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121061A/031061

6th Sem. / ECE

Subject : Medical Electronics

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Name the electrode used for recording EMG.

Q.2 Strain gauge is a type of temperature transducer. (T/F)

Q.3 Bioelectric potentials are ionic in nature. (T/F)

Q.4 Define Tissue.

Q.5 What is the main function of heart?

Q.6 EEG stands for _____.

Q.7 Write down types of heart rate meters.

Q.8 The AV node is the pacemaker of the heart. (T/F)

Q.9 What is micro-shock?

Q.10 What is bio-medical engineering?

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

Q.11 ECG signals have frequency range of _____.

Q.12 What are Pacemakers?

Q.13 The operation of thermocouple is based on_____.

Q.14 Name any two types of temperatures transducers.

Q.15 Diastolic pressure is the minimum pressure in the arteries. (T/F)

Q.16 LVDT stands for _____.

Q.17 What is the use of strain gauge method in medical electronics.

Q.18 List two uses of microprocessor in patient monitoring.

Q.19 Surface electrodes are treated as _____ impedance voltage source.

Q.20 The normal core body temperature of healthy adult human being is normally _____.

Q.21 _____ current flows through the heart wall directly.

Q.22 The frequency of muscles activity is very high. (T/F)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 Draw and explain structure of the human cell.

Q.24 Which types of electrodes are used for EEG measurement? Explain.

Q.25 Explain any two diagnostic and therapeutic equipments.

Q.26 Draw and explain any one pressure transducer.

Q.27 What is defibrillator? Why it is used?

Q.28 What are the various safety aspects of medical instruments?

Q.29 Explain the working of asynchronous pacemaker.

Q.30 Write a short note on Micro-current shock.

Q.31 Define and classify medical equipments?

Q.32 Explain the block diagram of ECG machine.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 What is pressure sensor? Explain in detail.

Q.34 Explain the breathing mechanism.

Q.35 What is respiratory system? Draw and explain respiratory system of a human body.

Q.36 Write a short note on the following. (Any two)

(a) Gross current Shock

(b) Bio-electric signal

(c) Electrode tissue interface

Q.31 Write a VHDL code for full adder using data flow modeling.

Q.32 Differentiate between CPLD and FPGA?

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 Explain behavioural, dataflow and structural modeling techniques.

Q.34 Develop a VHDL code for 4:1 Multiplexer using Behavioural modeling.

Q.35 Write a difference between signal and variable.

Q.36 Write a short note on the following. (Any two)

i) Entity

ii) Architecture

iii) Packages

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121061B

6th Sem.

Subject : VLSI SYSTEM DESIGN

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.1 Write the difference between ROM and RAM.

Q.2 Counters are for counting a sequence of values. (T/F)

Q.3 What is overloading in VHLD.

Q.4 What is CPLD?

Q.5 How does PLA differ from ROM?

Q.6 Full form of GAL.

Q.7 Write the significance of HDL in digital design.

Q.8 Define the clock.

Q.9 FPGA stands for_____.

Q.10 Explain the use of WAIT statement with example.

SECTION-B

Note: Very Short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

Q.11 Write the use in VHDL.

Q.12 Define Concurrent Statements.

Q.13 What are various sequential statements?

Q.14 What is operator overloading?

Q.15 What is CPLD?

Q.16 Write the need of Cad tool?

Q.17 What is delay?

Q.18 What is overloading in VHLD.(T/F)

Q.19 What is the Data flow modeling.

Q.20 How does PLA differ from ROM.

Q.21 Explain the inertial delay.

Q.22 PEEL stands for_____.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 Explain the different type of operations in VHDL.

Q.24 Write a data flow model for 3 to 8 decoder.

Q.25 Explain the internal architecture of FPGA.

Q.26 Write a VHDL program to design 2-bit comparator circuit.

Q.27 Explain various data types in VHDL.

Q.28 Write the behaviour model of 4 to 1 MUX using IF statement.

Q.29 Explain various data types in VHDL.

Q.30 Write the design steps of counters.

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121062

6th Sem. / ECE

Subject : Maintenance of Computer System

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Expand SCSI

Q.2 Write any one fault of Mouse.

Q.3 CMOS means_____.

Q.4 Define parallel Port.

Q.5 Expand USB.

Q.6 Mouse is an _____ Device.

Q.7 RAM stands for _____.

Q.8 _____ is an example of Non Impact printer.

Q.9 DVD stands for _____.

Q.10 WAN stands for _____.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

Q.11 Why we need modem? Explain in brief.

Q.12 Define secondary memory with example.

Q.13 Define Digitizer.

Q.14 Write two advantages of Laser Printer.

Q.15 Define BUSES in a PC.

Q.16 Define PCI Slots.

Q.17 Define ROUTER. Give its two uses.

Q.18 Write any one difference between LCD and LED Display.

Q.19 Write the types of HUB.

Q.20 Write two advantages of inkjet printer.

Q.21 Write the reason, why maintenance of computer system is so important.

Q.22 Define Solid State Display.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 Write any three advantages of Laptop.

Q.24 Difference between SWITCH and HUB.

Q.25 Write a Short note on SWITCH.

Q.26 Write different slots and components available on a Mother Board.

Q.27 Explain in brief Solid State Display.

Q.28 Explain Printing Mechanism in brief.

Q.29 Explain the use of computer for instrumentation.

Q.30 Explain the two common faults of a keyboard.

Q.31 Write two differences between a TV and a Computer Monitor.

Q.32 Write and explain any two faults, which can occur in a HDD.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 Explain in detail principle, construction and working of a HDD with the help of a diagram.

Q.34 Explain the following:-

i) Common faults of Mouse.

ii) Scanner and its types.

