

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2019.

Third Semester

Electronics — Main

Skill Based Subject — CONSUMER ELECTRONIC
APPLIANCES

(For those who joined in July 2017 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. Which of the following is not a common microwave application?
 - (a) Radar
 - (b) Mobile radio
 - (c) Telephone
 - (d) Satellite communications

7. What is UPC _____
 - (a) Universal Password Code
 - (b) Universal Protection Code
 - (c) Universal Product Code
 - (d) Universal Personal Code
8. EFT _____
 - (a) Electronic Fund Transfer
 - (b) Electronic File Transfer
 - (c) Electronic Fast Transfer
 - (d) Electronic Family Tag
9. _____ is developing standards for set-top boxes with their Open Cable initiative.
 - (a) Cable Lights (b) Cable Less
 - (c) Cable Lens (d) Cable Labs
10. TV shows can be recorded with
 - (a) PVR
 - (b) PAR
 - (c) VAP
 - (d) None of the above

2. The wavelength of microwave at 100 GHz will be
 - (a) 3 cm (b) 0.03 cm
 - (c) 0.3 cm (d) 10.3 cm
3. At the end of the _____ the machine switches off.
 - (a) Drying (b) Warming
 - (c) Washing cycle (d) None of the above
4. Air motion refers to
 - (a) air velocity (b) Air quality
 - (c) air direction (d) None of the above
5. A _____ air conditioning system uses equipment centrally located in mechanical equipment rooms.
 - (a) Central or online
 - (b) Central or tower
 - (c) Central or built-up
 - (d) Central of external
6. Interlock switches are linked with the
 - (a) Oven interior (b) Oven door
 - (c) Oven backside (d) Oven top

- PART B — (5 × 5 = 25 marks)
- Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.
11. (a) Brief about microwave and its characteristics.

Or

 (b) With a neat diagram discuss the anode cylinder block of a multi-cavity magnetron.
 12. (a) Mention the Inputs and outputs in an electronic washing machine with diagrams.

Or

 (b) List the mechanical electrical and electronic components in washing machine.
 13. (a) Give the features of remote control buttons in air conditioners.

Or

 (b) Mention important features of Domestic refrigerators.
 14. (a) What is Facsimile machine? Give the special features of the facsimile machine.

Or

 (b) Draw the block diagram of digital clock.

15. (a) What are Interoperable set-top boxes?

Or

(b) List the advantages of Digital cable TV.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Draw a neat Functional block diagram of a microwave oven and explain.

Or

(b) Explain the interfacing of LCD timer with alarm with necessary diagrams.

17. (a) Discuss the hardware and software developments in washing machines.

Or

(b) Draw a neat diagram of Fuzzy logic washing machines and explain its functions.

18. (a) Explain in detail the basic components of air conditioners.

Or

(b) Discuss the basics of refrigeration and its four different processes with diagrams.

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19. (a) Detail the basic steps of Xerographic copier with neat diagrams.

Or

(b) Describe the Structure of a calculator and Internal Organization of a calculator.

20. (a) With a neat Block diagram of a bar-code scanner and decoder detail their functionalities.

Or

(b) Explain the Automated Teller Machines, basic requirements and its assembling.

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M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2019.

Third Semester

Electronics

DIGITAL DESIGN USING VHDL

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

- An Assert is _____ command.
 - Sequential
 - Concurrent
 - Both (a) and (b)
 - None of the above

- In VHDL, which class of scalar data type represents the values necessary for a specific operation?
 - Integer types
 - Real types
 - Physical types
 - Enumerated types
- Which data type in VHDL is non synthesizable and allows the designer to model the objects of dynamic nature?
 - Scalar
 - Access
 - Composite
 - File
- In VHDL, which object/s is/are used to connect entities together for the model formation?
 - Constant
 - Variable
 - Signal
 - All of the above
- In Net-list language, the net-list is generated _____ synthesizing VHDL code.
 - Before
 - At the time of (during)
 - After
 - None of the above

- The 'next' statement skip the remaining statement in the _____ iteration of loop and execution starts from first statement of next iteration of loop.
 - Previous
 - Next
 - Current (present)
 - None of the above
- Which among the following wait statement execution causes the enclosing process to suspend and then wait for an event to occur on the signals?
 - Wait until Clk = '1'
 - Wait on x, y, z
 - Wait on clock until answer > 80
 - Wait for 12 ns
- In composite data type of VHDL, the record type comprises the elements of _____ data types.
 - Same
 - Different
 - Both (a) and (b)
 - None of the above
- Which among the following is pre-defined in the standard package as one-dimensional array type comprising each element of BIT type?
 - Bit type
 - Bit_vector type
 - Boolean type
 - All of the above

- Among the VHDL features, which language statements are executed at the same time in parallel flow?
 - Concurrent
 - Sequential
 - Net-list
 - Test-bench

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

- (a) Differentiate HDL and other software languages.
Or
(b) Explain about data objects.
- (a) Explain entity declaration.
Or
(b) Explain the signal drivers.
- (a) Explain delta delays.
Or
(b) Explain selected signal assignment statements.

14. (a) Write in detail about operator overloading.

Or

(b) Write in detail about explicit visibility.

15. (a) Write a test bench for half adder.

Or

(b) Explain modeling delay.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Give an overview of digital system design using HDL basic VHDL language elements.

Or

(b) Explain scalars and composite data types.

17. (a) Explain behavioral modeling with examples.

Or

(b) Explain inertial and transport delay models.

18. (a) Write about the structural modeling with examples.

Or

(b) Explain the concurrent assertion statement.

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19. (a) Explain the subprograms and overloading.

Or

(b) Explain packages and libraries.

20. (a) Explain about modeling conditional operations.

Or

(b) Explain the different styles of modeling.

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JAIE 21/SACE 21/SAIE 21

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2019.

Second Semester

Electronics/Electronics and Communication – Allied
PROGRAMMING IN C

(For those who joined in July 2016 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

- An octal integer constant consists of any combination of digits from the set '0' through '7' with heading _____.
(a) x (b) 0
(c) 8 (d) none

- The Range of values for char data type is _____.
(a) -32,768 to 32767 (b) -128 to 127
(c) 1.7e to 1.7e + 38 (d) none
- For the Electricity bill calculation program which statement is used.
(a) For loop (b) Simple IF
(c) Nested IF (d) Switch
- Which is the entry-controlled loop statement?
(a) For loop (b) while
(c) If (d) If-else
- Any subscript can begin with _____.
(a) sub (b) 1
(c) 0 (d) all
- 'Time table' – is an example for which type array?
(a) Not an array (b) one-dimension
(c) two dimensional (d) none
- Identify the wrong statement
(a) main () (b) main []
(c) int a ; (d) float b ;

- The Automatic variables are declared as _____ a function in which they are utilized.
(a) inside (b) outside
(c) any place (d) not applicable
- To define a structure, which keyword is used?
(a) structure (b) typedef
(c) type (d) def
- To move the file position to a desired location within the file _____ function is used.
(a) ftell (b) rewind
(c) fseek (d) fpos

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

- (a) Describe the relational operators and its complements.

Or

- (b) Describe the special operators with example.

