E02KU22

Candidate Code.....

Name and signature of candidate.....

UNIVERSITY OF KERALA

FOURTH SEMESTER M.Sc. PHYSICS PRACTICAL EXAMINATIONS, SEPTEMBER 2022

Time: 6 Hours PH 262 ADVANCED ELECTRONICS PRACTICALS Max. Marks 75

(Attempt the marked questions)

PART A (45 Marks)

1. Design and construct an Astable multivibrator for a frequency of .....kHz using OP-AMP 741. Observe the frequency using CRO and compare it with designed and calculated value. Repeat the experiment for two more suitable frequencies.
2. Design and construct an active Low pass filter of First and Second order with an upper cut off frequency of .....kHz and plot the frequency response. Determine the roll off rate from the graph.
3. Design and construct a voltage controlled oscillator using IC 555 timer and plot the graph between control voltage and output frequency.
4. Design and construct an Astable multivibrator for a frequency of .....kHz using IC 555 timer. Measure the output using CRO and compare it with designed and calculated value. Repeat the experiment for at least two suitable frequencies.
5. Design and construct an active High pass filter of First and Second order with a lower cut off frequency of .....kHz and plot the frequency response. Determine the roll off rate from the graph.

PART B (20Marks)

1. Write and execute an assembly language program to sort the given data in ascending order, using 8086.
2. Write and execute 8086 assembly language program to generate Fibonacci series.
3. Write an assembly language program for 8086 to design and demonstrate a simple traffic light controller
4. Write an assembly language program to convert ASCII to BCD. Execute the program using 8086 Processor and verify the result.
5. Write and execute an assembly language program to find the Sum of the contents of Block 1 and 2 using 8086.

FOR THE USE OF EXAMINERS ONLY

PART A Electronics	Marks awarded	Max Marks	PART B Microprocessor.	Marks awarded	Max. Marks
Circuit diagram and design		10	Writing program-correct execution		15
Skill, layout, soldering and wiring		15	Viva Voce		3
Viva-voce conducted during the examination		5	Result and Discussion		2
Tabulation of data, graph and error analysis		10			
Result and discussion		5			
Total-Part A		**45**			
Record		**10**	**Total-Part B**		**20**

REMARKS/COMMENTS:

	Marks	Max.
Part A		45
Part B		20
Record		10
Total		**75**

Name and Signature of Examiner 1

Name and Signature of Examiner 2