

AR16

CODE: 16CE2010

SET-2

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

II B.Tech II Semester Supplementary Examinations, July-2018

BUILDING PLANNING AND DRAWING (Civil Engineering)

Time: 3 Hours

Max Marks: 70

PART-A

Answer any THREE questions from Part-A

[3 X 14 = 42 M]

1. a What are the principles underlying with building byelaws 7M
b Write short notes on building bye-laws for frontage and open space in buildings 7M
2. a Give the standard dimensions and location for the following rooms of a residential building (i) Veranda (ii) Bed room (iii) Sick room 7M
b List out different purposes of rooms in a residential building? 7M
3. Explain the various requirements of different rooms that are considered in residential buildings 14M
4. a Write short note on the effect of sun on buildings. 7M
b Explain the earth's orbital motion round the sun 7M
5. a What are the different factors that are considered in the selection of a site for a residential building, explain. 7M
b Write explanatory notes on open space requirements in buildings 7M

PART-B

Answer any one question from Part-B

[1x28=28M]

6. a What are the merits and demerits of English bond over Flemish bond 8M
b Draw the plans of Flemish Bond odd and even courses of one and half brick walls in thickness at the junction of a corner (300mm thickness) 20M

7. Draw the plan, section and elevation of the line diagram shown in figure 1? 28M

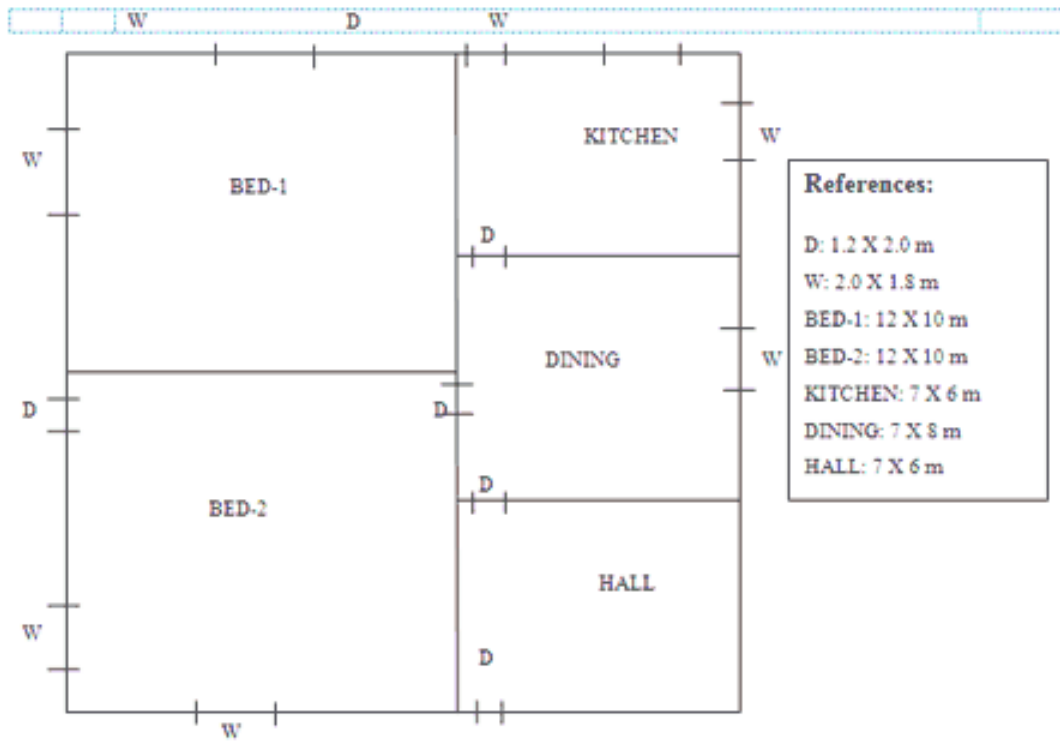


Fig: 1

**ELECTRO MAGNETIC FIELD THEORY
(Electrical & Electronics Engineering)****Time: 3 Hours****Max Marks: 70**

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the Question must be answered at one place

UNIT-I

1. a) State and explain gauss law in both integral form and point form. 6M
- b) Two small identical conducting spheres have charges 2nC and -1nC respectively. When they are separated by 4cm apart, find the magnitude of the force between them. If they are brought into contact and then again separated by 4cm , find the force between them. 8M