- (a) Write a program to print the largest of three numbers using nested if-else statements.
Or
(b) Describe about Else-if ladder with flow chart.
- (a) Describe about the compile time initialization.
Or
(b) Explain about reading strings from the terminal.
- (a) Explain the "Arguments with return values" function.
Or
(b) Write a function power that computes 'x' raised to the power 'y' for integers x and y and return double type value.
- (a) Explain the Array of pointers.
Or
(b) Explain about the 'getw' and 'putw' functions.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) How will you declare variables? Explain with rules and examples with valid names.

Or

- (b) Explain about conditional operator and bit-wise operator.

17. (a) Describe about GoTo statement.

Or

- (b) Write a program to print all the prime numbers between 1 and n. Where 'n' is the value supplied by the user.

18. (a) Write a program to store the string "united kingdom" in the array country and display the string under various format specifications.

Or

- (b) Explain about the passing strings to functions.

19. (a) Explain about the Accessing structure members.

Or

- (b) Explain the concept-UNIONS.

20. (a) Write a program to illustrate the use of indirection operator '*' to access the value pointed to by a pointer.

Or

- (b) Explain about fprintf and fscanf functions.

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Reg. No. :

Code No. : 40599 E Sub. Code : SNCS 3 B/
SNSE 3 B

U.G. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2019.

Third Semester

Computer Science/Software Engineering

Non-Major Elective — BASIC PROGRAMMING
DESIGN

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Algorithms can be represented
(a) As pseudo codes (b) As flowcharts
(c) As programs (d) All the above
2. The terminal symbol in a flowchart represents
(a) Start and end (b) Manual operation
(c) Processing (d) Decision

8. Which of the following is system software?
(a) MS-word (b) Tally
(c) MS-powerpoint (d) Operating system

9. Modem is short for
(a) Modulation demolition
(b) Modulator demodulator
(c) (a) and (b)
(d) None of the above

10. A web site's front page/main page is called
(a) Browser page (b) Search page
(c) Home page (d) Bookmark

PART B — (5 × 5 = 25 marks)

Answer ALL the questions, choosing either (a) or (b).

Answer should not exceed 250 words.

11. (a) What is computer program? Explain how to design a program.

Or

- (b) What is flow diagram? Write the various symbols used in a flowchart.

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3. White box testing is also known as
(a) Glass box testing
(b) Functional testing
(c) Clear box testing
(d) Both (a) and (c)
4. Logical error occurs due to
(a) Incorrect syntax
(b) Incorrect logic
(c) Wrong inputs
(d) None of these
5. Types of computer language translator are
(a) Compilers (b) Interpreters
(c) Assemblers (d) All of these
6. _____ converts an assembly language program into machine language
(a) Assembler (b) Interpreter
(c) Compiler (d) All of the above
7. Program which is used to control system performance is classified as
(a) experimental program
(b) system program
(c) specialized program
(d) organized program

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12. (a) What is program documentation? Explain types of documentation.

Or

- (b) What is structured programming?

13. (a) Write notes on machine level language.

Or

- (b) Explain the features of good programming language.

14. (a) Explain the relationship between software and hardware.

Or

- (b) Write notes on

- (i) Commercial software
- (ii) Public domain software.

15. (a) Write short notes on

- (i) Browser
- (ii) Web server.

Or

- (b) What is search engine? Explain.

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[P.T.O.]

PART C — (5 × 8 = 40 marks)

Answer ALL the questions, choosing either (a) or (b).

Answer should not exceed 600 words.

16. (a) Define computer algorithm. What are the features of an algorithm?

Or

- (b) Explain decision table with example.

17. (a) What is testing? Explain testing approaches.

Or

- (b) Explain the characteristics of a good programming.

18. (a) Explain the classification of programming language.

Or

- (b) Explain how a high-level language is translated into machine language.

19. (a) Define software. Explain the categories of software.

Or

- (b) What is application software? Explain with example.

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20. (a) Explain E-mail briefly.

Or

- (b) Explain

(i) Modem

(ii) Viruses.

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Reg. No. :

Code No. : 7713

Sub. Code : KELM 22/
PELM 22

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2019.

Second Semester

Electronics

EMBEDDED SYSTEMS

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer:

1. Embedded systems applications typically involve processing information as

- (a) Block level (b) Logical volumes
(c) Distance (d) Signals

2. Instructions might be used for graphical operations on pixels, these operations are commonly called.

- (a) Single-instruction multiple-data
(b) Vector instructions
(c) Pixel instruction
(d) Both (a) and (b)

3. MXP processor consists of a

- (a) 3 components (b) 4 components
(c) 5 components (d) 6 components

4. A code of rate m/n has m information bits for $(m + n)$ check bits, such codes are known as

- (a) Trellis codes (b) Unillis codes
(c) Dillis codes (d) None of above

5. Most popular example of wireless network, relies on radio with base stations, is

- (a) Trellis codes
(b) Cell telephony
(c) Cellular telecommunication
(d) Cellular telephony

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6. Noise is typically proportional to radio frequency bandwidth, and a key measure is the

- (a) Noise-to-noise ratio
(b) Signal-to-signal ratio
(c) Signal-to-noise ratio
(d) Noice-to-signal ratio

7. To achieve a two-way conversation over radio, frequency bands are set aside for each direction, forming a frequency pair or

- (a) Channel
(b) Wired networks
(c) Signal-to-noise ratio
(d) All above

8. Deadline-driven constraints so called

- (a) Reality-time constraints
(b) Real-time constraints
(c) Real-data constraints
(d) None of above

9. Processor must accept and process frame before next frame arrives, typically called

- (a) Hard real-time systems
(b) Real-time constraints
(c) Real-data constraints
(d) Soft real-time systems

10. Two partitions must be insulated to prevent operations on one half from affecting other, such floating-point operations are called.

- (a) Single-instruction operation
(b) Vector operation
(c) Paired single operations
(d) Fetch operation

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 250 words

11. (a) List the categories of embedded system.

Or

(b) Explain handheld computers.

12. (a) Explain communication interface sandards.

Or

(b) Explain about types of embedded OS.

13. (a) Explain PC to PC communication.

Or

(b) Explain about protocol converter.

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[P.T.O.]

14. (a) Write in detail about sending a message over a serial link.

Or

(b) Write in detail about embedded database application of energy meter reading.

15. (a) Write in detail about networked java.

Or

(b) Explain appliance control using Jini.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)

Each answer should not exceed 600 words

16. (a) Explain requirements of embedded systems.

Or

(b) Explain the applications of embedded system in consumer electronics.

17. (a) Explain embedded system development process.

Or

(b) Draw and Explain microcontroller architecture.

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18. (a) Write about the PC to PC communication.

Or

(b) Explain embedded applications over mobile network example MP3 sound player.

19. (a) Explain the simulink of a process control.

Or

(b) Explain controlling an appliance from the RT linux.

20. (a) Explain about mobile java applications.

Or

(b) Explain smart card and cashless society.

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(6 pages)

Reg. No. :

Code No. : 7953

Sub. Code : PELM 14

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2019.

