**Department of Computer Science**

**Class: T. Y. B. Sc. (CS)**

**Semester: VI**

**Subject: Wireless Sensor Networks and Mobile Communication**

**Sample Questions**

**Multiple Choice Questions**

1. \_\_\_\_\_\_\_\_\_\_is a technique used to gather information about a physical object or process, including the occurrence of events .
2. Actuating
3. Stationing
4. Sensing
5. System
6. If the sensors require external power, they are referred to as \_\_\_\_\_\_\_\_\_\_\_\_.
7. Passive Sensor
8. Laser sensor
9. Solar Sensor
10. Active sensors
11. WSN stands for \_\_\_\_\_\_\_\_\_\_.
12. Wireless sensor network
13. Wired sensor network
14. Wired sensor node
15. Wireless sensor node
16. WSN is built with \_\_\_\_\_\_\_\_\_\_.
17. Switches
18. Wires
19. Nodes
20. Radio
21. What is the purpose of radio transceiver in WSN?
22. Receives the data
23. Transits the data
24. Both transmits and receives the data
25. Convert data
26. Networks of interconnected, battery-powered, wireless sensors placed in the physical environment
27. Wireless Access Point
28. Wireless Sensor Networks (WSN)
29. Personal Area Network (PAN)
30. Wireless Local Area Network (WLAN)
31. What is the type of network in which the topology changes from time to time?
32. Wi-Fi
33. Cell Network
34. LAN
35. MANET
36. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an operating system for low power embedded devices, especially wireless sensor devices.
37. nesC
38. TinyOS
39. TOSSIM
40. NETSIM
41. In \_\_\_\_\_\_\_\_\_ , each mobile node is an independent node, which act as a host and a router.
42. Wireless Sensor Network
43. Mobile Ad-hoc Network
44. Computer Ad-hoc Network
45. Wired Sensor Network
46. \_\_\_\_\_\_\_\_\_\_\_\_\_ is entity where information needed
47. Sink node
48. Source node
49. Hop node
50. Network node
51. The basic unit of nesC code are \_\_\_\_\_\_\_\_\_\_.
52. Modules
53. Content
54. Components
55. Nodes
56. An \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a specialized processor, custom designed for a given application such as, for example, high-speed routers and switches.
57. API
58. ASC
59. ASIC
60. ASI
61. \_\_\_\_\_\_\_\_\_\_\_is a technique in which two or more processes start, run in an interleaved fashion through context switching and complete in an overlapping time period by managing access to shared resources.
62. Parallel programming
63. event-driven programming
64. Concurrent programming
65. Task Driven Programming
66. \_\_\_\_\_\_\_\_\_\_\_\_\_ is a component which can interact directly with other components with help of interface specification exits between them
67. Network
68. Service Interface
69. Application
70. Mobility
71. The development of WSN was motivated from \_\_\_\_\_\_\_\_\_\_.
72. Military
73. Hospitals
74. Schools
75. Offices
76. The energy source used in WSN are \_\_\_\_\_\_\_\_\_\_.
77. Inverter
78. Capacitor
79. Resistor
80. Battery
81. A sensor node with a processing unit has \_\_\_\_\_\_ computational power.
82. Limited
83. Minimum
84. Maximum
85. 0
86. A\_\_\_\_\_\_\_\_\_\_\_ sensing system is inherently more robust against individual sensor node or link failures, because of redundancy in the network
87. Centralized
88. Decentralized
89. Ad-hoc
90. Multi hope
91. FPGA stands for…
92. Field Program Gate Array
93. First Program Gate Array
94. Field Programmable Gate Array
95. First programmable Gate Array
