22636 Emerging trends in electronics mcq pdf
QUESTION BANK

Program: - EJ/IS

Semester: - VI **Course :- EMERGING TRENDS IN ELECTRONICS (22636)**

Unit 1 ADVANCE PROCESSORS

Question For 1 Mark

Q1] Main processor chip in computers is :

A. ASIC
B. ASAP
C. CPU
D. CPLD

Q2] ARM stands for:

A. Advanced Rate Machines
B. Advanced RISC Machines
C. Artificial Running Machines
D. Aviary Running Machines

Q3] The CISC stands for _____.

A. Computer Instruction Set Compliment
B. Complete Instruction Set Compliment
C. Computer Indexed Set Components
D. Complex Instructions Set Computer

Q4] The GIPO stands for _____.

A. General Purpose Input Output Propeller
B. General Purpose Input Output pins
C. General Purpose Interested Old People
D. General Purpose Input Output Processor

Q5] The IDE stands for _____.

A. In Deep Environment

B. Integrated Development Environment
C. Internal Deep Escape
D. IDE

Q6] A program written with the IDE for Arduino is called _____.

A. IDE source
B. Sketch
C. Cryptography
D. Source code

Q7] Arduino IDE consists of 2 functions. What are they?

A. Build() and loop()
B. Setup() and build()
C. Setup() and loop()
D. Loop() and build and setup()

Q8] ALU of ARM7TDMI is _____bit.

A. 8
B. 32
C. 64
D. 10

Q9] How many digital pins are there on the UNO board?

A. 14
B. 12
C. 16
D. 20

Q10] Most of processors designed by ARM are

A. 16 bit
B. 32 bit
C. 64 bit
D. 8 bit

Q11] The function of link register in ARM7TDMI is_____.

A. To store return address whenever subroutine
B. To store address of I/O device
C. Multiplex the address and data lines
D. Perform addition

Q12] The function of r15 in ARM7TDMI

A. Program Counter
B. CPSR
C. SPSR
D. ALU

Q13] In the ARM Nomenclature ARMxTDMI ,D and M stands for

A. Debug and Fast Multiplier units are present
B. Division and Multiplier units are present
C. Debugger and Multiplier units are not present
D. Division and Multiplier units are not present

Q14] The computer architecture aimed at reducing the time of execution of instructions is

A. CISC
B. RISC
C. ISA
D. ANNA

Q15] In CISC processor the nature of instruction size is

A. Fixed
B. Variable
C. Both A and B
D. None of the above

Q16]If three stages of execution in pipelining are overlapped , how would be the speed of execution?

A. Higher
B. Moderate
C. Lower
D. Unpredictable

Q17] In RISC Processors configuration status of control unit is____

A. Hardwired
B. Micro programmed
C. Both A and B
D. None of the above

Q18] A function is a series of programming statements that can be called by name. Which command is called once when the program starts:

A. Loop()
B. Setup()
C. (output)
D. (input)

Q19] In ATmega328p 'p' refers to?

A. Production
B. Pico-Power
C. Peripheral
D. Programmable on chip

Q20] The throughput of a super scalar processor is

A. Less than 1
B. 1
C. More than 1
D. Not Known

Q21] Each stage in pipelining should be completed within _____cycle.

A. 1
B. 2
C. 3
D. 4

Q22] The main importance of ARM micro-processors is providing operation with___

A. Low cost and low power consumption
B. Higher degree of multi-tasking
C. Lower error or glitches
D. Efficient memory management

Q23] In ARM processor when Interrupt occurs ARM processor goes into following mode:

A. FIQ mode
B. Abort mode
C. Supervisor mode
D. Undefined mode

Q24] The function of barrel shifter is

A. Shift operation in same instruction cycle

B. Shift operation in 2 instruction cycle
C. Shift operation in 4 instruction cycle
D. None of the above

Q25] Evaluate the following statements

1. R13 is traditionally used as the stack pointer and stores the head of the stack in the current processor mode
2. R14 is the link register where the core puts the return address on executing a subroutine
3. R15 is the program counter and contains the address of the next instruction to be fetched
    A. All the options are true
    B. 1 and 2 are true
    C. 2 and 3 are true
    D. 1 and 3 are true

Q26] When the processor is executing simple data processing instructions , the pipeline enables one instruction to be completed every clock cycle, this is also called as_____

A. Throughput
B. Latency
C. Execution
D. None of the above

Q27] It starts with a/* and continues until a*/ what does this do?

A. Loads a sketch
B. Make comments
C. Compiles quicker
D. Makes stars appear

Q28] The function used to execute one or many statements , multiple time_____

A. Setup()
B. Loop()
C. (input)
D. (output)

Q29] Default bootloader for the Arduino UNO is _____

A. Optibootloader
B. AIR-boot
C. Bare box
D. GAG

Q30] Select proper microcontroller used in Arduino UNO

A. ATmega328p
B. ATmega2560
C. ATmega32114
D. AT91SAM3x8E

Q 31] ATmega64x device has flash memory of ---------
A. 64 Kb
B. 32 Kb
C. 8Kb
D. 128Kb

Q 32] Number of ports available in ATmega 328 are:
A. 4
B. 3
C. 2
D. 6

Q 33] AVRs do not support code from----------
A. External memory
B. Internal memory
C. Internal RAM
D. Timer

Q 34] Reconfiguration of digital pin for behaving as input or output can be done through----------
A.

Unit 2 RECENT ELECTRONIC COMPONENTS

Question For 1 Mark

Q 31] Statement 1: In Li-ion batteries, lithium ions move from the negative electron to the positive the electron during discharge. Statement 2: In Li-ion batteries lithium ions move from positive electron to the negative electrons during charging.

A. Statement 1 is true and statement 2 is false
B. Statement 2 is true an statement 1 is false
C. Both statements are true
D. Both statements are false

Q 32] In Li-ion batteries, the _____ is/are lithium ion based

A. Positive electrode
B. Negative electrode
C. Positive and negative electrode
D. Electrolyte

Q 33] A nuclear battery is a device which uses energy from the _____ to generate electricity

A. Hydrocarbon
B. Hydrogen
C. Emission of radioactive isotopes
D. Chain reaction of radioactive elements

Q 34] Compare to other batteries, nuclear batteries are very _____ ,but have extremely _____ and high energy density

A. Cheap, long life
B. Costly, long life
C. Cheap, short life
D. Costly, short life

Q 35] Surface Mount Technology(SMT) is a method for production _____ in which the components are mounted or placed directly on the surface of _____

A. Electric circuit, electric board
B. Electronic circuit, printed circuit board
C. Pneumatic circuit, pneumatic bench
D. Instrumentation circuit for control panel

Q 36] OLED stands for _____

A. Organic light emitting display
B. Optical light emitting display
C. Organic light emitting diode
D. Optical light emitting diode

Q 37] In OLED at least one of the electrode is _____

A. Reactive
B. Transparent
C. Passive
D. Idle

Q 38] OLED are used to create digital display in devices such as _____

A. Only TV screens
B. Only smartphones
C. Only computer monitors
D. All of above

Q 39] Statement 1: An OLED display works without an backlite Statement 2: Because OLED emits visible light

A. Statement 1 is true and statement 2 is false
B. Statement 2 is true an statement 1 is false
C. Both statements are true
D. Both statements are false

Q 40] Memristor is defined by relation _____

A. dφ=m*dq
B. dp=c*dv
C. dφ=l*di
D. dv=r*di

Q 41] The surface mount components are accurately placed onto the pads with the help of _____

A. Peak and place machine
B. Manually
C. Reflow machine
D. Printing machine

Q 42] Desirable features of electronics components suitable of emerging application is

A. High power consumption
B. Miniature size
C. Lower operation speed
D. Low operating frequency

Q 43] _____ allows more number of components placing on both sides of the flexible dielectric

A. Single sided flexible circuit
B. Single mounted flexible circuit
C. Double excess flexible circuit
D. Sculptured flex circuit

Q 44] Memristor features unique properties like ____ and _____

A. Non-volatile nature, linearity
B. Volatile nature, non-linearity
C. Volatile nature, linearity
D. Non-volatile nature, non-linearity

Q 45] _____ is considered as a subset of memristor

A. ROM
B. ReRAM
C. Static RAM
D. DRAM

Q 46] Hysteresis loop and _____ phase shift between current and voltage, at _____ are the significant features of memristor

A. 0°, 0 crossing
B. 90°, 0 crossing
C. 45°, non 0 crossing
D. 180°, non 0 crossing

Q 47] Memristor shows _____ relation between voltage and current

A. Liner
B. Non liner
C. Exponential
D. Logarithmic

Q 48] Currently OLED displays are made by _____

A. Evaporating gases in vacuum chamber
B. Evaporating liquid in vacuum chamber
C. Evaporating solid in vacuum chamber
D. Anodization

Q 49] OLED displays are simpler than LCD they do not require _____ or _____

A. Power, filtering
B. Power, diffusing
C. Backlight, filtering
D. Backlight, diffusing

Q 50] In the cover lay of FPC, to reduce conductor damage from frequent bending the thickness of the cover lay should be _____

A. Same as the thickness of the dielectric layer
B. More than the thickness of the dielectric layer
C. Less than the thickness of the dielectric layer
D. Independent of the thickness of the dielectric layer

Q 51] In SMT technology AOI stands for-------

A. Auto Optical Information
B. Automatic Optic Inspection
C. Arithmetic Original Information
D. All Outstanding Information

Q52] SMT is unsuitable for----------

A. Small Capacitors
B. Small Transistors
C. Transformers
D. Resistors

Q 53] Two electrodes used in OLED are –

A. Graphite anode & Graphite Cathode
B. Non metallic anode and Li cathode
C. Metallic cathode & Transparent anode
D. Nuclear anode and Nuclear cathode

Q 54] Memristor establishes a relation between—

A. flux and electric charge
B. voltage and current
C. charge and voltage
D. flux and current

Q 55] Material used as cathode for Ni-Cd battery is:

A. Cadmium hydroxide
B. Potassium hydroxide
C. Nickel hydroxide
D. Graphite

Q 56] Material used as anode for Ni-Cd battery is:

A. Cadmium hydroxide
B. Potassium hydroxide
C. Nickel hydroxide
D. Lithium metal oxide

Q 57] Material used as anode for Li-ion battery is:

A. Graphite
B. Potassium hydroxide
C. Nickel hydroxide
D. Lithium metal oxide

Q 58] Li –ion batteries convert ---

A. Sound waves into electrical signals
B. Chemical energy into electrical energy
C. Audio signals into video signals
D. Light energy into heat energy

Q 59] Rolled annealed copper foils offer ---------- resistance to continuous flexing.
A. High
B. Low
C. Negligible
D. Medium

Q 60] In batteries positive electrode is termed as --------- and negative electrode is termed as-------.
A. anode, cathode
B. cathode anode
C. terminal, lead
D. lead, electrolyte

Unit 3 NEXT GENERATION TELECOM NETWORK

Question For 1 Mark

Q 61] In NGN , the interface not supporting media interaction is
A. UNI
B. ANI
C.NNI
D. SNI

Q 62] Number of layers in NGN architecture are
A. 7
B. 6
C. 5
D. 4

Q 63] Layers of NGN are
A. Access , Transport, Control Service layer
B. Physical ,Data link, Network, Session layer
C. Application, session, Data link, Network, Transport layer
D. Network, Application layer
Q 64] In NGN, CDF(Content Delivery Function) is a function of
A. Transport Stratum
B. Service Stratum
C. Transport and Service Stratum
D. Not from above

Q 65] ---------- MULTIPLEXING IS USED IN 3G.
A. FDMA
B. CDMA
C. TDMA
D. NOT from above

Q 66] Data speed in 5G is ----
A. More than 1 Gbps
B. 64 Kbps
C. 2 Mbps
D. 4 Kbps

Q 67] In NGN , URL stands for
A. Unified Resource Locator
B. Universal Regional Line
C. Universal Rectified level
D. Unified Range Locator

Q 68] 1G uses -------- technology.
A. Digital
B. CDMA
C. Wi Max
D. Analog

Q 69] Only circuit switching is used by----
A. 3G
B. 5G
C. 4G
D. 1G

Q 70] Maximum speed up to 2 Mbps is provided by
A. 3G
B. 4G
C. 5G
D. 1G

Q 71] Unlicensed radio band ISM stands for
A. Industrial, Scientific, Medical
B. Indian, Standard ,Meter
C. Indian ,Standard, Mobile
D. Industrial, Standard, Measure

Q72] In licensed radio band , allocated frequency band for FM broadcast is

A. 148.5 KHz to 283.5 KHz
B. 87.5 MHz to 108.0 MHz
C. 87.5 KHz to 108.0 MHz
D. 840 MHz to 900 MHz

Q 73] WPC Wireless Planning and Coordination is responsible for :

A. Frequency spectrum management including licensing and needs of users

B. Providing information resources

C. Managing and setting standards for spectrum use

D. Creating standard for WLAN

Q 74] Line side interface to the core IP network is supported by

A. Trunk Media Gateway

B. Signaling gateway

C. Access gateway

D. Access network

Q 75] The connectivity between customer premises equipment and access gateway in the service provider’s network is provided by

A. Trunk Media Gateway

B. Signaling gateway

C. Access gateway

D. Access network

Unit 3 Next Generation Telecom Network

Question For 1 Mark

Q1] The E2E optical path in an OTN network is specified by layer :

A. ODU
B. OTU
C. OCH
D. OPU

Q2] In NGN communication is possible

A. Within a city
B. Within a state
C. Within a country
D. Anywhere in world

Q3] A wavelength range of the XG-PONI downstream signal and the range of upstream signal on a single fiber system are

A. Same
B. For downstream signal wavelength is greater than that of upstream signal
C. For downstream signal wavelength is lower than that of upstream signal
D. Depends on application it varies

Q4] MPLS header length is a field of ----------bits.

A. 32
B. 24
C. 20
D. 8

Q5] 8000 frames/sec are transmitted in 125 μsec ,in

A. STM-4
B. STM-64
C. STM-1
D. STM-256

Q6] The use of EXP(Experimental) bits are

A. Quality of service
B. Avoid a packet being stuck in a routing loop
C. Receiving, transmitting a labeled packet on a data link.
D. Not from above

Q7] The protection scheme in an OTN network is defined by

A. G-709
B. G-873.1
C. G-798
D. G-872

Q8] SDH is----------

A. Session layer protocol
B. Transport layer protocol
C. Service protocol
D. Application protocol

Q9] TTL in a MPLS label is

A. Transistor Transistor Logic
B. Time to Live
C. Technology Transfer Layer
D. Not from above

Q10] In OTN network, Characteristics of optical transport network hierarchy equipment functional blocks is defined by:

A. G-872
B. G-709
C. G-873.1
D. G-798

Q11] In B-PON optical network B stands for:

A. Binary
B. Broadband
C. Bipolar

D. Big

Q12] High bit rate, network management and protection facility is provided by:

A. SDH
B. WDM
C. DWDM
D. OTN

Q13] In OTN standard frame format and payload mapping is provided by:----

A. G-878
B. G-709
C. G-798
D. G-873.1

Q14] Client signal encapsulation in OTN layer is function of:----------

A. OCH
B. OTU
C. ODU
D. OPU

Q15] OTN supports internal switching at:----------

A. 300Mbps
B. 1.25 Gbps
C. 1.25 Mbps
D. 200 Kbps

Q16] In MPLS Header field, number of bits used for TTL are----------

A. 1
B. 20
C. 3
D. 8

Q17] In MPLS Header field BOS stands for:-

A. Bits of service
B. Bits on Stack
C. Binary on shift
D. Bottom of Stack

Q18] Digital broadcast service is a example of:-

A. Asymmetric broadband service
B. Symmetric broadband service
C. Asynchronous service
D. Parallel transmission service

Q19] In NGN core MPLS stands for:---------

A. Medium Port Line Standard
B. Multi Port Line Switching
C. Multi Protocol Label Switching
D. Mega Print Line Simulation

Q20] In FTTx Network Architecture ONU and OLT are connected through:-

A. Wirelessly
B. Copper Cable
C. Fibre Cable
D. Not above

Q21] ---------- is a driver for the deployment of advanced optoelectronics technologies.

A. NGNC
B. GSM
C. FTTH
D. WCDMA

Q22] Interface over SNI to service nodes and to the PON is provided by:--------

A. ONU
B. OLT
C. NGN
D. NT

Q23] In FTTH architecture generally in upstream,---------- protocol is required.

A. CDMA
B. FDMA
C. WDMA
D. TDMA

Q24] In MPLS Network not labeled packets are received by:-

A. Intermediate LSR
B. Ingress LSR

C. Egress LSR
D. None of the above

Q25] In MPLS Header field, Label field length is:----

A. 32 bits
B. 8 bits
C. 1 bit
D. 20 bits

Q26] In SDH system, if STM-1 has bandwidth of 150,336kbps/sec then calculate bandwidth for STM-64.

A. 1202688
B. 2405376
C. 9621504
D. Same as STM-1

Q27] In passive optical network, bandwidth requirements of business and residential services is supported by:----

A. GPON
B. BPON
C. DPON
D. None of above

Q28] In passive optical network bandwidth requirements of narrowband and broadband services is supported by:----

A. GPON
B. BPON
C. DPON
D. None of above

Q29] XG-PON is also described as ---------- in IEEE(802.3)

A. 1G-EPON
B. 3G-EPON
C. 4G-EPON
D. 10G-EPON

Q30] 1 G class PON, 10 G class PON and video distribution services can co-exist on the same ODN because their----------

A. Transmission costs are equal
B. Voltage and current levels are same

C. Downstream signals use different wavelengths
D. Downstream signals use same wavelengths

Unit 4 Digital Factory

Question For 1 Mark

Q 31] Precision Agriculture is about

A. Weather Forecasting and management
B. Adequate crop water management
C. Pest Mangement and control
D. Food Monitoring and safety management

Q 32] Aircraft or satellite manufacturing is an example of discrete manufacturing with

A. High Complexity and Low volume
B. Low Complexity and high volume
C. Low complexity and low volume
D. High complexity high volume

Q 33] Challenges for discrete manufacturing industry are:

A. Only connected products

B. Only connected supply chain

C. Only smart manufacturing

D. All of above

Q 34] To model the driving behavior and to detect driving patterns such as sharp turns, sudden acceleration, hard braking, drifting and speeding sensors used in automotive are

A. GPS, Gyroscope, orientation sensors, and accelerometer
B. Voice, face print or finger print
C. Emission, mileage sensor
D. Ultrasonic sensor, pressure and temperature sensor

Q 35] Gateways are used to:

A. Consolidate data from sensors
B. Route it to relevant data system
C. If problem encountered return to the device
D. All of above

Q 36] What is the name of first recognized IoT Device?

A. ATM
B. Smart Watch
C. Radio
D. Video Game

Q 37] The digital factory represents an engineering system that mainly consists of three aspects

A. intercommunication, collaboration and execution
B. interconnection, communication and execution
C. interconnection, collaboration and execution
D. interconnection, collaboration and expansion

Q 38] Industries that implement IoT

A. Healthcare
B. Finance
C. Retail and Manufacturing
D. All of above

Q 39] ____ stage in IoT performs data preprocessing and enhanced analytics

A. First Stage
B. Second Stage
C. Third Stage
D. Fourth Stage

Q 40] --------- is the author of The Fourth Industrial Evolution

A. Professor Claud Schwaz
B. Professor Klaus Schwab
C. Professor Klaus Schwaz
D. Professor Kloff Schwab

Q 41] Vehicular systems can be a sample example of _____

A. IIoT
B. RAMI 4.0
C. Cyber Physical System

D. PLC SCADA

Q 42] The IoT has features like

A. Full perception
B. reliable transmission
C. intelligent processing
D. All of Above

Q 43] ---------- is the direct contact between two smart objects when they share information instantaneously without intermediaries

A. Device to Device
B. Device to Gateway
C. Gateway to data systems
D. Between Data systems

Q 44] Edge Gateway function is to

A. Interface between cloud and sensor network
B. Data Management
C. Collect data from things
D. Supervise the CPS system

Q 45] Along with the increasing urbanization the second industrial revolution lead to the inventions of:

A. Electric Lightening
B. Radio
C. Telephones
D. All of Above

Q 46] On Board Diagnostics OBD gives alerts like:

A. Open Doors
B. Light On
C. Hand brake
D. All of Above

Q 47] Which sensors are easy to interface with a microcontroller using Serial Peripheral Interface (SPI)

A. Digital
B. Analogue
C. Both of the above

D. Any sensors with communication capability only

Q 48] IoT Gateway must provide:

A. Protocol Abstraction
B. Security with Hardware
C. Simple and fast installation
D. Data Storage

Q 49] Gyroscope is a sensor which measures

A. Acceleration
B. Pressure
C. Orientation
D. Temperation

Q 50] Smart Farming can be achieved by

A. IoT Stick
B. Automation using irrigation systems
C. Automated crop harvesting
D. Automation food storage and transport management

Q 51] _____ has ability to convert the information obtained from the outer world into data for analysis.

A. Sensors

B. Actuator

C. Cloud

D. Server

Q52] Identify which of given are **not** "things" as per IoT

A. SMART watch
B. People
C. SMART Phone
D. Protocol

Q 53] Trans receivers transmits _____data and receive _____commands.

A. sensor, actuator

B. things, sensor

C. devices, sensors

D. sensors, devices

Q 54] "Actuators" main function is _____

A. these devices are able to intervene the physical reality

B. get information

C. Analysis and management of data

D. Analysis and storage of data

Q 55] Cyber Physical Systems have limited _____ and _____ capabilities due to their tiny size.

A. computation, storage

B. storage, transmitting

C. computation, transmitting

D. computation , analysis

Q 56] An IoT gateway functions are:

A. Forwarding packets between LAN and WAN on the IP layer

B. Enables local, short-range communication between IoT devices

C. Both the above

D. None of these

Q 57] RAMI 4.0 is a_____ dimensional architecture

A. 3

B. 4

C. 2

D. 5

Q 58] Identify which one of the following is not a part of functional layer of RAMI 4.0

A. Application Support Layer

B. Business Layer

C. Assets Layer

D. Information Layer

Q 59] Late generation _____ systems developed into first generation _____ systems.

A. SCADA, IIoT

B. SCADA, IoT

C. PLC, IoT

D. SCADA, PLC

Q 60] An IoT gateway may also be referred to as an intelligent gateway or _____

A. control tier

B. control gateway

C. SMART gateway

D. control layer

Unit 5 Smart World

Question For 1 Mark

1) Control unit in smart home receive all switching signals but switch ON or OFF particular appliance due to----------
   a. correct frequency.
   b. correct code.
   c. correct name
   d. correct label

2) Identify the position sensor:-
   a. Magnetic sensor
   b. Both a & c
   c. Audio sensor
   d. barometer

3) Name the device that constantly crawls around floors sweeping the dust.

a) Hair dryer
b) Robotic vacuum cleaner
c) Electric oven
d) Refrigerator

4) Type of audio sensors:-

a. Microphone
b. Light sensor
c. both a & b
d. Heart rate sensor

5) Functions of microphones are:-

a. Playback audio signal
b. Detects acoustic signal
c. deal with light intensity
d. provide live video feeds

6) The sensor used to adjust the display with motion is:-

a. Linear acceleration sensor
b. Camera
c. RTD
d. proximity sensor

7) low-voltage current flows between two points throughout the home's entry points, and breaking the circuit will result in loud siren. This is example of _____.

a. Home entertainment system
b. Home security and Alarm System.
c. Home theater system
d. home temperature control system

8) identify the statement which is not suitable for camera:-

a. deals with light intensity
b. device ambiance
c. provide live video feeds
d. control automatic light system

9) ____is used to fix display position by considering magnetic fields.

a. Light sensor
b. Magnetic sensor
c. photodiode
d. linear acceleration sensor

10) A smart home incorporates all the advanced

a) traffic system
b) backup system
c) ignition system
d) automation systems

11) Proximity sensor reduces :-

a. Pollution
b. Temperature
c. power consumption
d. Resistance

12) ------ help to capture signal from the satellite to infer the location of the device.

a. GPS c. Bluetooth

b. Both c &d d. Wi-Fi

13) ----- helps to measure the rate of change of angular movement in all three axis

a. magnetic sensor c. borometer

b. gyroscope d. heart rate

14) The oldest and best-known smart home automation system is-

a) B-10

b) C-10

c) X-10

d) A-10

15) Smart waste deals with-------

a) Garbage collection and disposal

b) Reusing and reducing garbage

c) Recycling waste

d) Dumping trash in landfills

16) Smart bins indicate status of bin using----------

a) Level sensors

b) Temperature sensors

c) Garbage sensors

d) Gas sensors

17) Domestic waste collection services are often provided by----------

a) Local Government authorities

b) State Government authorities

c) Central Government authorities

d) Housing Society

18) Smart bins can be monitored using

a) Its own private network implemented by municipality

b) Manual inspection by a person

c) Trained Dogs

d) Housing society

19) In Video monitoring system, camera will start recording automatically as it sense any movement in range is due to used of.

a) Home theater system

b) Home security and Alarm System.

c) home temperature control system

d) Home entertainment system

20) Function of device domain in M2M network

a) Collection and transmission of sensor data

b) Interpretation of sensor data

c) Processing of sensor data

d) Analysis of sensor data

21) Subnet in M2M is used for generating the communication link between the M2M devices and the M2M ----------

a) Gateways

b) Devices

c) Server

d) Router

22) In a ---------- networks, all nodes communicate with each other using some intermediate gateways .

a) Fully distributed

b) Client- server

c) Cooperative

d) point to point network

23) One of this is not a sensor

a) Gyroscope

b) Camera

c) Oscillator

d) Barometer

24) ----------is used for navigation purpose:

a) GPS

b) Light sensor

c) Barometer

d) Accelerometer

25) Lights in home can be controlled by mobile app by replacing normal switch with _____.

a) Smart Car

b) Smart dustbin

c) Smart TV

d) Smart Switches

26) Frequency band used by Z-WAVE protocol is:

a) 60 Hz

b) 2.4 GHz

c) Sub 1 GHz

d) 5 GHz

27) Transaction and data integration across multiple sources is

a) Orchestration

b) Data Routing

c) Data Mining

d) Data analyzing

28) In a Application server---------- allows users to access and use data even though device is not connected.

a) Off line support

b) Unsecured data

c) Data routing

d) Orchestration

29) Data encryption, device control, SSL, call logging is done by-------

a) Orchestration

b) Data routing

c) Both a & b

d) Security

30) Working in unlicensed frequency band is the limitation of ---------- cellular communication technology.

a) Cellular e MTC

b) LoRa

c) Cellular NB-IoT

d) Ethernet

31) Wireless range for indoor applications using ZigBee protocol is-------

a) upto 10 meters

b) Upto 70 meters

c) Upto 10 Kilo meters

d) Upto 500 meters

32) Web-based applications for controlling home appliances in smart home are also known as _____.

a) Web games

b) Web graphics

c) Web apps

d) Web media

33) Identify the wire line technology which has absence of regulations on use of frequency bands.

a) PLC

b) Ethernet

c) Wi-Fi

d) ZigBee

34) Identify Wire Line Technology.

a) DSL

b) Wi- Fi

c) ZigBee

d) Z-Wave

35) Identify the wireless cellular technology

a) Bluetooth

b) GSM

c) ZigBee

d) Wi-Fi

36) Identify Non cellular wireless technology

a) Wi-Fi

b) NB-IoT

c) GSM

d) WCDMA

37) In wired communication technology PLC stands for---------

a) Phase Locked Control

b) Phase Loop Communication

c) Pulse Line Control

d) Power Line communication

38) ---------- is a network component, used to convert the physical parameter into a signal which can be measured electrically.

a) Gateway

b) Sensor

c) Server

d) Application Server

39) M2M technologies allow wired or wireless system to communicate with devices of ---------- ability.

a) Same

b) Completely Different

c) Partially different

d) Exactly Opposite

40) In M2M communication, the intelligent Sensors communicate with the communication network with the help of ----------

a) M2M Gateways

b) M2M Application domain

c) M2M trigger

d) M2M server

41) Green pollution control and climate change adaption comes under----

a) Smart Infrastructure

b) Smart Mobility

c) Smart Environment

d) Smart Education

42) X-10 home automation sysytem can control switching up to _____ appliances on and off with no need for any extra cables.

a) 256

b) 512

c) 64

d) 128

43) Energy efficiency, reduced emissions and smart meters are the features of-----

a) Smart Education

b) Smart Government

c) Smart Business

d) Smart Utility

44) Integrated ICT, Sustainability and smart economy are the features of------

a) Smart Utility

b) Smart infrastructure

c) Smart Business

d) Smart Environment

45) Efficient use of physical infrastructure to support strong and healthy economic, social, & cultural development is achieved through------

a) Artificial Intelligence & Data analytics

b) Smart Home

c) GSM module

d) Web controlling

46) Identify the sensor used to determine the distance to an object using transmitting signal generated by high frequency sound waves and received echo.

a) Gyroscope

b) Audio sensor

c) Ultrasonic sensor

d) Magnetic sensor

47) Health & Education, Adequate water supply, E-Governance, safety & security for senior citizens & banks are the features or requirements of ------

a) Smart Home

b) Smart City

c) Smart illumination system

d) HVAC model

48) Sensor owners can register & connect devices to feed data for storage & allow developers to build own application based on that data is allowed through------

a) Planning and Budget

b) GSM module

c) Go Green concept

d) On-Line Database services

49) Smart home devices can not control through

a) wifi

b) Bluetooth

c) IEEE488-bus

d) Zigbee

50) Identify the communication technology which is not used in fitness and healthcare devices.

a) Bluetooth Low Energy b) NFC

c) Z-WAVE d) ANT

51) In a ---------- networks, all nodes or devices communicate directly with the server.

a) Fully distributed

b) Client- server

c) Cooperative

d) point to point network

52) The combination of fixed , mobile & voluntary sensors used for data collection and fusion is done in----------

a) Smart city model b) Distance sensing

c) Web controlling d) LED displays

53) Smart healthcare includes ---------- for data & information collection.

a) E health & M health

b) E health & A health

a) Z health & M health

a) M health & X health

54) _____is not smart light manufacturing company.

a) Osram

b) IKEA

c) Phillips

d) Maruti-suzuki

55) State the need of Smart city.

a) Increased Population

b) Financial support

c) Unemployment

d) Wild life

56) In smart waste management, sensor based dustbin will judge the level of waste in it and send the message directly to----------

a) central government b) State Government

c) Municipal corporation d) sweeper

57) If all M2M devices are connected as peers to the network and one of the node which is connected to network acts as router then that type of network is called as----------

a) Client server network

b) Point to point network

c) Cooperative network

d) Fully distributed network

58) Low Mobility, Time controlled, Low power consumption & monitoring, Online small data transmission are the features of ----------

a) M2M communication system

b) Ultrasonic sensor

c) GSM Module

d) Smart bins

59) In smart Education Smart Board, Video conference, AI platform are the examples of ----------.

a) Software development

b) Interactive display hardware

c) M2M Gateways

d) Smart sensors

60) _____ for controlling home appliances in smart home implements the flexibility of the Internet

a) Web-based applications

b) Relays

c) Sensors

d) Mechanical switches

61) In M2M/IoT communication , devices will communicate with application server through ----------.

a) Switch

b) Hub

c) Router

d) Gateways & Platform

62) Identify from following is not a example of Subnet.

a) Smart Board

b) PLC

c) Meter bus(M-BUS)

d) ZigBee

63) In M2M/IoT communication use of Gateway to communicate with platform depends on----------

a) Cost of communication

b) Range of communication technology

c) Power of device

d) Application server

64) For the connection of Arduino board with Ultrasonic sensor , Pin number 11 & 12 on Arduino board are used for connecting----------

a) Echo & Trigger pin of ultrasonic sensor

b) VCC & GND of ultrasonic sensor

c) to the GSM module

d) to the object

65) Identify which is not a type of garbage container or dustbin.

a) trash cans

b) dumpsters

c) wheelie bins

d) Glass bins

66) In intelligent traffic management GDP stands for----------

a) Generic Documentary Product
b) Gross Domestic Product
c) General Development Project
d) Government Developed Project

67) Making mobility more efficient and convenient by solving the problems associated with urban density is the aim of ----------

a) M2M area network
b) Smart budget
c) Interactive management
d) MaaS
68) State the need of Smart transportation.
a) High Economy rate
b) Literacy rate
c) Population Growth
d) Natural calamities