First Semester

Electronics - Core

NETWORK THEORY

(For those who joined in July 2017 onwards)

Time : Three hours


Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

- Identify the passive element.
 - Voltage source
 - Current Source
 - Inductor
 - Transistor
- If a resistor has 5.5V across it and 3 mA flowing through it, what is the power?
 - 16.5mW
 - 15mW
 - 1.83mW
 - 16.5W

- Laplace transform analysis gives 
 - time domain response only
 - frequency domain response only
 - both (a) and (b)
 - none
- The Laplace transform of a unit step function is _____
 - 1
 - 1/s
 - 1/s²
 - none
- If $Z_{11}=2$ ohm; $Z_{12}=1$ ohm; $Z_{21}=1$ ohm and $Z_{22}=3$ ohm, what is the determinant of admittance matrix
 - 5
 - 1/5
 - 1
 - 0
- For a 2-port bilateral network, the three transmission parameters are given by $A=6/5$; $B=17/5$ and $C=1/5$, What is the value of D?
 - 1
 - 1/5
 - 7/5
 - 0

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- The number of branches in a tree is _____ the number of branches in a graph.
 - less than
 - more than
 - equal to
 - None
- Mesh analysis is based on _____
 - Kirchoff's current law
 - Kirchoff's voltage law
 - both
 - none
- Superposition theorem is not applicable to networks containing _____
 - non-linear elements
 - dependent voltage sources
 - dependent current sources
 - transformers
- When the superposition theorem is applied to any circuit, the dependent voltage source in that circuit is always _____
 - opened
 - shorted
 - active
 - None

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

- Explain the various dot conventions followed in coupled circuits.

Or

 - Write a short note on Mesh analysis of circuits.
- Explain the following
 - Trees
 - Co-trees.

Or

 - Write a short notes on Superposition Theorem.
- Write a short note on Periodic Signals and aperiodic signals.

Or

 - Write short notes on Initial value and Final value theorems of Laplace transform.

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[P.T.O.]

14. (a) Write a short note on Open circuit Impedance parameters.

Or

(b) Explain in detail about Transmission parameters of 2-port networks.

15. (a) Write a short note on Synthesis of RL driving point functions.

Or

(b) Explain in detail about concept of Realizability.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the Mesh voltage analysis with suitable example.

Or

(b) Describe the Nodal analysis of circuits with suitable example.

17. (a) Explain about Incident matrix.

Or

(b) Briefly explain about constructing graph of a Network.

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18. (a) Find the Laplace transform of Unit Step signal and Unit ramp signal.

Or

(b) Describe any two properties of Laplace Transform.

19. (a) Write a note on characteristics of Ideal filters.

Or

(b) With suitable diagram explain about Composite filters.

20. (a) With suitable examples explain about Foster form.

Or

(b) Describe about the properties of positive real function.

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M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2019.

First Semester

Electronics/Electronics and Communication

SOLID STATE ELECTRONIC DEVICES

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. A semiconductor has _____ temperature coefficient of resistance
 - (a) positive
 - (b) negative
 - (c) zero
 - (d) none of the above

2. A semiconductor has generally _____ valence electrons
 - (a) 1
 - (b) 2
 - (c) 3
 - (d) 4
3. The silicon has $z = 14$. The outermost orbit is _____
 - (a) partially filled
 - (b) half filled
 - (c) completely occupied
 - (d) empty
4. A reverse bias P-N junction has _____
 - (a) very narrow depletion layer
 - (b) almost no current
 - (c) very low resistance
 - (d) large current flow
5. The operation of De MOSFET under the application of positive gate is known as _____
 - (a) depletion mode
 - (b) enhancement mode
 - (c) both (a) and (b)
 - (d) none of the above

6. A MOSFET can be easily destroyed by any _____ voltage on its gate
 - (a) zero
 - (b) stray
 - (c) both (a) and (b)
 - (d) none of the above
7. In comparison to LED, LASER has _____
 - (i) high efficient frequency
 - (ii) no turning arrangement
 - (iii) narrow spectral bandwidth
 - (iv) provision for confinement
 - (a) (i), (iii), (iv) are correct
 - (b) (i), (ii), (iii) are correct
 - (c) (i) and (iii) are correct
 - (d) (ii), (iii) and (iv) are correct
8. The switching time of LED is in the order of
 - (a) 1S
 - (b) $1 \mu S$
 - (c) 1ms
 - (d) 1ns
9. Tunnel diode is _____
 - (a) Linear resistor
 - (b) Current dependent Resistor
 - (c) Voltage dependent resistor
 - (d) Non linear resistor

10. Which diode is otherwise known as Esaki diodes?
 - (a) PIN diode
 - (b) Gunn diode
 - (c) Tunnel diode
 - (d) None of the above

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain Bohrs model.
Or
(b) Discuss on Atoms and Electrons.
12. (a) Write notes on semiconductor.
Or
(b) Explain drift and Resistance.
13. (a) Write short notes on Threshold voltage.
Or
(b) Explain gate induced drain leakage.
14. (a) Write the expression for noise and band width of photo detectors.
Or
(b) Write about LED.

15. (a) Explain the tunnel diode.

Or

(b) Explain Gunn diode.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) With neat sketch explain float zone growth of single crystal ingots.

Or

(b) Explain probability and uncertainty principle.

17. (a) Explain Hall effect and invariance of fermilevel equilibrium.

Or

(b) Explain energy bands in solids.

18. (a) Write an essay about MOSFET with diagram.

Or

(b) Explain the MOSFET characteristics.

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19. (a) Explain:

(i) Laser

(ii) Semiconductor laser.

Or

(b) Discuss on:

(i) Solar cells

(ii) Photo detectors.

20. (a) Illustrate the working of Gunn diode with neat diagram.

Or

(b) Explain IMPATT diode with neat diagram.

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Code No. : 7707

U.G. (CBCS) DEGREE EXAMINATION, APRIL 2019.
Fourth Semester

Part IV – COMPUTER FOR DIGITAL ERA

(For those who joined in July 2017 onwards)

Time : One and half hours Maximum : 50 marks
Choose the correct answer :

1. _____ is the most commonly used output device.
(a) Printer (b) Scanner
(c) Monitor (d) Bar code reader
2. ASCII stands for
(a) American Stable Code for International Interchange
(b) American Standard Case for Institutional Interchange
(c) American Standard Code for Information Interchange
(d) American Standard Code for Interchange Information
3. What is the basic element of the image in your Computer Monitor?
(a) Colour (b) Resolution
(c) Pixel (d) Clarity
4. Which is the brain of the computer?
(a) Output device (b) Storage unit
(c) CPU (d) Other devices

5. _____ makes the mouse as a popular input device in the windows.
(a) API (b) Games
(c) GUI (d) Web camera
6. What is abbreviation of ROM?
(a) Real Object Memory
(b) Read Object Memory
(c) Read Only Memory
(d) None of these
7. Which one is used by the digital computer?
(a) 1 to 9
(b) Signals
(c) Microwaves Computer
(d) Binary Number
8. What type of computer is cheapest one?
(a) Mini Computer (b) All of these
(c) Micro Computer (d) Laptop Computer
9. Which one is used in small offices and business shops?
(a) Mainframe Computer
(b) Desktop Computer
(c) Mini Computer
(d) None of these
10. RAM stands for
(a) Real Advance Memory
(b) Random Access Memory
(c) Read Advance Memory
(d) None of these
11. A computer is a _____
(a) Electronic data processing device
(b) Simple device
(c) Magical device
(d) None of the above

