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Previous Year Paper
S&T 2018 Paper

IRCON INTERNATIONAL LIMITED

(A Public Sector Undertaking under the Ministry of Railways)

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Participants Id:	
Participant Name:	
Test Center Name:	
Test Date:	06/04/2018
Test Time:	2:30 PM - 4:30 PM
Subject:	JUNIOR ENGINEER S & T

Section : **Discipline**

Q.1 What is meant by voltage resonance?

Question ID : **5013735331**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. It is a gain magnification.
✗ 2. It is a parallel resonance.
✓ 3. It is a series resonance.
✗ 4. It is a current magnification.

Q.2 What is the drain current (I_d) for an ideal MOSFET with gate to source voltage (V_{gs}) = 0 V?

Question ID : **5013735276**
Status : **Answered**
Chosen Option : **1**

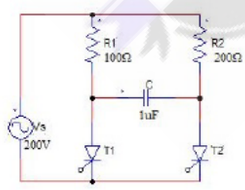
Ans
✗ 1. $I_d = 0$
✓ 2. $I_d = 0.1$ mA
✗ 3. $I_d = \infty$
✗ 4. $I_d = 1$ mA

Q.3 What is the value of V_{cb} (Potential difference between the base and the collector) in a PNP transistor in the saturation region?

Question ID : **5013735272**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. −0.2 V
✗ 2. 0.5 V
✓ 3. −0.5 V
✗ 4. 0.2 V

Q.4 Find the initial thyristor current at the time of turn-on of the Silicon-Controlled Rectifier (SCR).



Question ID : **5013735322**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 3 A
✓ 2. 5 A
✗ 3. 10 A
✗ 4. 2 A

Q.5 Which of the following electrolytes is used in an Edison cell?

Question ID : **5013735279**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. HCl
✗ 2. NaOH
✓ 3. KOH

✗ 4. HNO_3

Q.6 Which of the following is true about a complementary metal-oxide semiconductor (CMOS)?

Question ID : **5013735298**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. It has high packing density.
✗ 2. It has high power dissipation.
✗ 3. It has high complexity.
✗ 4. It has high noise margin.

Q.7 Which of the following devices has least switching loss and also opted for high frequency applications?

Question ID : **5013735274**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Silicon-Controlled Rectifier (SCR)
✗ 2. Bipolar Junction Transistor (BJT)
✓ 3. Metal-Oxide-Semiconductor Field-Effect Transistor (MOSFET)
✗ 4. Insulated-Gate Bipolar Transistor (IGBT)

Q.8 What is the time delay (t_d) of an 8-bit serial in/serial out shift register with a clock frequency of 4 MHz?

Question ID : **5013735343**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 0.2 µs
✗ 2. 8 µs
✗ 3. 4 µs
✓ 4. 2 µs

Q.9 What is the current flowing if a 25 C charge passes a point in 0.5 s?

Question ID : **5013735277**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 12.5 A
✗ 2. 0.5 A
✓ 3. 50 A
✗ 4. 25 A

Q.10 Which of the following instructions is mnemonic?

Question ID : **5013735293**
Status : **Answered**
Chosen Option : **4**

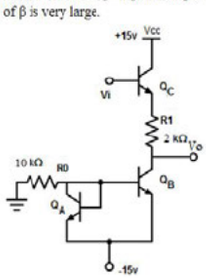
Ans
✗ 1. ADD
✓ 2. AAA
✗ 3. ADC
✗ 4. ADD and ADC

Q.11 How many transistors does the Intel 8085 microprocessor have?

Question ID : **5013735296**
Status : **Answered**
Chosen Option : **3**

Ans
✓ 1. 6,500
✗ 2. 8,500
✗ 3. 29,000
✗ 4. 9,000

Q.12 Determine the value of $V_i - V_o$ for the level shifter with the transistors Q_A and Q_B which are in the form of a current mirror. (Where, V_i – Input Voltage, V_o – Output voltage) Consider that the silicon transistors are identical and the value of β is very large.