Q.35 Explain the following:-

i) Serial and Parallel ports.

ii) RS232

Q.36 Explain the construction and working of DOT matrix printer?

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121063/31063

6th Sem. / ECE

Subject : Wireless and Mobile Communication

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 FHSS stands for _____.

Q.2 _____ is the basic geographical unit of cellular system.

Q.3 Co-channel reuse ratio Q = _____

Q.4 FDMA is a _____ technique (Analog/Digital)

Q.5 MSC stands for _____

Q.6 AMPS uses a channel spacing of _____

Q.7 EIR is _____ register.

Q.8 Range of Bluetooth is _____.

Q.9 Wi-Fi stands for _____.

Q.10 ISDN stands for _____.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

Q.11 Define cell sectoring.

Q.12 Write any two advantages of Digital Communication.

Q.13 Explain Co-channel interference.

Q.14 What is the frequency range of infrared and UHF signals?

Q.15 Define the function of HLR.

Q.16 Write the purpose of using A-interface in GSM system.

Q.17 Define handover process in wireless system.

Q.18 Define Multiple access technique.

Q.19 Why do we prefer hexagonal shape of a cell?

Q.20 Why do we use repeaters in cellular concept?

Q.21 Define frequency reuse factor.

Q.22 Define a page in a paging system.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 Write a short note on cordless telephone systems.

Q.24 How the co-channel and adjacent channel interferences can be minimised?

Q.25 Define capacity of a cell. How the capacity of a cell can be increased?

Q.26 Compare digital and analog communication systems.

Q.27 Write short note on Third Generation Mobile Systems.

Q.28 Write any five advantages of wireless communication system.

Q.29 Differentiate between Macro and Micro cells.

Q.30 Briefly explain GPRS system.

Q.31 Compare CDMA and GSM system.

Q.32 How can the power control method be used for reducing interface in wireless systems.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 Explain the architecture of GSM system.

Q.34 What are the various multiple access techniques for wireless communication? Explain FHSS in detail.

Q.35 Compare Paging System, Cordless telephone System and Cellular telephone System in detail.

Q.36 What are the disadvantages of analog Communication System? Explain the block diagram of Digital and Data Communication System.

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120264/030364/105243/105252/
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6th Sem. / Common to All

Subject : E.D.M.

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Full form of NABARD is .....

Q.2 Meaning of Partnership.

Q.3 Expand MSME.

Q.4 Full form of TBI is .....

Q.5 Meaning of Market Survey.

Q.6 WHO is father of management?

Q.7 Theory of Motivation is given by .....

Q.8 Expand EOQ.

Q.9 Full form of JIT is .....

Q.10 Meaning of Trade Mark.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

Define the following terms.

Q.11 Line organisation.

Q.12 Leadership style.

Q.13 Business opportunity.

Q.14 State Financial Corporations.

Q.15 IPR.

Q.16 Necessity of TQM.

Q.17 Demand forecasting.

Q.18 What is meaning of MRP?

Q.19 Define HRM.

Q.20 What is Income Tax?

Q.21 What are objectives of NSIC?

Q.22 Give importance of marketing.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

Q.23 What do you understand by Entrepreneurship?

Q.24 Discuss functions of MSME.

Q.25 What do you understand by Commercial banks?

Q.26 Enlist the various factors governing sales forecasting.

Q.27 Explain briefly PPR.

Q.28 Enlist in brief the importance of management.

Q.29 What do you understand by democratic leadership?

Q.30 What is the importance of Human Resource Management?

Q.31 Explain in detail about Sales Tax.

Q.32 Explain CRM and its need.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. 3x10=30

Q.33 What are qualities and functions of Entrepreneur?

Q.34 Explain in detail what factors should be Considered While making a final selection at the Product to be manufactured.

Q.35 Explain the following :

a) Common Errors in Project report Preparation.

b) Objectives of Management.

Q.36 Discuss following :

a) Sales Promotion Techniques

b) Performance Appraisal Methods.

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120962/105864/31065A

6th Sem. / Electrical Engg.

Subject : PLCs & Microcontrollers

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Expand PLC?

Q.2 What is relay?

Q.3 Define SCON?

Q.4 8051 microcontroller has .....pins.

Q.5 Expand RAM?

Q.6 What is timer?

Q.7 What is Rung?

Q.8 PIC stands for.....?

Q.9 Define baud rate?

Q.10 Define Interfacing?

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

Q.11 Name the two Programming Languages of PLC?

Q.12 What is sourcing connection?

Q.13 What is PLC Scanning?

Q.14 Define Machine Language?

Q.15 What is an assembler?

Q.16 Expand EEPROM?

Q.17 What is flag?

Q.18 Write names of any two types of Special function register?

Q.19 What is Ladder Diagram?

Q.20 The full form of RISC is.....?

Q.21 Name the different type of counters?

Q.22 What is the function of ALE pin in 8051 microcontroller?

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 Write the limitations of relay?

Q.24 Discuss RTC of PLC?

Q.25 Explain the Special function registers of 8051 microcontroller?

Q.26 What are the advantages of PLC?

Q.27 What do you mean by maskable and non maskable interrupts?

Q.28 Discuss about Serial data transmission modes in Microcontroller?

Q.29 What is Ladder programming?

Q.30 Draw the pin diagram of PIC mirocontroller?

Q.31 Explain star delta starter with the help of PLC?

Q.32 Explain any two Assembler directives.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 With the help of block diagram explain the working of different blocks of 8051 microcontroller?

Q.34 Explain the Architecture of PLC with block diagram?

Q.35 What are the different addressing modes in 8051 microcontroller? Explain them with example?

Q.36 Write short note on:

a) PLC operation

b) ON-delay timers of PLC.