12. Choose a programming language from the following
(a) C (b) BC
(c) Unix (d) MS Word
13. Which of the following devices are used as input device?
(a) Keyboard (b) Monitor
(c) Speaker (d) Printer
14. An example for open source Image Editor is
(a) GIMP (b) Adobe Photoshop
(c) Both (a) and (b) (d) None of the above
15. OS manages _____
(a) Computer hardware resources
(b) Peripherals
(c) Storage space
(d) All of the above
16. _____ Operating system is used in the mobile devices.
(a) Android (b) C
(c) Java (d) Firefox
17. BIOS means _____
(a) Basic Input Output System
(b) Basic Internet Output Software
(c) Basic Input Output Software
(d) Booting Input Output System
18. Which of the following Operating System does not implement multitasking truly?
(a) Windows 98 (b) Windows NT
(c) Windows XP (d) MS DOS

19. Which of the following is the mobile operating system?
(a) Linux (b) Unix
(c) Android (d) Windows
20. Cortana is able to recognize
(a) Natural spoken language
(b) High Level Language
(c) Low Level Language
(d) None of the above
21. MS-DOS operating system is a
(a) command line interface
(b) single user interface
(c) single tasking interface
(d) all of these
22. OSS stands for
(a) Open System Service
(b) Open Source Software
(c) Open System Software
(d) Open Synchronized Software
23. Which of the following is not essential to shut down your computer?
(a) Save all opened file
(b) Close all running applications
(c) Switch off monitor
(d) Cut off the power supply
24. What is operating system?
(a) collection of programs that manages hardware resources
(b) system service provider to the application programs
(c) link to interface the hardware and application programs
(d) all of the mentioned

25. Text-styling feature of MS word is
 (a) Word Color (b) Word Font
 (c) Word Art (d) Word Fill
26. To create a new table, in which method you don't need to specify the field type and size?
 (a) Create table in Design View
 (b) Create Table using wizard
 (c) Create Table by Entering data
 (d) All of above
27. MS Excel Based on _____ Software
 (a) WINDOWS (b) DOS
 (c) UNIX (d) LINUX
28. MS-Office is
 (a) Application Software
 (b) System Software
 (c) Operating System
 (d) All of Above
29. An extension of the file created in MS-Word 2003.
 (a) .doc (b) .docx
 (c) .ppt (d) .exe
30. The name of the font used by default in MS-Word
 (a) Times New Roman (b) Algerian
 (c) Arial (d) None of these
31. Copied Data in MS-Word is shown in _____
 (a) Task bar (b) Task pane
 (c) Clip art (d) None of these
32. Computer Network is
 (a) Collection of hardware components and computers
 (b) Interconnected by communication channels
 (c) Sharing of resources and information
 (d) All of the Above

Page 5 Code No. : 22740 E

33. The first Network
 (a) CNNET (b) NSFNET
 (c) ASAPNET (d) ARPANET
34. In which topology there is a central controller or hub?
 (a) Star (b) Mesh
 (c) Ring (d) Bus
35. Data communication system within a building or campus is _____
 (a) LAN
 (b) WAN
 (c) MAN
 (d) None of the mentioned
36. Expand WAN
 (a) World Area Network
 (b) Wide Area Network
 (c) Web Area Network
 (d) None of the mentioned
37. The Internet was originally a project of which agency?
 (a) ARPA (b) NSF
 (c) NSA (d) None of these
38. Verification of a login name and password is known as
 (a) Configuration (b) Accessibility
 (c) Authentication (d) Logging in
39. DISNIC stands for the
 (a) Digital India System by National Information Center
 (b) District Information System programme of the National Informatics Centre
 (c) Disseminating information of National important Councils
 (d) None of the above

Page 6 Code No. : 22740 E

40. The term NIC stands for
 (a) National Informatics Center
 (b) National Internet Center
 (c) Nation India Country
 (d) National Institute of Commerce
41. UID-Unique Identity Number is
 (a) Aadhaar Number (b) Staff ID number
 (c) PAN Card Number (d) None of the above
42. SDC stands for the
 (a) State Data Center
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43. Agriculture MMP will provide sophisticated interface to the farmers for making informed decisions by connecting the
 (a) Krishi Vigyan Kendras and farmers
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44. Data analytics has application in
 (a) Testing data
 (b) Analysis of Variance
 (c) Probabilistic methods
 (d) All the above
45. NPTEL stands for _____
 (a) National Programme for Television Enabled Learning
 (b) National Programme for Time Enabled Learning
 (c) National Programme for Technology Enabled Learning
 (d) National Programme for Training Enabled Learning

Page 7 Code No. : 22740 E

46. Ethical hacking means
 (a) The process that finds the weakness in computer or network
 (b) The process that finds the weakness in computer
 (c) The process that finds the weakness
 (d) The process that finds the weakness in computer
47. Social networks are the systems that use the computer networks and _____
 (a) WWW (b) Face book
 (c) Whats up (d) Data
48. Wifi is a short name for _____
 (a) Wired fidelity (b) Wireless fidelity
 (c) Wireless frequency (d) None of the above
49. Computer virus program is usually hidden in a
 (a) Operating system
 (b) Application program
 (c) Disk driver
 (d) Both (a) and (b)
50. edX is an online platform _____ destination
 (a) Self learning (b) Writing
 (c) Emailing (d) None of these

Page 8 Code No. : 22740 E

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) With neat block diagram, explain about CD recording system.
Or
(b) Explain in detail about play back process with diagram.
17. (a) With neat block diagram, explain the operation of public addressing system.
Or
(b) Explain in detail about Hi-Fi Stereo reproduction system.
18. (a) With neat diagrams, explain about superhetrodyne receiver.
Or
(b) How to find the Faults in Colour TV? How to rectify them?
19. (a) With neat diagram explain about MAC Receiver system.
Or
(b) Explain in detail about High definition TV.
20. (a) Explain in detail about Digital TV System.
Or
(b) Explain about working of DISH TV.

Reg. No. :

Code No. : 41250 E Sub. Code : JSEL 4 A/
JSES 4 A/SSEL 4 A

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Fourth Semester

Electronics/Electronics And Communication

Skill Based Subject—MAINTENANCE AND TROUBLE SHOOTING OF AUDIO AND VIDEO EQUIPMENTS

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1. The Play back needle is made up of _____
(a) Silver (b) Osmium
(c) Copper (d) Gold
2. CD recording reproduction principle is called _____
(a) Cartridge (b) Recorder
(c) Writer (d) Playback
3. The Public addressing system is also called as _____
(a) Analyzer
(b) Electroacoustic
(c) Detector
(d) Electrical Connector

4. Digital recording and reproduction converts the analog sound signal picked up by the _____
 (a) Joystick (b) Printer
 (c) Keyboard (d) Microphone
5. _____ triads are deposited in delta gun picture tube.
 (a) 3,33,100 (b) 3,33,000
 (c) 3,33,200 (d) 3,33,300
6. Number of delay used in PAL-D Receiver is _____
 (a) 124 (b) 32
 (c) 12 (d) 64
7. The Video recording is based on the principle of _____
 (a) Electric field (b) Electromagnetism
 (c) Coil process (d) Data analyzer
8. In the MAC receiver, the information is received by _____ detector.
 (a) FM (b) AM
 (c) Sound (d) Data
9. In plasma tv display they use small cells containing _____ charged ionized gases.
 (a) Magnetically (b) Electrically
 (c) Both (a) and (b) (d) None
10. LCD Stands for _____
 (a) Liquid Crystal Display
 (b) Light Crystal Display
 (c) Laser Crystal Display
 (d) Liquid Crystal Data.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
 Each answer should not exceed 250 words.