(OR)

2. a) Derive an expression for electric field intensity due to infinite line charge. 8M
- b) Determine the potential at $(0,0,5)\text{m}$ due to a total charge of 10^{-8}C distributed uniformly along a disc of radius 5m lying in the $Z=0$ plane and its centre is at the origin. 6M

UNIT-II

3. a) Derive an expression for Laplace equation from fundamentals. 7M
- b) Medium 1 has permittivity of 1.5 and x tends to the left of yz plane. Medium 2 has a permittivity of 2.5 and x tends to the right of yz plane. $E_1 = 2i + 3j + k$. Find the magnitude of E_2 . 7M

(OR)

4. a) Derive an expression for the capacitance of a spherical capacitor with conducting shells of radius a and b . ($a < b$). 6M
- b) A parallel plate capacitor with air as dielectric has a plate area of $36\pi \text{ cm}^2$ and separation of 1mm . It is charged to 100V by connecting it across a battery. If the battery is disconnected and distance is increased to 2mm . Calculate change in potential difference and energy stored. Assuming no leakage of charge. How do you account in energy stored. 8M

UNIT-III

5. a) Derive an expression for M.F.I due to an infinite line of current carrying conductor. 7M
b) Derive an expression for magnetic field intensity due to a circular loop of conductor carrying current I, lying in the XY-plane 7M

(OR)

6. a) Deduce the relationship between magnetic flux, magnetic flux density and magnetic field intensity. 6M
b) A transmission circuit consists of two parallel conductors A and B of 1 cm diameter each and spaced 1 m apart. The conductors are carrying currents of 100A and -100A respectively. Determine magnetic field at the surface of each conductor and in space exactly mid-way. 8M

UNIT-IV

7. a) Determine Self inductance of long solenoid. 7M
b) Find the force on a straight conductor of length 30cm carrying a current of 5A in the $-a_z$ direction where the field is $B = 0.0035(ax - ay) T$. 7M

(OR)

8. a) When the current carrying loop is placed in a uniform magnetic field show that torque experienced by the current loop is $T = m \times B$ 8M
b) A solenoid with 200 turns is 300mm long and 20mm in diameter. If the current is 600mA, find inductance and energy stored in solenoid. ($\mu_r = 500$). 6M

UNIT-V

9. a) State and explain poynting theorem. 7M
b) A parallel plate capacitor with plate area of $0.01m^2$ and plate separation of 0.05mm has a voltage of $100 \sin 200\pi t$ V applied to its plates. Calculate the displacement current assuming $\epsilon = 100\epsilon_0$. 7M

(OR)

10. a) Starting from Faraday's law of electromagnetic induction, derive $\nabla \times E = - \partial B / \partial t$ 7M
b) Obtain the expression for frequency at which both conduction current density and displacement current density are equal. 7M

AR16

CODE: 16HS2004

SET-1

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

**II B.Tech II Semester Supplementary Examinations, July-2018
MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS
(Mechanical Engineering)**

Time: 3 Hours

Max Marks: 70

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1. a) What is Managerial Economics? Explain the basic functions of Managerial Economics. **7 M**
b) Explain how Managerial Economics is linked with other academic disciplines? **7 M**
(OR)
2. “Managerial Economics is the discipline which deals with the application of business management” Comment. **14 M**

UNIT-II

3. a) Define the word Demand. Explain the factors determining the elasticity of Demand **14 M**
(OR)
4. a) Evaluate survey based demand forecasting methods with appropriate examples. **14 M**

UNIT-III

5. a) Discuss the economies of scale that occur in a firm. **7 M**
b) Explain the features of short run average cost curve and long run average cost curve. **7 M**
(OR)
6. a) What is the law of diminishing marginal utility? Explain with suitable example. **7 M**
b) What is meant by Break Even analysis? Discuss the assumptions and limitations of BE analysis. **7 M**

UNIT-IV

7. a) Distinguish between perfect and imperfect markets. **6 M**
b) XY Co.Ltd is contemplating to invest in a project that costs Rs.4,00,000/-. The estimated salvage value is zero. Tax rate is 50%. The company uses straight line depreciation and the proposed project has cash flows before tax (CFBT) as follows:

Year	1	2	3	4	5
NCIFs	1,00,000	1,00,000	1,50,000	1,50,000	2,50,000

Calculate the Internal Rate of Return.

