

Railway Recruitment Cell

Post Name : 08-Electronics and allied Engineering

Exam Code : MASSGNN

Exam Date : 12-06-2024

Exam Time : 9:30AM

Question No. 1

A microprocessor with a 12-bit address bus will be able to access-

- A) 0.5 KB of memory
- B) 4 KB of memory
- C) 5 KB of memory
- D) 10 KB of memory

Answer Key: B

Question No. 2

Determine the frequency of oscillations of a Wien Bridge Oscillator circuit having a resistor of 10 k $\Omega$  and a capacitor of 1000 nF.

- A) 14.8 Hz
- B) 15.9 Hz
- C) 11 Hz
- D) 15 Hz

Answer Key: B

Question No. 3

Wired Equivalent Privacy (WEP) is a security standard for-

- A) Emails
- B) USB communication
- C) Wireless networks
- D) Ethernet

Answer Key: C

Question No. 4

Which of the following devices is the opposite of an amplifier?

- A) Attenuator
- B) Voltage multiplier
- C) RF modulator
- D) Frequency multiplier

Answer Key: A

Question No. 5

A half-wave rectifier is constructed using-

- A) Four diodes in a bridge formation
- B) A metal rectifier in bridge formation
- C) Two diodes
- D) One diode

Answer Key: D

Question No. 6

Logarithmic amplifiers are used in-

- A) Adders
- B) Dividers
- C) Oscillators
- D) Combinational circuits

Answer Key: B

#### Question No. 7

The Schmitt trigger is also known as a-

- A) Squaring circuit
- B) Sweep circuit
- C) Blocking oscillator
- D) Sinusoidal circuit

Answer Key: A

#### Question No. 8

The number of comparator circuits required to build a three-bit simultaneous A/D converter is-

- A) 7
- B) 8
- C) 17
- D) 16

Answer Key: A

#### Question No. 9

The main advantage of using satellites for broadcasting is-

- A) Wide coverage
- B) Faster transmission
- C) Lower cost
- D) Simplicity in receiver design

Answer Key: A

#### Question No. 10

The ripple factor of a bridge rectifier is-

- A) 2
- B) 1.21
- C) 2.5
- D) 0.48

Answer Key: D

#### Question No. 11

The maximum efficiency of a full-wave rectifier is-

- A) 40.6%
- B) 81.2%
- C) 50%
- D) 25%

Answer Key: B

#### Question No. 12

What is the full form of ISDN with respect to communication engineering?

- A) Integrated Subscriber Digital Network
- B) Inter Subscriber Digital Network
- C) Inter Services Digital Network
- D) Integrated Services Digital Network

Answer Key: D

#### Question No. 13

Bluetooth is an example of a-

- A) Local area network
- B) Personal area network

C) Virtual private network

D) Wide area network

Answer Key: B

#### Question No. 14

The condition of an SCR can be tested by using a/an-

A) Line tester

B) Voltmeter

C) Ohmmeter

D) Insulation meter

Answer Key: C

#### Question No. 15

Which of the following devices converts decimal number to binary number?

A) Decoder

B) RAM

C) Converter

D) Encoder

Answer Key: D

#### Question No. 16

Which of the following is used to generate PWM?

A) JK flip-flop

B) Schmitt trigger

C) Monostable multivibrator

D) Free running multivibrator

Answer Key: C

#### Question No. 17

\_\_\_\_\_ is the property of magnetic materials which helps them to retain their magnetism after a magnetizing force is withdrawn.

A) Reluctivity

B) Resistivity

C) Retentivity

D) Conductivity

Answer Key: C

#### Question No. 18

The resolution of a 4-bit counting ADC is 0.5 volts. For an analog input of 6.6 volts, the digital output of the ADC will be-

A) 1011

B) 1101

C) 1100

D) 1110

Answer Key: D

#### Question No. 19

What is the range of the voltage level of the LM317 adjustable voltage regulator?

