**S .Y. B. Sc. (IT) (Semester-IV)**

**Semester Examination**

**Sample Questions**

**Year 2021-2022**

**Subject: Introduction to embedded system**

**Multiple Choice Questions**

1. What is CISC?
2. Computing instruction set complex
3. Complex instruction set computing
4. Complementary instruction set computing
5. Complex instruction set complementary
6. It retains its content when power is remove What type of memory is this?
7. Volatile memory
8. Non-volatile memory
9. RAM
10. SRAM
11. What kind of visual panel is used for seven segmented display?
12. LED
13. LCD
14. Binary output
15. Analogue output
16. An embedded system can do task
17. multi task at a time
18. single task at a time
19. specific task
20. No task are performed.
21. An embedded system must have\_\_\_\_\_
22. hard disk
23. processor and memory
24. operating system
25. processor and input-output unit(s)
26. Which of the following is not an example of a ‘Small scale embedded System’?
27. Electronic Barbie doll
28. simple calculator
29. Cell phone
30. Electronic toy car
31. Which of the following is (are) an intended purpose(s) of embedded systems?

1.Data Collection

2.Data Processing

3.Data Communication

1. 1 and 2 only
2. 1 only
3. 2 and 3 only
4. 1,2,and 3
5. Which of the following is an (are) example(s) of embedded system for data communication?
6. USB Mass storage device
7. Network router
8. Digital camera
9. Music player
10. The instruction set of RISC processor is
11. Simple and lesser in number
12. complex and lesser in number
13. Simple and larger in number
14. Complex and larger in number
15. Which characteristics of an embedded system exhibit the responsiveness to the assortments or variations in system's environment by computing specific results for real-time applications without any kind of postponement?
16. Single-functioned Characteristic
17. Tightly-constraint Characteristics
18. Reactive & Real time Characteristics
19. All characteristics
20. What is the directional nature of two active wires SDA & SCL usually adopted in I2C Bus for carrying the information between the devices?
21. Uni-directional
22. Bi-directional
23. Multi-directional
24. Any direction
25. Which potential mode of operation indicate the frequent sending of byte to the slave corresponding to the reception of an acknowledge signal when it becomes desirable for the master to write to the slave during data transmission in I2C bus?
26. Master in master-transmit mode & Slave in slave-receive mode
27. Slave in slave-transmit mode & Master in master-receive mode
28. Master in master-transmit mode as well as master-receive mode
29. Slave in slave-transmit mode as well as slave-receive mode
30. Which kind of assembler does not generate the programs in similar language as that used by micro-controllers by developing the program in high-level languages making them as machine independent?
31. Macro Assembler
32. Cross Assembler
33. Meta Assembler
34. Machine assembler
35. Which development tool / program have the potential to allocate the specific addresses so as to load the object code into memory?
36. Loader
37. Locator
38. Library
39. Linker
40. The assembler list file generated by an assembler mainly includes \_\_\_\_\_\_\_\_\_\_
41. binary codes
42. statements
43. instruction
44. architecture
45. Which architectural scheme has a provision of two sets for address & data buses between CPU and memory?
46. Harvard architecture
47. Von-Neumann architecture
48. Princeton architecture
49. Microprocessor architecture
50. Which is/are the non- operational quality attribute?
51. Testability and Debug-ability
52. reliability
53. Throughput
54. Response
55. \_\_\_\_\_\_\_\_\_\_\_Deals with the possible damage that can happen to the operating person and environment due to the breakdown of an embedded system or due to the emission of hazardous materials from the embedded products.
56. Testability and Debug-ability
57. Safety
58. security
59. reliability
60. Confidentiality, Integrity and Availability are three corner stones of \_\_\_\_\_\_\_\_
61. Testability and Debug-ability
62. safety
63. security
64. reliability
65. Which one of the following is UV erasable?
66. Flash memory
67. SRAM
68. EPROM
69. DRAM
70. How the input terminals are associated with external environments?
71. Actuators
72. Sensors
73. Inputs
74. Outputs
75. Why is SRAM more preferably in non-volatile memory?
76. low-cost
