(6 pages) Reg. No. : 201

Code No. : 7004 **Sub. Code : KELM 41**

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2018.

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 questions.

Choose the correct answer :

1. Solid state physical properties for bone include: Half heat and ————————

(a) Photoelectric effect

(b) Temperature effect

(c) Heat effect

(d) Strain gauge diagram

2. To avoid ————————, Biomaterials which can easily degrade in the body are preferable.

(a) Stress Shielding

(b) High temperatures

(c) Minimum bending

(d) Temperature variation

3. Bubbles in blood pressure transducer line and incorrect placement of transducer are type of

(a) Insertion error

(b) Application error

(c) Dynamic error

(d) Response time error

4. 50-60 Hz noise in E.C.G machines can be reduced by

(a) Right Leg drive

(b) CMR of instrumentation amplifier

(c) Notch filter

(d) All of the above

5. The use of human embroyonic stem cell (hESCs) is modern aspect of

(a) Extension of life (b) Tissue Engineering

(c) Pregnancy (d) Genetic engineering

6. To treat disease the removal of Genes within an individual cells and biological tissues is done by

(a) Gene therapy

(b) Tissue engineering

(c) Tissue culture

(d) Viral vectors

7. The thermodynamically driven process of Drug delivery mechanism is called as:

(a) Erosion

(b) Diffusion

(c) Osmosis

(d) Tissue analysis

8. ———————— is the area of human brain which contains approximately 15-33 billion neurons, these neurons depend upon two factors: ———————— and ————————

(a) Cerabral cortex, age, gender

(b) Axons, age, gender

(c) Motor neurons, smoking habits, gender

(d) Cerebral cortex, height, weight

9. The ———————— aspect of synaptic signaling process mainly depends on properties of the neuron's membrane.

(a) Electrical (b) Chemical

(c) Synaptic (d) Ionic

10. For pain relieves medical procedures alter the functions of nervous system' this is the most common applications of ————————

(a) G-protein couples receptors

(b) Ligand-gated ion channels

(c) Neuromodulation

(d) Neurotransmitters

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain Kidney Systems.

Or

(b) Explain bio potential electrodes.

12. (a) Explain Spirometer.

Or

(b) Explain about calorimeters.

13. (a) Explain doppler effect.

Or

(b) Explain blood flow meter.

14. (a) Give the details about image intensifier.

Or

(b) Give the details about CAT scan.

15. (a) Give the components in telemetry system.

Or

(b) Write about shock hazards.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain cardiovascular systems.

Or

(b) Explain EEG

17. (a) Explain sphygmomanometer.

Or

(b) Explain lung volume and capacities.

18. (a) Write in detail about block shematic of M mode.

Or

(b) Explain cardiac imaging.

19. (a) Explain x ray generation.

Or

(b) Explain fluroscopy.

20. (a) Explain about intensive care unit.

Or

(b) Explain hemodialysis.

———————

(6 pages) Reg. No. : .....

Code No. : 6996 **Sub. Code : KELM 22/ PELM 22**

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2018.

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) Distances

(d) Signals

2. Deadline-driven constraints so called ————

(a) Reality time constraints

(b) Real time constraints

(c) Real data constraints

(d) None of the above

3. Processor must accept and process frame before next frame arrives typically called ————

(a) Hard real time system

(b) Real time constraints

(c) Real data constraints

(d) Soft real time system

4. Which among the below stated lines represent the handshaking variant usually and only controlled by the software in the handshaking process?

(a) XON/XOFF (b) DCD and GND

(c) TD and RD (d) All the above

5. Caches can be converted in to software managed on-chip memories via ————

(a) block level (b) seek time

(c) line locking (d) line blocking

6. Average time for a particular task is constrained as well as is number of instances when some maximum time is exceeded, stated approach is known as ————

(a) hard real time systems

(b) real data constraints

(c) real time constraints

(d) soft real time systems

7. Radio signals are first received by antenna, amplified, passed through a mixer, then filtered, means ————

(a) modulated

(b) demodulated

(c) cellular telecommunication

(d) cellular telephony

8. Caches can be converted in to software managed on chip memories via

(a) Block level (b) Seek time

(c) Line locking (d) Line blocking

9. Stage that reads program data from memory in to instruction buffer queue is known as ————

(a) execution stage (b) address stage

(c) decode stage (d) fetch stage

10. Exponent variable is often shared by a set of fixed point variables, this style of arithmetic is also called ————

(a) unblocked floating point

(b) blocked floating point

(c) blocked fixed point

(d) unblocked fixed point

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 a control system?