96. \_\_\_\_\_\_\_\_\_\_\_\_\_\_topology nodes communicate directly with help of gateways.
97. Multi Hop Network
98. Single Hop network
99. Mesh Hop Network
100. Star Hop Network
101. The mobile nodes (devices) add or leave a Mobile Ad-hoc Network, changing the \_\_\_\_\_ of this network over time.
102. infrastructure
103. topology
104. transmission range
105. transmission speed
106. Which of the following correctly describes an advantage of a Mobile Ad-hoc Network?
107. Autonomous nodes that can act as both a host and a router.
108. Maximum Security
109. Faster than Wired networks
110. Highly Reliable
111. Mobile Ad-hoc Networks are less secure because \_\_\_\_\_.
112. there is no firewall in a MANET as it is a decentralized network.
113. the nodes are autonomous.
114. the MANET is a centralized network.
115. the MANET uses multi-hop transmission.
116. Following are the types of routing on MANET, except:
117. Proactive Routing
118. Hybrid Routing
119. Hyper Active Routing
120. Reactive Routing
121. What is MANET?
122. Multiple and network
123. Mobile ad hoc network
124. Main ad hoc network evaluation
125. Multiple ad hoc network
126. \_\_\_\_\_\_\_ occurs when a node gets copies of same messages from multiple number of its neighbours.
127. Flooding
128. Implosion
129. Overlap
130. Blindness
131. \_\_\_\_\_\_\_ message is used to advertise new data in SPIN
132. DATA
133. REQ
134. ADV
135. MSG
136. Which sublayer of the data link layer performs data link functions that depend upon the type of medium?
137. logical link control sublayer
138. media access control sublayer
139. network interface control sublayer
140. error control sublayer
141. The two sub-layers of a Data Link layer are \_\_\_.
142. LLC - Logical Link Control Layer
143. MAC - Medium Access Control Layer
144. LLC and MAC
145. Data Layer
146. This is what happens if two devices on the same Ethernet network determine the network is free, but attempt to transmit data at exactly the same time.
147. overlap
148. crossover
149. collision
150. Implosion
151. Which one of the following task is not done by data link layer?
152. framing
153. error control
154. flow control
155. channel coding
156. The data link layer takes the packets from \_\_\_\_\_ and encapsulates them into frames for transmission.
157. network layer
158. physical layer
159. transport layer
160. application layer
161. Frequency division multiple access (FDMA) assigns \_\_\_\_\_\_ channels to \_\_\_\_\_\_\_ users.
162. Individual, individual
163. Many, individual
164. Individual, many
165. Many, many
166. \_\_\_\_\_\_\_\_\_\_\_\_ is packet based data service
167. GPRS
168. HSCSD
169. RLC
170. MAC
171. \_\_\_\_\_\_\_\_\_\_ are utilized to allow synchronization of the receivers between different slots and frames.
172. Preamble
173. Data
174. Guard bits
175. Trail bits
176. TDMA is a multiple access technique that has
177. Different users in different time slots
178. Each user is assigned unique frequency slots
179. Each user is assigned a unique code sequence
180. Each signal is modulated with frequency modulation technique
181. TDMA allows the user to have
182. Use of same frequency channel for same time slot
183. Use of same frequency channel for different time slot
184. Use of same time slot for different frequency channel
185. Use of different time slot for different frequency channels
186. Guard band is
187. The small unused bandwidth between the frequency channels to avoid