Question ID : **5013735319**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 0.7 V
✗ 2. 1.43 V
✓ 3. 3.56 V
✗ 4. 15 V

Q.13 Which of the following is a diamagnetic material?

Question ID : **5013735326**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. Cobalt
✗ 2. Silver
✓ 3. Germanium
✗ 4. Silicon

Q.14 If a monostable multivibrator has Resistor R = 240 kΩ and a time delay T = 1,200 ms, then what is the value of Capacitance C?

Question ID : **5013735315**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. 2.5 µF
✓ 2. 4.5 µF
✗ 3. 3.5 µF
✗ 4. 5.5 µF

Q.15 How many transistors are used in a current repeater circuit if the reference current I_{ref} = 0.5 mA, Collector current I_c = 0.4 mA and the Feedback factor β =160?

Question ID : **5013735317**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. 36
✓ 2. 39
✗ 3. 38
✗ 4. 37

Q.16 Which of the following is true about a pure inductive circuit?

Question ID : **5013735330**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. The current is in phase with the voltage.
✓ 2. The current lags behind the voltage by 90 degrees.
✗ 3. The current leads the voltage by 90 degrees.
✗ 4. The current can lead or lag by 90 degrees.

Q.17 If the modulating frequency (f_m) of a carrier wave varies between 120 Hz and 125 kHz, what is its bandwidth?

Question ID : **5013735287**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 249.76 kHz
✗ 2. 149.76 kHz
✗ 3. 350 kHz
✗ 4. 125 kHz

Q.18 If the half cycle surge current rating of an Silicon-Controlled Rectifier (SCR) is 1000 A for a 50 Hz supply, then what is the one cycle surge current?

Question ID : **5013735320**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 803.21 A
✓ 2. 707.11 A
✗ 3. 1000 A
✗ 4. 500 A

Q.19 The individual transistor current gain in a Darlington circuit is 100. Find the overall current gain?

Question ID : **5013735318**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 10000
✗ 2. 1000
✗ 3. 10

✗ 4. 100

Q.20 How many layers are there in an internet protocol stack?

Question ID : **5013735286**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 4
✗ 2. 7
✗ 3. 6
✗ 4. 5

Q.21 If the operating frequency of an astable multivibrator is 150 Hz and the discharge time is 3 minutes, then what is the duty cycle of the circuit?

Question ID : **5013735316**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 55%
✓ 2. 45%
✗ 3. 50%
✗ 4. 40%

Q.22 What is the value of the Solar Constant?

Question ID : **5013735309**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 1257 W/m^2
✗ 2. 1447 W/m^2
✗ 3. 1537 W/m^2
✓ 4. 1367 W/m^2

Q.23 What is an inverse transducer?

It is a device which converts an:

Question ID : **5013735283**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. electrical quantity to mechanical quantity
✗ 2. electrical energy to thermal energy
✗ 3. electrical energy to mechanical quantity
✗ 4. electrical energy to light energy

Q.24 What is the duration of execution of the loop in a microprocessor if we consider 'T' is the period of clock at which the microprocessor is running and 'n' is the number of clock cycles?

Question ID : **5013735294**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. n+T
✓ 2. $\frac{n}{T}$
✗ 3. $\frac{T}{n}$
✗ 4. $n * T$

Q.25 Which of the following layers provides delimiting and synchronisation of data exchange?

Question ID : **5013735285**
Status : **Answered**
Chosen Option : **2**

Ans
✓ 1. Session layer
✗ 2. Application layer
✗ 3. Transport layer
✗ 4. Presentation layer

Q.26 Which of the following terms is relevant to analogue communication?

