Code No. : 6196   **Sub. Code : PECM 14**

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

First Semester

Electronics and Communication

ADVANCED MICROPROCESSOR

(For those who joined in July 2017-2020)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1.   The CPU of 80286 contains ——————

   (a) 16 bit general purpose registers

   (b) 16 bit segment registers

   (c) Status and control registers

   (d) All the above mentioned

2. The bits that are modified according to the result of the Execution of logical and arithmetic instructions are called ——————

   (a) byte addressable bit

   (b) control flag bits

   (c) status flag bits

   (d) none of the mentioned

3. Because of Pentium's superscalar architecture, the number of instructions that are executed per clock cycle is ——————

   (a) 1   (b) 2

   (c) 3   (d) 4

4. The instructions that pars through the fetch, decode and Execution stages sequentially is known as ——————

   (a) Sequential instruction

   (b) Sequence of fetch decode and Execution

   (c) Linear instruction sequencing

   (d) Non linear instruction sequencing

5. Which of the following processors execute its instruction in a Single Cycle?

   (a) 8086   (b) 8088

   (c) 8087   (d) MIPS R2000

6. How is memory accessed in RISC architecture?

    (a) Load and store instruction

    (b) Opcode instruction

    (c) Memory instruction

    (d) Bus instruction

7. Princeton architecture is also known as

    (a) Von-Neumann architecture

    (b) Harvard

    (c) RISC

    (d) CISC

8. Who coined the term RISC?

    (a) David Patterson

    (b) Von Newmann

    (c) Michael Flynn

    (d) Harvard

9. Which command is used to reset a MODEN when using the "At Command Set"?

    (a) ATR

    (b) ATZ

    (c) DTR

    (d) None of the above

10. If any instruction consist of any arithmetic operation, data is transferred to —————————

   (a) Quantitative unit

   (b) Qualitative unit

   (c) Arithmetic and logic unit

   (d) Central processing unit

PART B — (5 × 5 = 25 marks)

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

11. (a) Draw 80186 architecture and Explain.

Or

   (b) Draw and explain 80486 architecture.

12. (a) List the special pentium Registers.

Or

   (b) Compare any two pentium processor.

13. (a) Write notes on Branch prediction.

Or

   (b) Write notes on Execution Parallelism.

14. (a) Write about Intel 1960 in short.

Or

   (b) Write short notes on MIPS R 10000.

15. (a) What is ISA?

Or

(b) What is PCIX?

PART C — (5 × 8 = 40 marks)

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

16. (a) Write in detail about Real and Virtual addressing modes of 80286 microprocessor.

Or

(b) Explain about memory management and memory paging mechanism of 80386 microprocessor.

17. (a) Write in detail about the following.

(i) Special pentium registers

(ii) Pentium memory management.

Or

(b) Write in detail about the comparisons of Pentium processors.

18. (a) Explain the following of RISC processor I.
(i) Instruction fetching.

(ii) Branch Prediction.

Or

(b) Draw and explain the basics of P6 micro architecture.

19. (a) Explain in detail about IA32.

Or

(b) Write in detail about SPARC Version 9.

20. (a) Write in detail about new generation mother boards 286 to Pentium 4 Bus interface.

Or

(b) Explain the following :

(i) EISA

(ii) VESA

(iii) PCI

(iv) PCIX

_____

Reg. No. : ....

Code No. : 6201   Sub. Code : PECM 31

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Third Semester

Electronics and Communication – Core

ADVANCED POWER ELECTRONICS

(For those who joined in July 2017 – 2020)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. In boost regulator, the output voltage is ——————— than the input voltage.

    (a) Lesser

    (b) Greater

    (c) Moderate

    (d) Same

2. Buck-Boost Regulator is also known as —————.

   (a) Non - Inverting Regulators

   (b) Shifting Regulator

   (c) Inverting Regulator

   (d) None of the above

3. ————— circuit is very complex.