77. high-cost
78. low power consumption
79. transistor as a storage element
80. \_\_\_\_\_\_\_\_\_\_\_\_is an ISO defined serial communication bus originally developed for the automotive industry.
81. CAN
82. LAN
83. WAN
84. MAN
85. Embedded system supposed to do \_\_\_\_\_\_\_\_\_specific task.
86. 1
87. 2
88. 3
89. 4
90. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_is the function called when a particular interrupt occurs.
91. IRS
92. ISR
93. IRR
94. ISS
95. \_\_\_\_\_\_\_\_\_\_\_\_method simply uses a code section which checks a particular flag or status of operation.
96. memory map
97. IO map
98. Interrupt map
99. Polling
100. Memory that doesn’t loses its contents when power is lost is:
101. Volatile memory
102. Non-volatile memory
103. A and B
104. No such memory
105. The two kind of main memory are
106. primary and secondary
107. direct and sequential
108. floppy disk and hard disk
109. one of these
110. Which of the following memories below is often used in typical computer operation?
111. SRAM
112. DRAM
113. HDD
114. FDD
115. DMA stands for\_\_\_\_\_\_\_\_\_
116. Direct Memory Access
117. Depend Memory Access
118. Data Memory Access
119. Data Memory address
120. There are types of watchdog timer
121. 2
122. 3
123. 4
124. 5
125. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is a method of transferring data from the computer's RAM to another part of the computer without processing it using the CPU.
126. DMA
127. DMM
128. AMD
129. DAM
130. There are \_\_\_\_\_\_\_\_types of Hybrid memory devices
131. 2
132. 3
133. 4
134. 5
135. Each storage location of EPROM consist of a single\_\_\_\_\_\_\_
136. FET
137. Diode
138. Gate
139. No device used
140. AGC was designed on\_\_\_\_\_\_words of ROM & \_\_\_\_\_\_\_\_\_words of RAM
141. 256 and 4K
142. 1 k and 1k
143. 4K and 256
144. 4k and 4k
145. Embedded system designed for the purpose of \_\_\_\_\_\_\_\_\_\_\_performs acquisition of data from the external world.
146. Data communication
147. data signal processing
148. monitoring
149. data collection
150. the \_\_\_\_\_\_\_\_\_ connected to the output port are controlled according to the changes in the input variable.
151. Sensors
152. interface
153. buttons
154. actuators
155. A \_\_\_\_\_\_\_\_\_\_is a silicon chip representing a central processing unit.
156. microprocessor
157. device
158. interrupt
159. processing
160. A microprocessor is a \_\_\_\_\_\_ unit
161. dependent
162. independent
163. individual
164. reverse
165. What is RISC?
166. Reduced interrupt set computing.
167. Reduced interpret set computing.
168. Reduced instruction safe computing
169. Reduced Instruction Set Computing
170. embedded system which are simple in application and where the performance requirement are not critical are \_\_\_\_\_\_\_\_\_\_
171. small scaled embedded system
172. medium scaled embedded system
173. large scale embedded system
174. moderate scale embedded system
175. In \_\_\_\_\_\_\_\_\_\_\_\_ system Applications are alterable by the user
176. Embedded system
177. Data communication system
178. General purpose system
179. Special purpose system
180. \_\_\_\_\_\_\_\_\_\_\_Built around 32-bit µp & 16-bit µc.Concepts like Digital Signal Processors(DSPs), Application Specific Integrated Circuits(ASICs) evolved in this generation
181. Fourth generation
182. Third generation
183. Second generation
184. First generation
185. *Intel 4004*  is developed in year\_\_\_\_\_\_\_\_\_\_
186. April 1972.
187. November 1971
188. July 1976
189. April 1974
190. \_\_\_\_\_\_\_\_\_\_\_\_contains lesser number of instructions.
191. RISC
192. CISC
193. TISC
194. PISC
195. \_\_\_\_\_\_\_\_\_\_means the higher order data byte is stored in memory at the lowest and the lower order data byte at the highest address.
196. Big-endian
197. Little endian
198. Mid endian
199. Large endian
200. The internal RAM memory of the 8051 is:
201. 32 bytes
202. 64 bytes
203. 128 bytes
204. 256 bytes
205. The 8051 has 16-bit counter/timers.
206. 1
207. 2
208. 3
209. 4
210. The 8051 can handle interrupt sources.
211. 3
212. 4
213. 5
214. 6
215. An alternate function of port pin P3.4 in the 8051 is:
216. Timer 0
217. Timer 1
218. interrupt 0
219. interrupt 1
220. The I/O ports that are used as address and data for external memory are\_\_\_\_\_\_
221. ports 1 and 2
222. ports 1 and 3
223. ports 0 and 2
224. ports 0 and 3
225. Microcontrollers often have\_\_\_\_

