

# BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY

## QUESTION BANK

### Unit Test-I (Shift:-I)

Program: - EJ/IS

Semester: - VI

Course :- EMERGING TRENDS IN ELECTRONICS (22636)

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### 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] AVR's 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----

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- 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 backlight 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.  $d\phi = m \cdot dq$
- B.  $dp = c \cdot dv$
- C.  $d\phi = l \cdot di$
- D.  $dv = r \cdot di$

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.  $0^\circ$ , 0 crossing
- B.  $90^\circ$ , 0 crossing
- C.  $45^\circ$ , non 0 crossing
- D.  $180^\circ$ , non 0 crossing

Q 47] Memristor shows \_\_\_\_\_ relation between voltage and current

- A. Linear
- B. Non linear
- 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