Question ID : **5013735344**
Status : **Answered**
Chosen Option : **2**

Ans
✓ 1. Continuous signal with varying amplitude (or) phase
✗ 2. Suitable for long distance communication

✗ 3. Numerical coded signal

✗ 4. Discrete signal

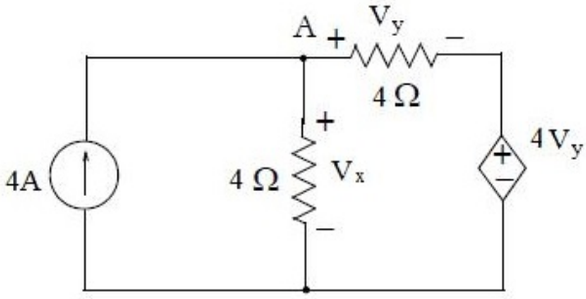
Q.27 What is the value directivity when the antenna radiates over half a sphere?

Question ID : **5013735336**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 3
✗ 2. 4
✗ 3. 5
✓ 4. 2

Q.28 Find the value of the voltage V_x for the given circuit.

Question ID : **5013735284**
Status : **Answered**
Chosen Option : **1**



Ans
✗ 1. 8 V
✗ 2. 1 V
✗ 3. 4 V
✓ 4. 5 V

Q.29 How long is an IPv4 address?

Question ID : **5013735312**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. 64 bits
✓ 2. 32 bits
✗ 3. 128 bits
✗ 4. 32 bytes

Q.30 Which of the following is the pinch-off voltage in a junction field-effect transistor?

Question ID : **5013735270**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 0.6 V
✗ 2. 5.5 V
✗ 3. 6.6 V
✓ 4. 5 V

Q.31 How is a Photoresist layer formed?

It is formed by using _____.

Question ID : **5013735300**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. polysilicon
✗ 2. silicon dioxide
✗ 3. high sensitive polymer
✓ 4. light sensitive polymer

Q.32 A terminal multiplexer has five 1000 bps terminals and 'n' 200 bps terminals are connected to it. The outgoing line is 10000 bps. What is the maximum value of n?

Question ID : **5013735311**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 25
✗ 2. 1000
✗ 3. 200

✗ 4. 50

Q.33 The primary winding of a transformer has AC voltage 115 V across it. If the turn ratio of the transformer is 9, what is the secondary voltage of the transformer?

Question ID : **5013735306**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 12.78 V
✓ 2. 1035 V
✗ 3. 115 V
✗ 4. 1080 V

Q.34 Which of the following is a DISADVANTAGE of Pulse-code modulation (PCM)?

Question ID : **5013735346**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. All of the options.
✗ 2. It cannot be decoded easily.
✓ 3. It requires large bandwidth.
✗ 4. It has very high noise.

Q.35 Which of the following is equivalent to a TRIAC (Triode for Alternating Current)?

Question ID : **5013735321**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Two SCRs are in inverse-parallel.
✗ 2. Two SCRs are in parallel.
✗ 3. Three SCRs are in series.
✗ 4. Two SCRs are in series.

Q.36 Which of the following is true of repeaters?

Question ID : **5013735314**
Status : **Answered**
Chosen Option : **4**

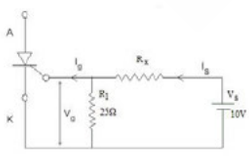
Ans
✗ 1.
Repeaters are used to provide translation services between incompatible LANs.
✗ 2.
Repeaters connect multiple device segments.
✗ 3.
Repeaters are used to provide a link between two separate devices but same type LANs.
✓ 4.
Repeaters receive a signal and retransmit it at a higher level.

Q.37 What is the voltage of a single solar cell?

Question ID : **5013735308**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. 1.5 V
✓ 2. 0.5 V
✗ 3. 5 V
✗ 4. 2.5 V

Q.38 If a thyristor triggers at the gate voltage (V_g) of 2 V and the gate current (I_g) of 120 mA, what is the value of R_x in the given circuit?



Question ID : **5013735324**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 25 Ω
✓ 2. 40 Ω
✗ 3. 50 Ω
✗ 4. 45 Ω

Q.39 Which among the following materials is commonly used for shielding magnetism?

