

Question Paper Code

EEE-EEE-1102



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Q.No : 1 - Main Subject

A transducer measures a range of 0 - 200 N force with a resolution of 0.15% of full scale. What is the smallest change which can be measured by this transducer

- A) 3N
 B) 30N
 C) 0.3N
 D) 0.03N

Answer: C

Q.No : 2 - Main Subject

When the stator windings are connected in such a fashion that the number of poles are made half the speed of the rotor of a synchronous motor

- A) remains same as the original value
 B) decreases to half the original value
 C) increases to two times the original value
 D) tends to become zero

Answer: C

Q.No : 3 - Main Subject

66 kV is suitable for transmission of power over

- A) 30km
- B) 60km
- C) 120km
- D) 200km

Answer: **B**

Q.No : 4 - Main Subject

The least severe fault on a transmission line is:

- A) L-L-G
- B) L-G
- C) L-L
- D) L-L-L

Answer: **B**

Q.No : 5 - Main Subject

The function of connecting a zener diode in an UJT circuit, used for the triggering of SCRs, is to

- A) expedite the generation of triggering pulses
- B) delay the generation of triggering pulses
- C) provide a constant voltage to UJT to prevent erratic firing
- D) provide a variable voltage to UJT as the source voltage changes.

Answer: **C**

Q.No : 6 - Main Subject

A speaker of $9\ \Omega$, resistive impedance is connected to a supply of 10 V with an internal impedance of $1\ \Omega$. A transformer of 1: 3 turns ratio is used between source and speaker. Determine the power taken by the speaker.

- A) 25 W
- B) 2.5W
- C) 250W
- D) $100/9$ W

Answer: **A**

Q.No : 7 - Main Subject

In 8086 program status word has _____ flags (status & control)

- A) 8
B) 9
C) 16
D) 4

Answer: **B**

Q.No : 8 - Main Subject

The 8085-microprocessor's instruction which can be used to check whether given unsigned 8-bit number in accumulator is an odd or even integer, is/are:

- A) LDA or STA
B) XCHG
C) RAR
D) LDAX or STAX

Answer: **C**

Q.No : 9 - Main Subject

A 400-KW, 3-Phase, 440-V, 50-HZ induction motor has a speed of 950rpm on full load. The machine has 6 poles. The slip of the machine will be

- A) 0.06
B) 0.1
C) 0.04
D) 0.05

Answer: **D**

Q.No : 10 - Main Subject

Bi-polar function transistor have working following mode

- A) a) Cut-off - b) active - c) saturation
B) a) Forward - b) Backward - c) Ideal
C) a) Cutoff - b) Forward - c) Ideal
D) a) active - b) Reverse - c) Forward

Answer: **A**

Q.No : 11 - Main Subject

In a synchronous generator, reactance calculated between the air gap line voltage and the corresponding short circuit current is known as,

- A) Saturated reactance
B) Unsaturated reactance

- C) Critical reactance
D) Compensated reactance

Answer: **B**

Q.No : 12 - Main Subject

In a Δ – connected source during a Δ – connected load, the

- A) load voltage and line voltage are one-third the source voltage for a given phase.
B) load voltage and line voltage are two-thirds the source voltage for a given phase
C) load voltage and line voltage cancel for a given phase
D) load voltage, line voltage and source phase voltage are equal for a given phase

Answer: **D**

Q.No : 13 - Main Subject

Overall thermal efficiency of a steam power station is in the range

- A) 18 - 25%
B) 30 - 40%
C) 44 - 62%
D) 68 - 79%

Answer: **A**

Q.No : 14 - Main Subject

Buchholz relay works on the principle of

- A) production of eddy currents whenever load changes are rapid
B) ionization of transformers oil
C) magnetic hum due to sudden variation in load
D) generation of gas due to breakdown of insulation

Answer: **D**

Q.No : 15 - Main Subject

Dipole & dipole movement equation is

- A) $m = Q \cdot l$ Coulomb meter
B) $\nabla^2 v = -e_v / \epsilon$
C) $dB = \frac{\mu_0 I dl}{4\pi r^2} \sin\theta$

D) $\text{emf} = \frac{d\phi}{dt}$

Answer: **A**

Q.No : 16 - Main Subject

A wattmeter has a range of 1000V with an error of $\pm 1\%$ of full scale deflection. If the true power passed through it is 100W, then the relative error would be,

A) $\pm 10\%$

B) $\pm 5\%$

C) $\pm 1\%$

D) $\pm 0.5\%$

Answer: **A**

Q.No : 17 - Main Subject

How many capacitances does the high frequency hybrid ' π ' model of a Transistor has?