1.CPUs

2.RAM

3.ROM

1. Only 1
2. Only 2 and 3
3. Only 1 and 3
4. 1,2,and 3
5. The total external data memory that can be interfaced to the 8051 is:
6. 32K
7. 64K
8. 128K
9. 256K
10. 8051 series has how many 16 bit registers?
11. 2
12. 3
13. 1
14. 0
15. When 8051 wakes up then 0x00 is loaded to which register?
16. DPTR
17. SP
18. PC
19. PSW
20. When the micro controller executes some arithmetic operations, then the flag bits of which register are affected?
21. PSW
22. SP
23. DPTR
24. PC
25. There is/are ways to create a time delay in 8051C
26. Using a simple For Loop
27. Using 8051 timers
28. only A
29. both A and B
30. An alternate function of port pin P3.0 RX in the 8051 is:\_\_\_\_\_\_\_\_
31. serial port input
32. serial port output
33. memory write strobe
34. memory read strobe
35. FPGAs stands for\_\_\_\_\_\_\_\_\_\_
36. Full programmable gate arrays
37. Field protocol gate arrays
38. Field programmable gate area
39. Field Programmable Gate Arrays
40. \_\_\_\_\_\_\_\_\_\_\_\_generates synchronization clock pulses.
41. SCL
42. SDA
43. SCA
44. SDL
45. \_\_\_\_\_\_\_\_\_\_\_is a measure of quickness of the system.
46. Request
47. Response
48. Throughput
49. Delay
50. A \_\_\_\_\_\_\_\_\_\_\_\_ is transducer device that converts energy from one form to other for any measurement or control purpose.
51. Actuator
52. LED
53. Sensor
54. Application
55. RS-232 is example of a \_\_\_\_\_\_\_\_\_\_ communication interface
56. Onbord communication interface
57. External communication interface
58. Internal communication interface
59. Peripheral communication interface
60. The configuration settings a developer dumps into the code memory of embedded system is called as\_\_\_\_\_\_\_\_
61. Communication interface
62. Data collection
63. Data processing
64. Embedded firmware
65. Which system software is used to convert a "C" language program in to language of another processor?
66. Compiler
67. Linker
68. Cross compiler
69. Cross Linker
70. Embedded C programming language support instructions of normal "Language
71. All
72. Some
73. Specific
74. None
75. Cross Compiler converts
76. Program into C language into binary language
77. Programming C language into another language.
78. Program in C language into program of another processors language
79. Both A & B
80. \_\_\_\_\_\_\_\_\_\_\_\_\_Is the function of system can be changed or upgraded by changing the software or replacing one IC with another one without incurring a heavy additional cost?
81. Compatibility
82. Size
83. Availability
84. Functionality Testing
85. COFF stands for\_\_\_\_\_\_\_\_\_\_
86. Common Object File Format
87. Center object file format
88. Compiling object file
89. Computer object format
90. The job of\_\_\_\_\_\_\_\_\_\_\_\_\_is mainly to translate human readable program into equivalent set of opcodes.
91. Compiler
92. Linker
93. Cross compiler
94. Cross Linker
95. All of the code blocks are collected into a section called\_\_\_\_\_\_\_\_\_\_\_\_
96. gcc
97. text
98. data
99. bss
100. The job of\_\_\_\_\_\_\_\_\_\_\_is to combine all object files and in the process to resolve all of the unresolved symbols.
101. Compiler
102. Linker
103. Cross compiler
104. Cross Linker
105. The tool that performs the conversion from relocatable program to executable binary image is called as\_\_\_\_\_\_\_\_\_\_
106. Compiler
107. Linker
108. Cross compiler
109. Locator
110. The code to be run on the target embedded system is called as\_\_\_\_\_\_\_\_
111. binary executable code
112. hex code
113. C code
114. Interfacing code
115. The process of putting this code in the memory chip of the target embedded system is called\_\_\_\_\_\_\_\_\_\_\_\_
116. Downloading
117. Uploading
118. Compiling
119. Linking
120. A\_\_\_\_\_\_\_\_\_\_\_\_can be used to download, execute and debug embedded software over a serial port or network connection between host and target.
121. Cross Compiler
122. Remote Linker
123. Remote Debugger
124. Remote compiler
125. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_These is/are the way/ways of downloading the binary image on the embedded system
126. Using a Device Programmer
127. Using in system Programmer
128. A and B
129. No access to anyone
130. A debug monitor is also called as\_\_\_\_\_\_\_\_\_\_
131. RAM Monitor
132. ROM Monitor
133. target Monitor
134. host monitor
135. A \_\_\_\_\_\_\_\_\_\_\_is a piece of laboratory equipment designed specifically for troubleshooting digital hardware.
136. Emulators
137. Simulators
138. logic analyzer
139. Remote Debugger
140. \_\_\_\_\_\_\_\_\_\_\_\_\_can be used as a starting program in embedded system.
141. Hello world
142. Blinking LED
143. 7 segment display
144. stepper motor
145. CRO stands for
146. Cathode Ray Oscilloscope
147. Current Resistance Oscillator
148. Central Resistance Oscillator
149. Capacitance Resistance Oscilloscope
150. List the important considerations when selecting a processor.