A) 1.25 V to 37 V

B) 0 V to 5 V

C) 5 V to 24 V

D) -5 V to -24 V

Answer Key: A

#### Question No. 20

A number of cells connected in series provide a-

- A) Higher voltage
- B) Higher current
- C) Lower voltage
- D) Lower current

Answer Key: A

#### Question No. 21

\_\_\_\_\_ are electronic switches that actuate when a small external voltage is applied across the terminals.

- A) Electromechanical relays
- B) Reed relays
- C) Solid-state relays
- D) Latching relays

Answer Key: C

#### Question No. 22

0110-0001-1001 in standard BCD is decimal number-

- A) 615
- B) 916
- C) 619
- D) 919

Answer Key: C

#### Question No. 23

RAM is also known as-

- A) PROM
- B) EAROM
- C) EPROM
- D) RWM

Answer Key: D

#### Question No. 24

The ratio of the differential-mode gain to common-mode gain is called-

- A) Common-mode rejection ratio
- B) Differential-mode rejection ratio
- C) Phase ratio
- D) Amplitude ratio

Answer Key: A

#### Question No. 25

How many 16-bit registers does an 8051 microcontroller have?

- A) 1
- B) 2
- C) 4
- D) 6

Answer Key: B

#### Question No. 26

The process of producing chemical decomposition of a compound by passing electricity through the compound is called-

- A) Electrolysis
- B) Electrolyte
- C) Electroplating
- D) Electrophoresis

Answer Key: A

Question No. 27

Which of the following is NOT an ethernet-cable type?

- A) Array cable
- B) Rollover cable
- C) Crossover cable
- D) Straight-through cable

Answer Key: A

Question No. 28

Gigabit Ethernet has a data rate of \_\_\_\_\_ Mbps.

- A) 10
- B) 100
- C) 1000
- D) 10000

Answer Key: C

Question No. 29

What is the role of a Relay in protection scheme?

- A) Amplifying device
- B) Sensing device
- C) Oscillating device
- D) Rectifying device

Answer Key: B

Question No. 30

Which part of circuit breaker is helpful in breaking the current?

- A) Medium
- B) Handle
- C) Trip Coil
- D) Contacts

Answer Key: D

Question No. 31

Which of the following is the correct way of declaring pointer to a constant in C++?

- A) `int const * pointer1=&p;`
- B) `int * const pointer1=&p;`
- C) `int pointer1 * const=&p;`
- D) `const * int pointer1=&p;`

Answer Key: A

Question No. 32

The number of cells in 3 variable K-map is \_\_\_\_\_ since the number of variables is three.

- A) 16
- B) 8
- C) 4
- D) 3

Answer Key: B

Question No. 33

How many address lines are needed for 64 KB memory?

- A) 32
- B) 16

C) 10

D) 3

Answer Key: B

Question No. 34

The purpose of level shifter in Op-amp internal circuit is to-

A) Increase impedance

B) Adjust DC voltage

C) Decrease input resistance

D) Provide high gain

Answer Key: B

Question No. 35

Classify the following based on the given instruction types in an 8085 microprocessor:

MVI B, F2H

A) 1 byte

B) 2 bytes

C) 3 bytes

D) 4 bytes

Answer Key: B

Question No. 36

A/an \_\_\_\_\_ is a flexible, transparent fibre made of high quality extruded glass (silica) or plastic.

A) Optical fibre

B) Plastic fibre

C) Transparent fibre

D) Glass fibre

Answer Key: A

Question No. 37

Which of the following is NOT used as a Comparator Reference Voltage in Op-amp Comparator Circuit?

A) Resistive voltage divider

B) Transistor reference source

C) Battery reference source

D) Zener diode reference source

Answer Key: B

Question No. 38

Which of the following is NOT a secondary instrument?

A) Indicating instrument

B) Integrating instrument

C) Recording instrument

D) Absolute instrument

Answer Key: D

Question No. 39

Which part converts sound to an equivalent electrical signal in a Public Address System?