11. (a) With neat diagram, explain the principle of playing the CD.
 Or
 (b) Explain the principles of Disc Recording.
12. (a) What is mean by Stereophony, How it works?
 Or
 (b) List out the requirements of Public Addressing System and explain it.
13. (a) Explain about working principle of monochrome TV?
 Or
 (b) Draw the block diagram of TV transmitter and explain it.
14. (a) Explain the working principle of Video recording on disk.
 Or
 (b) List out the advantages of MAC Encoder.
15. (a) Write a brief note on LCD TV.
 Or
 (b) Explain about Closed Circuit System.

B.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2019.

Fourth Semester

Computer Science

Non Major Elective — HTML

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. To create HTML page, you need
 - (a) Web browser
 - (b) Text editor
 - (c) Both (a) and (b)
 - (d) None

5. Unordered list comprises of _____
 - (a) Numbers
 - (b) Alphabets
 - (c) Bullets
 - (d) None of these
6. The column tags are specified between the _____ tags
 - (a) `<tr>` and `</tr>`
 - (b) `<th>` and `</th>`
 - (c) `<td>` and `</td>`
 - (d) None of these
7. Frames divide the single _____ into different rectangular areas
 - (a) Web page
 - (b) Table
 - (c) Window
 - (d) `<body>`
8. Which attribute is not used on new forms?
 - (a) Size
 - (b) Text
 - (c) Name
 - (d) Max length
9. DHTML stands for _____
 - (a) Document HTML
 - (b) Dynamic HTML
 - (c) Digital HTML
 - (d) Data HTML

2. `<a>` and `` are the tags used for
 - (a) Adding image
 - (b) Aligning text
 - (c) Audio-voiced text
 - (d) Adding links to your page
3. Which of the following tag is used to mark a beginning of paragraph?
 - (a) `<TD>`
 - (b) `
`
 - (c) `<P>`
 - (d) `<TR>`
4. The syntax for aligning is _____
 - (a) `<h1 align = "center">`
 - (b) `<h1 align>`
 - (c) `<h1center>`
 - (d) `<h1align"center">`

10. _____ HTML tag is used to define an internal style sheet in web page
 - (a) `<CSS>`
 - (b) `<Script>`
 - (c) `<Style>`
 - (d) none

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Answer should not exceed 250 words.

11. (a) Explain about HTML generations.
Or
(b) Write a short note on anchor tag.
12. (a) Discuss, how to design a colorful web page.
Or
(b) Write a short note on heading tags.
13. (a) Explain with an example the difference between ordered and unordered list.
Or
(b) Explain how to create a table and which tags are necessary to create a table?

14. (a) Write and explain the syntax to create three rows and two columns in the first and third row. Distribute the rows and columns even frames.

Or

- (b) Explain Drop down list with example.

15. (a) Explain the advantages of DHTML.

Or

- (b) Explain about inline styles.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Answer should not exceed 600 words.

16. (a) Explain about HTML history and HTML documents.

Or

- (b) Write the syntax for hyper links and explain with examples.

17. (a) Explain horizontal rule, paragraph and tab setting with examples.

Or

- (b) Explain the features of including images and pictures in web pages. Give example.

Page 5 Code No. : 41401 E

18. (a) Design a web page that has ordered, unsorted and nested lists.

Or

- (b) Design a page for your subject time table.

19. (a) Design a web page to illustrate frames.

Or

- (b) Explain the features in forms.

20. (a) How to link a style sheet to an HTML document? Explain with example.

Or

- (b) Explain internal, external and multiple sheets with example.

Page 6 Code No. : 41401 E

(6 pages)

Reg. No. :

Code No. : 41401 E Sub. Code : SNCS4 A

B.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2019.

Fourth Semester

Computer Science

Non Major Elective — HTML

(For those who joined in July 2017 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. To create HTML page, you need

- (a) Web browser
- (b) Text editor
- (c) Both (a) and (b)
- (d) None

2. $\langle a \rangle$ and $\langle /a \rangle$ are the tags used for

- (a) Adding image
- (b) Aligning text
- (c) Audio-voiced text
- (d) Adding links to your page

3. Which of the following tag is used to mark a beginning of paragraph?

- (a) $\langle TD \rangle$ (b) $\langle br \rangle$
- (c) $\langle P \rangle$ (d) $\langle T R \rangle$

4. The syntax for aligning is _____

- (a) $\langle h1 align = "center" \rangle$
- (b) $\langle h1 align \rangle$
- (c) $\langle h1center \rangle$
- (d) $\langle h1align"center" \rangle$

Page 2 Code No. : 41401 E

5. Unordered list comprises of _____

- (a) Numbers (b) Alphabets
- (c) Bullets (d) None of these

6. The column tags are specified between the _____ tags

- (a) $\langle tr \rangle$ and $\langle /tr \rangle$ (b) $\langle th \rangle$ and $\langle /th \rangle$
- (c) $\langle td \rangle$ and $\langle /td \rangle$ (d) None of these

7. Frames divide the single _____ into different rectangular areas

- (a) Web page (b) Table
- (c) Window (d) $\langle body \rangle$

8. Which attribute is not used on new forms?

- (a) Size (b) Text
- (c) Name (d) Max length

9. DHTML stands for _____

- (a) Document HTML (b) Dynamic HTML
- (c) Digital HTML (d) Data HTML

10. _____ HTML tag is used to define an internal style sheet in web page

- (a) $\langle CSS \rangle$ (b) $\langle Script \rangle$
- (c) $\langle Style \rangle$ (d) none

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Answer should not exceed 250 words.

11. (a) Explain about HTML generations.

Or

(b) Write a short note on anchor tag.

12. (a) Discuss, how to design a colorful web page.

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Page 3 Code No. : 41401 E

Page 4 Code No. : 41401 E

[P.T.O.]

14. (a) Write and explain the syntax to create three rows and two columns in the first and third row. Distribute the rows and columns even frames.

Or

- (b) Explain Drop down list with example.

15. (a) Explain the advantages of DHTML.

Or

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PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Answer should not exceed 600 words.

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Page 5 Code No. : 41401 E

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Page 6 Code No. : 41401 E

C.C. (W.S.) EXAMINATION, APRIL 2019

Fourth Semester

Part IV - COMPUTER FOR DIGITAL ERA

(For those who passed in July 2017 onwards)

Time : One and half hours Maximum : 50 marks

Choose the correct answer :

7. _____ is the most commonly used output device.
 - (a) Printer
 - (b) Scanner
 - (c) Monitor
 - (d) Bar code reader
8. ASCII stands for
 - (a) American Noble Code for International Interchange
 - (b) American Standard Code for Institutional Interchange
 - (c) American Standard Code for Information Interchange
 - (d) American Standard Code for Interchange Information
9. What is the basic element of the image in your Computer Monitor?
 - (a) Colour
 - (b) Resolution
 - (c) Pixel
 - (d) Clarity
10. Which is the brain of the computer?
 - (a) Output device
 - (b) Storage unit
 - (c) CPU
 - (d) Other devices