69) Fire monitoring is done through ----------
a) Photoelectric smoke detectors & heat detectors
b) Carbon Monoxide detectors
c) Proximity sensors
d) Ultrasonic sensors

70) For smart safety & security Indoor laundry room should have-------
a) Poisoning gas detector
b) smoke detector
c) Ultrasonic sensor
d) flood sensor & heat detector
71) One of this is not a networking device:
a) Router
b) Switch
c) Bridge
d) Traffic Analyzer
72) Limitation of Wireless sensor Network(WSN)
a) Restricted Bandwidth
b) Infinite storage capacity
c) High processing speed
d) Large range
73) The vital component often considered in discourse around smart cities is---
a) The role of the accountant
b) The role of central Government
c) The role of local Government
d) The role of Technology
74) Advantage of wireless technology over wired technology is:
a) High Interference
b) Signal attenuation
c) Less expensive to deploy
d) less reliable
75) Disadvantage of Wired communication over wireless communication is:

a) Less prone to interference
b) More reliable
c) Low cost
d) Expensive to deploy

76) Type of communication technology used for any application not depends upon:
a) light intensity
b) Coverage distance
c) Power
d) Quality of Service

77) To fix orientation of device display ---------- is used.
a) proximity sensor
b) magnetic sensor
c) ultrasonic sensor
d) Barometer

78) Advantage of smart waste management is:
a) Decreased noise & air pollution
b) More fuel consumption
c) More traffic on roads
d) Increased level of CO2

79) One of the statements is not true for smart education.
a) Easy access to online resources
b) Increased productivity
c) Enhanced & interactive learning experience
d) Increased traffic flow

80) _____ provides thermal comfort and acceptable air quality inside home.

a) Heating, ventilation, and air conditioning (HVAC)

b) Video monitoring system

c) Smart waste management system.

d) Smart lighting system

81) M2M network architecture not includes:
a) M2M area domain
b) application domain
c) E-Governance
d) Network domain

82)Smart city does not include:
a) Smart Transportation

b) Smart education
c) Smart Behavior
d) Smart Waste Management
83) Smart healthcare applies---------- to analyze & manage collected health data for accurate treatment.
a) Intelligent Transportation
b) Artificial Intelligence & automation
c) Crypto currency
d) Cochlear implants
84) The key components of Smart Transportation are:
a) Radiologist, Physician & Researcher
b) Smart infrastructure, Data integration & smart services
c) Ultrasonic sensor, Smart bins & municipal authorities
d) AI platform, Video conference & Interactive display
85) Pollution reduction, disposal of unused & recycling of useful materials & creation of green energy is done by------
a) HVAC management
b) Smart healthcare
c) Smart Home
d) Smart waste management
86) Extremely short range is the limitation of ---------- communication technology.
a) NFC
b) LoRa
c) Wi-SUN
d) SIGFOX

87) "Hey Google, turn on all lights.". This voice command is for _____ used in smart home.

a) Camera

b) Speaker

c) Microphone

d) Picture tube.

88) Medium range communication up to 10 Km is achieved through------
a)WPAN
b) WNAN
c) NFC
d) RFID
89) One of following is a sensor:
a) Meter bus

b) ZigBee
c) GSM module
d) Camera

90) One of the following smart home devices is not avilable in market

a) video doorbell

b) smart door locks

c) smart burger

d) Smart TV

91) GDP increases with ---------- consumption of vehicular fuel & oil imports.
a) increase in
b) decrease in
c) more investments in
d) interactive
92) One of these statements is not true for smart city.
a) Sustainable environment
b) Robust IT connectivity & digitization
c) safety & security of citizens
d) vehicle exhaust emissions
93) ---------- is a software framework that provides facilities to create web applications & server environment to run them.
a) Application Server
b)Sensor n/w
c)Access protocol
d) Gateway
94) Efficient urban mobility along with public transport and board highways are the features of:
a) Smart home
b) Smart metering
c) Smart transportation
d) Smart security

95) In an _____system heat can be removed through radiation and conduction.

a) room heating

b) air conditioning

c) dish cleaning

d) cloths washing

96) Pressure of the device peripheral is measured using:
a) Gyroscope
b) Barometer
c) Magnetic sensor
d) Accelerometer

97) Brightness and contrast of the display of the device is adjusted using:
a) Light sensor
b) Proximity sensor
c) Gyroscope
d) GPS
98) The presence of nearby objects without any physical contact is detected using:
a) Audio sensor
b) Position sensor
c) Proximity sensor
d) Motion sensor
99) High data security is the advantage of ---------- communication technology.
a) DSL
b) Ethernet
c) NFC
d)LoRa

100) Name wireless device used to control X-10 system

a) Aircondinionar

b) Wirelss router

c) TV

d) Lighting