1.Instruction set.

2.Maximum bits in an operand

3.Clock frequency

1. 1 only
2. 2 only
3. 3 only
4. 1,2,and 3 all
5. An IDE stands for\_\_\_\_\_\_\_\_\_
6. Integrated design environment
7. Integrated debugging environment
8. Integrated development environment
9. Integrated deal environment
10. There are phases to Product development.
11. 2
12. 3
13. 4
14. 5
15. \_\_\_\_\_\_\_\_\_\_\_involves understanding what product needs to be developed
16. Analysis
17. Design
18. Implementation
19. Testing
20. \_\_\_\_\_\_\_\_\_\_\_\_\_\_involves what approach to be used to build the product
21. Analysis
22. Design
23. Implementation
24. Testing
25. \_\_\_\_\_\_\_\_\_\_\_\_\_is developing the product by realizing the design.
26. Analysis
27. Design
28. Implementation
29. Testing
30. \_\_\_\_\_\_\_\_\_\_\_\_\_is the process of launching the first fully functional model of the product in the market.
31. Analysis
32. Design
33. testing
34. Deployment
35. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ phase is the final phase in a product development life cycle where the product is declared as discontinued from the market.
36. Retirement
37. testing
38. Deployment
39. Support
40. The\_\_\_\_\_\_\_\_\_\_\_\_ is the repetitive process in which the Waterfall model is repeated over and over to correct the ambiguities observed in each iteration.
41. iterative model
42. Waterfall model
43. Prototyping Model
44. Spiral Model
45. OMA stands for
46. open mobile alliance
47. object mobile alliance
48. opcode mobile alliance
49. operate mobile alliance
50. \_\_\_\_\_\_\_\_\_ is an operating system based on the Linux kernel, and designed primarily for touchscreen mobile devices such as smartphones and tablet computers
51. source
52. Android
53. OMA
54. OHA
55. \_\_\_\_\_\_\_\_is a project to create a family of open source mobile phones, including the hardware specification and the operating system
56. bottleneck
57. embedded
58. android
59. Openmoko
60. \_\_\_\_\_\_\_\_\_is the software that runs on the host computer and is

responsible for interfacing with the embedded system

1. Embedded Software
2. embedded firmware
3. embedded hardware
4. embedded interface
5. Depending on the requirement, \_\_\_\_\_\_\_\_\_\_\_\_\_\_ can change their functionality to adapt to the new requirement.
6. operating system
7. reconfigurable processors
8. multicore processors
9. SoC
10. \_\_\_\_\_\_\_\_concept makes it possible to integrate almost all functional systems required to build an embedded product into a single chip.
11. Multicore
12. system
13. System on Chip (SoC)
14. Application
15. A \_\_\_\_\_\_\_\_ is a utility program that duplicates the target CPU and simulates the features and instructions supported by target CPU
16. emulator
17. software
18. hardware
19. simulator
20. \_\_\_\_\_\_\_contains information about the link/locate process and is composed of a number of sections
21. object file
22. processor file
23. header file
24. Map file
25. \_\_\_\_\_\_\_\_\_\_ are the basic interface between and embedded processor and peripheral device.
26. Control and status registers
27. CRC register
28. Checksum register
29. memory register
30. In the \_\_\_\_\_\_\_\_\_\_ we need to confirm that each of the address pins can be set to 0 and 1 without affecting any of the others
31. address bus test
32. control bus test
33. Data Bus Test
34. system bus test