_____ makes the mouse as a popular input device in the windows.

- (a) API
 - (b) Camera
 - (c) GUI
 - (d) Webcam
11. What is abbreviation of ROM?
 - (a) Read Object Memory
 - (b) Read Object Memory
 - (c) Read Only Memory
 - (d) None of these
 12. Which one is used by the digital computer?
 - (a) 1 to 0
 - (b) Signals
 - (c) Microwave Computer
 - (d) Binary Number
 13. What type of computer is cheapest one?
 - (a) Mini Computer
 - (b) All of these
 - (c) Micro Computer
 - (d) Laptop Computer
 14. Which one is used in small offices and business shops?
 - (a) Mainframe Computer
 - (b) Desktop Computer
 - (c) Mini Computer
 - (d) None of these
 15. RAM stands for
 - (a) Real Advance Memory
 - (b) Random Access Memory
 - (c) Read Advance Memory
 - (d) None of these
 16. A computer is a _____.
 - (a) Electronic data processing device
 - (b) Simple device
 - (c) Magical device
 - (d) None of the above

17. Choose a programming language from the following
 - (a) C
 - (b) BC
 - (c) Unix
 - (d) MS Word
18. Which of the following devices are used as input device?
 - (a) Keyboard
 - (b) Monitor
 - (c) Speaker
 - (d) Printer
19. An example for open source Image Editor is
 - (a) GIMP
 - (b) Adobe Photoshop
 - (c) Both (a) and (b)
 - (d) None of the above
20. OS manages _____.
 - (a) Computer hardware resources
 - (b) Peripherals
 - (c) Storage space
 - (d) All of the above
21. _____ Operating system is used in the mobile devices.
 - (a) Android
 - (b) C
 - (c) Java
 - (d) Firefox
22. BIOS means _____.
 - (a) Basic Input Output System
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23. Which of the following Operating System does not implement multitasking truly?
 - (a) Windows 95
 - (b) Windows NT
 - (c) Windows XP
 - (d) MS DOS

24. Which of the following is the mobile operating system?
 - (a) Linux
 - (b) Unix
 - (c) Android
 - (d) Windows
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 (a) Operating system
 (b) Application program
 (c) Disk driver
 (d) Both (a) and (b)
50. edX is an online platform _____ destination
 (a) Self learning (b) Writing
 (c) Emailing (d) None of these

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain about Transmission media and its types.
Or
(b) Write a note on Digital Subscribe line.
17. (a) What are the various layers of OSI Architecture. Explain the functions of Transport layer and session layer.
Or
(b) Write a note on Data link protocols:
18. (a) Explain the Architecture of ATM with neat diagram.
Or
(b) Explain Frame Relay layers in detail.
19. (a) Write a note on FDDI.
Or
(b) Explain Random Access Protocols in detail
20. (a) Explain presentation layer.
Or
(b) Explain Application layer

Reg. No. : 2017315150933

Code No. : 41412 E Sub. Code : SMEL 42

B.Sc.(CBCS) DEGREE EXAMINATION,
APRIL 2019.

Fourth Semester

Electronics – Main

COMPUTER NETWORKS

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

- Which * error detection method uses one's complement arithmetic?
(a) LRC (b) VRC
(c) CRC (d) Checksum
- _____Cable consists of an inner copper core and a second conducting outer sheath.
(a) Twisted pair (b) Co-axial
(c) fibroptic (d) shielded twisted pair
- The _____layer decides the location of synchronization points.
(a) Transport (b) session
(c) Presentation (d) Application

4. Which are the following are bridges types?
- (a) Simplex, complex, Transparent
 - (b) Simplex, Transparent, multiport
 - (c) Simplex, complex, multiport
 - (d) Spanning, contract, suspension.
5. ATM is an acronym of _____
- (a) Automated Teller Machine
 - (b) Automatic Transmission Model.
 - (c) Asynchronous Tele Communication
 - (d) Asynchronous Transfer Mode.
6. The _____ class is a best-effort delivery services that does not guarantee anything.
- (a) CBR (b) VBR
 - (c) ABR (d) UBR
7. FDDI is an acronym for _____
- (a) Fast data delivery interface
 - (b) - fiber distributed data interface
 - (c) fiber distributed digital interface
 - (d) fast distributed data interface.
8. Mail services and directory services are available to network users through the _____ layer.
- (a) Datalink (b) Session
 - (c) Transport (d) Application

9. The _____ layer is responsible for dialog establishment maintenance, synchronization, and termination.
- (a) Session (b) Transport
 - (c) presentation (d) Application
10. The RSA algorithm is the basis of a _____ encryption method.
- (a) Public key (b) Private key
 - (c) Conventional (d) denominational

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Describe about Time Division Multiplexing.
Or
(b) Explain packet switching.
12. (a) What is Internetworking devices? Explain about Repeaters:
Or
(b) Explain link state Routing with an example.
13. (a) Write a note on frame Relay operations.
Or
(b) Explain ATM Switching.
14. (a) Explain Token Ring.
Or
(b) Explain ALOHA
15. (a) Write a note on Session Layer.
Or
(b) Explain about Virtual Terminal.

(7 pages)

Reg. No. :

Code No. : 41406 E Sub. Code : SACS 41

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Fourth Semester

Computer Science - Allied

E - COMMERCE

(For those who joined in July 2017 Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. _____ is concerned with buying and selling information, products and services over the internet.
- (a) Commerce
 - (b) E-Commerce
 - (c) E-Business
 - (d) Internet

2. Which of the following protocol is responsible for transferring and displaying web pages.
- (a) HTTP
 - (b) HTML
 - (c) FTP
 - (d) TCP/IP
3. Business selling to local, state and federal agencies is known as _____ business model.
- (a) B2C
 - (b) G2B
 - (c) B2G
 - (d) G2G
4. _____ are used to achieve high value integration without hierarchical control.
- (a) Auctions
 - (b) Aggregators
 - (c) Content
 - (d) Alliances.

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5. Who spends a good deal of time online, mainly at their places of business.
- (a) cyber buyers
 - (b) cyber consumers
 - (c) cyber surfers
 - (d) none of the above
6. _____ describes the accelerating benefits of a positive feedback loop.
- (a) E-care
 - (b) E-mail
 - (c) Affiliate network
 - (d) Spiral
7. _____ is a hacker can use to enter a system, search for passwords and install software programs to allow remote control of the computer.
- (a) Back door
 - (b) NASDAG
 - (c) Guesses
 - (d) PEM

8. _____ is a software or a hardware used to isolate and protect a private system or a network from the public network.
- (a) Intrusion detection
 - (b) Firewall
 - (c) Password
 - (d) Virus
9. In bank, _____ key is used for Encryption.
- (a) Public
 - (b) Private
 - (c) Secret
 - (d) None of the above
10. In digital signature _____ algorithm is used to calculate a message digest.
- (a) RSA
 - (b) DES
 - (c) AES
 - (d) Both (a) and (b)

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Page 4 Code No. : 41406 E

[P.T.O.]

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Explain emergence of the internet as an E-Commerce.

Or

- (b) How E-Commerce provides opportunities to various industries?

12. (a) What are the advantages of B2B model?

Or

- (b) Write a short on different kinds of aggregator models.

13. (a) Write about traditional marketing and its problems.

Or

- (b) Explain spiral branding with example.

14. (a) How to secure over E-mail? Explain the various methods to secure E-mail.

Or

- (b) What are the significant features of firewall?

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19. (a) Explain security risks associated with a network and a website.

