

**Course Name: Embedded System**

**1. LPC 2148 pro development board has \_\_\_\_\_ on chip memory.**

- a) 500k
- b) 625k
- c) 512k
- d) 425k

**ANS:-C**

**2. The USB controller provides high speed interface to laptop/PC with a speed of \_\_\_\_\_**

- a) On-chip USB with 12Mb/s
- b) On-chip USB with 15Mb/s
- c) Peripheral USB with 12Mb/s
- d) Peripheral USB with 15Mb/s

**ANS:-A**

**3. Xbee/Bluetooth/Wifi wireless modules and SD/MMC card are included in the board?**

- a) True
- b) False

**ANS:-B**

**4. In LPC 2148 we require separate programmer?**

- a) True
- b) False

**ANS:- B**

**5. Which LCD display is present in LPC 2148 Development Board?**

- a) 8\*8 LED
- b) 2\*32 LCD
- c) 2\*16 LCD connected peripherally
- d) 2\*16 LCD on-chip

**ANS:- D**

**6. It have in system programming or in application programming?**

- a) True
- b) False

**ANS:-A**

**7. It provides real time debugging with the on chip real monitor software.**

- a) True
- b) False

**ANS:- A**

**8. Who is the founder of LPC2148 board?**

- a) Intel
- b) Atmel
- c) Motorola
- d) Philips

ANS:- D

**9. What is the program counter value when the board turns on?**

- a) 0x00000
- b) 0xFFFFF
- c) Where the previous program ends
- d) At the location where we write the code

ANS:- C

**10. Which IDE is supported by LPC2148 board?**

- a) Code Blocks
- b) AVR Studio 4
- c) Keil uVersion 4
- d) Walldorf

ANS:- D

**11. \_\_\_\_\_ bit ARM7TDMI controller is present?**

- a) 128 bit
- b) 8 bit
- d) 64 bit
- d) 32 bit

ANS:- C

**12. USB 2.0 full speed compliant device controller with \_\_\_\_\_ of end point RAM.**

- a) 6 kB
- b) 4 kB
- c) 2 kB
- d) 8 kB

ANS:- B

**13. Single 10-bit DAC provides variable \_\_\_\_\_ output.**

- a) Digital
- b) Analog
- c) Analog and digital
- d) Neither analog nor digital

ANS:- C

**14. Timer in the board has \_\_\_\_\_ compare and \_\_\_\_\_ capture channels.**

- a) 3 and 4
- b) 4 and 3
- c) 4 and 4

d) 3 and 3

ANS:- C

**15. What is the operating voltage of the board?**

a) 5v

b) 2.5v

c) 3

d) 4.5v

ANS:- D

**16. What is the processor used by ARM7?**

a) 8-bit CISC

b) 8-bit RISC

c) 32-bit CISC

d) 32-bit RISC

ANS:-D

**17. What is the instruction set used by ARM7?**

a) 16-bit instruction set

b) 32-bit instruction set

c) 64-bit instruction set

d) 8-bit instruction set

ANS:-A

**18. How many registers are there in ARM7?**

a) 35 register( 28 GPR and 7 SPR)

b) 37 registers(28 GPR and 9 SPR)

c) 37 registers(31 GPR and 6 SPR)

d) 35 register(30 GPR and 5 SPR)

ANS:-C

**19. ARM7 has a in-built debugging device?**

a) True

b) False

ANS:-A

**20. What is the capability of ARM7 f instruction for second?**

a) 110 MIPS

b) 150 MIPS

c) 125 MIPS

d) 130 MIPS

ANS:- D

**21. We have no use of having silicon customization?**

a) True

b) False

ANS:- B

**22. Which of the following has the same instruction set as ARM7?**

a) ARM6

- b) ARMv3
- c) ARM71a0
- d) ARMv4T

ANS:- B

**23. What are t, d, m, I stands for in ARM7TDMI?**

- a) Timer, Debug, Multiplex, ICE
- b) Thumb, Debug, Multiplier, ICE
- c) Timer, Debug, Modulation, IS
- d) Thumb, Debug, Multiplier, ICE

ANS:- A

**24. ARM stands for \_\_\_\_\_**

- a) Advanced RISC Machine
- b) Advanced RISC Methodology
- c) Advanced Reduced Machine
- d) Advanced Reduced Methodology