   (a) PWM circuit

   (b) PPM circuit

   (c) SMPS circuit

   (d) PPSK circuit

4. Fly back circuit transformer for ————— usage.

   (a) Impedance purpose

   (b) Resistance purpose

   (c) All the above

   (d) Isolation purpose

5. Inverter produced ————— type of wave form.

   (a) Sine wave

   (b) Square wave

   (c) Sinusoidal wave

   (d) Triangular wave

6. The load current almost in dependent of —————.

   (a) impedance   (b) resistance

   (c) capacitance   (d) inductance

7. The most efficient method to control gain in inverter is —————.

   (a) Pulse Position Modulation

   (b) Pulse Amplitude Modulation

   (c) Pulse Width Modulation

   (d) None of the above

8. The modulation index is also called as —————.

   (a) Amplitude Modulation index

   (b) Frequency Modulation index

   (c) Pulse Modulation index

   (d) Time Modulation index

9. There are ————— types of inverters.

   (a) two   (b) four

   (c) three   (d) five

10. The second winding of the transformer is called as _____.

   (a) primary

   (b) secondary

   (c) either primary or secondary

   (d) none

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain the basic concept of Buck converters.

Or

   (b) Derive the output voltage equations.

12. (a) Explain isolated DC-DC topologies.

Or

   (b) Discuss briefly about current mode control.

13. (a) What are the advantages of resonant converters?

Or

   (b) Explain half bridge operation.

14. (a) Write short notes on modulation index.

Or

(b) List out the applications of single phase bridges.

15. (a) How to calculate actual power factor in a circuit?

Or

(b) Write short notes on high frequency transformers.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain continuous current mode.

Or

(b) Explain discontinuous current mode.

17. (a) Draw the block diagram of SMPS and explain it.

Or

(b) Discuss the push-pull topology.

18. (a) Explain series and parallel resonant converters.

Or

(b) Explain the principles of zero voltage switching.

19. (a) Give brief introduction of PWM methods.

Or

(b) Draw the block diagram of fixed frequency control and explain it.

20. (a) Write short notes on :

(i) Displacement factor

(ii) Distortion factor.

Or

(b) Explain the different topologies of UPS.

_____

Reg. No. : ....

Code No. : 6204   **Sub. Code : PECM 41**

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fourth Semester

Electronics and Communication

MICROWAVE ELECTRONICS

(For those who joined in July 2017-2020)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The noise produced in a microwave tube due to random nature of emission and electron flow is called —————

    (a) Partition noise   (b) Shot noise

    (c) Johnson noise   (d) Shannon noise

2. Which of the following is not possible in a circular wave guide?

   (a) TE_{10} (b) TE_{01}

   (c) TE_{11} (d) TE_{12}

3. Which of the following are microwave sources?

   (a) klystron   (b) magnetron

   (c) IMPATT   (d) TWTA

4. Which of the following is a transferred electron device?

   (a) BARITI diode   (b) IMPATT diode

   (c) TRAPATT diode   (d) Gunn diode

5. The resonant frequency of an IMPATT diode is given by —————

   (a) $V_d / 2l$ (b) V_d / l

   (c) $V_d / 2\pi I$ (d) $Vd_d / 4\pi 1$

6. The substrate of an MMIC must be a ————— to accommodate the fabrication of all the type of devices.

   (a) semiconductor

   (b) insulator

   (c) partial conductors

   (d) metals operable at high frequencies

7. Transmission lines and other conductors in microwave devices are usually made with _____

(a) gold metallization   (b) silver metallization

(c) copper metallization (d) zinc metallization

8. Which is the dominant mode in rectangular waveguides?

(a) TE10   (b) TM11

(c) TM01   (d) TE11

9. ———————— devices uses a helix?

(a) klystron amplifier   (b) klystron oscillator

(c) TWT   (d) None of these

10. In microwave communication links, what causes intense fading in the 18GHZ band?

(a) rain   (b) fog

(c) dust   (d) snow

PART B — (5× 5= 25 marks)

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

11. (a) Explain klystron amplifier.

Or

     (b) List out the advantages of waveguide.

12. (a) Explain Gunn oscillators.

Or

     (b) Explain briefly about vacuum tubes.