Or

- (b) Discuss security premises on physical infrastructure.

20. (a) Explain in detail about E-Banking at ICICI Bank.

Or

- (b) Discuss different kinds of methods of secure E-Payment process.

15. (a) Explain micro payment system with suitable example.

Or

- (b) State the features of E-banking in India.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) What are the advantages of E-Commerce? Explain.

Or

- (b) Write in detail about origin of world wide web.

17. (a) Briefly explain about business-to-consumer model.

Or

- (b) Discuss brokerage model.

18. (a) Explain online marketing.

Or

- (b) Discuss marketing strategies with suitable example.

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(6 pages)

Reg. No. :

Code No. : 7002

Sub. Code : KELM 41/
PELM 41

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Fourth Semester

Electronics

ADVANCED MEDICAL ELECTRONICS

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1. The measurement of physiological variable and parameters is known as _____
- (a) Bio-electronics
(b) Bio-metrics
(c) Bio-maths
(d) Bio-medical

6. Flow rates are expressed in _____
- (a) Cm/min (b) Degree/min
(c) Liters/min ✓ (d) None of these
7. CT means _____
- (a) Linear Tomography
(b) Digital Tomography
(c) Axial Tomography
(d) Computerized Tomography
8. The value of one electron volt (1 ev) is equal to _____
- (a) $1.602 \times 10^{-12} \text{ erg}$ (b) $2.602 \times 10^{-12} \text{ erg}$
(c) $3.202 \times 10^{-10} \text{ erg}$ (d) $4.202 \times 10^{-10} \text{ erg}$
9. _____ is the measurements of bio-logical parameters over a distance
- (a) Transmitter (b) Bio-telemetry
(c) Receiver (d) Mixer
10. In the heart exchanger the blood is maintained at the human body temperature is _____
- (a) 40°C (b) 20°C
(c) 18°C (d) 37°C

2. _____ is a measure of system error configuration
- (a) frequency response
(b) stability
(c) isolation
(d) accuracy
3. The lungs are elastic bags located in a closed cavity is called _____
- (a) Veins (b) Heart
(c) Thorax cavity (d) Smooth muscle
4. The blood pressure is usually measured by means of indirect method using a _____
- (a) X-ray
(b) CT-scan
(c) Sphygmomanometer
(d) None of these
5. _____ present a two dimensional image of a stationary organ or body structure
- (a) A-scan (b) B-scan
(c) M-scan (d) D-scan

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain bio electric potential.
Or
(b) Explain about man instrument system.
12. (a) Write short note on electrodes and leads.
Or
(b) Explain sphygmomanometer with neat diagram.
13. (a) Explain basic modes of transmission.
Or
(b) Explain echo-encephalography with neat diagram.
14. (a) Explain X-ray machine with neat diagram.
Or
(b) Explain about gantry and detector.

15. (a) Write short notes on implantable units.

Or

(b) Explain about planning and location of different instrument in intensive care unit.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain about cardio vascular system with neat diagram.

Or

(b) Explain respiratory system with neat diagram.

17. (a) Write about clinical measurement of blood cell.

Or

(b) Explain about calorimeter with neat diagram.

18. (a) Explain briefly ultrasonic imaging system.

Or

(b) Explain about blood flow measurement and cardiac output.

19. (a) Explain X-ray films and fluoroscopy with neat diagram.

Or

(b) Explain about image identifier for visual observation and recording of a picture.

20. (a) What are the components of bio-telemetry systems?

Or

(b) Write about bed-side monitor with neat diagram.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain the various oscillator configurations in PIC microcontroller.
Or
(b) Compare the operation of SPI and 12C.
17. (a) Explain the various resets in PIC microcontroller and specify its application.
Or
(b) Draw the 12C typical message string format and explain it.
18. (a) Discuss the tool chain for building embedded software.
Or
(b) How baud rate can be specified for serially data communication in PIC microcontroller?
19. (a) Explain the function of mailbox with example.
Or
(b) Explain the various software development tools for building embedded applications.
20. (a) How the pointers is used to handle the task in function queue scheduling architecture?
Or
(b) Explain the operation of scheduler in RTOS based environment.

Reg. No. :

Code No. : 41242 E Sub. Code : JMEL 6 B/
JMES6 B

B.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2019.

Sixth Semester

Electronics/Elect. and Communication

Major Elective — EMBEDDED SYSTEM AND RTOS

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The number of lines used to connect 12C peripheral 12C bus is _____
(a) 4 (b) 1
(c) 2 (d) 3
2. In fast mode, the 12C bus transfer rate will be maximum up to _____
(a) 100kb/s (b) 400kb/s
(c) 300kb/s (d) 200kb/s

3. PIC parts can be programmed _____
 (a) By serial only
 (b) Parallel only
 (c) Serial or Parallel
 (d) Can't program
4. The data transfer size with respect to the parallel port is _____
 (a) 14 bit (b) 8 bit
 (c) 13 bit (d) None
5. An event is usually specified by _____
 (a) Byte (b) Data
 (c) Boolean flag (d) Address
6. Which of the following will pass more information between tasks?
 (a) Semaphore (b) Events
 (c) Timer (d) Queues
7. Which one of the following is odd man output?
 (a) Compiler (b) Emulator
 (c) Programmer (d) Debugger
8. We can _____ with respect to pipes
 (a) Read (b) Write
 (c) Read and Write (d) None
9. Which one of the software architecture doesn't uses interrupt?
 (a) Round Robin (b) RTOS
 (c) Function queue (d) All the above

10. Any one of following architecture if light response is not required over the task _____
 (a) Round Robin
 (b) Round robin with interrupt
 (c) Function queue
 (d) All the above

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
 Each answer should not exceed 250 words.

11. (a) Mention the characteristics of various software architecture.
 Or
 (b) What happens if all the tasks are blocked in RTOS based environment?
12. (a) How PIC microcontroller can be put in to power consumption mode?
 Or
 (b) Write a short note on SPI communication.
13. (a) What is meant by PSP and briefly explain its application?
 Or
 (b) What is meant by periodic timer?
14. (a) How the oscillator is configured in PIC microcontroller?
 Or
 (b) Write a short note on 12C communication.
15. (a) What is meant by BOP and POR and explain its SFR?
 Or
 (b) How the ready, running and blocked state with respect to a task?

M.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2019.