ANS:- C

**25. What are the profiles for ARM architecture?**

- a) A,R
- b) A,M
- c) A,R,M
- d) R,M

ANS:- C

**26. ARM7DI operates in which mode?**

- a) Big Endian
- b) Little Endian
- c) Both big and little Endian
- d) Neither big nor little Endian

ANS:- C

**27. In which of the following ARM processors virtual memory is present?**

- a) ARM7DI
- b) ARM7TDMI-S
- c) ARM7TDMI
- d) ARM7EJ-S

ANS:- A

**28. How many instruction pipelining is used in ARM7EJ-S?**

- a) 3-Stage
- b) 4-Stage
- c) 5-Stage
- d) 2-stage

ANS:- C

**29. How many bit data bus is used in ARM7EJ-s?**

- a) 32-bit
- b) 16-bit
- c) 8-bit
- d) Both 16 and 32 bit

**ANS:-A**

**30. What is the cache memory for ARM710T?**

- a) 12Kb
- b) 16Kb
- c) 32Kb:-
- d) 8Kb

**ANS:- D**

**31. Which of the following is the professional kit?**

- a) PK52
- b) CA51
- c) A51
- d) PK51

**ANS:- D**

**32. Which of the following is the Compiler kit?**

- a) CA51
- b) PK51
- c) A51
- d) A52

**ANS:- B**

**33. Which of the following is the Assembler kit?**

- a) PK51
- b) CA51
- c) A51
- d) A52

**ANS:- C**

**34. Does PK51 supports extended memory derivatives?**

- a) True
- b) False

**ANS:- A**

**35. \_\_\_\_\_ is a complete line of home IoT devices that includes smart switches.**

- a) Awair
- b) Canary
- c) Belkin's WeMo
- d) Cinder

**ANS:- C**

**36. Which device is a home security system?**

- a) Belkin's WeMo
- b) Awair
- c) Canary
- d) Cinder

**ANS:- C**

**37. \_\_\_\_\_ also offers a huge lineup of products related to home automation.**

- a) GE connected appliances
- b) Honeywell
- c) Eversense
- d) Cinder

**ANS:-B**

**38. \_\_\_\_\_ is the best for Internet connected thermostat.**

- a) Honeywell
- b) GE connected appliances
- c) Eversense
- d) Nest

**ANS:-D**

**39. \_\_\_\_\_ is known for its deadbolts and doorknobs.**

- a) GE connected appliances
- b) Eversense
- c) Nest
- d) Schlage

**ANS:-D**

**40. GPS module like SIM900/800 uses which protocol?**

- a) UART protocol
- b) USART protocol
- c) SPI protocol
- d) I2C protocol

**ANS:-A**

**41. Finger print sensor uses which interface?**

- a) USART protocol
- b) UART protocol
- c) SPI protocol
- d) I2C protocol

**ANS:- B**

**42. RS232 is used for long range wired communication.**

- a) True
- b) False

**ANS:- A**

**43. UART is similar to \_\_\_\_\_**

- a) SPI protocol
- b) I2C protocol
- c) HTTP protocol
- d) MQTT protocol

**ANS:-B**

**44. What does UART contains?**

- a) Parallel register
- b) Shift register
- c) Clock
- d) Parallel shift register

**ANS:- B**

**45. Communication in UART is \_\_\_\_\_**

- a) Only simple
- b) Only duplex
- c) Only full duplex
- d) Simplex, half duplex, full duplex