A) 2

B) 3

C) 1

D) Zero.

Answer: **A**

Q.No : 18 - Main Subject

For a diode, reverse recovery time is defined as the time between the instant diode current becomes zero and the instant reverse recovery current decays to

A) Zero

B) 10% of reverse peak current I_{RM}

C) 25% of I_{RM}

D) 15% of I_{RM}

Answer: **C**

Q.No : 19 - Main Subject

What KVA rating is required for a transformer that must handle a maximum load current of 8A with a secondary voltage of 2KV?

- A) 4 KVA
B) 0.25 KVA
C) 16 KVA
D) 8 KVA

Answer: C

Q.No : 20 - Main Subject

The Threshold voltage of a MOSFET is defined as:

- A) The drain-source voltage at which the transistor goes into saturation
B) The gate-source voltage at which the transistor goes into saturation
C) The gate-source voltage at which a predefined value of drain current starts flowing
D) The drain-source voltage at which a predefined value of drain current starts flowing

Answer: C

Q.No : 21 - Main Subject

If in a synchronous motor, driving a given mechanical load and drawing current at a leading power factor from constant voltage supply its field excitation is increased, its power factor

- A) will become more
B) will become less
C) will remain unchanged
D) will become unity

Answer: B

Q.No : 22 - Main Subject

When a 6V battery is connected across the primary of a transformer with turns ratio of 8, the secondary voltage is

- A) 0V
B) 6V
C) 48V
D) 0.75V

Answer: A

Q.No : 23 - Main Subject

In a system, if the base load is the same as the maximum demand, the load factor will be

- A) 1
B) zero
C) infinity

D) 1percent

Answer: **A**

Q.No : 24 - Main Subject

An electronegative gas is one in which

- A) Positive ions are formed along with electrons
B) The gas has inherent negative charge
C) Gas is ionized due to electron bombardment
D) The gases in which electron gets attached to form negative ion

Answer: **D**

Q.No : 25 - Main Subject

The clearances normally adopted in HV laboratories for AC and impulse voltages are

- A) 100 to 200 kV/m for AC and 500 kV/m for impulse
B) 300 kV/m for AC and 500 kV/m for impulse
C) 30 kV/m for AC and 50 kV/m for impulse
D) 10 kV/m for AC and 50 kV/m for impulse

Answer: **A**

Q.No : 26 - Aptitude

The length of a rectangle, with perimeter 20, increases by 128.57%. Find the percent increase in its area if the initial length of the rectangle is 7 and its perimeter increases by 100%.

- A) 204.76%
B) 198.56%
C) 228.26%
D) 200%

Answer: **A**

Q.No : 27 - Aptitude

If 15 August 1947 has same day in 1944 then which year would have the same day as 15 August in 1944?

- A) 1948
B) 1947
C) 1945
D) 1946

Answer: **A**

Q.No : 28 - Aptitude

The average of seven quantities is 7. The average of three of them is 13. find the average of the other four.

- A) 5
B) 5.75
C) 2.5
D) 0

Answer: **C**

Q.No : 29 - Aptitude

Krishna, whose bowling average before his last match was 9.4 runs per wicket, takes five wickets for 19 runs in his last match, thereby decreasing his present average by 0.4 runs per wicket. How many wickets did he take before the last match?

- A) 95
B) 65
C) 47
D) 85

Answer: **B**

Q.No : 30 - Aptitude

Find the remainder when 577^{234} is divided by 4.

- A) 5
B) 4
C) 1
D) 2

Answer: **C**

Q.No : 31 - Aptitude

The angles of a triangle are in the ratio 3 : 5 : 7. Find the measurement of greatest angle (in degrees).

- A) 90
B) 96
C) 84
D) 100

Answer: **C**

Q.No : 32 - Aptitude

Anchal and Nikita run on a circular track of length 150 m in opposite direction. If Anchal has a speed of 20 m/s and Nikita has a speed of 10 m/s, then in how much time will they meet for the first time? Also, find the time taken by them to meet at the starting point for the first time.