13. (a) Explain about MIC materials.

Or

     (b) Explain MIC conductor materials.

14. (a) Explain waveguide dimensions.

Or

     (b) Explain about impedance matching elements.

15. (a) Write notes on standing wave measurements.

Or

     (b) Explain the cavity frequency.

PART C — (5× 8= 40 marks)

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

16. (a) Explain Reflex klystron oscillators.

Or

(b) Explain TWT in detail.

17. (a) Write in detail about generation of microwave by solid state devices.

Or

(b) Explain avalanche diode in detail.

18. (a) Compare HMIC and MMIC.

Or

(b) Explain the types of MIC and write in detail about MMIC.

19. (a) Write in detail about waveguides, components concept of waveguides and advantages of hollow waveguides.

Or

(b) Explain PIN diode switches.

20. (a) Explain the microwave measurement techniques.

Or

(b) Write in detail about dielectric measurement.

——————————

Reg. No. : ....

Code No. : 6205   Sub. Code : PECM 42

M.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2022.

Fourth Semester

Electronics and Communication

MOBILE AND SATELLITE COMMUNICATION

(For those who joined in July 2017-2020)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer

1.   Erlang B formula is also known as

   (a)   blocked calls clear formula

   (b)   blocked formula

   (c)   clear formula

   (d)   unblocked calls formula

2. The cellular concept was a major break through in solving the problem of —————

    (a) spectral congestion (b) user friendly

    (c) large cell   (d) data

3. Speech coding systems are called

    (a) vocoders   (b) decorders

    (c) MUX   (d) DeMUX

4. LEO satellite operate in the range of

    (a) 0.5 GHz   (b) more than 2 GHz

    (c) 1.15 GHz only   (d) more than 5 GHz

5. Single radio channels can be shared by multiple users n —————

    (a) TDD   (b) TDM

    (c) FDM   (d) FDD

6. In Kepler law, Prefers

    (a) mean solar earth days

    (b) constant

    (c) semi — major axis

    (d) harmonic law

7. Noise figure is equal to

   (a) 20 log F   (b) 10 log F

   (c) 30 log F   (d) 40 log F

8. Thermal noise power is expressed as

   (a) N = KTB   (b) N = KT

   (c) N= KB   (d) N=T

9. Electric field of the signed determined by

   (a) polarization   (b) spatial isolation

   (c) reuse   (d) none of the above

10. The most useful satellite systems is ——————

    (a) GPS

    (b) Surveillance system

    (c) CRC system

    (d) Parity system

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) List out of the examples of the cellular radio.

Or

(b) Explain the Handoff and neat diagram.

12. (a) Define the frequency selective mobile channels.

Or

(b) What is GSM codec and explain it.

13. (a) Write short note on the ionospheic effect.

Or

(b) Explain about the system noise.

14. (a) Discuss about the FDMA.

Or

(b) Write about the Pre assigned FDMA.

Page 4　**Code No. : 6205**

[P.T.O.]

15. (a) Explain the concept of frequency and polarization.

Or

(b) Describe shortly about GPS.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Briefly explain about the frequency reuse.

Or

(b) Explain the free space propagation model.

17. (a) Briefly explain about the vocoders.

Or

(b) Discuss about the TDMA.

18. (a) Explain about the Apogee and Perigee.

Or

(b) Write about the Rain attenuation.

19. (a) Discuss about Direct Broadcast Satellite system.

Or

(b) Briefly Explain the uplink and Downlink analysis.

20. (a) Discuss about DTV transmitter and neat block diagram.

Or

(b) What is satellite positioning? Explain its functions.

_____

Reg. No. : ....

Code No. : 6206   **Sub. Code : PECM43**

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fourth Semester

Electronics And Communication - Core

NAVIGATION SYSTEMS

(For those who joined in July 2017-2020)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1.   In Navigation by _____ the navigator fixes his position on map by observing known visible landmarks.

     (a) Pilotage   (b) GPS

     (c) Gonass   (d) Dead reckoning

2. _____ operated direction finders have the virtue of relative simplicity.