Question ID : **5013735282**
Status : **Answered**

Ans
✗ 1. Copper

2. Brass
3. Aluminium
4. Soft iron

Chosen Option : **4**

Q.40 If a RADAR receives an echo from a target (T) 10 μs after sending the signal, what is the approximate range of the target in metres?

Ans
1. 500 m
2. 1,500 m
3. 2,000 m
4. 1,000 m

Question ID : **5013735290**
Status : **Answered**
Chosen Option : **3**

Q.41 An AM broadcast station transmits a modulating frequency of 5 kHz and a transmitting frequency of 876 kHz. What are the values of maximum and minimum frequencies of upper and lower sidebands?

Ans
1. 881 kHz, 871 kHz
2. 881 kHz, 876 kHz
3. 871 kHz, 881 kHz
4. 876 kHz, 871 kHz

Question ID : **5013735345**
Status : **Answered**
Chosen Option : **1**

Q.42 What is the induced torque in a DC shunt motor of 6 kW running at 1200 rpm?

Ans
1. 56.76 N
2. 57.77 N
3. 46.76 N
4. 47.77 N

Question ID : **5013735303**
Status : **Answered**
Chosen Option : **2**

Q.43 An 8.76 kW, 200 V DC shunt motor has full load efficiency (η) of 87% and armature resistance (R_a) of 0.27 ohms. What is the value of starting resistance (R_s) in ohms for a current (I_s) 1.8 times of the full load current (I_fl)?

Ans
1. 1.937 Ω
2. 0.270 Ω
3. 1.800 Ω
4. 0.876 Ω

Question ID : **5013735304**
Status : **Answered**
Chosen Option : **3**

Q.44 For a resistance R = 10 Ω and conductance G = 0.4 Ω. What is the attenuation constant α?

Ans
1. 6 units
2. 4 units
3. 2 units
4. 10 units

Question ID : **5013735335**
Status : **Answered**
Chosen Option : **2**

Q.45 Which among the following protocols provides unreliable data transfer?

Ans
1. All of the other options
2. Transmission Control Protocol (TCP)
3. Internet Protocol (IP)
4. User Datagram Protocol (UDP)

Question ID : **5013735288**
Status : **Answered**
Chosen Option : **3**

Q.46 Which of the following provides a separate physical connection to the memory?

Ans
1. PCI BUS
2. PCI bridge
3. PCI interface
4. Switch circuit

Question ID : **5013735310**
Status : **Answered**
Chosen Option : **1**

Q.47

Which semiconductor material has a small band-gap?

Question ID : **5013735329**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Conductor
✗ 2. Metal
✓ 3. Insulator
✗ 4. Both metal and conductor

Q.48 Which logic family is used for high speed applications?

Question ID : **5013735339**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Transistor-Transistor Logic (TTL)
✗ 2. Diode Transistor Logic (DTL)
✓ 3. Emitter Coupled Logic (ECL)
✗ 4. Integrated Injection Logic (I2L)

Q.49 Which diode impurities among the following are the most heavily doped?

Question ID : **5013735273**
Status : **Answered**
Chosen Option : **2**

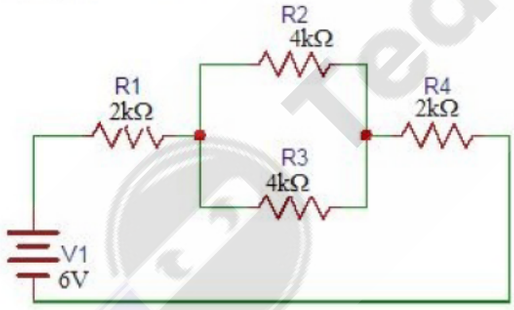
Ans
✗ 1. Zener diode
✓ 2. Tunnel diode
✗ 3. Varactor diode
✗ 4. PIN diode

Q.50 Which of the following shapes is most commonly used for patch antennas?