A) Speaker

B) Power Amplifier

C) Mixer

D) Microphone

Answer Key: D

Question No. 40

How many layers are there in the ISO-OSI reference model?

- A) 5
- B) 6
- C) 7
- D) 9

Answer Key: C

Question No. 41

Which of the following is a phase-locked loop IC?

- A) IC 565
- B) IC 555
- C) IC 545
- D) IC 4017

Answer Key: A

Question No. 42

Which of the following is NOT an application of heating effect of electric current?

- A) Electric cooker
- B) Electric heater
- C) Electric iron
- D) Electroplating

Answer Key: D

Question No. 43

Calculate the electric current of a silicon diode which is applied with a forward potential of 9 V and a resistance of 1.5 k $\Omega$  in series with the diode.

- A) 5.5 mA
- B) 9 mA
- C) 4.5 mA
- D) 1.5 mA

Answer Key: A

Question No. 44

The power of an input AC supply applied to a half-wave rectifier is 50 watts. The DC output power obtained is 20 watts. What is the rectification efficiency?

- A) 25%
- B) 30%
- C) 40%
- D) 50%

Answer Key: C

Question No. 45

The terminal count of a mod-10 binary counter is-

- A) 1000
- B) 1001
- C) 1010
- D) 1011

Answer Key: B

Question No. 46

Which multiplexing has more empty slots?

- A) TDM
- B) Synchronous TDM
- C) Asynchronous TDM
- D) FDM

Answer Key: B

Question No. 47

Which network topology is used by the RS485 serial communication method for computers and devices?

- A) Multidrop
- B) Multipoint
- C) Point-to-point
- D) Bus Topology

Answer Key: B

Question No. 48

The full forms of the abbreviations TTL and CMOS in reference to logic families are-

- A) Triple Transistor Logic and Chip Metal Oxide Semiconductor
- B) Tristate Transistor Logic and Chip Metal Oxide Semiconductor
- C) Transistor Transistor Logic and Complementary Metal Oxide Semiconductor
- D) Tristate Transistor Logic and Complementary Metal Oxide Silicon

Answer Key: C

Question No. 49

Given the IP address 201.14.78.65 and the subnet mask 255.255.255.224. What is the subnet address?

- A) 201.14.78.32
- B) 201.14.78.64
- C) 201.14.78.65
- D) 201.14.78.224

Answer Key: B

Question No. 50

Which of the following works only on DC supply?

- A) Electrostatic meter
- B) Electrolytic energy meter
- C) Induction meter
- D) Electrodynamic meter

Answer Key: B

Question No. 51

What will be the voltage drop across a 2 kW electric heater whose resistance is 20  $\Omega$ ?

- A) 200 V
- B) 500 V
- C) 1000 V
- D) 2000 V

Answer Key: A

Question No. 52

In active region, transistor operates as a/an-

- A) Voltage regulator
- B) Amplifier
- C) Rectifier
- D) Voltage follower

Answer Key: B

Question No. 53

For an SCR, di/dt protection is achieved through the use of-



- A) R in series with SCR
- C) RL in series with SCR

- B) L in series with SCR
- D) RLC in series with SCR

Answer Key: B

#### Question No. 54

Which of the following quantity is the same in each device in a series circuit?

- A) Voltage
- C) Current
- B) Power
- D) Resistance

Answer Key: C

#### Question No. 55

Which of the following effects of electricity is used in electric bell?

- A) Sound
- C) Chemical
- B) Thermal
- D) Magnetic

Answer Key: D

#### Question No. 56

When a program is being executed in an 8085 microprocessor, its program counter contains-

- A) The number of instructions in the current program that have already been executed
- C) The memory address of the instruction that is being currently executed
- B) The total number of instructions in the program being executed
- D) The memory address of the instruction that is to be executed next

Answer Key: D

#### Question No. 57

The merging of a free electron and a hole in semiconductors is called-

- A) Recombination
- C) Restriking
- B) Neutralization
- D) Zeroing

Answer Key: A

#### Question No. 58

What is the major advantage of the J-K flip-flop over the S-R flip-flop?