- A) 5 sec, 7 sec
B) 7 sec, 9 sec
C) 5 sec, 15 sec
D) 10 sec, 12 sec

Answer: C

Q.No : 33 - Aptitude

What is the probability that the birthdays of three different persons will fall in exactly two calendar months?

- A) $\frac{13}{48}$
B) $\frac{1}{4}$
C) $\frac{11}{48}$
D) $\frac{3}{8}$

Answer: C

Q.No : 34 - Aptitude

Find the least number which when divided by 21, 25 and 35 leaves a remainder of 13.

- A) 128
B) 518
C) 538
D) 48

Answer: C

Q.No : 35 - Aptitude

A sum of money in 4 years becomes 2016 and in 9 years becomes Rs. 2286. What is the principal sum where the simple rate of interest is to be charged?

- A) Rs. 1600
B) Rs. 1750
C) Rs.1800
D) Rs.1850

Answer: C

Q.No : 36 - Aptitude

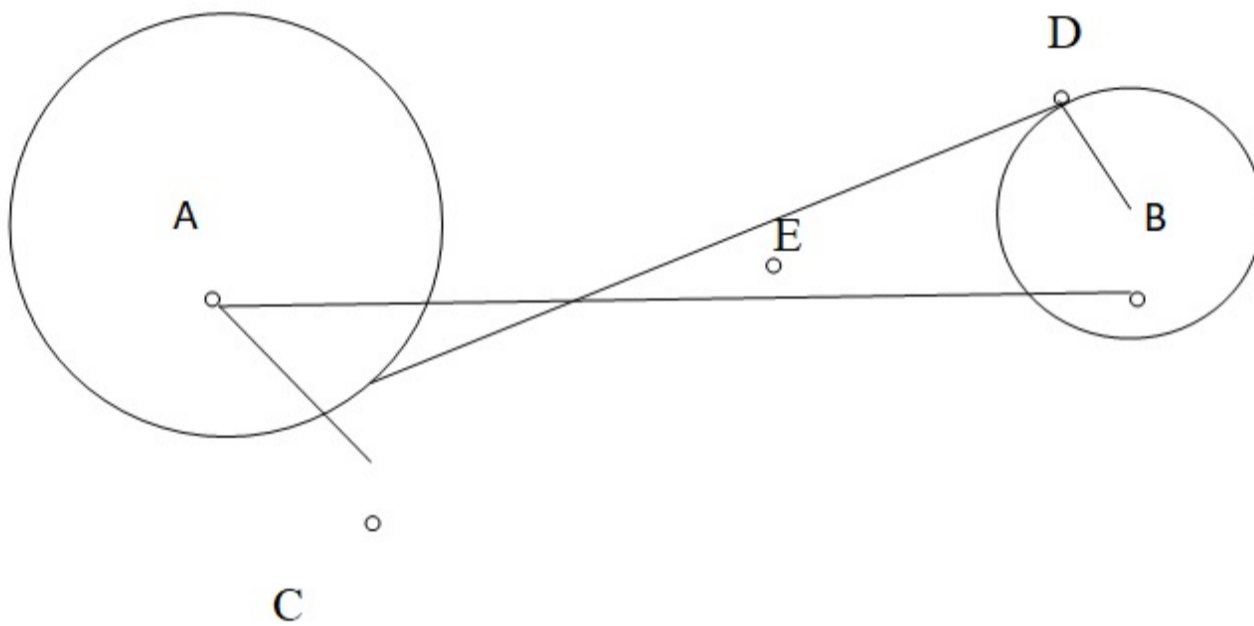
How many 5 digit numbers can be formed out of the digits 3,2,7,4 and 0, if no digit is to be used more than once?

- A) 96
 B) 24
 C) 720
 D) 120

Answer: **A**

Q.No : 37 - Aptitude

Two circles, radius 5 and 3, have a common tangent CD. If $AB = 18$ and $CE:ED = 3:1$, Then find CD.



- A) 15
 B) 12
 C) 16
 D) 19

Answer: **C**

Q.No : 38 - Aptitude

Find the 10th term and the sum of the first 10 terms of the series $-7,-3,1,5,9,\dots$

- A) 30,110
 B) 29,110
 C) 30,220
 D) 29,220

Answer: **B**

Q.No : 39 - Aptitude

The population of a village is 11000. If the number of children increases by 11% and the number of adults increases by 20%, the population becomes 12660. Find the population of children in town.