8 M

(OR)

8. a) Explain the features of perfect competition. **7 M**
b) Explain how the price is determined in case of imperfect competition. **7 M**

UNIT-V

9. a) What is a ledger? State the method of recording the ledger. **6 M**
b) From the following Trial Balance of Sri Venkatesh and Sons, prepare the Trading and Profit & Loss Account for the year ending 31st March, 2016.

Trial Balance as on 31st March, 2016

Particulars	Debit Rs.	Credit Rs.
Capital		7,610
Cash in Hand	30	
Purchases	8,990	
Sales		11,060
Cash at Bank	885	
Fixtures and Fittings	225	
Freehold premises	1,500	
Lighting and heating	65	
Bills receivables	825	
Returns inwards	30	
Salaries	1,075	
Creditors		1,950
Debtors	5,700	
Stock on April 1, 2015	3,000	
Printing	225	
Bills payable		1,875
Rates, Taxes and Insurance	190	
Discount received		445
Discount allowed	200	
Total	22,940	22,940

Adjustments: a) Stock on 31st March, 2016 was valued at Rs. 1,800/-

8 M

(OR)

10. From the following transactions write journal entries and post them into ledger in the books of Baradwaj.

2016	Particulars	Rs
March 1	Started business	10,000
March 2	Sold goods to Muttu on credit	4,300
March 6	Sold goods to Anand for cash	5,000
March 8	Commission received	50
March 14	Goods returned by Muttu	100
March 16	Purchased goods from Murali on credit	2,000
March 19	Purchased goods from Mohan on cash	2,400
March 20	Stationary purchased	75
March 21	Goods returned to Murali	300
March 21	Paid cash to Murali	1,700
March 22	Purchased goods for cash	600
March 31	Salaries paid	300
March 31	Wages	200
March 31	Electricity expenses	100

14 M

AR16

CODE: 16EC2007

SET-1

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

II B.Tech II Semester Supplementary Examinations, July-2018

**ANALOG COMMUNICATIONS
(Electronics and Communication Engineering)**

Time: 3 Hours

Max Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the Question must be answered at one place

UNIT-I

1. a) What do you understand by modulation theorem? How it is useful in communication system? What are the conditions imposed on modulating and carrier frequencies? **7M**
- b) Discuss the Virtues and limitations of AM DSB-FC. Suggest modifications for improvement of AM modulation system. **7M**

(OR)

2. a) Explicate the working principle of square law modulator for AM generation. Obtain the expression for its output. **6M**
- b) A 10 KHz carrier signal is modulated with a 600 Hz modulating signal to generate DSBSC signal. (I) Find the bandwidth of the transmitted signal. (ii) Another tone of frequency 1000 Hz signal is simultaneously modulated with the same carrier. Find the new modulated signal bandwidth. (iii) Find the bandwidth of the transmitted signal, if 600 Hz tone is removed **8M**

UNIT-II

3. a) What do you understand by over modulation? What is its effect on the reception of the signal? What is the maximum transmitted power in AM? **8M**
- b) A broadcast radio transmitter radiates 10 KW, when the modulation index is 0.6. Suppose another tone signal is simultaneously modulated with modulation index of 0.8 with the same carrier. Determine the carrier and total sideband power. **6M**

(OR)

4. a) Discuss about the modulation index for faithful reproduction of the message signal at the receiver. **6M**
- b) Discuss the basic elements of electronic communication systems? Illustrate the importance of modulation and demodulation in the communication systems. **8M**

UNIT-III

5. a) Explain the working of Armstrong method for FM generation with the help of neat block diagram. **7M**
- b) Explain the balanced slope detector method for FM demodulation. **7M**

(OR)

6. a) Draw the block diagram of PLL technique for demodulating an FM signal and explain its working. **7M**
- b) Draw the circuit diagram of a Foster-Seely discriminator for demodulating the FM signals and explain the operation with phasor diagrams. **7M**