- A) The J-K flip-flop is much faster
- C) The J-K flip-flop does not have any invalid states as outputs
- B) The J-K flip-flop does not have propagation delay problems
- D) All of the options

Answer Key: C

#### Question No. 59

The torque produced in an indicating instrument by utilizing magnetic, electrodynamic, electromagnetic, thermal, chemical and electrostatic effects is known as-

- A) Controlling torque
- B) Deflecting torque

C) Damping torque

D) Restoring torque

Answer Key: B

Question No. 60

What is the voltage of a battery that uses 800 J of energy to move 40 C of charge through a resistor?

A) 800 V

B) 40 V

C) 25 V

D) 20 V

Answer Key: D

Question No. 61

Which of the following materials is a paramagnetic substance?

A) Iron

B) Germanium

C) Aluminum

D) Nickel

Answer Key: C

Question No. 62

Quantizing noise can be reduced by increasing the-

A) Bandwidth

B) Sampling rate

C) Number of standard quantum levels

D) All of the options

Answer Key: C

Question No. 63

What type of energy transformation takes place during the discharge of the battery?

A) Chemical energy to electrical energy

B) Electrical energy to chemical energy

C) Mechanical energy to electrical energy

D) Electrical energy to mechanical energy

Answer Key: A

Question No. 64

The element which converts electric energy into heat energy in a circuit is called-

A) Resistance

B) Current

C) Voltage

D) EMF

Answer Key: A

Question No. 65

A copper wire of resistance  $R_0$  is stretched till its length is increased  $n$  times of its original length. Its resistance now will be-

A)  $n^2 R_0$

B)  $R_0/n^2$

C)  $nR_0$

D)  $n^3 R_0$

Answer Key: A

Question No. 66

What is the size of an IP address in IPv6?

- A) 4 bytes
- B) 8 bytes
- C) 100 bits
- D) 128 bits

Answer Key: D

Question No. 67

Which of the following devices are operating at the physical layer in the OSI network architecture?

- A) Gateways
- B) Hubs
- C) Bridges
- D) Routers

Answer Key: B

Question No. 68

How many side bands are transmitted in DSB modulation?

- A) Vestigial side band
- B) One side band and vestigial side band
- C) Two side bands
- D) One side band

Answer Key: C

Question No. 69

Current transformers are typically used with-

- A) AC voltmeters
- B) DC voltmeters
- C) AC ammeters
- D) DC ammeters

Answer Key: C

Question No. 70

Which of the following voltages is given to the control grid in a CRO with respect to cathode?

- A) Negative voltage
- B) Positive voltage
- C) Neutral voltage
- D) Zero voltage

Answer Key: A

Question No. 71

Which of the following can be measured using LCR meter?

- A) Input voltage, capacitance and reactance
- B) Intensity, copper loss and resistance
- C) Inductance, capacitance, and resistance
- D) Inductance, current and reactance

Answer Key: C

Question No. 72

What is the role of the focus section in a CRO?

- A) Controls horizontal position of trace
- B) Rotates the trace
- C) Selecting desired sweep rate
- D) Adjust the sharpness of the waveform

Answer Key: D

Question No. 73

How many basic types of probes are used in a CRO?

- A) 2
- B) 1
- C) 5
- D) 7

Answer Key: A

Question No. 74

How are transducers classified based on the source of energy?

- A) Temperature and pressure
- B) Manual and automatic
- C) Active and passive
- D) Mechanical and electrical

Answer Key: C

Question No. 75

Which bit of the flag register is occupied by the sign flag in the 8085 microprocessor?

- A) Sixth bit
- B) Seventh bit
- C) Fifth bit
- D) Fourth bit

Answer Key: B

Question No. 76

How many hardware interrupts are non-maskable in the 8085 microprocessor?

- A) 3
- B) 4
- C) 1
- D) 2

Answer Key: C

Question No. 77

Which register is loaded with the memory address 0000 when the 8051 microcontroller wakes up upon power being applied?

