

20KU05 E

Candidate Code

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Date and time of exam

Name and signature of candidate

UNIVERSITY OF KERALA
FOURTH SEMESTER M.Sc. PHYSICS PRACTICAL EXAMINATION AUGUST/SEPTEMBER 2020
PH 262 E ADVANCED ELECTRONICS **Max. Marks 75**
Time: 6 Hours
(Attempt the marked questions)

SECTION A (55 Marks)

- Design and construct active High pass filter of First and Second order with cutoff frequencyKhz and plot the frequency response. Determine the roll of rate from the graph.
- Design and construct an Astable multivibrator for a frequency of 1 Khz using IC 555. Measure the output using CRO. Repeat the experiment for at least two more values of frequencies.
- Design and construct a monostable multivibrator using OP AMP 741 with 1ms pulse width. Repeat the experiment for at least for two more values of frequencies
- Design and construct a triangular wave generator.
- Design and construct a differential amplifier using transistors for a voltage gain of 100 in the difference mode. Study the output waveforms. Use the differential amplifier in the common mode and find the CMRR. .

SECTION B (20 Marks)

- Write a program to convert ASCII to BCD. Execute the program using 8086 Processor and verify it.
- Write an assembly language program to find the Sum of the contents of Block 1 and 2 using the processor 8086. Execute the program and verify it.
- Using 8085/8255A generate a square wave of suitable period of ms. Observe the waveform using a CRO and measure the space and pulse width.
- Write an assembly language program to generate a Fibonacci series using 8086 processor.
- Write an assembly language program to display the LED board using 8085/86 and execute the program.

FOR THE USE OF EXAMINERS ONLY

PART A Advanced electronics	Marks awarded	Max Marks	PART B Microprocessor.	Marks awarded	Max. Marks
Record		10			
Circuit diagram and design		10	Writing Program and correct execution		15
Viva-voce conducted during the examination		5	Viva Voce		3
Skill in performance – layout, soldering and wiring		15	Result and Discussion		2
Tabulation graph and error analysis		10			
Result and discussion		5			
Total		55	Total		20

REMARKS/COMMENTS:

Name and signature of Examiners: