



RAAK

COLLEGE OF ENGINEERING AND TECHNOLOGY

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VALUE ADDED COURSES

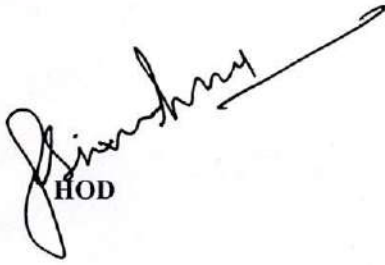
2018-2019

Department of Information Technology

18IT01- Sensors and Actuator Devices

MARK SHEET

Sl. No	Register Number	Student Name	Marks
1	15TH3101	MAHESWARI S	88
2	15TH3102	MANJULA S	AB
3	15TH3104	YUVARAJ V	84


HOD


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VALUE ADDED COURSES

2018-2019

Department of Information Technology

18IT01- Sensors and Actuator Devices

NAME :

CLASS :

DATE :

1. Which sensor measures temperature?

- A. Temperature sensor
- B. Air sensor
- C. Glass sensor
- D. Both A and B

Answer: A. Temperature sensor

2. MOS APS sensor is abbreviated as _____.

- A. MOS Active Pixel Sensor
- B. MOS Actual Pixel Sensor
- C. MOS Active Peak Sensor
- D. MOS Actual Peak Sensor

Answer: A. MOS Active Pixel Sensor

3. Which of the following are examples of temperature sensors?

- A. Bimetallic devices
- B. Thermometers
- C. Silicon diode
- D. All the above

Answer: D. All the above

4. A sensor that detects sound levels is called _____ sensor.



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- A. Sound sensor
- B. Light sensor
- C. Velocity sensor
- D. Gas sensor

Answer: A. Sound sensor

5. Which sensor is used to measure pressure?

- A. Pressure sensor
- B. Temperature sensor
- C. Force sensor
- D. Sound sensor

Answer: A. Pressure sensor

6. What is the primary use of an accelerometer?

- A. Detects changes in position, orientation
- B. Measures temperature
- C. Measures sound levels
- D. Measures light intensity

Answer: A. Detects changes in position, orientation

7. The Hall Effect sensor is based on which principle?

- A. Electromagnetic induction
- B. Electric induction
- C. Magnetic induction
- D. All the above

Answer: C. Magnetic induction

8. Which of the following is a type of level sensor?

- A. Point level sensor


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- B. Continuous level sensor
- C. Both A and B
- D. None of the above

Answer: C. Both A and B

9. What is an example of an analog sensor?

- A. Accelerometer
- B. Light sensor
- C. Pressure sensor
- D. All the above

Answer: D. All the above

10. Which sensor is used in automation and aircraft for position and orientation detection?

- A. Gyroscope
- B. Thermistor
- C. Photodiode
- D. LVDT

Answer: A. Gyroscope

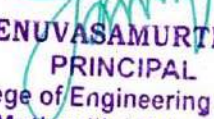
11. Which sensor converts mechanical pressure into an electrical signal?

- A. Pressure sensor
- B. Temperature sensor
- C. Light sensor
- D. Sound sensor

Answer: A. Pressure sensor

12. What type of sensor is commonly used in home automation systems for detecting movement?




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- A. IR sensor
- B. Proximity sensor
- C. Temperature sensor
- D. Pressure sensor

Answer: B. Proximity sensor

13. Which sensor type detects the presence of nearby objects without physical contact?

- A. Motion sensor
- B. Heading sensor
- C. Proximity sensor
- D. Temperature sensor

Answer: C. Proximity sensor

14. An inclinometer is used to measure what?

- A. Pressure
- B. Tilt and inclination
- C. Temperature
- D. Sound

Answer: B. Tilt and inclination

15. Which device can be used as both a sensor and an actuator?

- A. LVDT
- B. Thermistor
- C. Servo motor
- D. Photodiode

Answer: C. Servo motor

16. What is the function of an LDR (Light Dependent Resistor)?




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- A. Detects temperature
- B. Detects sound levels
- C. Detects light intensity
- D. Measures pressure

Answer: C. Detects light intensity

17. Which type of sensor is often used in climate monitoring to measure temperature, humidity, and pressure?

- A. Proximity sensor
- B. Temperature sensor
- C. Smart climate sensor
- D. Motion sensor