   (a) Manually

   (b) Semi automatic

   (c) Remote

   (d) Automatically

3. Losan transmilters have a peak power of   kw.

   (a) 20   (b) 10

   (c) 100   (d) 50

4. The Decca system operates in ----- banol

   (a) HF   (b) LF

   (c) VHF   (d) UHF

5. MLS stands for ----------

   (a) Mean latitude survey

   (b) Microwave landing system

   (c) Marker laser signal

   (d) Motorised landing signal

6. Peak power of surveillance Radar is -----

   (a) 80 KW   (b) 100 KW

   (c) 10 KW   (d) 1KW

7. The angle between the heading and track is called _____.

   (a) Yaw (b) Pitch

   (c) Roll (d) Driff angle

8. Instrument used to measure thrust acceleration of a vehicle is _____.

   (a) Goniometer

   (b) Granometer

   (c) Accelerometer

   (d) Navameter

9. The transit system came into operation in the year _____.

   (a) 1947 (b) 1977

   (c) 2007 (d) 1827

10. Navstar global positioning system was developed by

   (a) Intel (b) Atmel

   (c) DOD (d) DRDA

PART B — (5 × 5 = 25 marks)

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

11. (a) Explain about adock direction finders.

Or

(b) Explain working of Goniometer.

12. (a) Explain Loran A Equipment.

Or

(b) Explain about DME transmissions.

13. (a) Explain about the Aids to approach and landing aircrafts.

Or

(b) Explain about Marker Beacons.

14. (a) Explain about track stabilization.

Or

(b) Explain about Navigation over earth.

15. (a) Explain about differential Navigation.

Or

(b) Explain about GPS transmitters.

Page 4   **Code No. : 6206**

[P.T.O.]

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 the four basic methods of Navigation.

Or

(b) Explain about the working of the commulated aerial direction finder.

17. (a) Explain about range and precision of standard loran.

Or

(b) Explain about TACAN system.

18. (a) Explain glide slope system.

Or

(b) Explain about precision approach Radan.

19. (a) With a neat block diagram explain incoherent pulsed Doppler system.

Or

(b) Explain working of an Accelerometer with necessary diagrams.

20. (a) Explain basic principles of operation of GPS with necessary diagrams.

Or

(b) Explain about Navstar receivers.

————————

Code No. : 6527　　　　**Sub. Code : ZECM 22**

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Second Semester

Electronics And Communication — Core

OPTOELECTRONICS AND OPTICAL
COMMUNICATION

(For those who joined in July 2021 onwards)

Time : Three hours　　　　　　Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1.　Light emitting diodes emits light when it is in

　　(a)　Forward biased

　　(b)　Reverse biased

　　(c)　Zero biasing

　　(d)　Infinite biasing

2. The nature of light emitted by LEDs depends upon

   (a) Nature of material used in LEDs

   (b) The difference in energy levels of material used

   (c) Both (a) and (b)

   (d) Neither (a) nor (b)

3. _____ is fully depleted by employing electric fields.

   (a) A valanche photodiode

   (b) P-I-N diode

   (c) Varactor diode

   (d) P- n diode

4. Often _____ pulse shape is obtained from APD

   (a) Negligible   (b) Distorted

   (c) Asymmetric   (d) Symmetric

5. In _____ type of optical fiber cables, the density of the fiber core varies.

   (a) Multimode step-index

   (b) Multimode graded-index

   (c) Multimode single-index

   (d) Single mode

6. Which one of the following types does not exist in optical fibers?

   (a) Single mode step- index

   (b) Single mode graded -index

   (c) Multimode step-index

   (d) Multimode graded-index

7. In an optical fiber communication system, which among the following is not a typical transmitter function.

   (a) Coding for error protection

   (b) Decoding of input data

   (c) Electrical to optical conversion

   (d) Recoding to match output standard

8. In the fiber optic link, power transfer from one fiber to another and from fiber to detector must take place with _____ coupling efficiency.