interference

1. The bandwidth allotted to the signal
2. The channel spectrum
3. The spectrum acquired by the noise between the signal
4. In \_\_\_\_\_\_\_\_ each station sends a frame whenever it has a frame to send.
5. pure ALOHA
6. slotted ALOHA
7. CSMA
8. CSMA/CD
9. In \_\_\_\_\_\_\_\_\_\_, each station is forced to send only at the beginning of the time slot.
10. pure ALOHA
11. slotted ALOHA
12. CSMA
13. CSMA/CD
14. In the \_\_\_\_\_\_\_\_\_ method, after the station finds the line idle, it sends its frame immediately. If the line is not idle, it continuously senses the line until it finds it idle.
15. nonpersistent
16. 1-persistent
17. p-persistent
18. t- persistent
19. In the \_\_\_\_\_\_\_\_method, a station that has a frame to send senses the line. If the line is not idle, it waits a Fixed interval of time and then senses the line again.
20. nonpersistent
21. 1-persistent
22. p-persistent
23. t- persistent
24. In the \_\_\_\_\_\_\_method, after the station finds the line idle it sends or refrain from sending based on the outcome of a random number generator. If the line is busy, it tries again.
25. nonpersistent
26. 1-persistent
27. p-persistent
28. t- persistent
29. In \_\_\_\_\_\_\_\_, a station monitors the medium after it sends a frame to see if the transmission was successful. If so, the station is finished. If, however, there is a collision, the frame is sent again.
30. CSMA
31. FDMA
32. CDMA
33. TDMA
34. To avoid collisions on wireless networks, \_\_\_\_\_\_\_\_was invented.
35. CSMA/CA
36. CSMA/CD
37. TDMA
38. FDMA
39. In \_\_\_\_\_\_\_, collisions are avoided through the use of three strategies: the interframe space, the contention window, and acknowledgments.
40. CSMA/CA
41. CSMA/CD
42. CDMA
43. FDMA
44. The term that refers to the time in which the Request to Send (RTS) and Clear to Send (CTS) control frames are in transition is called
45. Hand shaking period
46. Back-off time
47. Frame exchange timeline
48. timeline
49. \_\_\_\_\_\_ is the core of WSN which collects data from sensors.
50. controller
51. processor
52. transceiver
53. Power Amplifier
54. The device used to convert bit stream to and from radio waves is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
55. transceiver
56. antenna
57. actuator
58. controller
59. \_\_\_\_\_\_\_\_\_\_\_ is an operating system used in WSN.
60. Linux
61. NesC
62. Tinyos
63. Windows 95
64. \_\_\_\_\_\_ useful in WSN as they can reduce their power consumption by going into sleep states where only controller parts are active.
65. microcontroller
66. processor
67. transceiver
68. power amplifier
69. \_\_\_\_\_\_\_\_\_\_\_is one of the hardware components in a wireless sensor
70. Memory
71. Video card
72. GPU
73. CPU
74. The System will switch the call to new cell site without interrupting the call or changing user This procedure is called as the\_\_\_\_\_\_\_\_\_\_\_\_\_
75. Handoff
76. Interference
77. Cluster
78. Mobile
79. SPIN Stands For\_\_\_\_\_\_\_\_\_
80. Sensor Protocols for Information Via Negotiation
81. Sensor Protocol for Invention Via Negotiation
82. Sensor Protocol for Investment Via Negotiation
83. Sensor Protocol for Internet Via Negotiation
84. \_\_\_\_\_\_\_\_ is an entity in WSN from which information originates.
85. Sink
86. Source
87. processor
88. transreceiver
89. FDMA,TDMA and CDMA comes under :
90. Fixed assignment protocol
91. Demand assignment protocol
92. Random assignment protocol
93. Transport control protocol
94. Which MAC protocol is used in WSN to reduce energy consumption and support self configuration?
95. Sensor-MAC protocol
96. Leach Protocol
97. Y-MAC Protocol
98. SPIN
99. Which technique is used for spreading the BW of the transmitted data?
100. Spread Spectrum
101. TDM
102. FDM
103. CDM
104. LEACH stands for :
105. Low-Energy Adaptive Clustering Hierarchy
106. Low- Energy Adhoc Cluster Hierarchy
107. Low-Efficiency Alternate Clustering Hierarchy
108. Low-Energy All Clustering Hierarchy
109. \_\_\_\_\_\_\_\_\_\_\_is a process of simultaneously transmitting two or more individual signal over a signal over a single communication channel’
110. Multiplexing
111. Overpassing
112. Demultiplexing
113. Underpassing
114. Garuda comes under the downstream reliability group based on a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ architecture.
115. One tier
116. Two tier
117. Three tier
118. N tier
119. A\_\_\_\_\_\_\_ tells us about the manner in which antenna radiates power in different direction is known as the addition pattern of antenna
120. Graph
121. Tree
122. Route
123. topology
124. LEACH is a \_\_\_\_\_\_\_ based protocol
125. Star
126. Clustering
127. Area
128. Packet
129. ALOHA comes under
130. Routing Protocol
131. Transport Control Protocol
132. MAC Protocol
133. Session layer protocol
134. Mobile communication can be setup with?
135. Repeater
136. Antenna
137. Access point
138. Hub
139. The Synchronous orbit which is parallel to the equator is known as \_\_\_\_\_\_\_\_\_
140. GEO
141. MEO
142. LEO
143. HEo
