1/112 **0701M258** Candidate's Seat No :_____

B.Sc Sem.-3 Examination

CC 202

Electronics

Time : 2-00 Hours] **January 2021** **[Max. Marks : 50**

SECTION - I

Q.I	(A)	Explain Transformation of impedances with tapped resonant circuits.	7
	(B)	Explain ideal transformer with mesh impedances, ratio of currents and voltage.	7
Q.II	(A)	Discuss reactance L-section for impedance transformation. Derive its equation for $R < R_g$.	7
	(B)	Explain magnetically coupled circuit. Derive its coefficient of coupling.	7
Q.III	(A)	Explain how a low pass RC circuit behaves as an integrator.	7
	(B)	Derive the equation of characteristic impedance of symmetrical networks.	7
Q.IV	(A)	Explain how a high pass RC circuit behaves as differentiator.	7
	(B)	Derive the relation between neper and decibel.	7
Q.V	(A)	Draw full adder and explain it with the help of Truth table and karnaugh map.	7
	(B)	Explain how 555 timer can be used as monostable multivibrator.	7
Q.VI	(A)	Draw & explain binary adder-subtracter with the help of example.	7
	(B)	Discuss the Schmitt trigger operation of the 555 timer.	7
Q.VII	(A)	Explain Machine language, assembly language & high-level language.	7
	(B)	Explain 8085 hardware and programming model in detail.	7
Q.VIII	(A)	Explain large computers, medium-size computers & microcomputers.	7
	(B)	Write instructions to load the 43H & 03H in register A & B respectively. Add the numbers, and display the sum at the LED output port PORT 1.	7

SECTION – II

Q.IX Attempt any **EIGHT** 8

(A) Ideal transformer is assumed to have value of k = _____.

(B) The value of anti-resonant resistance is dependent on the ___ ratio chosen for the circuit.

(C) For values of k/kc greater than_____, the circuit is over-coupled.

(D) Coefficient of coupling k = _____.

(E) For better differentiation CR should be as _____ ___ as possible.

(F) The bel is defined as the _____ of a power ratio.

(G) 10 neper = _____ db.

(H) The loudness L may be expressed as L = _____.

(I) In half adder, if A=1 and B=1 then SUM =_____.

(J) In full adder, output of XOR gate is called _____.

(K) The output of the AND gate in half adder circuit is called _____.

(L) Pin number 5 of 555 timer is called _____.

(M) A set of instructions written for the microprocessor to perform a task is called a _____.

(N) Programming languages that are intended to be machine-independent are called _____.

(O) The Zero flag is set to 1 when the result is _____.

(P) The Sign flag is set if bit D7 of the result is _____.