   (a) Maximum   (b) Stable

   (c) Minimum   (d) Unpredictable

9. Nonlinear effects which are defined by the intensity – dependent refractive index of the fiber are called as

   (a) Scattering effects   (b) Kerr effects

   (c) Raman effects   (d) Tomlinson effects

10. What is different in case of cross-phase modulation from self-phase modulation?

    (a) Overlapping but same pulses

    (b) Overlapping but distinguishable pulses

    (c) Non-overlapping and same pulses

    (d) Non-overlapping but distinguishable pulses

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain the working principles of Fabry-Perot lasers.

Or

    (b) What are the characteristics of distributed feedback laser?

12. (a) Explain the laser used in safety interlocks.

Or

    (b) Explain the role of power isolators in opto-electronics.

13. (a) Discuss in detail about the loss mechanism in optical fibers.

Or

(b) What is meant by Fresnel reflection and where does Fresnel reflection occur?

14. (a) How does an electro-absorption modulator work?

Or

(b) What are the noise sources in optical detectors explain.

15. (a) What is dispersion in fiber and explain its types?

Or

(b) Draw and explain the working principle of stimulated brillouin scattering?

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) What is a DFB laser differentiate DFB laser from other types of laser?

Or

(b) Draw and explain the working principle of Multimedia projectors.

17. (a) Explain intrinsic and extrinsic fiber optic sensors.

Or

(b) Draw and explain the working principle of PIN photodiodes.

18. (a) Write short notes on misalignment and mismatch losses in optical fiber.

Or

(b) What are splices in optical fiber and how many types of fiber optic connectors are there explain?

19. (a) What is noise equivalent bandwidth how is NEP calculated?

Or

(b) Explain the working principle of electro absorption modulator.

20. (a) Write short notes on Cross-phase modulation.

Or

(b) Discuss in detail about the single channel system design in optical fiber.

_____

Reg. No. : ....

Code No. : 6528   Sub. Code : ZECM 23

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Second Semester

Electronics and Communication - Core

DIGITAL COMMUNICATION SYSTEMS

(For those who joined in July 2021 onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1.   ————— is the amount of information that we gain when one of two possible and equally likely event occurs.

(a) Entropy

(b) One bit

(c) One nibble

(d) Data

2. ——————— capacity of a discrete memory less channel is the maximum average mutual information in any single use of the channel.

(a) storage   (b) channel

(c) data   (d) loading

3. Hamming distance between a pair of code vectors is defined as the number of locations in which their respective ——————— differs.

(a) elements   (b) characters

(c) positions   (d) all the above

4. The generator matrix G is used in the ——————— operation at the transmitter.

(a) decoding   (b) encoding

(c) convolution   (d) discrete

5. A ——————— encoder operates on incoming message sequence continuously in a serial manner

(a) convolution   (b) ashlys

(c) trellis   (d) habeburn

6. The ——————— algorithm operates by computing a metric for every possible path in the trellis.

(a) Bernoullis   (b) Jack

(c) Viterbi   (d) Shannon

7. In digital communications the ——————— wave consists of binary data or an M'ary encoded version of it.

(a) laser

(b) photonic

(c) optic

(d) modulating

8. ——————— employs synchronous detection to separate the even and odd bit streams.

(a) ASK (b) PSK

(c) MSK (d) QPSK

9. A ——————— sequence is defined as a coded sequence of 1's and 0's with certain autocorrelation properties.

(a) finite

(b) complex

(c) colbys

(d) pseudonoise

10. The most important application of spread spectrum techniques is that of protection against

(a) enemies (b) hackers

(c) jammers (d) leakages

PART B — (5 × 5 = 25 marks)

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

11. (a) What is Kraft-McMillan inequality? Explain.

Or

(b) Write about extended Huffman coding.

12. (a) Explain Hamming code with examples.

Or

(b) Write about Syndrome decoding.

13. (a) Write about decoding of convolutional codes.

Or

(b) Explain about digital signatures.

14. (a) Write about phase shift keying.

Or

(b) Compare digital modulation techniques.

15. (a) Explain properties of pseudo noise sequences.

Or

(b) Write about fast frequency hopping.