**ANS:-D**

**46. Start bit of UART is logic high.**

- a) True
- b) False

**ANS:-B**

**47. Which error occurs when the receiver can't process the character?**

- a) Overrun error
- b) Underrun error
- c) Framing error
- d) Break condition

**ANS:- A**

**48. What is WD1402A?**

- a) SPI
- b) USART
- c) SPIUART
- d) I2C

**ANS:- C**

**49. What is the speed of the 8250 UART?**

- a) 4800bits/sec
- b) 1200bits/sec
- c) 12000bit/sec
- d) 9600bits/sec

**ANS:- D**

**50. Which error occurs when UART transmitter has completed sending a character and the transmit buffer is empty?**

- a) Overrun error
- b) Underrun error
- c) Framing error
- d) Break condition

**ANS:- B**

**51. Which error occurs when the designated start and stop bits are not found?**

- a) Overrun error
- b) Underrun error
- c) Framing error
- d) Break condition

**ANS:-C**

**52. Secure digital card application uses which protocol?**

- a) UART
- b) SPI
- c) I2C
- d) USART

**ANS:- B**

**53. SPI device communicates in \_\_\_\_\_**

- a) Simplex
- b) Half duplex
- c) Full duplex
- d) Both half and full duplex

**ANS:- C**

**54. Do SPI have/has a single master?**

- a) True
- b) False

**ANS:- A**

**55. SPI is described as Asynchronous serial interface.**

- a) True
- b) False

**ANS:- B**

**56. How many logic signals are there in SPI?**

- a) 5 signals
- b) 6 signals



- c) 4 signals
- d) 7 signals

**ANS:-A**

**57. SPI uses how many lines?**

- a) 4 lines
- b) 1 line
- c) 3 lines
- d) 2 lines

**ANS:- D**

**58. MOSI means \_\_\_\_\_**

- a) Line for master to send data to the slave
- b) Line for the slave to send data to the master
- c) Line for the clock signal
- d) Line for the master to select which slave to send data to

**ANS:- A**

**59. MISO means \_\_\_\_\_**

- a) Line for master to send data to the slave
- b) Line for the slave to send data to the master
- c) Line for the clock signal
- d) Line for the master to select which slave to send data to

**ANS:- B**

**60. Which of the following is advantage in SPI?**

- a) No start and stop bits
- b) Use 4 wires
- c) Allows for single master
- d) Error checking is not present

**ANS:- A**

**61. Which of the following is disadvantage in SPI?**

- a) Full duplex communication
- b) Push pull drivers
- c) Unidirectional signals
- d) More pins

**ANS:- D**

**62. Which of the following is the type of SPI controller?**

- a) Queued SPI
- b) Microwire
- c) Microwire/plus
- d) Quad SPI

**ANS:- A**

**63. \_\_\_\_\_ is a predecessor of SPI.**

- a) Queued SPI
- b) Microwire
- c) Microwire/plus
- d) Quad SPI

**ANS:- B**

**64. Which has a half duplex communication?**

- a) Queued SPI
- b) Microwire
- c) Microwire/plus
- d) Quad SPI

**ANS:- B**

**65. Do SPI have internal flash?**

- a) True
- b) False

**ANS:-A**

**66. SMBUS stands for \_\_\_\_\_**

- a) Serial Memory Bus
- b) Serial Management Bus
- c) System Management Bus
- d) System Memory Bus

**ANS:-C**

**67. Two wire interface is also called as \_\_\_\_\_**

- a) UART
- b) SPI
- c) I2C
- d) USART

**ANS:-C**

**68. I2c will address large number of slave devices.**

- a) True
- b) False

**ANS:-A**

**69. SDA is having a \_\_\_\_\_ transition when the clock line SCL is high.**

- a) high to low
- b) low to high
- c) low to low
- d) high to high

**ANS:-A**

**70. Inter Integrated Circuit is a \_\_\_\_\_**

- a) Single master, single slave
- b) Multi master, single slave
- c) Single master, multi slave
- d) Multi master, multi slave

**ANS:- D**

**71. Typical voltages used are \_\_\_\_\_**

- a) 5v
- b) 3.3v
- c) 5v or 3.3v
- d) 2.5v

**ANS:- C**

**72. What is the speed of I2C bus?**

- a) 100 kbits/s
- b) 10 kbits/s
- c) 75 kbits/s
- d) 100 kbits/s and 10 kbits/s

**ANS:- D**

**73. Master transmits means \_\_\_\_\_**

- a) Master node is sending data to a slave
- b) Master node is receiving data from slave
- c) Slave node is transmitting data to master
- d) Slave node is sending data to master

