



IAT2

Questions **Responses** 41

Total points: 50

41 responses



Accepting responses



Summary

Question

Individual

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Score released Nov 7 3:10 PM

[Release score](#)

IAT2

* Required

Name *

/ 0

shubham mishra

Add individual feedback

USN *

/ 0

1CR17TE030

Add individual feedback

✓ Nimbits is a

1 / 1

PaaS



SaaS

IaaS

None

Add individual feedback

✓ Nimbits provides a rule engine for connecting sensors, persons and software to the cloud and one another.

1 / 1

True



False

Add individual feedback

✓ The role of medium access protocol is to regulate

1 / 1

- the access of the sensor nodes to the shared wireless medium
- Power to the sensor
- Communication between nodes
- none of the above



Add individual feedback

✓ A sensor network is subject to a unique set of resource constraints such as a: finite on-board battery power b: limited network communication bandwidth

1 / 1

- a
- b
- both
- none



Add individual feedback

✓ In a typical sensor network, each sensor node has a microprocessor and a small amount of memory for signal processing and task scheduling

1 / 1

- true
- False



Add individual feedback

✓ _____ routes user queries or commands to appropriate nodes in a sensor network 1 / 1

Brigde

Gateway



Add individual feedback

✓ A sensor network is designed to collect information from a _____ environment 1 / 1

logical

physical

both

none



Add individual feedback

✓ The challenges we face in designing sensor network systems and applications include, a: limited hardware b: limited support for networking c: limited support for software development(a/b/c/all) 1 / 1

- A
- B
- C
- all



Add individual feedback

✓ The S-MAC protocol includes the following major components 1 / 1

- periodic listen and sleep
- collision avoidance
- over hearing avoidance
- message passing
- all of the above



Add individual feedback

✓ In the S-MAC protocol, _____ is designed to reduce energy consumption during the long idle time when no sensing events happens , by turning off the radio periodically. 1 / 1

- periodic listen and sleep
- message passing



Add individual feedback

✓ _____ in S-MAC is done by using an RTS/CTS exchange 1 / 1

- overhearing avoidance
- collision avoidance



Add individual feedback

✓ Because of the unique attenuation characteristics of RF signals, _____ network provides a significant energy saving over _____ network for the same distance 1 / 1

- single hop/multi hop
- multi hop/single hop



Add individual feedback

✓ A _____ sensing system is inherently more robust against individual sensor node or link failures, because of redundancy in the network 1 / 1

decentralized ✓

centralized

Add individual feedback

✓ Wireless sensor network is a collection of 1 / 1

Embedded sensors

Embedded sensors with networking capability ✓

wired nodes

none of these

Add individual feedback

✓ WSN node consists of 1 / 1

Sensors and actuators

Communication unit

Processing unit

All of the above ✓

Add individual feedback

✓ Which of these is not an OS for IoT/WSN

1 / 1

- TiniOS
- MuCOS2
- Contiki
- None of the above



Add individual feedback

✓ Which is not a performance metrics of WSN

1 / 1

- Latency
- Balancing
- Fault-Tolerance
- Network throughput



Add individual feedback

✓ In underwater WSN which signal is used for communication

1 / 1

- Radio
- Acoustic
- Optical
- All of the above



Add individual feedback

✓ System lifetime can be measured by generic parameters such as time until

1 / 1

- 25% nodes dies
- 50% nodes dies
- 75% nodes dies
- 100% nodes dies



Add individual feedback

✓ Usually sensor nodes are deployed on the sensor fields with densities as high as 1 / 1
_____ nodes/m³

10

20

30

40



Add individual feedback

✓ WSN stands for 1 / 1

wireless sensor networks

wired sensor nodes

wiring sensor networks

Wireless sensor networking



Add individual feedback

✓ Radio waves are

1 / 1

- light waves
- sound waves
- electromagnetic waves
- none of the above



Add individual feedback

✓ Any electromagnetic wave has three parameters

1 / 1

- Amplitude, frequency, phase
- Amplitude, frequency, power
- Amplitude, frequency, pulse width
- none of the above



Add individual feedback

✓ Optimization of wireless sensor network is based on _____

1 / 1

- Quality of Service
- Quality of Service & Energy Efficiency
- Quality of Service & Scalability
- Quality of Service, Energy Efficiency & Scalability



Add individual feedback

✓ _____ is a process of simultaneously transmitting two or more individual signal over a single communication channel. 1 / 1

Multiplexing ✓

Duplexing

Overpassing

Sending

Add individual feedback

✓ TinyOs supports ____ and ____ by the concept of components. 1 / 1

Mobility, Data-based Programming

Modularity, Event-based Programming ✓

Mobility, Event-based Programming

Modularity, Data-based Programming

Add individual feedback

✓ _____ is an operating system used in WSN.

