



# RAAK

## COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)

VALUE ADDED COURSES

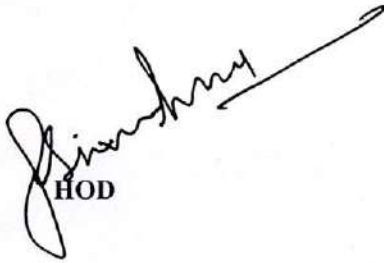
2018-2019

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	<b>AB</b>
3	15TH3104	YUVARAJ V	84

  
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Dr. S. SEENUVASAMURTHI, M.E., Ph.C.  
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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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### VALUE ADDED COURSES

2018-2019

Department of Information Technology

18IT01- Sensors and Actuator Devices

NAME : S. MAHESWARI

CLASS : IV/IT

DATE : 20-8-2018.

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22  
25

88%

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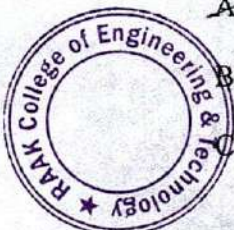
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D. Gas sensor

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9. What is an example of an analog sensor?

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~~D. All the above~~

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

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C. Thermistor

D. Photodiode

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

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23. Which sensor is used in digital thermometers?

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C. LVDT

D. Gyroscope ✓

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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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### VALUE ADDED COURSES

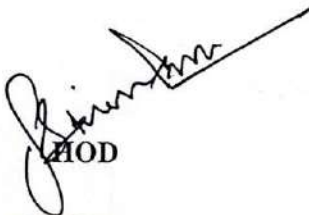
2018-2019

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

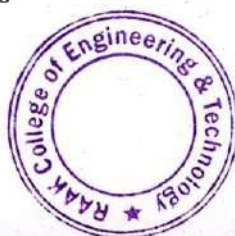
2. Which technology is crucial for the development of smart cities?

- 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
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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
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Answer: a) Advanced technology integration

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

- a) By increasing waste production
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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

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18IT02-Design of Smart Cities

NAME : PARAMESWARI V

CLASS : II / IT

DATE : 20-8-2018

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24  
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96%

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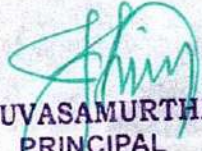
# RAAK

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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

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

COURSE TITLE: **DESIGN OF SMART CITIES**

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

SCORE: **86**

*Srinivasan*  
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HOD



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