

ACHARYA NAGARJUNA UNIVERSITY

MODEL PAPER (Maths Combination)

Elective VII (A): ~~(Electronics)~~ **PHYSICS**

Semester -VI

Elective Paper -VII-(A) :Analog and Digital Electronics

Time : 3.00 Hours

Max: Marks : 75

SECTION - A (5 x5 = 25)

Answer any **FIVE** of the following

1. Draw the symbols of LED and write their applications
2. Define CMRR and slew rate
3. What are the Characteristics of an ideal op-amp (or) **Problem**
4. Explain op-amp acts as integrator
5. Explain op-amp as voltage follower
6. Explain Pin Diagram of IC 555
7. Construct decoder and Explain working of decoder
8. Explain working of D- Flip flop

SECTION - B (5 X 10 = 50)

Answer **ALL** questions

9. a) Explain construction and working of Enhancement of MOSFET and draw its drain characteristics **(OR)**
b) Explain the operation of LED and draw its characteristics and state its applications.
10. a) Explain block diagram of op-amp and differentiate ideal and practical characteristics of Op-amp **(OR)**
b) Draw the basic circuit diagram of differential amplifier and explain.
11. a) Explain working of Differentiator and summing amplifier with the help of op-amp **(OR)**
b) Draw the circuit diagram of inverting and non inverting amplifier and explain their operations.
12. a) Design and explain any one multiplexer **(OR)**
b) Explain working of astable multivibrator with the help of op-amp
13. a) Draw the circuit diagram of RS Flip-flop and explain working with truth table. **(OR)**
b) Design BCD to seven segment display and gray to BCD

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UNIT	Essay Questions 10 marks	Short questions 5 marks	Marks allotted
I	2	1	25
II	2	1 + 1 Problem	30
III	2	2	30
IV	2	2	30
V	2	1	25

Note : Please Strictly follow the syllabus and set the question paper as per the blue print given above. Two essay questions and one short question is compulsory in each unit.

Dr.Y.Gowri Sankar
Chairman , BOS , Physics

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MODEL PAPER (Maths Combination)

Cluster Paper –VIII-(A1)

Semester –VI

Introduction to Microprocessor and Microcontrollers

Time : 3.00 Hours

Max: Marks : 75

SECTION – A (5 x5 = 25)

Answer any **FIVE** of the following

- 1.Explain applications of microcontrollers
- 2.Explain working of general purpose computer system
- 3.Explain any three Logical instructions of 8085 microprocessor
4. Write an assembly language programming to add two 8- bit numbers
- 5.write an assembly language program for factorial of given 8- bit number
- 6.Explain pin diagram of 8051 Micro Controller
- 7.Explain structure of embedded system programming
- 8.Explain trends in embedded industry

SECTION – B (5 X 10 = 50)

Answer ALL questions

9. a) Draw and explain architecture of embedded system (OR)
b) Explain elemental description of embedded processor and microcontrollers
10. a) Draw the pin diagram of 8085 microprocessor and explain each pin function.
(OR)
b) Explain classifications of instructions in 8085 microprocessor
11. a) Write the block diagram of 8051 microcontroller and explain. (OR)
b) Explain Jump , Loop and Call instructions
12. a) Explain any five Arithmetic instructions with examples (OR)
b) Explain addressing modes used in 8051 programming
13. a) Explain the process of embedded product development life cycle in detail (OR)
b) explain files compiling , downloading and debugging

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UNIT	Essay Questions 10 marks	Short questions 5 marks	Marks allotted
I	2	2	30
II	2	1+1(Simple Programme)	30
III	2	1 (S.A/ Programme)	25
IV	2	1	25
V	2	2	30

Note : Please Strictly follow the syllabus and set the question paper as per the blue print given above. Two essay questions and one short question is compulsory in each unit.

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