- A) SP
- B) PSW
- C) DPTR
- D) PC

Answer Key: D

Question No. 78

The ALU in the 8051 microcontroller can perform operations on \_\_\_\_\_ data.

- A) 8-bit
- B) 16-bit
- C) 6-bit
- D) 4-bit

Answer Key: A

Question No. 79

What is the maximum length of a character constant?

- A) 1 character
- B) 8 characters

C) 32 characters

D) 248 characters

Answer Key: A

### Question No. 80

What is the output of this C code?

```
#include <stdio.h>
```

```
void main()
```

```
{
```

```
int i = 0;
```

```
int j = i+1;
```

```
printf("%d\n", j);
```

```
}
```

A) 0

B) 1

C) 2

D) Run time error

Answer Key: B

### Question No. 81

The main circuit used in DPSK modulator is-

A) NOR

B) NAND

C) XNOR

D) OR

Answer Key: C

### Question No. 82

A monostable multivibrator-

A) Has one stable state

B) Has one quasi stable state

C) Goes to quasi stable state upon application of triggering

D) All of the options

Answer Key: D

### Question No. 83

On which architecture does 8051 microcontroller work?

A) Von-Neumann

B) Harvard

C) Both Von-Neumann and Harvard

D) None of the options

Answer Key: B

### Question No. 84

Which of the following functions returns the length of the string "s"?

- A) strlen(s);
- C) strcpy(s, s1);

- B) strstr(s);
- D) strlen(s);

Answer Key: A

#### Question No. 85

Which of the following is NOT a rule for virtual functions?

- A) Virtual functions can be static members
- B) A virtual function can be a friend function of another class
- C) A virtual function must be defined in the base class, even though it is not used
- D) A class may have a virtual destructor but it cannot have a virtual constructor

Answer Key: A

#### Question No. 86

The flow of electrons is called-

- A) Current
- B) Resistance
- C) Energy
- D) Inductance

Answer Key: A

#### Question No. 87

Two capacitors, 100  $\mu\text{F}$  and 50  $\mu\text{F}$ , are connected in parallel. Find the equivalent capacitance.

- A) 50  $\mu\text{F}$
- B) 100  $\mu\text{F}$
- C) 150  $\mu\text{F}$
- D) 200  $\mu\text{F}$

Answer Key: C

#### Question No. 88

A damping torque is provided in \_\_\_\_\_ type of instruments.

- A) Indicating
- B) Integrating
- C) Recording
- D) All of the options

Answer Key: A

#### Question No. 89

What is meant by an attribute in the DBMS?

- A) It contains the name of a table in a particular database
- B) It contains the type of data in a particular cell
- C) It contains the name of a column in a particular table
- D) None of the options

Answer Key: C

#### Question No. 90

Which of the following SQL operators is used in a WHERE clause to search for a specified pattern in a column in DBMS?

- A) AND
- B) SOME
- C) LIKE
- D) ANY

Answer Key: C

Question No. 91

Suppose the Student table consists of RollNo, RegNo, Name, Address and Rank attributes. What is the query to change the names of those students with the name "Sharma" to "Patel"?

- A) UPDATE Student Name = 'Sharma' WHERE Name = 'Patel';  
B) MODIFY Student Name = 'Patel' as Name = 'Sharma';  
C) MODIFY Student RENAME Name = 'Patel' as Name = 'Sharma';  
D) UPDATE Student SET Name = 'Patel' WHERE Name = 'Sharma';

Answer Key: D

Question No. 92

In SQL, unique records are returned when the \_\_\_\_\_ keyword is used while fetching records from a table with multiple duplicate records.

- A) BETWEEN  
B) DISTINCT  
C) DELETE  
D) INDEX

Answer Key: B

Question No. 93

If the size of a stack is 6 and the programmer tries to add the 7th element in the stack, then the condition is known as-

- A) Underflow  
B) Backflow  
C) Downflow  
D) Overflow

Answer Key: D

Question No. 94

In a microprocessor, which of the following buses is unidirectional?