**ANS:- A**

**74. Who sends the start bit?**

- a) Master receive
- b) Master transmit
- c) Slave transmit
- d) Slave receive

**ANS:- B**

**75. Which is the I2C messaging example?**

- a) 24c32 EPROM
- b) 24c32 EEPROM
- c) 24c33 EEPROM
- d) 24c33 EPROM

**ANS:-B**

**76. Are pull up registers required in I2C?**

- a) True
- b) False

**ANS:-A**

**77. How many types of addressing structures are there in I2C?**

- a) 4 types
- b) 3 types

c) 2 types

d) 5 types

**ANS:- C**

**78. All operating modes work under \_\_\_\_\_**

a) 11 kbit/s

b) 100 kbit/s

c) 15 kbit/s

d) 150 kbit/s

**ANS:- B**

**79. Which mode is highly compatible and simply tightens?**

a) Fast mode

b) High speed mode

c) Ultra fast mode

d) Both fast and high speed mode

**ANS:- A**

**80. What is the speed for fast mode?**

a) 100 kbit/s

b) 400 kbit/s

c) 150 kbit/s

d) 200 kbit/s

**ANS:- B**

**81. What is the speed for fast mode?**

a) 100 kbit/s

b) 3.4 Mbit/s

c) 150 kbit/s

d) 200 kbit/s

**ANS:-B**

**82. The main importance of ARM micro-processors is providing operation with \_\_\_\_\_**

(a) Low cost and low power consumption

(b) Higher degree of multi-tasking

(c) Lower error or glitches

(d) Efficient memory management

**ANS:-A**

**83. ARM processors where basically designed for \_\_\_\_\_**

(a) Main frame systems

(b) Distributed systems

(c) Mobile systems

(d) Super computers

**ANS:-C**

**84. The ARM processors doesn't support Byte address ability ?**

- (a) True
- (b) False

**ANS:-B**

**85. The address space in ARM is \_\_\_\_\_**

- (a)  $2^{24}$
- (b)  $2^{64}$
- (c)  $2^{16}$
- (d)  $2^{32}$

**ANS:-D**

**86. The address system supported by ARM systems is/are \_\_\_\_\_**

- (a) Little Endian
- (b) Big Endian
- (c) X-Little Endian
- (d) Both Little & Big Endian

**ANS:-D**

**87. Memory can be accessed in ARM systems by \_\_\_\_\_ instructions.**

- i) Store**
- ii) MOVE**
- iii) Load**
- iv) arithmetic**
- v) logical**

- (a) i,ii,iii
- (b) i,ii
- (c) i,iv,v
- (d) iii,iv,v

**ANS:- B**

**88. RISC stands for \_\_\_\_\_**

- (a) Restricted Instruction Sequencing Computer
- (b) Restricted Instruction Sequential Compiler
- (c) Reduced Instruction Set Control.
- (d) Reduced Induction Set Computer.

**ANS:- C**

**89. In ARM, PC is implemented using \_\_\_\_\_**

- (a) Caches
- (b) Special function register
- (c) General purpose register
- (d) Stack

**ANS:- C**

**90. The additional duplicate register used in ARM machines are called as**

- (a) Copied-registers
- (b) Banked registers
- (c) EXtra registers
- (d) Extential registers

**ANS:-B**

**91. The banked registers are used for \_\_\_\_\_**

- (a) Switching between supervisor and interrupt mode
- (b) Extended storing
- (c) Same as other general purpose registers
- (d) None of the mentioned

**ANS:- A**

**92. Each instruction in ARM machines is encoded into \_\_\_\_ Word.**

- (a) 2 byte
- (b) 3 byte
- (c) 4 byte
- (d) 8 byte

**ANS:-C**

**93. All instructions in ARM are conditionally executed.**

- (a) True
- (b) False

**ANS:-A**

**94.Thumb-2 technology is implemented in which of the following?**

- (a) All ARM processors
- (b) All ARMv7 processors
- (c) ARMv7-A processors only
- (d) ARMv7-A and ARMv7-R but not ARMv7-M

**ANS:-B**

**95.The ARM processor registers R13, R14, and R15 are architecturally used for special purposes.**

**Which is the correct respective sequence of special purpose registers?**

- (a) PC, LR, SP
- (b) LR, PC, SP
- (c) SP, LR, PC

(d) LR, SP, PC

ANS:- C

**96. CISC stands for \_\_\_\_\_**

(a) Complex Instruction Sequencing Computer

(b) Complex Instruction Sequential Compiler

(c) Complex Instruction Set Control

(d) Complex Induction Set Computer

ANS:- C

**97. Microcontrollers are called \_\_\_\_\_**

(a) application-specific integrated circuit

(b) applied system integration control

(c) application-specified integration circuit

ANS:- A

**98. The addressing mode where the EA of the operand is the contents of Rn is \_\_\_\_\_**

a) Pre-indexed mode

b) Pre-indexed with write back mode

c) Post-indexed mode

d) None of the mentioned

ANS:-C

**99. The effective address of the instruction written in Post-indexed mode, MOVE[Rn]+Rm is \_\_\_\_\_**

**MOVE[Rn]+Rm is \_\_\_\_\_**

a) EA = [Rn].