UNIT-IV

7. a) Illustrate the operation of radio transmitter using low level modulation system. **8M**
- b) Explain how constant intermediate frequency is achieved in the super heterodyne receiver? **6M**

(OR)

8. a) Discuss the merits of delayed AGC over simple AGC. Show AGC curves to illustrate the comparison and explain how delayed AGC is obtained and applied. **8M**
- b) Illustrate the Tuned Radio Frequency receiver with the help of neat schematic diagram. **6M**

UNIT-V

9. a) Draw the circuit of PPM demodulator and explain its operation. **8M**
- b) Comparison of PAM, PWM and PPM **6M**

(OR)

10. a) Explain the principle of PAM with a help of block diagram. Derive the mathematical expressions. **8M**
- b) Discuss the advantages and disadvantages of PAM system. **6M**

AR16

CODE: 16CS2006

SET-1

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

II B.Tech II Semester Supplementary Examinations, July-2018

**COMPUTER ORGANIZATION AND ARCHITECTURE
(Common to CSE & IT)**

Time: 3 Hours

Max Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the Question must be answered at one place

UNIT-I

1. a) The value of a float type variable is represented using the single-precision 32-bit floating point format IEEE-754 standard that uses 1 bit for sign, 8 bits for biased exponent and 23 bits for mantissa. A float type variable X is assigned the decimal value of -15.48. Represent X in hexadecimal, binary and octal notation. **7M**
- b) Draw and explain the system bus structure with relevant block diagram. **7M**

(OR)

2. a) Explain different types of computers. Distinguish between multiprocessor and multicomputer. **7M**
- b) Briefly describe the fixed point representation of numbers with suitable examples. **7M**

UNIT-II

3. a) Explain with suitable flowchart and example the addition of signed numbers. **7M**
- b) Write a short note on floating point arithmetic operations. **7M**

(OR)

4. Explain in detail about signed multiplication with appropriate flow chart and examples. Also give the hardware implementation. **14M**

UNIT-III

5. a) What is a micro-operation? List different types of micro-operations and explain each with an example. **7M**
b) Give the importance of registers in CPU. Explain the general register organisation of processor with relevant diagrams. **7M**

(OR)

6. a) Draw and explain the block diagram for the hardware that implements the following statements: **4M**
$$x + yz : AR \leftarrow AR + BR$$

where AR and BR are two n-bit registers and x, y, and z are control variables. Include the logic gates for the control function.
b) Define an addressing mode. List different types of addressing modes and explain with relevant examples. **10M**

UNIT-IV

7. a) Illustrate the memory hierarchy. Give the importance of primary memory and explain in detail different types of memories. **7M**
b) Explain about daisy chaining priority interrupt in interrupt driven I/O. Give the disadvantage of this. **7M**

(OR)

8. a) Explain the concept of virtual memory. Draw and explain associative memory page table. **7M**
b) Write a short note on asynchronous data transfer with relevant timing diagrams. **7M**

UNIT-V

9. a) With an example explain vector processing and array processors. **7M**
b) Explain the interconnection arbitration of multi-processor **7M**

(OR)

10. a) Explain 6-stage instruction pipelining with an example. **9M**
b) Briefly describe the characteristics of multi-processors. **5M**

MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS**(Common to CE & ME)****Time: 3 Hours****Max Marks: 70****PART-A****ANSWER ALL QUESTIONS****[1 x 10 = 10 M]**

1. (a) Define demand.
- (b) What do you mean by micro economics?
- (c) Define Break-even point.
- (d) Define Cobb Douglas production function.
- (e) Mention types of market structures.
- (f) Explain features of the Joint stock company.
- (g) Define Accounting.
- (h) Give formulae for Liquidity ratios
- (i) What is the need of capital?
- (j) List out the components of working capital.