- A) Address bus  
B) Data bus  
C) Control bus  
D) All of the options

Answer Key: A

Question No. 95

If a capacitor is marked as 484N, then its value is-

- A) 480000 pF  
B) 240000 pF  
C) 120000 pF  
D) 60000 pF

Answer Key: A

Question No. 96

The output of a particular op-amp increases 9 V in 12  $\mu$ s. The slew rate is-

- A) 9 V/ $\mu$ s  
B) 0.75 V/ $\mu$ s  
C) 1.5 V/ $\mu$ s  
D) 1.33 V/ $\mu$ s

Answer Key: B

Question No. 97

The flow control during macro expansion is \_\_\_\_\_.

- A) Chronological
- B) Combination
- C) Sequential
- D) Indexable

Answer Key: C

Question No. 98

Which filter is required to obtain SSB from a DSB signal?

- A) Band-stop filter
- B) Band-pass filter
- C) High-pass filter
- D) Low-pass filter

Answer Key: B

Question No. 99

Which application of op-amp produces an output voltage that is both proportional to the amplitude and duration of the input signal?

- A) Scale changer
- B) Phase shifter
- C) Differentiator
- D) Integrator

Answer Key: D

Question No. 100

What should be the percentage power in each sideband with respect to carrier power for 100% modulation in AM?

- A) 70%
- B) 25%
- C) 50%
- D) 60%

Answer Key: B

Question No. 101

The Gulf of Mannar is situated along the coast of-

- A) Gujarat
- B) Kerala
- C) Tamilnadu
- D) Karnataka

Answer Key: C

Question No. 102

When is 'National Sports Day of India' celebrated?

- A) August 15
- B) July 27
- C) August 29
- D) November 12

Answer Key: C

Question No. 103

Which of the following titles was assumed by Narasimhavarman I?



- A) Vatapikondan
- C) Kadaramkondan

- B) Jayamkondan
- D) Gangaikondan

Answer Key: A

#### Question No. 104

Who appoints the Chief Minister of Delhi?

- A) Prime Minister
- C) President
- B) Governor
- D) Chief Justice

Answer Key: C

#### Question No. 105

In which of the following states is the festival of Hornbill celebrated?

- A) Tamil Nadu
- C) Nagaland
- B) Karnataka
- D) Arunachal Pradesh

Answer Key: C

#### Question No. 106

Which of the following is NOT a computer virus?

- A) Trojan horse
- C) McAfee
- B) Logic bomb
- D) Redlof

Answer Key: C

#### Question No. 107

'INS Vikramaditya' is a/an-

- A) Submarine
- C) Main battle tank
- B) Aircraft carrier
- D) Jet fighter

Answer Key: B

#### Question No. 108

Ozone is a gas composed of \_\_\_\_\_ atoms.

- A) Two
- C) Four
- B) Three
- D) Five

Answer Key: B

#### Question No. 109

Who is the present RBI Governor?

- A) Shaktikanta Das
- C) Arvind Subrmaniyan
- B) NK Singh
- D) None of the options

Answer Key: A

#### Question No. 110

\_\_\_\_\_ loses its data when the power is turned off.

- A) Antivirus
- B) Hard drive
- C) RAM
- D) Flash memory

Answer Key: C

#### Question No. 111

Minerals and oil are -

- A) Renewable resources
- B) Non-renewable resources
- C) Water resources
- D) Artificial resources

Answer Key: B

#### Question No. 112

Which of the following devices is suitable for the removal of gaseous pollutants?

- A) Cyclone separator
- B) Fabric filter
- C) Electrostatic precipitator
- D) Wet collector (scrubber)

Answer Key: D

#### Question No. 113

Which of the following is likely a characteristic of hazardous waste?

- A) Ignitability
- B) Corrosivity
- C) Reactivity
- D) All of the options

Answer Key: D

#### Question No. 114

Which of the following is a control device that can be used to minimize the effects of air pollution?