Or

(b) Write the requirements of embedded systems.

12. (a) Draw the architecture of micro controller.

Or

(b) What is voice-over IP?

13. (a) What is protocol controller?

Or

(b) Write about communication interference channel.

14. (a) How will you sent a message over a serial link?

Or

(b) Write an embedded database application using example as salary.

15. (a) What is Networked Java?

Or

(b) Explain mobile java applications.

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 requirements of embedded systems.

Or

(b) Explain the detail process application of embedded systems in consumer electronics.

17. (a) Write in detail about serial communication with 8051 family of micro controller.

Or

(b) Explain voice-over IP.

18. (a) Explain communication interface standards.

Or

(b) Explain the types of embedded operating systems.

19. (a) Write about sending a message over a serial link.

Or

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

20. (a) Write in detail about mobile java applications.

Or

(b) Explain in detail about (SOC) system on a chip.

———————

Reg. No. : 201

Code No. : 7006 Sub. Code : KELM 43

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2018.

Fourth Semester

Electronics

ADVANCED MICRO CONTROLLERS

(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. Which base-register is preferred for address calculation of a byte that is to be accessed from program memory by base-register plus register-indirect addressing mode?
   (a) DPTR
   (b) PSW
   (c) PCON
   (d) All of the above

2. What does the symbol '#' represent in the instruction MOV A, #55H?
   (a) Direct datatype
   (b) Indirect datatype
   (c) Immediate datatype
   (d) Indexed datatype

3. How many single byte, two-byte and three-byte instructions are supported by MCS-51 form the overall instruction set?
   (a) 55 – single byte, 35 two-byte and 21 three-byte instructions
   (b) 50 – single byte, 30 two-byte and 31 three-byte instructions
   (c) 42 – single byte, 45 two-byte and 24 three-byte instructions
   (d) 45 – single byte, 45 two-byte and 17 three-byte instructions

4. What kind of PSW flags remain unaffected by the data transfer instructions?
   (a) Auxillary Carry flags
   (b) Overflow Flags
   (c) Parity Flags
   (d) All of the above

5. Which instruction should be adopted for moving an accumulator to the register from the below mentioned mnemonics?
   (a) MOV A, R_n (b) MOV A, @ R_i
   (c) MOV R_n, A (d) MOV direct, A

6. What does the instruction XCHD A, @R_i signify during the data transfer in the program execution?
   (a) Exchange of register with an accumulator
   (b) Exchange of direct byte with an accumulator
   (c) Exchange of indirect RAM with accumulator
   (d) Exchange of low order digit indirect RAM with an accumulator

7. Which flags allow to carry out the signal as well as unsigned addition and subtraction operations?
   (a) CY (b) OV
   (c) AC (d) F0

8. How many bytes are supposed to get occupied while subtracting indirect RAM from an accumulator along with borrow under the execution of SUBB A, @R_i ?
   (a) 1 (b) 2
   (c) 3 (d) 4

9. What can be the oscillator period for the multiplication operation of A and B in accordance to 16-bit product especially in B:A registers?
   (a) 12 (b) 24
   (c) 36 (d) 48

10. Which form of instructions also belong to the category of logical instructions in addition to bitwise logical instructions?
   (a) Single-operand instructions
   (b) Rotate instructions
   (c) Swap instructions
   (d) All 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) Draw the architecture of ATTiny 15L controller.

Or

(b) Explain reset and interrupt handling.

12. (a) Explain EEPROM.

Or

(b) Explain about fuse bits.

13. (a) Explain PMW mode.

Or

(b) Explain ideal timer.

14. (a) Write in detail about Baud rate generation.

Or

(b) Write in detail about Microwise Interface.

15. (a) Draw the architecture of ATTiny 15L controller.

Or

(b) Explain SPI modes.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain atmel AVR family in detail.

Or

(b) Explain I/O space.

17. (a) Explain ADC noise reduction.

Or

(b) Explain memory programming.

18. (a) Write about the pin descriptions of COP8CBR9.

Or

(b) Explain boot ROM.

19. (a) Explain the interrupts in COP8 family.

Or

(b) Explain dual clock operation.

20. (a) Explain about file register file map.

Or

(b) Explain I/O ports.

———————

(6 pages) Reg. No. : .....

Code No. : 7179 **Sub. Code : PELM 24**

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2018.