Question ID : **5013735337**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Elliptical
✗ 2. Circular
✓ 3. Rectangular
✗ 4. Parabolic

Q.51 What is the total current (mA) in the given circuit?



Question ID : **5013735325**
Status : **Answered**
Chosen Option : **3**

Ans
✓ 1. 1.5 mA
✗ 2. 1.6 mA
✗ 3. 0.75 mA
✗ 4. 0.5 mA

Q.52 Which of the following has least luminous efficiency?

Question ID : **5013735332**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Fluorescent tube
✗ 2. High-wattage light bulb
✓ 3. Low-wattage light bulb
✗ 4. Mercury vapour lamp

Q.53 What is the IP address range of Automatic Private IP Addressing (APIPA)?

Question ID : **5013735313**
Status : **Answered**

Ans
✗ 1. 169.254.0.1 to 169.254.0.254

✗ 2. 169.254.0.1 to 169.254.0.255
✓ 3. 169.254.0.1 to 169.254.255.254
✗ 4. 169.254.0.1 to 169.254.255.255

Chosen Option : 3

Q.54 How many full and half-adders are required to add 16-bit numbers?

Ans
✗ 1. 8 half-adders, 8 full-adders
✗ 2. 4 half-adders, 12 full-adders
✗ 3. 16 half-adders, 0 full-adders
✓ 4. 1 half-adder, 15 full-adders

Question ID : **5013735340**
Status : **Answered**
Chosen Option : **4**

Q.55 Which among the following gives maximum probability of error?

Ans
✗ 1. Binary Frequency Shift Keying (BFSK)
✓ 2. Amplitude Shift Keying (ASK)
✗ 3. Binary Phase Shift Keying (BPSK)
✗ 4. Differential Phase Shift Keying (DPSK)

Question ID : **5013735348**
Status : **Answered**
Chosen Option : **2**

Q.56 When is the starting current reduced in a 200 V DC motor? Consider that it has an external resistance R_a (armature resistance) and R_f (field resistance)

Ans
✗ 1. When R_f is maximum and R_a is maximum.
✓ 2. When R_f is minimum and R_a is maximum.
✗ 3. When R_f is maximum and R_a is minimum.
✗ 4. When R_f is minimum and R_a is minimum.

Question ID : **5013735305**
Status : **Answered**
Chosen Option : **1**

Q.57 Which of the following gates is required to build a half adder?

Ans
✗ 1. EX-OR gate and OR gate
✗ 2. EX-OR gate and NOR gate
✗ 3. Four NAND gate
✓ 4. EX-OR gate and AND gate

Question ID : **5013735338**
Status : **Answered**
Chosen Option : **4**

Q.58 Which access technology can enhance battery life?

Ans
✗ 1. Frequency Division Multiple-Access (FDMA)
✗ 2. All of the options
✗ 3. Orthogonal Frequency-Division Multiple Access (OFDMA)
✓ 4. Time Division Multiple-Access (TDMA)

Question ID : **5013735349**
Status : **Answered**
Chosen Option : **3**

Q.59 What is the crest factor of a direct current?

Ans
✗ 1. 10
✗ 2. 0
✓ 3. 1
✗ 4. 100

Question ID : **5013735347**
Status : **Answered**
Chosen Option : **3**

Q.60 How many select lines are required in a 1-to-4 demultiplexer?

Ans
✓ 1. 2

Question ID : **5013735341**
Status : **Answered**
Chosen Option : **1**

✗ 2. 4
✗ 3. 3
✗ 4. 1

Q.61 Which of the following is used to make Pure Green LED?

Question ID : **5013735328**
Status : **Answered**
Chosen Option : **4**

Ans
✓ 1. Indium gallium nitride (InGaN)
✗ 2. Gallium arsenide (GaAs)
✗ 3. Zinc selenide (ZnSe)
✗ 4. Aluminium gallium arsenide (AlGaAs)

Q.62 If the maximum allowable gate power dissipation (P_{gm}) is 20 kW and the duty cycle is 60%, then what is the average gate power dissipation (P_{gav})?