- A) Cyclone separator
- B) Aerial water tanks
- C) Sand filter
- D) Trickling filter

Answer Key: A

#### Question No. 115

Which of the following is NOT a function in the Microsoft 365 version of MS-Excel?

- A) SUM
- B) AVG
- C) MAX
- D) MIN

Answer Key: B

#### Question No. 116

From which state was Chandrayaan-2 launched?

- A) Andhra Pradesh
- B) Kerala
- C) Karnataka
- D) Tamilnadu

Answer Key: A

**Question No. 117**

The 'India Standard Meridian' passes through the States of Uttar Pradesh, Madhya Pradesh, Chhattisgarh-

- A) Andhra Pradesh and Karnataka
- B) Andhra Pradesh and Tamil Nadu
- C) Karnataka and Tamil Nadu
- D) Odisha and Andhra Pradesh

Answer Key: D

**Question No. 118**

When did Indira Gandhi serve as the Prime Minister of India for the first time?

- A) 1961
- B) 1964
- C) 1966
- D) 1980

Answer Key: C

**Question No. 119**

What does WSDL stand for?

- A) Web Software Definition Language
- B) Web Services Description Language
- C) World Server Definition Language
- D) Web Page Distribution Language

Answer Key: B

**Question No. 120**

Acid rains are caused by-

- A) Sulphur dioxide and ozone
- B) Sulphur dioxide and Nitrogen oxides
- C) Nitrogen oxide and ozone
- D) Carbon monoxide and Sulphur dioxide

Answer Key: B

**Question No. 121**

The noise level of soft whisper will be around-

- A) 20 dB
- B) 10 dB
- C) 30 dB
- D) 40 dB

Answer Key: C

**Question No. 122**

What is the full form of GWP?

- A) Global Wind Potential
- B) Global Warming Potential
- C) Global Warming Precedence
- D) Global Wind Precedence

Answer Key: B

**Question No. 123**

What is the full form of GLOBE?

- A) Global Leading Occupations to Benefit the Environment
- B) Global Learning and Observations to Benefit the Environment

- C) General Learning and Occupations to Benefit the Environment  
D) Global Leaders and their Observations to Benefit the Environment

Answer Key: B

Question No. 124

According to air pollution, the meteorological variable(s) affecting the severity of pollution is/are-

- A) Wind speed  
B) Precipitation  
C) Atmospheric diffusion  
D) All of the options

Answer Key: D

Question No. 125

What is the former name for the Badminton World Federation (BWF)?

- A) International Badminton Association  
B) International Badminton Federation  
C) Association of World Badminton  
D) Federation of International Badminton

Answer Key: B

Question No. 126

Soil erosion can be prevented by-

- A) Afforestation  
B) Deforestation  
C) Overgrazing  
D) Removal of vegetation

Answer Key: A

Question No. 127

The number of pixels displayed on the computer screen is called-

- A) Aspect ratio  
B) Refresh rate  
C) Resolution  
D) Contrast ratio

Answer Key: C

Question No. 128

Which of the following sources of energy has the largest share in power generation in India?

- A) Thermal energy  
B) Wind energy  
C) Nuclear energy  
D) Hydro energy

Answer Key: A

Question No. 129

What is the 1's complement of the binary number  $(1011001)_2$ ?

- A)  $(0110110)_2$   
B)  $(0100110)_2$   
C)  $(0100111)_2$   
D)  $(0101100)_2$

Answer Key: B

Question No. 130

Which of the following search engines originated from Russia?

- A) Baidu
- B) Yahoo
- C) Naver
- D) Yandex

Answer Key: D

Question No. 131

In a mesh topology, every device has a dedicated \_\_\_\_\_ link to every other device.

- A) Point-to-point
- B) Duplex
- C) Multipoint
- D) None of the options

Answer Key: A

Question No. 132

Which of the following data transfer modes allows bidirectional transfer of data between drives and memory without the intervention of the processor?