b) EA = [Rn + Rm].

c) EA = [Rn] + Rm

d) EA = [Rm] + Rn

ANS:- A

**100. LPC 1768 pro development board has \_\_\_\_\_ on chip memory.**

a) 500k

b) 625k

c) 512k

d) 425k

ANS:- C

**101. The USB controller provides high speed interface to laptop/PC with a speed of \_\_\_\_\_**

a) On-chip USB with 12Mb/s

b) On-chip USB with 15Mb/s

c) Peripheral USB with 12Mb/s

d) Peripheral USB with 15Mb/s

ANS:- A

**102. Xbee/Bluetooth/Wifi wireless modules and SD/MMC card are included in the board?**

- a) True
- b) False

**ANS:- A**

**103. In LPC 1768 we require separate programmer?**

- a) True
- b) False

**ANS:- B**

**104. Which LCD display is present in LPC 2148 Development Board?**

- a) 8\*8 LED
- b) 2\*32 LCD
- c) 2\*16 LCD connected peripherally
- d) 2\*16 LCD on-chip

**ANS:- D**

**105. It have in system programming or in application programming?**

- a) True
- b) False

**ANS:-A**

**106. It provides real time debugging with the on chip real monitor software.**

- a) True
- b) False

**ANS:- A**

**107. Who is the founder of LPC1768 board?**

- a) Intel
- b) Atmel
- c) Motorola
- d) Philips

**ANS:-D**

**108. What is the program counter value when the board turns on?**

- a) 0x00000
- b) 0xFFFFF
- c) Where the previous program ends
- d) At the location where we write the code

**ANS:- A**

**109. Which IDE is supported by LPC2148 board?**

- a) Code Blocks
- b) AVR Studio 4
- c) Keil uVersion 4
- d) Walldorf

**ANS:- C**

**110. \_\_\_\_\_ bit ARM CortexM3 controller is present?**



- a) 128 bit
- b) 8 bit
- d) 64 bit
- d) 32 bit

**ANS:- D**

**111. What is the processor used by ARM Cortex M3?**

- a) 8-bit CISC
- b) 8-bit RISC
- c) 32-bit CISC
- d) 32-bit RISC

**ANS:-D**

**112. What is the instruction set used by ARM Cortex M3?**

- a) 16-bit instruction set
- b) 32-bit instruction set
- c) 64-bit instruction set
- d) 8-bit instruction set

**ANS:- B**

**113. How many registers are there in ARM Cortex M3?**

- a) 35 register( 28 GPR and 7 SPR)
- b) 37 registers(28 GPR and 9 SPR)
- c) 37 registers(31 GPR and 6 SPR)
- d) 35 register(30 GPR and 5 SPR)

**ANS:- C**

**114. ARM Cortex M3 has a in-built debugging device?**

- a) True
- b) False

**ANS:- A**

**115. What is the capability of ARM Cortex M3 instruction for second?**

- a) 110 MIPS
- b) 150 MIPS
- c) 125 MIPS
- d) 130 MIPS

**ANS:- B**

**116. In Cortex-R processor series, which among the following represent/s dual core configuration along with the space saving the floating point unit?**

- a. Cortex-R 4
- b. Cortex-R 5
- c. Cortex-R 7
- d. All of the above

**ANS:-B**

**117. Which types of an embedded systems involve the coding at a simple level in an embedded 'C', without any necessity of RTOS?**

- a. Small Scale Embedded Systems
- b. Medium Scale Embedded Systems
- c. Sophisticated Embedded Systems
- d. All of the above

**ANS:-A**

**118. What is/are the configuration status of control unit in RISC Processors?**

- a. Hardwired
- b. Microprogrammed
- c. Both a and b
- d. None of the above

**ANS:-A**

**119. How is the nature of instruction size in CISC processors?**

- a. Fixed
- b. Variable
- c. Both a and b
- d. None of the above

**ANS:-B**

**120. Performance of Cortex-M3 processor with CoreMark 1.0 benchmark is**

- a. 1.25 MHz
- b. 3.34 MHz
- c. 12.56 MHz
- d. 1.98 MHz

**ANS:-B**