L4	CO3
c)	Write note on polarization of antenna.		L1	CO2
d)	What are the factors which affects ionosphere propagation		L4	CO2

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T.Y.B.Tech.(E & TC Engg.) (Sem-VI)
End Semester Examination, July- 2023

Course Name :	Embedded Systems	Course Code:	ETC-604
Day & Date :	**Monday, 10-Jul-2023**	Max Marks :	60 Marks
Time :	**2:00 pm to 4:00 pm**		

Instructions:
    a) All questions are compulsory
    b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)
       (L1-Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
    c) Use of non-programmable calculator is allowed
    d) Assume suitable data if required.

		Marks	B.L	CO
Q.1	**Attempt any two**	**12**		
a)	Differentiate RISC & CISC architecture..		**L1**	**3**
b)	Draw & explain ARM core data flow model.		**L2**	**1**
c)	Draw & explain CPSR register		**L1**	**2**
Q.2	**Attempt any two**	**12**		
a)	Draw & explain RS-232.		**L3**	**4**
b)	Draw & explain memory organization of LPC 2148		**L2**	**1**
c)	Write Arithmetic & logical instruction set of ARM.		**L1**	**3**
Q.3	**Attempt any two**	**12**		
a)	What are features of LPC 2148 ?		**L6**	**3**
b)	What are features of ADC used in LPC 2148		**L4**	**2**
c)	What are Features of GPIO used in LPC 2148		**L1**	**2**
Q.4	**Attempt any two**	**12**		
a)	Write a program for Stepper motor interfacing .		**L2**	**2**
b)	Draw & explain CAN bus		**L5**	**3**
c)	Draw & explain IIC bus.		**L6**	**2**
Q.5	**Attempt any two**	**12**		
a)	Differentiate Von Neuman & Harward architecture .		**L1**	**1**
b)	What is Embedded system ? What are types of Embedded systems ?		**L2**	**2**
c)	What is barallel shifter ?Write barallel shifter instructions		**L4**	**2**
d)	What are different ARM operating modes ?		**L6**	**4**

Seat No.	

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T.Y.B.Tech.(E & TC Engg.) (Sem-VI)
End Semester Examination, July- 2023

Course Name : MOBILE TECHNOLOGY (OE-II) Course Code: ETC605
Day & Date : **Wednesday, 12-Jul-2023** Max Marks : 60 Marks
Time : **2:00 pm to 4:00 pm**

Instructions:
a) All questions are compulsory
b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)
   (**L1-Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating**)
c) Use of non-programmable calculator is allowed
d) Assume suitable data if required.

		Marks	**B.L**	**CO**
Q.1	**Attempt any two**	12		
a)	Compare the different mobile generations.	6	L4	CO2
b)	Explain the frequency reuse concept in detail.	6	L2	CO1
c)	Differentiate between cellular network and adhoc network.	6	L1	CO1
Q.2	**Attempt any two**	12		
a)	Draw the diagram and explain architecture of GSM.	6	L1	CO1
b)	What is need for agent discovery & what is agent solicitation?	6	L1	CO3
c)	What is MSISDN, IMSI, TMSI, MSRN.	6	L1	CO1
Q.3	**Attempt any two**	12		
a)	Explain the slow start mechanism in detail.	6	L1	CO3
b)	Briefly discuss the M-TCP approach in mobile wireless network.	6	L2	CO3
c)	How does I-TCP isolate problem on the wireless link.	6	L2	CO3
Q.4	**Attempt any two**	12		
a)	Draw the diagram and explain the architecture of WAP (Wireless Application Protocol.	6	L1	CO4
b)	State the advantages and limitations of WAP.	6	L4	CO4
c)	What are the various protocols in a WAP protocol suite	6	L1	CO4
Q.5	**Attempt any two**	12		
a)	Explain the following entities associated with mobile IP. a)Mobile Node b)Correspondent Node c)Home Network d)Foreign Network e) Home Agent f) Foreign Agent	6	L1	CO3
b)	Explain the different signal propagation effects	6	L2	CO1
c)	Explain adjacent channel interference and co-channel interference.		L2	CO1
d)	Write short note on security in GSM.	6	L1	CO1

Tatyasaheb Kore Institute of Engineering and Technology, Warananagar
(An Autonomous Institute, Affiliated to Shivaji University, Kolhapur)

T.Y.B.Tech.(E & TC Engg.) (Sem-VI)
End Semester Examination, July- 2023

Course Name : Cyber Security and Law   Course Code: ETC-H-601
Day & Date : **Friday, 14-Jul-2023**   Max Marks : 60 Marks
Time : **2:00 pm to 4:00 pm**

Instructions:
  a) All questions are compulsory
  b) Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL)
    (L1-Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
  c) Use of non-programmable calculator is allowed
  d) Assume suitable data if required.

		Marks	B.L	CO
Q.1	**Attempt any two**	12		
a)	How to evaluate cyber stalking?		L4	1
b)	Explain port scanning active scanning techniques		L3	2
c)	Explain spyware & legal uses of spyware.		L2	2
Q.2	**Attempt any two**	12		
a)	Define Cyber Physical System. Explain general workflow of cyber physical system.		L2	2
b)	Explain general guidelines to follow in any forensic examination.		L1	2
c)	Explain countermeasures in CPS.		L2	2
Q.3	**Attempt any two**	12		
a)	Explain positive aspects of the ITA 2000.		L1	3
b)	Explain challenges to Indian Law and cybercrime scenario in India.		L2	3
c)	Explain sections 67, 71 of the Indian ITA 2000.		L1	3
Q.4	**Attempt any two**	12		
a)	Explain in brief about cyber crime or offence. Give the name of different Act associated with cyber crime.		L2	4
b)	Explain about different cyber security awareness tips.		L2	4
c)	Explain classification of Intellectual Property.		L1	4
Q.5	**Attempt any two**	12		
a)	Explain about how to detect & eliminate spyware & viruses.		L4	1
b)	Explain Cross-Site Scripting attack.		L2	2
c)	Draw technical architecture of Blockchain & explain its Core Components.		L2	2
d)	Explain different operating system utilities that can be useful in gathering forensic data.		L3	2