Question ID : **5013735323**
Status : **Answered**
Chosen Option : **2**

Ans
✓ 1. 12 kW
✗ 2. 20 kW
✗ 3. 14 kW
✗ 4. 16 kW

Q.63 Which of the following companies is the biggest player in the microprocessor industry?

Question ID : **5013735292**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Intel
✗ 2. Motorola
✗ 3. AMD
✗ 4. IBM

Q.64 Which of these cells is used as a standard cell?

Question ID : **5013735281**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Solar cell
✓ 2. Mercury-Cadmium cell
✗ 3. Zinc-Carbon cell
✗ 4. Dry cell

Q.65 What is the range of a buried layer sheet resistance?

Question ID : **5013735301**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. 15 to 20 Ω / Sq
✓ 2. 5 to 15 Ω / Sq
✗ 3. 1 to 3 Ω / Sq
✗ 4. 3 to 5 Ω / Sq

Q.66 When does the transformer have zero voltage regulation?

Question ID : **5013735302**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. At zero power factor
✗ 2. At unity power factor
✗ 3. At lagging power factor
✓ 4. At leading power factor

Q.67 What kind of chemical is used for shielding the active areas during oxidation?

Question ID : **5013735299**
Status : **Answered**
Chosen Option : **2**

Ans
✓ 1. silicon nitride
✗ 2. polysilicon
✗ 3. silver nitride

✗ 4. hydrofluoric acid

Q.68 Which among the following write buffers is used by the pipeline ALUs in order to write the result to the memory in a Pentium processor?

Question ID : **5013735297**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. External Snoop Write Buffer
✗ 2. Line Replacement Write Buffer
✓ 3. Write-back Buffer
✗ 4. Internal Snoop Write Buffer

Q.69 What is the average range of VHF (Very High Frequency) communications?

Question ID : **5013735333**
Status : **Answered**
Chosen Option : **2**

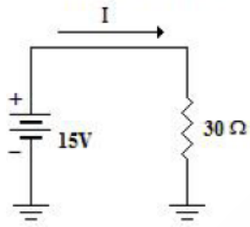
Ans
✗ 1. 100 miles
✗ 2. 15 miles
✓ 3. 30 miles
✗ 4. 60 miles

Q.70 What is the wavelength range of visible light?

Question ID : **5013735291**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 440 nm to 540 nm
✓ 2. 390 nm to 770 nm
✗ 3. 670 nm to 1,000 nm
✗ 4. 110 nm to 240 nm

Q.71 Determine the power in the given circuit.



Question ID : **5013735278**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 2.0 W
✗ 2. 450 W
✓ 3. 7.5 W
✗ 4. 0.5 W

Q.72 What is a Pelton wheel?

Question ID : **5013735307**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. It is an outward flow impulse turbine.
✗ 2. It is an inward flow impulse turbine.
✗ 3. It is an inward flow reaction turbine.
✓ 4. It is an axial flow impulse turbine.

Q.73 What is the operating voltage of HV (High-voltage) cables?

Question ID : **5013735334**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Up to 6.6 kV
✓ 2. Up to 11 kV
✗ 3. Up to 3.3 kV
✗ 4. Up to 1.1 kV

Q.74 Which among the following theorems uses the curl operation?

Question ID : **5013735327**
Status : **Answered**

Ans
✗ 1. Green's theorem

✔ 2. Stokes' theorem
✘ 3. Gauss Divergence theorem
✘ 4. Maxwell equation

Chosen Option : **2**

Q.75 For a Bipolar Junction Transistor (BJT), if the threshold voltage (V_t) is 6 V, the collector resistance (R_c) = 2 kΩ and the bias current is 13 mA, then what is the value of the voltage gain?

Ans
✘ 1. 1.3 V
✔ 2. 4.3 V
✘ 3. 26 V
✘ 4. 5.4 V

Question ID : **5013735271**
Status : **Answered**
Chosen Option : **2**

Q.76 What is the bandwidth of a typical satellite?