Page 4   **Code No. : 6528**

[P.T.O.]

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain source coding theorem.

    Or

    (b) Explain Huffman coding with example.

17. (a) Explain about linear block codes.

    Or

    (b) Explain about cycle codes.

18. (a) Write about code tree, trellis and state diagram for convolution encoder.

    Or

    (b) Explain the Viterbi algorithm.

19. (a) Explain QPSK in detail

    Or

    (b) Calculate error probability for QPSK.

    Page 5   **Code No. : 6528**

20. (a) Explain spread spectrum modulation in detail.

Or

(b) Explain slow frequency hopping.

————————

Reg. No. : ....

Code No. : 6529   **Sub. Code : ZECM 31**

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Third Semester

Electronics and Communication - Core

ADVANCED POWER ELECTRONICS AND VIRTUAL
INSTRUMENTATION

(For those who joined in July 2021 onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1.   A thyristor (SCR) is a

(a) P-N-P device   (b) N-P-N device

(c) P-N-P-N device   (d) P-N device

2. What are unijunction transistors used for?

   (a) Amplifying a circuit

   (b) Circuit breaker

   (c) Splitting device

   (d) On-Off switching device

3. ———————— reduction is a major advantage of using VI.

   (a) Power   (b) Energy

   (c) Cost   (d) Time

4. You have a front panel control on a top-level VI that you must control from within a sub VI. What must you pass to the sub VI?

   (a) The control's properties

   (b) The controls methods

   (c) The control's reference

   (d) The control's data type

5. The Wait Until Next ms Multiple function:

(a) Begins timing at program start and completes upon a multiple of the PC timer

(b) Begins timing after the code in the loop has completed and expires when the multiple of the (user) input time expires

(c) Begins timing after the code in the loop has completed and expires when the (user) input time completes

(d) Begins timing at program start and waits until the code in the loop has completed

6. Which variable is commonly used to eliminate race conditions by preventing simultaneous access to code or data?

(a) Functional global variable

(b) Local variable

(c) Global variable

(d) Shared variable

7. Why is Lab VIEW a data flow programming language?

(a) It uses icons instead of text to create applications

(b) The flow of data through nodes on the block diagram determines execution

(c) It does not have a Goto function to control execution

(d) The memory location in which data is stored changes each iteration

8. Which is a native debugging feature in LabVIEW?

   (a) Step Back (b) Step Over

   (c) Step Around (d) Step Above

9. How do you document a VI so that the description appears in the Show Context Help popup window?

   (a) Use the VI Properties Documentation window

   (b) Type in the Show Context Help window

   (c) Create a free label on the front panel

   (d) Edit the LabVIEW help files

10. What settings should be selected for a custom control so that all copies of the control are of the same data type yet have the flexibility to use different colors and styles?

   (a) Control (b) Type Def.

   (c) Strict Type Def. (d) Flex Def.

PART B — (5 × 5 = 25 marks)

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

11. (a) Explain the Characteristic of Thyristor.

Or

   (b) Draw and explain the function of phase controller rectifier.

12. (a) Describe the evolution of VI.

Or

(b) Draw and explain the architecture of VI.

13. (a) What are the controls and indicators using in LabView explain any one?

Or

(b) Elaborate the precision and representation.

14. (a) Write short notes on Formula nodes.

Or

(b) Explain graphs and charts using LabView.

15. (a) Explain matrix generation.

Or

(b) Write a simple program based on the Linear spacing.

PART C — (5 × 8 = 40 marks)

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

16. (a) Draw and explain Single phase half wave with RL load rectifier.

Or

(b) Write short notes on Commutation Techniques.

17. (a) Explain data-flow techniques with suitable example.

Or

(b) List out the features of Graphical Programming.

18. (a) Discuss in detail about Graphical programming palettes and tools.

Or

(b) Explain Functions and Libraries in Lab View.

19. (a) Explain Loops with suitable example.

Or

(b) Write a simple program using case structure.

20. (a) Discuss in detail about Concatenating matrices in Python.

Or

(b) Explain multiple data sets in one plot with suitable example.

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