Second Semester

Electronics – Core

COMMUNICATION THEORY

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following is an indirect way of generating FM?
 - (a) Armstrong modulator
 - (b) Varactor diode modulator
 - (c) Reactance FET modulator
 - (d) Reactance bipolar transistor

2. Commercial frequency deviation of frequency modulation is _____.
 - (a) 70 KHz
 - (b) 75 KHz
 - (c) 80 KHz
 - (d) 65 KHz
3. What is the change in the value of transmitted power when the modulation index changes from 0 to 1?
 - (a) 100%
 - (b) unchanged
 - (c) 50%
 - (d) 80%
4. In FM noise can be decreased by a feature that AM does not have
 - (a) increasing deviation
 - (b) decreasing deviation
 - (c) reducing modulation index
 - (d) increasing modulation index
5. In a receiver which of the following device has IF input but RF output?
 - (a) demodulator
 - (b) loudspeaker
 - (c) audio amplifier
 - (d) frequency changer

6. The output of a diode detector contains _____.
 - (a) DC voltage
 - (b) modulating signal
 - (c) RF ripple
 - (d) all of the above
7. In a communication system, noise is most likely to affect the signal _____.
 - (a) at the transmitter
 - (b) in the channel
 - (c) in the information source
 - (d) at the destination
8. The main systems used for generation of SSB are _____.
 - (a) filter method
 - (b) phase cancellation method
 - (c) third method
 - (d) all the above
9. The another name of facsimile is _____.
 - (a) tele copying
 - (b) fax
 - (c) tele fax
 - (d) all the above
10. In digital fax, the output of CCD scanner is in _____ form.
 - (a) analog
 - (b) digital
 - (c) pulse
 - (d) triangle

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Write a short notes on frequency modulation.
Or
(b) What is modulation? Explain phase modulation.
12. (a) Write short notes on AM transmitter.
Or
(b) Explain reactance modulator.
13. (a) What are the advantages of super heterodyne receiver?
Or
(b) Define the terms sensitivity, selectivity and image frequency.
14. (a) Explain single side band suppressed carrier modulation.
Or
(b) Write the advantages of VSB in television.

15. (a) Explain the block schematic of a telephone set.

Or

(b) Write short notes on facsimile.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Define amplitude modulation. Explain the definition with a sketch of a sine modulated AM wave.

Or

(b) Explain frequency modulation and give its mathematical representation.

17. (a) Write about solid state modulator.

Or

(b) Explain varactor diode modulator.

18. (a) Briefly explain the blocks in superheterodyne receiver.

Or

(b) Prove that the phase discriminator is an FM demodulator.

Page 5

Code No. : 7235

19. (a) Write about SSB receiver.

Or

(b) Explain VSB transmission.

20. (a) Explain single line analog SLIC board.

Or

(b) Write about power line communication.

Page 6

Code No. : 7235

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

- The operating voltage of AT Tiny 15 L controller is
(a) -2.7 V - 5.5 V (b) -2.9 V - 5.9 V
(c) -1.7 V - 4.5 V (d) -2.5 V - 5.9 V
- The At Tiny 15 L controller consist with _____ bit timer.
(a) 4 bit (b) 8 bit
(c) 16 bit (d) 32 bit

- A watch dog timer is sometimes called as
(a) computer operating property timer
(b) proper operating timer
(c) proper signal timer
(d) computer timer
- What is the advantage of using flash type A/D converter?
(a) High speed conversion
(b) Low speed conversion
(c) Nominal speed conversion
(d) None of the above
- The brownout voltage of COP8CBR9 is _____
(a) 2.7 - 2.9 V (b) 2.6 - 3.4 V
(c) 1.6 V - 1.9 V (d) 1.7 - 4.9 V
- COP8CBR9 has _____ bytes RAM.
(a) 1 k (b) 2 k
(c) 3 k (d) 6 k

- The COP8CBR9 processor has _____ bit analog to digital converter.
(a) 8 bit (b) 10 bit
(c) 12 bit (d) 16 bit
- The USART asynchronous module consist of _____
(a) Baudrate generator
(b) Sampling circuit
(c) Asynchronous receiver
(d) All the above
- _____ is a free running on chip RC oscillator which doesn't require any external components.
(a) timer (b) watch dog timer
(c) counter (d) none
- _____ register contains arithmetic status of ALU.
(a) status (b) flag
(c) both (a) and (b) (d) none

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

- (a) Write short notes on tunable internal oscillator.

Or

(b) Describe the atmel AVR controller features.
- (a) Explain the analog comparator.

Or

(b) Explain A/D converter.
- (a) Explain the salient features of COP8CBR9 processor.

Or

(b) Explain about the idle timer.
- (a) Write short notes on multi input wake up.

Or

(b) Explain the interrupts.

15. (a) Explain the memory organization of PIC16F873 processor.

Or

(b) Explain the I/O ports.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) With neat sketch explain the architecture of an AT Tiny 15 L controller.

Or

(b) Write an essay about addressing modes.

17. (a) Explain the analog to digital converter.

Or

(b) Write an algorithm for designing a timer in micro controller.

18. (a) With a neat diagram explain the pin descriptions of COP8CBR9 processor.

Or

(b) Write an essay about system programming.

19. (a) Explain

(i) framing formats

(ii) baud rate generation.

Or

(b) Explain the A/D conversion.

20. (a) Draw and explain the PIC16F873 architecture.

Or

(b) Explain about I/O ports.

(6 pages)

Reg. No. : _____

Code No. : 7002

Sub. Code : KELM 41/
PELM 41

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Fourth Semester

Electronics

ADVANCED MEDICAL ELECTRONICS

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1. The measurement of physiological variable and parameters is known as _____
(a) Bio-electronics
(b) Bio-metrics
(c) Bio-maths
(d) Bio-medical

6. Flow rates are expressed in _____
(a) Cm/min (b) Degree/min
(c) Liters/min (d) None of these
7. CT means _____
(a) Linear Tomography
(b) Digital Tomography
(c) Axial Tomography
(d) Computerized Tomography
8. The value of one electron volt (1 ev) is equal to _____
(a) $1.602 \times 10^{-12} \text{ erg}$ (b) $2.602 \times 10^{-12} \text{ erg}$
(c) $3.202 \times 10^{-10} \text{ erg}$ (d) $4.202 \times 10^{-10} \text{ erg}$
9. _____ is the measurements of bio-logical parameters over a distance
(a) Transmitter (b) Bio-telemetry
(c) Receiver (d) Mixer
10. In the heart exchanger the blood is maintained at the human body temperature is _____
(a) 40°C (b) 20°C
(c) 18°C (d) 37°C

Page 3 Code No. : 7002

2. _____ is a measure of system error configuration
(a) frequency response
(b) stability
(c) isolation
(d) accuracy
3. The lungs are elastic bags located in a closed cavity is called _____
(a) Veins (b) Heart
(c) Thorax cavity (d) Smooth muscle
4. The blood pressure is usually measured by means of indirect method using a _____
(a) X-ray
(b) CT-scan
(c) Sphygmomanometer
(d) None of these
5. _____ present a two dimensional image of a stationary organ or body structure
(a) A-scan (b) B-scan
(c) M-scan (d) D-scan

Page 2 Code No. : 7002

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain bio electric potential.

Or

(b) Explain about man instrument system.
12. (a) Write short note on electrodes and leads.

Or

(b) Explain sphygmomanometer with neat diagram.
13. (a) Explain basic modes of transmission.

Or

(b) Explain echo-encephalography with neat diagram.
14. (a) Explain X-ray machine with neat diagram.

Or

(b) Explain about gantry and detector.

Page 4 Code No. : 7002

[P.T.O.]

15. (a) Write short notes on implantable units.

Or

(b) Explain about planning and location of different instrument in intensive care unit.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain about cardio vascular system with neat diagram.

Or

(b) Explain respiratory system with neat diagram.

17. (a) Write about clinical measurement of blood cell.

Or

(b) Explain about calorimeter with neat diagram.

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(b) Explain about blood flow measurement and cardiac output.

19. (a) Explain X-ray films and fluoroscopy with neat diagram.

Or

(b) Explain about image identifier for visual observation and recording of a picture.

20. (a) What are the components of bio-telemetry systems?

Or

(b) Write about bed-side monitor with neat diagram.