Answer: C. Smart climate sensor

18. Which sensor uses a semiconductor material to detect changes in magnetic fields?

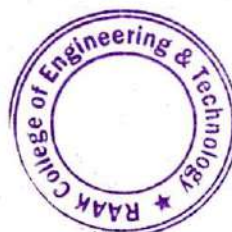
- A. Hall Effect sensor
- B. LVDT
- C. Thermistor
- D. Photodiode

Answer: A. Hall Effect sensor

19. Which sensor technology is used for detecting light levels in smartphones and cameras?

- A. Pressure sensor
- B. Light sensor
- C. Temperature sensor
- D. Sound sensor

Answer: B. Light sensor




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20. What is the role of a strain gauge in sensors?

- A. Measures light intensity
- B. Measures strain and deformation
- C. Detects sound levels
- D. Measures temperature

Answer: B. Measures strain and deformation

21. Which sensor type is widely used in automotive applications for monitoring wheel speed?

- A. Load cell
- B. Strain gauge
- C. Magnetoresistance sensor
- D. Gyroscope

Answer: C. Magnetoresistance sensor

22. What is a common application of piezoelectric sensors?

- A. Measuring light intensity
- B. Measuring temperature
- C. Detecting vibrations
- D. Measuring pressure

Answer: C. Detecting vibrations

23. Which sensor is used in digital thermometers?

- A. Bimetallic strip
- B. Thermistor
- C. LVDT
- D. Gyroscope

Answer: B. Thermistor




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24. Which type of sensor is used to detect the position of a rotating shaft?

- A. Gyroscope
- B. Rotary encoder
- C. Thermistor
- D. LVDT

Answer: B. Rotary encoder

25. Which sensor can detect moisture levels in the soil for agricultural applications?

- A. Pressure sensor
- B. Humidity sensor
- C. Soil moisture sensor
- D. Temperature sensor

Answer: C. Soil moisture sensor




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Department of Information Technology

18IT01- Sensors and Actuator Devices

NAME : **S. MANISWARI**

CLASS : **IV/IT**

DATE : **20-8-2018.**

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- D. Both A and B

22
25

88%

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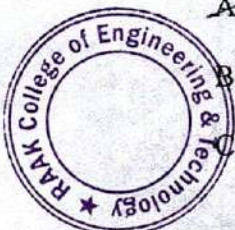
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- B. Light sensor
- C. Velocity sensor



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D. Gas sensor

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9. What is an example of an analog sensor?

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B. Light sensor

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~~D. All the above~~

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X

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C. Thermistor

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Certificate of Completion

2018-2019

This is to certify that Mr/Ms..... **MAHESWARI S**.....
Year..... Department..... **IT**..... has successfully Completed the Value added
course.

COURSE TITLE: **SENSORS AND ACTUATOR DEVICES**

SCORE: **88**

COURSE DURATION: **(09-08-2018) to 13-08-2018)**

[Signature]
.....

HOD



[Signature]
.....
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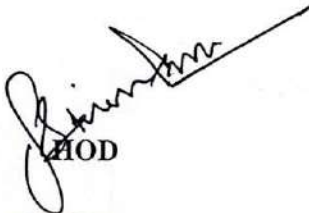
2018-2019

Department of Information Technology

18IT02- Design of Smart Cities

MARK SHEET

Sl. No	Register Number	Student Name	Marks
1	17TH3101	S. JAYAVARTHINI	88
2	17TH3102	KEERTHANA R	86
3	17TH3103	PARAMESWARI V	96
4	17TH3104	SUCITHA E	92
5	17TH3105	YASMEEN S	84


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VALUE ADDED COURSES

2018-2019

Department of Information Technology

18IT02-Design of Smart Cities

NAME :

CLASS :

DATE :

1. Which of the following is a key feature of a smart city?

- a) Advanced technology integration
- b) Rural development
- c) Traditional infrastructure
- d) Limited connectivity

Answer: a

2. Which technology is crucial for the development of smart cities?

- a) Blockchain
- b) Internet of Things (IoT)
- c) Typewriters
- d) Analog phones

Answer: b

3. What is the main objective of a smart city?

- a) To increase population density
- b) To improve the quality of life using technology
- c) To expand urban areas



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d) To reduce technological use