- A) DMA
- B) Interrupt initiated I/O
- C) Programmed I/O
- D) None of the options

Answer Key: A

Question No. 133

How many pipes can be used to create a two-way data channel between two processes in IPC?

- A) 1
- B) 2
- C) 3
- D) 4

Answer Key: B

Question No. 134

Who among these clinched the Best Actress Award at the 77th Cannes Film Festival held in May 2024 for her scintillating performance in 'The Shameless'?

- A) Anasuya Sengupta
- B) Elizabeth Olsen
- C) Oprah Winfrey
- D) Zoe Saldana

Answer Key: A

Question No. 135

The GoI extended the tenure of Dr. Sameer V Kamat in May 2024 for one more year as the Chairman of-

- A) ISRO
- B) AIIMS
- C) IISc
- D) DRDO

Answer Key: D

Question No. 136

What is equal to the measurement of  $1\mu\text{A}$ ?

- A)  $10^6\text{A}$
- B)  $10^{-3}\text{A}$

C)  $10^{-6}$  A

D)  $10^3$  A

Answer Key: C

#### Question No. 137

In universal indicators, a pH of 4 to 5 indicates-

A) Strong acids

B) Weak acids

C) Weak alkalis

D) Strong alkalis

Answer Key: B

#### Question No. 138

The ability of metals to be drawn into thin wires is known as-

A) Ductility

B) Malleability

C) Sonority

D) Conductivity

Answer Key: A

#### Question No. 139

$\text{Fe(s)} + \text{CuSO}_4(\text{aq}) \rightarrow \text{FeSO}_4(\text{aq}) + \text{Cu(s)}$  is an example of-

A) Double Displacement Reaction

B) Combination Reaction

C) Decomposition Reaction

D) Displacement Reaction

Answer Key: D

#### Question No. 140

\_\_\_\_\_ is defined as the time rate at which work is done or energy is transferred.

A) Power

B) Force

C) Distance

D) Displacement

Answer Key: A

#### Question No. 141

What are transition elements?

A) Elements which possess properties of both metals and non-metals

B) Elements which have eight electrons in the outermost shell

C) Elements whose two outermost shells are incomplete

D) Elements which belong to group 17

Answer Key: C

#### Question No. 142

Which of the following is the atomic number of Manganese?

A) 25

B) 26

C) 27

D) 28

Answer Key: A

#### Question No. 143

What is the work that needs to be done to increase the speed of a 1 kg ball from 3 m/s to 6 m/s?

- A) 13.5 J
- B) 36 J
- C) 27.5 J
- D) 18 J

Answer Key: A

#### Question No. 144

Which of the following metal oxides has both acidic and basic properties?

- A) Aluminium oxide
- B) Magnesium oxide
- C) Silicon oxide
- D) Sulphur oxide

Answer Key: A

#### Question No. 145

The magnetic lines of force-

- A) Are closed curves
- B) Intersect far away from the poles
- C) Always intersect
- D) Do not mutually repel each other

Answer Key: A

#### Question No. 146

Find the work done when a force of 50 N moves an object through a distance of 2 m.

- A) 100 J
- B) 200 J
- C) 300 J
- D) 500 J

Answer Key: A

#### Question No. 147

Which of the following is a ferromagnetic material?

- A) Iron
- B) Calcium
- C) Sodium
- D) Magnesium

Answer Key: A

#### Question No. 148

A current of 0.6 A is drawn by a filament of an electric bulb for 11 minutes. Find the amount of electric charge that flows through the circuit.

- A) 300 C
- B) 396 C
- C) 214 C
- D) 297 C

Answer Key: B

#### Question No. 149

The word aqueous (aq) is written if the reactant or product is present as a/an-

- A) Solution in kerosene
- B) Solution in water
- C) Concentrated solution
- D) Isotonic solution

Answer Key: B

Question No. 150

What is the chemical name of  $\text{KHCO}_3$ ?

A) Potassium hydroxide

B) Potassium carbonate

C) Potassium bicarbonate

D) Potassium carboxylate

Answer Key: C