PART-B**Answer one question from each unit****[5x12=60M]****UNIT-I**

2. Explain the methods of demand forecasting. (12M)

(OR)

3. Illustrate the different types of elasticity of demand. (12M)

UNIT-II

4. a) Explain Iso-costs and Iso-quants with graphs. (7M)

- b) Explain economies of scale. (5M)

(OR)

5. Explain the various cost concepts with examples. (12 M)

UNIT-III

6. What is perfect market? Explain the features of perfect competition. (12M)

(OR)

7. Explain various forms of public enterprises. (12M)

UNIT-IV

8. Prepare Trial Balance of Mr.Rajaram as on 31.12.2005 from the following balances.

(12M)

	Rs.		Rs.
Sundry Debtors	32,000	Stock as on 1.1.2005	22,000
Cash in Hand	35	Cash at Bank	1,545
Plant & Machinery	17,500	Sundry Creditors	10,650
Trade expenses	1,075	Sales	2,34,500
Salaries	2,225	Carriage Outwards	400
Rent	900	Bills Payable	7,500
Purchases	2,18,870	Discount Allowed	1,100
Capital	79,500	Business Premises	34,500

(OR)

9. Explain accounting cycle. (12M)

UNIT-V

10. a) State the formulas for Activity Ratios. (4M)

b) Company has an investment opportunity costing Rs.50,000 with the following expected net cash flows after taxes. (8M)

Years	Net Cash Flows (Rs.)
1	20,000
2	15,000
3	25,000
4	10,000

Determine Pay back period method.

(OR)

11. a) From the following compute current ratio and quick ratio : (6 M)

	Rs
Fixed Assets	100000
Stock	30000
Debtors	20,000
Cash	40,000
Prepaid expenses	10,000
Creditors	30,000
Reserves	10,000

b) From the following information calculate the NPV of the two projects and suggest which one should be accepted assuming a discount rate of 10%. (6M)

	Project X	Project Y
Initial Investment	20,000	30,000
Estimated Life	5 Yrs	5 Yrs

The profits before depreciation and after taxes are as follows.

	Year 1	Year 2	Year 3	Year 4	Year 5
Project X	5,000	10,000	10,000	3,000	2,000
Project Y	20,000	10,000	5,000	3,000	2,000
P.V @ 10%	0.909	0.826	0.751	0.683	0.621

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)****II B.Tech II Semester Supplementary Examinations, July-2018****ELECTRICAL CIRCUIT ANALYSIS-II
(Electrical and Electronics Engineering)****Time: 3 Hours****Max Marks: 70****PART-A****ANSWER ALL QUESTIONS****[1 x 10 = 10 M]**

1. a) For an unbalanced 3-Phase 4-wire write an expression for the relationship between the neutral current and R, Y, B phase currents?
- b) Write the relations between line voltage and phase voltage, line current and phase current in case of star connected network.
- c) Two watt meter readings are 400w and -35w. Calculate the power factor?
- d) What is the time constants of a series R,L circuit?
- e) A ramp voltage, $v(t) = 100t$ volts, is applied to an RC differentiating circuit with $R = 5\text{ k}\Omega$ and $C = 4\text{ }\mu\text{F}$. What is the maximum output voltage ?
- f) A series RLC circuit with $R=200\text{ ohms}$ and $L=0.1\text{H}$ is to be made critically damped by the selection of the capacitance. Find the value of C?
- g) Write the relations between line voltage and phase voltage, line current and phase current in case of delta connected network.
- h) Write any three properties of RC impedance function?
- i) What is Band pass filter?
- j) What is the function of filter?

PART-B**Answer one question from each unit****[5x12=60M]****UNIT-I**

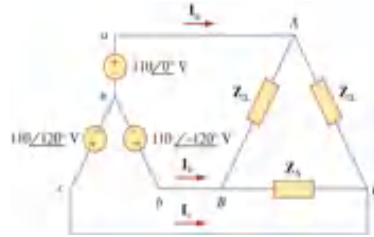
2. Three impedances $Z_1=20$ $Z_2=40$ $Z_3=10$ are delta connected to a 400 volts 3 phase system as shown in figure below. Determine i) phase currents ii) line currents iii) total power consumed by the load. **[12M]**

(OR)

3. a) Prove that two watt meters are enough to measure 3-Phase power. **[6M]**

b) Solve for the line currents in the Y- Δ circuit. Take $Z_{\Delta} = 60\angle 45^{\circ}\Omega$.

