E07KU21

Candidate Code .....

Name and signature of candidate .....

UNIVERSITY OF KERALA

FOURTH SEMESTER M.Sc. PHYSICS PRACTICAL EXAMINATIONS, AUGUST 2021

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

(Attempt the marked questions)

SECTION A (45 Marks)

1. Design and construct an AM modulator using transistor. Measure the modulation index. Construct a demodulator and verify the output.
2. 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.
3. 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.
4. Design and construct a triangular wave generator, using OP-AMP 741.
5. Design and construct a voltage controlled oscillator using IC 555 timer and plot the graph between control voltage and output frequency.

SECTION B (20Marks)

1. Write an assembly language program to interface a LED display board using 8085/86 and execute the program
2. Using 8255A interface and 8085/8086 processor generate a square wave of period ..... ms. Observe the waveform using a CRO and measure the pulse widths.
3. Write an assembly language program to convert ASCII to BCD. Execute the program using 8086 Processor and verify the result.
4. Write and execute an assembly language program to find the Sum of the contents of Block 1 and 2 using 8086.
5. Write and execute an assembly language program to sort the given data in ascending order, using 8086.

FOR THE USE OF EXAMINERS ONLY

PART A Advanced electronics	Marks awarded	Max Marks	PART B Microprocessor.	Marks awarded	Max. Marks
Circuit diagram and design		10	Writing Program and correct execution		15
Skill in performance – 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		**45**			
Record		10			
Grand Total		55	**Total**		**20**

REMARKS/COMMENTS:

Name and signature of Examiner 1

Examiner 2