Answer: b

4. In a smart city, what role do sensors play?

- a) They provide entertainment
- b) They collect and transmit data for various services
- c) They increase manual labor
- d) They reduce data accuracy

Answer: b

5. Which of the following is a component of smart city infrastructure?

- a) Unpaved roads
- b) Smart grids
- c) Landline phones
- d) Manual water pumps

Answer: b

6. Which approach is used in the implementation of smart city IoT architecture?

- a) Top-down approach
- b) Bottom-up approach
- c) Random approach
- d) Mixed approach

Answer: a

7. Who utilizes their own IoT business models in smart cities?

- a) PaaS
- b) SaaS
- c) IaaS




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d) Service providers

Answer: d

8. What is the primary benefit of smart city technologies?

- a) Increased traffic congestion
- b) Enhanced urban services and efficiency
- c) Higher energy consumption
- d) More bureaucratic processes

Answer: b

9. Which system helps manage city utilities more efficiently in a smart city?

- a) Manual control system
- b) Smart grid system
- c) Paper-based system
- d) Analog system

Answer: b

10. What does IoT stand for in the context of smart cities?

- a) Internet of Things
- b) Internet of Technology
- c) Interconnected Operations Technology
- d) Independent of Technology

Answer: a

11. Which of the following is an example of smart transportation in a smart city?

- a) Regular buses
- b) Autonomous vehicles
- c) Horse-drawn carriages




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d) Pedal bicycles

Answer: b

12. Which platform supports services in smart city architecture?

a) Cloud computing data center

b) Personal computers

c) Standalone servers

d) Private networks

Answer: a

13. What is the function of a smart grid in a smart city?

a) Manual electricity distribution

b) Efficient and automated electricity management

c) Increasing fossil fuel usage

d) Decreasing renewable energy integration

Answer: b

14. How does smart waste management benefit a smart city?

a) By increasing waste

b) By reducing waste management efficiency

c) By optimizing waste collection routes and reducing costs

d) By eliminating waste separation

Answer: c

15. What role does data analytics play in smart cities?

a) It has no role

b) It complicates decision-making




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- c) It enhances decision-making and operational efficiency
- d) It reduces the amount of data collected

Answer: c

16. What is the primary goal of a smart city?

- a) To use technology to improve the quality of life for its citizens
- b) To increase population density
- c) To expand urban sprawl
- d) To reduce technology usage

Answer: a) To use technology to improve the quality of life for its citizens

17. Which technology is fundamental to the development of smart cities?

- a) Typewriters
- b) Analog phones
- c) Internet of Things (IoT)
- d) Fax machines

Answer: c) Internet of Things (IoT)

18. What is a smart grid in the context of smart cities?

- a) A traditional power distribution system
- b) A system for efficient and automated electricity management
- c) A network of natural gas pipelines
- d) A water distribution network

Answer: b) A system for efficient and automated electricity management

19. What role do sensors play in a smart city?

- a) They collect and transmit data for various services




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- b) They provide entertainment
- c) They increase manual labor
- d) They reduce data accuracy

Answer: a) They collect and transmit data for various services

20. Which of the following is an example of smart transportation?

- a) Horse-drawn carriages
- b) Regular buses
- c) Autonomous vehicles
- d) Pedal bicycles

Answer: c) Autonomous vehicles

21. What is a key feature of a smart city?

- a) Advanced technology integration
- b) Rural development
- c) Traditional infrastructure
- d) Limited connectivity

Answer: a) Advanced technology integration

22. How does smart waste management benefit a smart city?

- a) By increasing waste production
- b) By optimizing waste collection routes and reducing costs
- c) By reducing waste management efficiency
- d) By eliminating waste separation

Answer: b) By optimizing waste collection routes and reducing costs

23. Which platform supports services in smart city architecture?




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- a) Standalone servers
- b) Cloud computing data center
- c) Personal computers
- d) Private networks

Answer: b) Cloud computing data center

24. What is the purpose of data analytics in a smart city?

- a) It complicates decision-making
- b) It enhances decision-making and operational efficiency
- c) It reduces the amount of data collected
- d) It has no role

Answer: b) It enhances decision-making and operational efficiency

25. Which of the following is a key component of smart city infrastructure?

- a) Unpaved roads
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- d) Landline phones