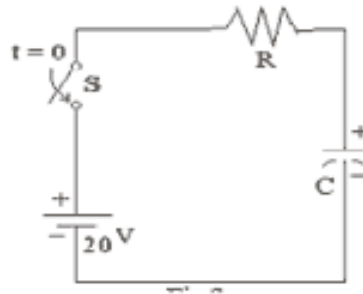
[6M]



1 of 3

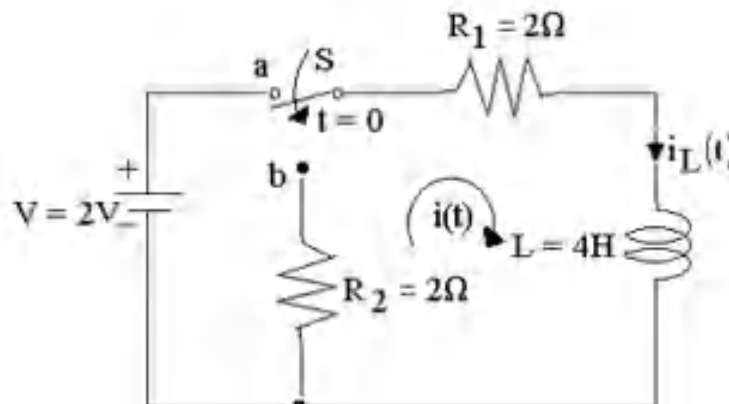
UNIT-II

4. a) The switch S in the circuit shown in Figure is closed at $t = 0$. Obtain an expression for $V_c(t)$, $t > 0$ where the value of $R = 10 \text{ ohms}$, $C = 0.1 \text{ f}$ **12M**



(OR)

5. a) After steady-state current is established in the R-L circuit shown in Figure with switch S in position 'a', the switch is moved to position 'b' at $t = 0$. Find $i_L(0^+)$ and $i(t)$ for $t > 0$. What will be the value of $i(t)$ when $t = 4 \text{ seconds}$? **12M**



UNIT-III

6. A sinusoidal current source, $10\cos 1000t \text{ A}$, is in parallel both with a 20 ohm resistor and the series combination of a 10 ohm resistor and a inductance of 10mH , Find the voltage across i) 10 ohm resistor ii) Current source iii) inductor **12M**

2 of 3

(OR)

7. a) The current $i = 4\cos(200t - 45^\circ)$ is the response produced in series RL circuit by the source $v_s = 150\cos(200t + 15^\circ)$. Find the R and L values? **4M**
- b) The source voltage $V_s(t) = 100\cos 20t$ is applied to a series RL circuit containing a $\% \text{ohm}$ resistor and an inductor L. Find L if a) Amplitude of the current is 10A b) the current waveform lags the source voltage by 90° **8M**

UNIT-IV

8. Synthesize the following impedance function in Cauer-I Form : **12M**

(OR)

9. Determine the condition for which the function $F(s) = \frac{(s^2 + a_1s + a_0)}{(s^2 + b_1s + b_0)}$ is positive real. It is given that a_1, a_0, b_1 and b_0 are real and positive. **12M**

UNIT-V

10. a) Design an m-derived T-section filter (high pass) with a cut off frequency 10kHz, design impedance of $200\ \Omega$ and $m=0.4$ **6M**
- b) What are demerits of constant K filters and How to overcome them. **6M**

(OR)

11. Design K-type band pass filter of both T and π section having a design impedance of 500 ohm and cut-off frequencies 1KHz and 10 KHz. **12M**

AR13

CODE: 13EC2009

SET-2

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

II B.Tech II Semester Supplementary Examinations, July-2018

ANALOG COMMUNICATIONS

(Electronics and Communication Engineering)

Time: 3 Hours

Max Marks: 70

PART-A

ANSWER ALL QUESTIONS

[1 x 10 = 10 M]

1.
 - a) What is coherent detection?
 - b) Give the relation between total power and carrier power in AM system.
 - c) What is quadrature null effect in DSB SC system?
 - d) What is Hilbert transform? Mention the modulation scheme in which it is used?
 - e) what is Carson's rule? Why it is required in FM systems?
 - f) Define selectivity of a receiver?
 - g) What is amplitude limiting?
 - h) What is automatic gain control (AGC)? Give its application.
 - i) State sampling theorem for band limited signal.
 - j) What is figure of merit?