Second Semester

Electronics

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. If modulation is 100% then signal amplitude is _____ carrier amplitude.
   (a) Equal to
   (b) Greater than
   (c) Less than
   (d) None of the above

2. As the modulation level is increases, the carrier power _____
   (a) Is increased
   (b) Remains the same
   (c) Is decreased
   (d) None of the above

3. Demodulation is done in _____
   (a) Receiving antenna
   (b) Transmitter
   (c) Radio receiver
   (d) Transmitting antenna

4. A high Q tuned circuit will permit an amplifier to have high _____
   (a) Fidelity
   (b) Frequency range
   (c) Sensitivity
   (d) Selectivity

5. In radio transmission the medium of transmission is _____
   (a) Space (b) An antenna
   (c) Cable (d) None of the above

6. If level of modulation is increased _____ power is increased
   (a) Carrier
   (b) Side band
   (c) Carrier as well as sideband
   (d) None of the above

7. In TV transmission, picture signal is _____ modulated
   (a) Frequency
   (b) Phase
   (c) Amplitude
   (d) None of the above

8. In a radio receiver, noise is generally developed at _____
   (a) IF stage
   (b) Receiving antenna
   (c) Audio stage
   (d) RF stage

9. Man made noise are _____ variations
   (a) Amplitude
   (b) Frequency
   (c) Phase
   (d) Both phase and frequency

10. The signal voltage included in the aerial of the radio receiver is of the order of _____
    (a) mv (b) μv
    (c) v (d) None of 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 communication system.

    Or

    (b) Explain phase modulation.

12. (a) Explain FM transmitter.

    Or

    (b) Explain FM demodulators.

13. (a) Explain IF amplifier.

    Or

    (b) Explain super Retrodyne receiver.

14. (a) Explain suppression of carrier.

Or

(b) Explain the pilot carrier receiver.

15. (a) Explain pulse and tone signaling.

Or

(b) Write 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) Write in detail about USB and LSB power relation.

Or

(b) Compare AM, FM and PM.

17. (a) Write in detail about reactance modulator.

Or

(b) Write in detail about varactor diode Modulator.

18. (a) Write in detail about mixer circuits.

Or

(b) Write in detail about automatic gain control circuits.

19. (a) Write in detail about filtering of unwanted sidebands.

Or

(b) Write in detail about single side band transmission.

20. (a) Write in detail about electronic telephone.

Or

(b) Write in detail about power line communication.

———————

(6 pages) Reg. No. : .....

Code No. : 7181 **Sub. Code : PECM 23**

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2018.

Second Semester

Electronic and Communication

MICRO CONTROLLERS

(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. What is the bit addressing range of addressable individual bits over the on-chip RAM.
   (a) 00H to FFH (b) 01H to 7FH
   (c) 00H to 7FH (d) 80H to FFH
2. In Atmel AVR family, which of timer can operate in the 16-bit condition?
   (a) Timer 0 (b) Timer 1
   (c) Timer 2 (d) All of the above
3. Fuse bits are programmable in
   (a) High-Voltage serial programming modes
   (b) Low-voltage serial programming modes
   (c) Both High and Low voltage serial programming modes
   (d) None of the above
4. Instruction CBI port B 1 means
   (a) Clearing the port B register
   (b) Clearing the first bit of the port B register
   (c) Setting the port B register
   (d) Setting the first bit of the port B register
5. In COPCBR9 processor, the ACD converter takes ——— to complete the conversion
   (a) 10 clock cycles (b) 15 clock cycles
   (c) 20 clock cycles (d) 25 clock cycles
6. COP 8 is a ——— architecture
   (a) RISC (b) Von Neumann
   (c) Harvard (d) Modified Harvard

7. The common application of HALT mode is
   (a) Used in laptop keyboards
   (b) Used in Remote control
   (c) Logging the data
   (d) Used in motor control
8. What is the function of SCON register?
   (a) To control SBUF and SMOD registers
   (b) To program the start bit, stop bit and data bits of framing
   (c) Both of the above
   (d) None of the above
9. In PIC 16F873 processor, which port is 6-bit wide?
   (a) Port A (b) Port B
   (c) Port C (d) Port D
10. Abbrevartion for I^2C is
    (a) Inter Integrated Circuit
    (b) Intel integrated Circuit
    (c) Integrated Inter Circuit
    (d) International integrated Circuit

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 internal and external memory interfacing of 8051.

    Or

    (b) Briefly explain the addressing modes of ATTiny 15L controller.

12. (a) Write about the various functions used Timers.