Ans
✘ 1. 200 MHz
✘ 2. 400 MHz
✘ 3. 300 MHz
✔ 4. 500 MHz

Question ID : **5013735289**
Status : **Answered**
Chosen Option : **2**

Q.77 Which of the following parameters is used for controlling an Insulated-Gate Bipolar Transistor (IGBT)?

Ans
✘ 1. V_{CE} (Collector to Emitter Voltage)
✘ 2. I_G (Gate current)
✘ 3. I_C (Collector current)
✔ 4. V_{GE} (Gate to Emitter Voltage)

Question ID : **5013735275**
Status : **Answered**
Chosen Option : **2**

Q.78 Which of the following laws governs electrolysis applications?

Ans
✘ 1. Ohm's law
✘ 2. Coulomb's law
✔ 3. Faraday's law
✘ 4. Lenz's law

Question ID : **5013735280**
Status : **Answered**
Chosen Option : **2**

Q.79 Which of the following flip-flops are most commonly used for designing synchronous counters?

Ans
✔ 1. J-K flip-flops
✘ 2. D flip-flops
✘ 3. S-R flip-flops
✘ 4. T flip-flops

Question ID : **5013735342**
Status : **Answered**
Chosen Option : **1**

Q.80 What is the address line for RST 5?

Ans
✘ 1. 0030 H
✔ 2. 0028 H
✘ 3. 0020 H
✘ 4. 0038 H

Question ID : **5013735295**
Status : **Answered**
Chosen Option : **3**

Section : **General**

Q.1 **In the following question the parts of a sentence namely P, Q, R, and S are jumbled. Choose the correct order of these to make a grammatically correct and meaningful sentence from the given options:**

P- is often misleading
Q- using another person's
R- ideas to guide others
S- and leads to confusion

Ans
✘ 1. RPSQ

Question ID : **5013735354**
Status : **Answered**
Chosen Option : **4**

✗ 2. PRSQ

✗ 3. SQPR

✓ 4. QRPS

Q.2 **Fill in the blanks selecting the best possible option.**

Most actors have _____ higher standard of living than _____ people who watch their films.

Question ID : **5013735355**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. an, the

✗ 2. the, no article

✗ 3. no article, an

✓ 4. a, the

Q.3 **Choose the word which means the same as the group of words given.**

That which cannot be heard

Question ID : **5013735358**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. Noisy

✓ 2. Inaudible

✗ 3. Unheard

✗ 4. Inaccessible

Q.4 **Identify the underlined part of the sentence which is not grammatically correct.**

Freedom of speech or the right to say what you think, are the most important feature of a democratic society.

Question ID : **5013735352**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. the right to say what you think

✗ 2. Freedom of speech

✓ 3. are the most important feature

✗ 4. of a democratic society.

Q.5 **Fill in the blanks selecting the best possible option.**

Round the neck of the chimpanzee there _____ a thick chain which the man held to bring him out of the cage.

Question ID : **5013735357**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. are

✓ 2. was

✗ 3. be

✗ 4. will be

Q.6 **Identify the underlined part of the sentence which is not grammatically correct.**

Even if the last date for sending the applications was drawing near he had still not filled in all the information.

Question ID : **5013735353**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. was drawing near

✓ 2. Even if

✗ 3. still not filled in

✗ 4. for sending the applications

Q.7 **Pick the word from the given options that is closest in meaning to the underlined word.**

The presence of her parents gave her solace in her time of grief.

Question ID : **5013735350**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. pride

✗ 2. joy

✗ 3. strength

✓ 4. comfort

Q.8

Question ID : **5013735356**

Fill in the blanks selecting the best possible option.

I tried _____ all my might to pull the heavy box, but in vain.