1 / 1

- Linux
- NesC
- Tinyos
- Windows 95



Add individual feedback

✓ _____ is a design principle of WSN.

1 / 1

- Data centrality
- single hop topology
- complex operating system
- large memory



Add individual feedback

✓ _____ is an entity in WSN from which information originates.

1 / 1

- Sink
- Source
- Processor
- Transreceiver



Add individual feedback

✓ FDMA,TDMA and CDMA comes under :

1 / 1

- Fixed assignment protocol
- Demand assignment protocol
- Random assignment protocol
- Transport control protocol



Add individual feedback

✓ Congestion control, reliability issue and energy conservation are the problems of _____ protocol.

1 / 1

- Routing
- Transport Control
- MAC
- Physical Layer



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✓ These cloud services are of the form of utility computing i.e. the _____ uses these services pay-as-you-go model.

1 / 1

- Cloud providers
- Cloud users



Add individual feedback

✓ It is more appropriate to address nodes in a sensor network by_____ than by_____. (a) IP address (b)physical properties

1 / 1

(a) and (b)

(b) and (a)



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✓ Dense networks of distributed communicating sensors can improve SNR by reducing average distances from sensor to source of signal to the target (true/false)_____

1 / 1

True

False



Add individual feedback

✓ For communication, the main consideration is that communication paths consists of many short hops can be_____ energy efficient than paths using a few long hops

1 / 1

less

more



Add individual feedback

✓ Following characteristics of wireless sensor networks point to the need for a specialized MAC protocol a: the issues of fairness of the node level are much less important than overall application performance b: most sensor nodes are idle much of the time c: In-network processing can greatly improve bandwidth utilization d: the assumed lack of mobility and therefore the relatively fixed neighborhood of each node can be exploited in medium access protocol design e: issues of energy efficiency, scalability and robustness remain paramount

1 / 1

- only a and b is true
- only d is true
- only c is true
- all are true



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✓ Features of TinyOS a: have no file system b: supports only static memory allocation c: implements a simple task model d: provides minimal device & networking abstractions e: takes a language based application development approaches

1 / 1

- a
- b
- c
- d
- e
- all



Add individual feedback

✗ _____ aims at supporting sensor network applications on resource constrained hardware platforms such as the Berkeley motes

0 / 1

- TinyOS
- TinyGALS

✗

Correct answer

- TinyOS

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✓ TinyOS organizes components into layers, the _____ a layer is , the closer it is to the hardware; the _____ a layer is, the closer it is to the application (lower/higher)

1 / 1

- lower , higher
- higher , lower

✓

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✓ In nesC component, _____ call is a method call from a lower layer component to a higher layer component while a _____ call is a method call from a higher layer component to a lower layer component (command/event)

1 / 1

- command , event
- event , command

✓

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_____ interface is a set of method calls exposed to the upper layers while a _____ interface is a set of method calls hiding the lower layer components (provides/uses)

/ 0

- provides , uses
- uses , provides

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✓ TinyOS does not support dynamic memory allocation (true/false)_____

1 / 1

- True
- False



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✗ which type of programming model is suitable for WSN

0 / 1

- Event based
- sequential
- process based
- none



Correct answer

- Event based

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✓ A tinyOS component comprises the required state information in

1 / 1

- frame
- tasks
- command
- events



Add individual feedback

✓ In TinyOS actual computational work is done in the tasks

1 / 1

- true
- False



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✓ Compared with dedicated sensor nodes, PC like platforms are _____
power hungry(less/more)

1 / 1

- more
- less



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✓ A gateway acts as an simple extension of one WSN to another WSN is known as tunneling 1 / 1

True



False

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✓ The physical layer is mostly concerned with modulation-demodulation of digital data. this task is carried out by: 1 / 1

Microcontroller

Sensor

Transceiver



Memory unit

Add individual feedback

✓ Wireless channels provide unguided medium. 1 / 1

True



False

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✓ Physical layer and transceiver design considerations in WSN include: a)Energy usage profile b) Choice of Modulation c)Dynamic modulation scaling d)Antenna considerations 1 / 1

a and b

c and d

all

none



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✓ MAC stands for 1 / 1

medium access control



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Submitted 11/7/20, 3:10 PM