PART-B

Answer one question from each unit

[5x12=60M]

UNIT-I

2.
 - a) Derive the mathematical expression for single tone AM signal and discuss its spectrum. **6M**
 - b) Discuss the phase reversal of envelop in conventional AM and DSB-SC. State your observations. **6M**
- (OR)**
3.
 - a) Diode can be used as AM demodulator. How? Describe AM detection mechanism when the diode is operating in non linear region. **6M**
 - b) Determine the percentage power saving when carrier wave and one side band are suppressed in an AM wave modulated to a depth of modulation i) 100% ii) 75% iii) 50%. What do you understand from the results? **6M**

UNIT-II

4.
 - a) Discuss the effects of frequency and phase errors in synchronous detection of DSB SC signal. **6M**
 - b) Illustrate the generation of SSB SC signal using phase discrimination method with the help of block diagram. **6M**
- (OR)**
5.
 - a) Discuss the merits and demerits of SSB-SC system over DSB-SC and conventional AM system. **5M**
 - b) Give the mathematical description of the VSB-SC signal. **7M**

UNIT-III

6. a) Illustrate the generation of FM signal using indirect method with the help of neat block diagram. **6M**
b) Differentiate linear and non linear modulation schemes in terms of power, bandwidth, modulation index and noise immunity. **6M**
(OR)
7. a) Describe the usage of PLL in FM system. **6M**
b) Define multiplexing. Discuss the existing of TDM system and illustrate the functioning of TDM system with neat sketch. **6M**

UNIT-IV

8. a) Illustrate the operation of radio transmitter using low level modulation system. **6M**
b) Explain how constant intermediate frequency is achieved in the super heterodyne receiver? **6M**
(OR)
9. a) Discuss the merits of delayed AGC over simple AGC. Show AGC curves to illustrate the comparison and explain how delayed AGC is obtained and applied. **6M**
b) Illustrate the Tuned Radio Frequency receiver with the help of neat schematic diagram. **6M**

UNIT-V

10. a) Give the performance comparison of various pulse modulation schemes. **6M**
b) Show that the figure of merit of DSB SC system is unity. **6M**
(OR)
11. a) Prove that pulse duration modulation requires more average power over pulse amplitude modulation **5M**
b) Pre-emphasis and de-emphasis improve the quality of FM transmission. Justify. **7M**

AR13

CODE: 13CS2008

SET-2

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

II B.Tech II Semester Supplementary Examinations, July-2018

**COMPUTER ORGANIZATION AND ARCHITECTURE
(Common to CSE & IT)**

Time: 3 Hours

Max Marks: 70

PART-A

ANSWER ALL QUESTIONS

[1 x 10 = 10 M]

1. a) What is Von-Neumann architecture of a computer?
b) Explain about shift operators.
c) Explain about array multiplier.
d) Explain instruction formats.
e) Construct 8*2 ROM using two dimensional techniques?
f) Define auxiliary memory.
g) What are the different modes of data transfer?
h) What is set associative mapping?
i) What are pipeline hazards
j) Explain RISC & VLIW briefly.

PART-B

Answer one question from each unit

[5x12=60M]

UNIT-I

2. Explain the block diagram of a computer with functional units. **12**
- (OR)
3. Convert the following number systems **12**
 - i) $(75492)_{10} = (?)_8$
 - ii) $(46534)_8 = (?)_2$
 - iii) $(CD721EE)_{16} = (?)_8$
 - iv) $(95687)_{10} = (?)_{16} = (?)_2$

UNIT-II

4. a) Explain with example subtraction of a signed number. **6**
b) Explain different kinds of register reference instructions. **6**
- (OR)
5. Explain Booth's algorithm with example. **12**

UNIT-III

6. a) What is memory hierarchy? Explain in detail. **6**
b) Explain auxiliary memory structure with neat sketches. **6**
- (OR)
7. Construct a 16*2 ROM using 8*2 ROM and explain its functioning. **12**

AR13

CODE: 13CS2008

SET-2

UNIT-IV

8. Explain the following data transfer methods
- i) Programmed I/O **6**
 - ii) Interrupt initiated I/O **6**
- (OR)**
9. a) Explain about the peripheral devices. **6**
b) Explain about the I/O processor briefly. **6**

UNIT-V

10. Explain pipe lining and different types of pipe lining. **12**
- (OR)**
11. a) Explain differences between Multiprocessors and Multi computers. **6**
b) Explain about ILP. **6**

2 of 2
