

Q.No 1 : Answer in brief {any Ten } (50M)

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- 1) Write the Advantages of self-Employment ?
- 2) Explain Good Qualities of good Entrepreneur?
- 3) Explain the importance of trading business ?
- 4) Write different types of buyers ?
- 5) What are the factors affecting consumer and buying?
- 6) What is meant market segmentation ?
- 7) Write classification of resources ?
- 8) Differentiate between human resources and non-human resources?
- 9) Explain the function of District Industries center?
- 10) Write short notes on Industrial Development Bank of India ?
- 11) Explain the objectives on Industrial finance corporation of india (IFCI)

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S.Y.J.C (H.S.V.C) FIRST TERM EXAM NOV2019

P-I : APPLIED AND INDUSTRIAL ELECTRONICS

MM: 50 TIME: 2 HRS

Q.1) a) Fill in the blanks with appropriate word : (5M)

i) The instrument at the remote station should always be in the _____ state. (ON/OFF)

ii) Stepper motors are used in _____ peripherals.
(computer/audio tapes)

iii) _____ multi vibrator is used as an oscillator.
(astable/bistable)

iv) Input offset voltage of an ideal OPAMP is _____
(zero/ infinity)

v) Total internal reflection is observed in _____ cable.
(fibre optic/ glass)

Q.1) b) State whether TRUE or FALSE (5M)

a. The link between the ground station and satellite is of infra red waves.

b. Electric motor converts mechanical energy to electrical energy.

c. IC 555 uses 3 comparators .

d. Offset adjustment is necessary in IC741.

e. Photo conductive effect is observed in LDR.

Q.1) c) Match the column :

(5M)

A

B

- | | |
|-------------------------|--|
| i. Remote control | a. provides isolation between 2 circuits |
| ii. Armature voltage | b. 1.1 RC |
| iii. Discharge terminal | c. used in consumer electronics |
| iv. T = | d. can vary the speed of the motor |
| v. Opto coupler | e. Pin 7 of IC 555 |

Q.4) Answer any FIVE questions:

(20M)

- i. With a neat diagram explain the working of ground station.
- ii. Draw the OPAMP as adder. Give its output equation also.
- iii) With a neat diagram explain the working of mono stable using IC 555.
- iv) write note on LDR.
- v) Explain the speed control of DC motor using transistor

Q.5) Answer any THREE questions:

(15M)

1. Draw the OPAMP as an inverting amplifier. Give its output equation also.
2. State the advantages of digital timer over analog timer.
3. What is back emf. Explain its importance
4. State the various applications of remote control. Explain any one briefly.

3/12/2019

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P-II : MODERN INSTRUMENTS AND COMMUNICATION SYSTEMS

MM: 50 TIME: 2 HRS

Q.1) a) Fill in the blanks with appropriate word : (5M)

i) The piezoelectric transducer is _____ transducer.
(pressure/ displacement)

ii) Sawtooth waveform is applied at _____ deflection plates.
(X/ Y)

iii) The calibration signal usually available from a CRO is a
_____ wave. (square/ triangular)

iv) For perfect amplitude modulation, modulation index is
_____ (zero/ one)

v) Wi fi is a technology for wireless _____ (LAN/ MAN)

Q.1) b) State whether TRUE or FALSE (5M)

a. Blue tooth is a technology for wireless personal area networking.

b. AM has 3 sidebands.

c. Opposite process of modulation is not demodulation .

d. Active transducers are operated by input signal.

e. Thermistor is a pressure transducer.

Q.1) c) Match the column :

(5M)

A

B

- | | |
|---------------------------|----------------------------|
| i. GPS | a. inductive transducer |
| ii. Data communication | b. Displacement transducer |
| iii. FM band | c. navigation |
| iv. Capacitive transducer | d. infinity |
| v. LVDT | e. Digital method |

Q.4) Answer any FIVE questions:

(20M)

- i. Explain working of photo relay circuit using LDR.
- ii. Write note on thermocouple.
- iii) State applications of CRO.
- iv) Draw sweep generator. Explain its working.
- v) Explain the necessity of modulation in wireless communication.

Q.5) Answer any THREE questions:

(15M)

1. Draw the labelled diagram of CRT.
2. State the applications of function generator.
3. Explain the working of AM modulator circuit.
4. Define the 3 types of modulations.

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P-III : COMPUTER HARDWARE & NETWORKING

MM: 50 TIME: 2 HRS

Q.1) a) Fill in the blanks with appropriate word : (5M)

- i) 8085 uses _____ power supply. (+5V/ +10V)
- ii) _____ flag is affected by instruction RRC . (Carry/Zero)
- iii) The conversion from digital to analog and vice versa is done by _____. (modem/ repeater)
- iv) The address bus is _____ (unidirectional/ bidirectional)
- v) 8051 micro controller IC has _____ number of 8bit input/output parts . (4/ 8)

Q.1) b) State whether TRUE or FALSE (5M)

- a. HL is an invalid resistor pair for 8085.
- b. In 8085, CPI data instruction affects flag register.
- c. The 8051 microcontroller has an ALU of 8 bit capacity .
- d. The UTP cable has highest sensitivity.
- e. Semiconductor memory is called secondary memory.

Q.1) c) Match the column :

(5M)

A

B

- | | |
|----------------------------|-------------------------------|
| i. 808386 microprocessor | a. 3 byte instruction |
| ii. LXIH, addr | b. used between two buildings |
| iii. 8051 | c. mother board |
| iv. Fibre optic cable | d. microcontroller chip |
| v. Main system board in PC | e. 32 bit microprocessor |

Q.4) Answer any FIVE questions:

(20M)

- i. Compare secondary and primary memory of computer .
- ii. Draw a labelled diagram of Co axial cable.
- iii) Give advantages of microcontroller.
- iv) Write an assembly level language program to add 8 bit BCD numbers stored in location 5000H and 5001H. Store the result at memory location 5002H.
- v) State the various symbols used in a flow chart.
- vi) Draw the functional pin diagram of 8085.

Q.5) Answer any THREE questions:

(15M)

1. Draw the block diagram of computer and explain.
2. Compare twisted pair cable and coaxial cable.
3. Explain 1byte, 2 byte, 3 byte instruction.
4. Draw the pin diagram of IC 8085