    Or

    (b) With neat diagram explain the function of Analog comparator in Timer.

13. (a) Briefly explain the concept of I/O port configuration is COP 8CBR9 processor.

    Or

    (b) Explain the following:
    (i) Option Register
    (ii) Virtual EEPROM.

14. (a) Explain the concept of baud rate generation in power saving modes.

Or

(b) Explain the master mode operation in micro wire interface.

15. (a) List out the features of PIC 16F873 processor.

Or

(b) What are the registers used in PIC 16F873.

PART C — (5 × 8 = 40 marks)

Answer the following by choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) How many ports are available in 8051 microcontroller? Explain the port operations with neat diagrams.

Or

(b) Explain the handling methods of Reset and Interrupt vectors in ATTiny 151 controller.

17. (a) Explain in detail about ADC noise reduction techniques in timers.

Or

(b) With a neat diagram explain port B registers and their functions.

18. (a) With a neat diagram explain the memory organization of COP8CHR9 processor.

Or

(b) Explain the following.

(i) Brownout reset

(ii) Boot-ROM

(iii) Electrical characteristics.

19. (a) How different input can be given in power saving mode? Explain in brief about multi input wake up.

Or

(b) How a waveform generated in power saving mode? Explain micro wire interface waveforms.

20. (a) What is Asynchronous serial port? Explain I²c modes.

Or

(b) With a neat diagram explain the memory organization and I/O ports of PIC 16F873 processor.

———————

(6 pages) DTH

Reg. No. : .....

Code No. : 21183 **Sub. Code : JACE 21/ JAIE 21 /SAIE 21/SACE 21**

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2018.

Second Semester

Information Technology Allied for Electronics/ Electronics & 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 :

1. In C, execution starts from ———— function.
   (a) Main ( ) (b) Library
   (c) Header files (d) User defined
2. ———— operator is known as the conditional operator.
   (a) || (b) & &
   (c) | ? (d) ? :
3. ———— loop is an Entry-controlled loop statement.
   (a) Do (b) FOR
   (c) WHILE (d) Do-while
4. A loop can be termined using the ———— statement.
   (a) break (b) continue
   (c) goto (d) none
5. Character Array is declared as ————.
   (a) char $a[w]$; (b) int+ $a[w]$;
   (c) string $a[w]$; (d) float $a[w]$;
6. If the two strings are identical, then strcmp ( ) function returns
   (a) –1 (b) 1
   (c) 0 (d) YES
7. In structures, each member has its ————.
   (a) Own storage location
   (b) Common storage
   (c) Own buffer
   (d) Stack area

8. The parameters associated with called function is known as ———— parameters.
   (a) Formal (b) Actual
   (c) Global (d) Bind
9. EOF is a ———— data type.
   (a) double (b) char
   (c) string (d) integer
10. Which mode is used to open an existing file for both reading and writing?
    (a) r (b) w
    (c) r+ (d) w+

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Discuss about conditional and bitwise operators.

    Or

    (b) Write about increment and decrement operators in C with examples.

12. (a) Write a C program for finding the greatest among given 3 number.

    Or

    (b) Give the syntax of switch statement and state the rules.

13. (a) Write a C program to find the average of n numbers.

    Or

    (b) Write a C program to sort an array of integers.

14. (a) What are structures? How will you initialize structures in C with example.

    Or

    (b) What is recursion? Discuss about recursive function with example.

15. (a) Describe the concepts of pointers.

    Or

    (b) Discuss in brief on random file access.

[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 operator precedence and associativity.

Or

(b) Discuss in detail about formatted output with suitable example.

17. (a) Explain Else if statement and nested if statement with example

Or

(b) Explain about

(i) While

(ii) Do-while

(iii) For-statement

18. (a) Explain multi dimensional array and write a program to find the row sum of the given n×m matrix.

Or

(b) Describe string handling function.

19. (a) How can you categorize the function in C explain?

Or

(b) Discuss the following :

(i) Structures within structures

(ii) Structures and functions

20. (a) Discuss the input operations on file.

Or

(b) Discuss how to access a variable through its pointer.

———————

(6 pages) Reg. No. : .....

Code No. : 6996 **Sub. Code : KELM 22/ PELM 22**

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2018.

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) Distances
(d) Signals

2. Deadline-driven constraints so called ————

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

3. Processor must accept and process frame before next frame arrives typically called ————

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

4. Which among the below stated lines represent the handshaking variant usually and only controlled by the software in the handshaking process?

