

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
- c) 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 _____

- 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
- c) 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