144. \_\_\_\_\_\_\_\_\_\_ supports the operation and maintenance of GSM.
145. BSS
146. NSS
147. OSS
148. MSC
149. Which part of GSM is also known as core network?
150. Network and switching subsystem
151. Base station subsystem
152. GPRS Network
153. Operation support system
154. The transmitter-receiver combination in the satellite is known as a
155. Relay
156. Repeater
157. Transponder
158. Duplexer
159. What is a cluster in a cellular system?
160. Group of frequencies
161. Group of cells
162. Group of subscribers
163. Group of mobile systems
164. UMTS use which multiple access technique?
165. CDMA
166. TDMA
167. FDMA
168. SDMA
169. \_\_\_\_\_\_\_\_\_\_ is the main signalling layer of DECT
170. Physical Layer
171. Data link layer
172. Network layer
173. Mac layer
174. Multihop network operates on \_\_\_\_\_\_\_\_\_\_\_\_\_\_ principle.
175. Store Packet
176. Forward Packet
177. Store and Forward Packet
178. Receive and Update Packet
179. In \_\_\_\_\_\_\_\_\_\_\_\_ we can transmit signals from a series of independent sources at the same time over the same frequency band.
180. Frequency Division Multiplexing
181. Time Division Multiplexing
182. Space Division Multiplexing
183. Code Division Multiplexing
184. Two components make up DECT in WSN, a \_\_\_\_\_\_\_ and a base station called a\_\_\_\_\_\_\_\_, which is connected to a telephone network.
185. Antenna, radio fixed part
186. Mobile handset, antenna
187. Mobile handset, radio fixed part
188. Sensors, radio fixed part
189. What is the name of the protocol that can classified as either connection-oriented Protocol?
190. UDP
191. TCP
192. MAC
193. TCDM
194. Who provides reliability and congestion control, belongs to the upstream reliability guarantee group?
195. CODA
196. ESRT
197. RMST
198. PSFQ
199. A packet in Transmission Control Protocol (TCP) is called a \_\_\_\_\_\_\_\_\_\_\_\_
200. Transmittable Slots
201. Packet
202. Segment
203. Source Slots
204. Which protocol assigns an IP address to the client connected to the internet?
205. DHCP
206. IP
207. RFC
208. RSVP
209. The Temporary Address is also called as
210. Home Address
211. Care-of Address
212. Foreign Address
213. Configuration Address
214. Which Multiplexing Technique used to transmit digital signals?
215. FDM
216. TDM
217. WDM
218. FDM & WDM
219. \_\_\_\_\_\_\_\_\_\_\_ is an interdisciplinary research area that draws on contributions from signal processing, networking and protocols, databases and information management, distributed algorithms, and embedded systems and architecture.
220. Wireless Network
221. Sensor Network
222. Wired Network
223. Satellite Network
224. \_\_\_\_\_has defined three different categories of services: bearer, tele, and supplementary services?
225. ISDN
226. TDMA
227. GSM
228. FDMA
229. The DECT system is based on \_\_\_\_\_\_\_\_\_\_ principles.
230. TCP
231. IP
232. OSI
233. AMPS
234. Wireless communication means communication by \_\_\_\_\_\_ waves.
235. Radio
236. Sound
237. Noise
238. Vacuum
239. \_\_\_\_\_\_\_\_\_\_\_ is the capability of the network to maintain performance characteristics with respect to the size
240. Scalability
241. Delay
242. Throughput
243. Reliability
244. EAR stands for\_\_\_\_\_\_\_\_
245. Eavesdrop and Register
246. Enterprise Archive
247. Event Address Register
248. Erection All Risks
249. An interconnected collection of piconet is called \_\_\_\_\_\_\_\_\_\_\_
250. scatternet
251. micro net
252. Mininet
253. multinet
254. Piconet can have up to \_\_\_\_\_\_\_\_\_\_ Active slaves
255. Four
256. Five
257. Seven
258. Eight
259. For low power communication B-MAC uses \_\_\_\_\_\_\_\_\_\_
260. CCA
261. CCD
262. CCS
263. CCT
264. \_\_\_\_\_\_\_\_\_ is Threshold based resource awareness method
265. SPIN-PP
266. SPIN-EC
267. SPIN-BC
268. SPIN-RL
269. In directed diffusion method sink nodes transmits\_\_\_\_\_\_\_\_ message to all neighbours.
270. Data Messages
271. Interest
272. Gradients
273. Reinforcement
274. To achieve reliable transport in TCP, \_\_\_\_\_\_\_\_\_\_\_ is used to check the safe and sound arrival of data.
275. Packet
276. Buffer
277. Segment
278. Acknowledgment
279. What is the header size of a UDP packet?
	1. 8 bytes
	2. 12 bits
	3. 16 bytes
	4. 124 bytes
280. \_\_\_\_\_\_\_\_\_\_\_\_ generation of mobile communication is based on analog technology.
281. First
282. Second
283. Third
284. Fourth
285. \_\_\_\_\_ is Physical representation of Data.
286. Signal
287. Frequency
288. Wavelength
289. Period
290. \_\_\_\_\_\_\_\_\_ is specialised transducer in the form of a metallic structure that converts radio frequency in AC current or AC current int RF
291. Antenna
292. Transmitter
293. Receiver
294. LED
295. In amplitude modulation, which among the following is constant?
296. Amplitude
297. Frequency
298. Wave length
299. Time period
300. Which is not a protocol of SPIN family?
301. SPIN-PP
302. SPIN-PC
303. SPIN-EC
304. SPIN-BC
305. Which of the following memory device stores information such as subscriber’s identification number in GSM?
306. Register
307. Flip flop
308. SIM
309. SMS