

मार्गदर्शिका

Date: 04/12/2015.

Student Exam No. _____

GANPAT UNIVERSITY
B. TECH. SEMESTER- V (MARINE ENGINEERING)

REGULAR EXAMINATION NOV-DEC 2015

2MR506: ELECTRONICS

Time: 3 Hours

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Answers to the two sections must be written in separate answer books.
3. Figures to the right indicate full marks.
4. Assume suitable data, if necessary.

SECTION – I

- Que. –1 (A) What is use of clipper circuit? Explain positive and negative clipper circuit with wave form. 6
- (B) Explain half wave rectifier circuit with wave form. 3
- (C) Draw construction and symbol of n-p-n and p-n-p BJT. 3

OR

- Que. – 1 (A) What is use of clamper circuit? Explain positive and negative clamper circuit with wave form. 6
- (B) Explain full wave bridge rectifier circuit with wave form. 6

OR

- Que. – 2 (A) What is use of voltage regulators? Explain Series Voltage Regulator. 5
- (B) What are requirements for Oscillations? Explain Wein bridge oscillator. 6
- Que. – 2 (A) What is use of voltage regulators? Explain shunt Voltage Regulator. 5
- (B) Draw the block diagram of timer IC-555. Draw and explain the pin diagram of IC-555. 6
- Que. – 3 (A) Draw the symbol and pin diagram of IC-741 Op-Amp. 2
- (B) Explain the Inverting and Noninverting configuration of Op-amp. 5
- (C) Explain Binary weighted Digital to Analog Converters. 5

SECTION – II

- Que. – 4 (A) What is flip flops? Draw and Explain SR flip flop and D-Flip flops. 5
 (B) Simplify the following Boolean Function. 5

$$Y = (A + B)(A' + C)(B + C)$$

 (C) What is a digital multiplexer? 2
- OR
- Que. – 4 (A) Explain working and construction of thyristor. 5
 (B) Simplify the following Boolean Function. 5

$$XY + YZ + Y'Z = XY + Z$$

 (C) What is a digital demultiplexer? 2
- Que. – 5 (A) Explain Cathode Ray Oscilloscope using block diagram. 6
 (B) What is need of Modulation & Demodulation? Explain FM with waveform. 5
- OR
- Que. – 5 (A) What is use of function generator? Explain function generator working using block diagram. 6
 (B) Explain RADAR system using block diagram. 5
- Que. – 6 (A) Draw and explain the architecture of 8085 Microprocessors. 7
 (B) What is use of seven segment display? Explain the internal diagram of seven segment display. 5

END OF PAPER