(a) XON/XOFF (b) DCD and GND
(c) TD and RD (d) All the above

5. Caches can be converted in to software managed on-chip memories via ————

(a) block level (b) seek time
(c) line locking (d) line blocking

6. Average time for a particular task is constrained as well as is number of instances when some maximum time is exceeded, stated approach is known as ————

(a) hard real time systems
(b) real data constraints
(c) real time constraints
(d) soft real time systems

7. Radio signals are first received by antenna, amplified, passed through a mixer, then filtered, means ————

(a) modulated
(b) demodulated
(c) cellular telecommunication
(d) cellular telephony

8. Caches can be converted in to software managed on chip memories via

(a) Block level (b) Seek time
(c) Line locking (d) Line blocking

9. Stage that reads program data from memory in to instruction buffer queue is known as ————

(a) execution stage (b) address stage
(c) decode stage (d) fetch stage

10. Exponent variable is often shared by a set of fixed point variables, this style of arithmetic is also called ————

(a) unblocked floating point
(b) blocked floating point
(c) blocked fixed point
(d) unblocked fixed point

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 a control system?

Or

(b) Write the requirements of embedded systems.

12. (a) Draw the architecture of micro controller.

Or

(b) What is voice-over IP?

13. (a) What is protocol controller?

Or

(b) Write about communication interference channel.

14. (a) How will you sent a message over a serial link?

Or

(b) Write an embedded database application using example as salary.

15. (a) What is Networked Java?

Or

(b) Explain mobile java applications.

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 requirements of embedded systems.

Or

(b) Explain the detail process application of embedded systems in consumer electronics.

17. (a) Write in detail about serial communication with 8051 family of micro controller.

Or

(b) Explain voice-over IP.

18. (a) Explain communication interface standards.

Or

(b) Explain the types of embedded operating systems.

19. (a) Write about sending a message over a serial link.

Or

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

20. (a) Write in detail about mobile java applications.

Or

(b) Explain in detail about (SOC) system on a chip.

———————

(6 pages) Reg. No. : .....

Code No. : 6997 **Sub. Code : KELM 23/ PELM 23**

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2018.

Second Semester

Electronics

ADVANCED MICROPROCESSORS

(For those who joined in July 2016 and afterwards)

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The 16 bit flag of 8086 microprocessor is responsible to indicate _____
   (a) the condition of result of ALU operation
   (b) the condition of memory
   (c) the result of addition
   (d) the result of subtraction

2. The CF is known as _____
   (a) carry flag (b) condition flag
   (c) common flag (d) single flag

3. The SF is called as _____
   (a) service flag (b) sign flag
   (c) single flag (d) condition flag

4. The OF is called as _____
   (a) overflow flag (b) overdue flag
   (c) one flag (d) over flag

5. The IF is called as _____
   (a) initial flag (b) indicate flag
   (c) interrupt flag (d) inter flag

6. The register AX is formed by grouping _____
   (a) AH & AL (b) BH & BL
   (c) CH & CL (d) DH & DL

7. The SP is indicated by _____
   (a) single pointer (b) stack pointer
   (c) source pointer (d) destination pointer

8. The BP is indicated by _____
   (a) base pointer (b) binary pointer
   (c) bit pointer (d) digital pointer

9. The SS is called as _____
   (a) single stack (b) stack segment
   (c) sequence stack (d) random stack

10. The index register are used to hold _____
    (a) memory register
    (b) offset address
    (c) segment memory
    (d) offset memory

SECTION B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain the following in intel x86family.
    (i) register set
    (ii) addressing modes.

    Or

    (b) Explain real and virtual execution.

12. (a) Explain Pentium memory management.

    Or

    (b) Explain Pentium 4 microprocessors.

13. (a) Write in detail about on chip register file Vs cache evaluation.

    Or

    (b) Explain IBM RS/6000 in detail.

14. (a) Explain MIPS R4000.

Or

(b) Explain MC 88200.

15. (a) Explain ASIP.

Or

(b) Explain network processors.

SECTION C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Draw the architecture of intel x86 family.

Or

(b) Explain paging.

17. (a) Write about special Pentium registers.

Or

(b) Draw the architecture of Pentium IV microprocessor.

18. (a) Explain single stack, stack segment, sequence stack and random stack.

Or

(b) What is power PC?

19. (a) Draw the architecture of MIPS Rx000 family.

Or

(b) Draw the architecture of MC 88110.

20. (a) Draw EPIC architecture.

Or

(b) Explain DSPs.

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