Status : **Answered**
Chosen Option : **2**

Ans
1. by ✗
2. with ✓
3. from ✗
4. for ✗

Q.9 **Pick the word from the given options that means the opposite of the underlined word.**

The tribals venerate tree gods.

Question ID : **5013735351**
Status : **Answered**
Chosen Option : **1**

Ans
1. dislike ✗
2. decorate ✗
3. insult ✓
4. worship ✗

Q.10 **Choose the correctly spelt word.**

Question ID : **5013735359**
Status : **Answered**
Chosen Option : **2**

Ans
1. oppurtunity ✗
2. opportunity ✓
3. oportunity ✗
4. oportunety ✗

Q.11 What is the currency of the Latin American country of Argentina?

Question ID : **5013735361**
Status : **Answered**
Chosen Option : **2**

Ans
1. Argentine Real ✗
2. Argentine Sterling ✗
3. Argentine Peso ✓
4. Argentine Dollar ✗

Q.12 Name the astronomer who discovered the planet of Pluto?

Question ID : **5013735364**
Status : **Answered**
Chosen Option : **4**

Ans
1. Stephen Hawking ✗
2. Edwin Hubble ✗
3. Clyde Tombaugh ✓
4. Copernicus ✗

Q.13 Who is the author of the book 'Laghu Paniniyam', which is a treatise on Sanskrit grammar?

Question ID : **5013735363**
Status : **Answered**
Chosen Option : **2**

Ans
1. AR Raja Raja Varma ✓
2. Panini ✗
3. Patanjali ✗
4. Ramachandra Guha ✗

Q.14 Which Indian actress will reprise the role that Sadhana immortalised in the yesteryear film 'Woh Kaun Thi'?

Question ID : **5013735365**
Status : **Answered**
Chosen Option : **1**

Ans
1. Aishwarya Rai ✓
2. Priyanka Chopra ✗
3. Deepika Padukone ✗
4. Anushka Sharma ✗

Q.15 Water rising in a tube due to capillary action is driven by which phenomenon?

Question ID : **5013735366**
Status : **Answered**
Chosen Option : **3**

Ans
- ✗ 1. Viscosity
- ✗ 2. Anomalous expansion
- ✓ 3. Surface tension
- ✗ 4. Vaporisation

Q.16 Who among the following foreign invaders was a Mongol?

Question ID : **5013735362**
Status : **Answered**
Chosen Option : **4**

Ans
- ✗ 1. Vasco da Gama
- ✗ 2. Sher Shah Suri
- ✓ 3. Genghis Khan
- ✗ 4. Babur

Q.17 Which new-age bank's Initial Public Offering (IPO) got oversubscribed by nearly 15 times in March 2018?

Question ID : **5013735368**
Status : **Answered**
Chosen Option : **1**

Ans
- ✓ 1. Bandhan Bank
- ✗ 2. Kotak Bank
- ✗ 3. EXIM Bank
- ✗ 4. Yes Bank

Q.18 What is the factor that is leading to a potential environmental degradation issue in Koodankulam, a small town in southern Tamil Nadu

Question ID : **5013735369**
Status : **Answered**
Chosen Option : **2**

Ans
- ✓ 1. Nuclear power plant
- ✗ 2. Hydroelectric power plant
- ✗ 3. Leather industry
- ✗ 4. Mining

Q.19 Who presented the Best Actor award to Aamir Khan at the Dinanath Mangeshkar Awards ceremony held in April 2017?

Question ID : **5013735360**
Status : **Answered**
Chosen Option : **3**

Ans
- ✗ 1. Asha Bhosle
- ✗ 2. Manohar Parrikar
- ✗ 3. Lata Mangeshkar
- ✓ 4. Mohan Bhagwat

Q.20 In which country would you find the giant statue of Christ the Redeemer, considered as one of the modern wonders of the world?

Question ID : **5013735367**
Status : **Answered**
Chosen Option : **4**

Ans
- ✗ 1. Vatican
- ✗ 2. Italy
- ✗ 3. Spain
- ✓ 4. Brazil