Answer: b) Smart grids




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18IT02-Design of Smart Cities

NAME : PARAMESWARI V

CLASS : II / IT

DATE : 20-8-2018

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24
25

96%

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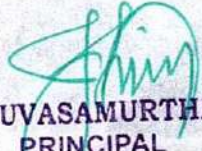
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4. In a smart city, what role do sensors play?
- a) They provide entertainment
 - b) They collect and transmit data for various services
 - c) They increase manual labor
 - d) They reduce data accuracy
5. Which of the following is a component of smart city infrastructure?
- a) Unpaved roads
 - b) Smart grids
 - c) Landline phones
 - d) Manual water pumps
6. Which approach is used in the implementation of smart city IoT architecture?
- a) Top-down approach
 - b) Bottom-up approach
 - c) Random approach
 - d) Mixed approach
7. Who utilizes their own IoT business models in smart cities?
- a) PaaS
 - b) SaaS
 - c) IaaS
 - d) Service providers
8. What is the primary benefit of smart city technologies?
- a) Increased traffic congestion
 - b) Enhanced urban services and efficiency
 - c) Higher energy consumption




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- d) More bureaucratic processes
9. Which system helps manage city utilities more efficiently in a smart city?
- a) Manual control system
 - b) Smart grid system
 - c) Paper-based system
 - d) Analog system
10. What does IoT stand for in the context of smart cities?
- a) Internet of Things
 - b) Internet of Technology
 - c) Interconnected Operations Technology
 - d) Independent of Technology
11. Which of the following is an example of smart transportation in a smart city?
- a) Regular buses
 - b) Autonomous vehicles
 - c) Horse-drawn carriages
 - d) Pedal bicycles
12. Which platform supports services in smart city architecture?
- a) Cloud computing data center
 - b) Personal computers
 - c) Standalone servers
 - d) Private networks




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13. What is the function of a smart grid in a smart city?

- a) Manual electricity distribution
- b) Efficient and automated electricity management
- c) Increasing fossil fuel usage
- d) Decreasing renewable energy integration

14. How does smart waste management benefit a smart city?

- a) By increasing waste
- b) By reducing waste management efficiency
- c) By optimizing waste collection routes and reducing costs
- d) By eliminating waste separation

15. What role does data analytics play in smart cities?

- a) It has no role
- b) It complicates decision-making
- c) It enhances decision-making and operational efficiency
- d) It reduces the amount of data collected


16. What is the primary goal of a smart city?

- a) To use technology to improve the quality of life for its citizens
- b) To increase population density
- c) To expand urban sprawl
- d) To reduce technology usage

17. Which technology is fundamental to the development of smart cities?

- a) Typewriters
- b) Analog phones
- c) Internet of Things (IoT)




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d) Fax machines

18. What is a smart grid in the context of smart cities?

- a) A traditional power distribution system
- b) A system for efficient and automated electricity management
- c) A network of natural gas pipelines
- d) A water distribution network

19. What role do sensors play in a smart city?

- a) They collect and transmit data for various services
- b) They provide entertainment
- c) They increase manual labor
- d) They reduce data accuracy

20. Which of the following is an example of smart transportation?

- a) Horse-drawn carriages
- b) Regular buses
- c) Autonomous vehicles
- d) Pedal bicycles

21. What is a key feature of a smart city?

- a) Advanced technology integration
- b) Rural development
- c) Traditional infrastructure
- d) Limited connectivity




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22. How does smart waste management benefit a smart city?

- a) By increasing waste production
- b) By optimizing waste collection routes and reducing costs
- c) By reducing waste management efficiency
- d) By eliminating waste separation

23. Which platform supports services in smart city architecture?

- a) Standalone servers
- b) Cloud computing data center
- c) Personal computers
- d) Private networks

24. What is the purpose of data analytics in a smart city?

- a) It complicates decision-making
- b) It enhances decision-making and operational efficiency
- c) It reduces the amount of data collected
- d) It has no role

25. Which of the following is a key component of smart city infrastructure?

- a) Unpaved roads
- b) Smart grids
- c) Manual water pumps
- d) Landline phones


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2018-2019

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COURSE TITLE: **DESIGN OF SMART CITIES**

COURSE DURATION: **(09-08-2018) to (13-08-2018)**

SCORE: **86**

Srinivasan
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