- A) 5000
B) 6500
C) 6000
D) 5500

Answer: **C**

Q.No : 40 - Aptitude

Find a single discount equivalent to three successive discounts of 10%, 20% and 25%.

- A) 44%
B) 46%
C) 42%
D) 48%

Answer: **B**

Q.No : 41 - Reasoning

Palaeography : Writings :: Ichthyology : ?

- A) Fishes
B) Whales
C) Oysters
D) Mammals

Answer: **A**

Q.No : 42 - Reasoning

In the following question, four groups of letters are given, out of which three are alike in a certain way while one is different. Choose the odd one.

- A) BCYZ
B) EFVW
C) HIUV
D) JKQR

Answer: **C**

Q.No : 43 - Reasoning

In a certain code, PAPER is written as SCTGW. How is MOTHER written in that code?

- A) ORVLGW
B) PQVJGT
C) PQXJJT
D) PQXKJV

Answer: C

Q.No : 44 - Reasoning

Choose the 'ODD' man out: 312, 725, 422 and 634.

- A) 725
B) 312
C) 634
D) 422

Answer: C

Q.No : 45 - Reasoning

Directions: Read the following information carefully and answer the questions that follow:

- i. P, Q, R, S, T and U are six students procuring their Master's degree in six different subjects - English, History, Philosophy, Physics, Statistics and Mathematics.
- ii. Two of them stay in hostel, two stay as paying guest (PG) and the remaining two stay at their home.
- iii. R does not stay as PG and studies Philosophy.
- iv. The students studying Statistics and History do not stay as PG.
- v. T studies Mathematics and S studies Physics.
- vi. U and S stay in hostel. T stays as PG and Q stays at home.

Which of the following combinations of subject and place of stay is not correct ?

- A) English - Hostel
B) Mathematics - PG
C) Philosophy - Home
D) Physics - Hostel

Answer: A

Q.No : 46 - Reasoning

Mundas : Gaddis : Shompens

- A) They are varieties of fodder.
B) They are different kinds of pastures,
C) They are tribal groups.
D) They are good mountaineers.

Answer: C

Q.No : 47 - Reasoning

Introducing a man, a woman said, 'He is the only son of my mother's mother.' How is the woman related to the man?

- A) Mother
B) Aunt
C) Sister
D) Niece

Answer: **D**

Q.No : 48 - Reasoning

If MOBILITY is coded as 46293927, then EXAMINATION is coded as

- A) 45038401854
B) 56149512965
C) 57159413955
D) 67250623076

Answer: **B**

Q.No : 49 - Reasoning

Choose the missing term out of the given alternatives. c _ bbb _ _ abbb _ abbb _

- A) aabcb
B) abccb
C) abacb
D) bacbb

Answer: **B**

Q.No : 50 - Reasoning

Directions for Question : Among the 450 players, 195 are prescribed to team A. One hundred and seventy-five are prescribed to team B and 185 are for team C. Fifty-five are subscribed to team A and B. Forty are for team B and C. Forty-five are prescribed for team A and C. Twenty-five for all the three teams. How many players subscribed for exactly two team?

- A) 310
B) 325
C) 335
D) 350

Answer: **D**

Q.No : 51 - Reasoning

If in a certain code, 'bir le nac' means 'green and tasty'; 'pic nac hor' means 'tomato is green' and 'coc bir hor' means 'food is tasty'. Which of the following means 'tomato is tasty' in that code ?

- A) bir le hor
 B) pic hor nac
 C) hor bir pic
 D) None of these

Answer: C

Q.No : 52 - Reasoning

How much does Akshay pay as fees per annum for his engineering degree?

Statements:

- a) Ramesh pays 15% more per annum than Akshay as he (Ramesh) obtained the seat through management quota. Additionally, Akshay pays 30% more per annum than Karan, who is a merit student.
 b) As he would obtain discount of 8% on the course fee for two academic years, Karan paid a two-year course fee for Rs.75400. Choose from the following:

- A) If (a) alone is sufficient to answer the question.
 B) If (b) alone is sufficient to answer the question.
 C) If (a) and (b) together are necessary to answer the question.
 D) If either (a) or (b) is sufficient to answer the question.

Answer: C

Q.No : 53 - Reasoning

I : Prune :: Hair : 11

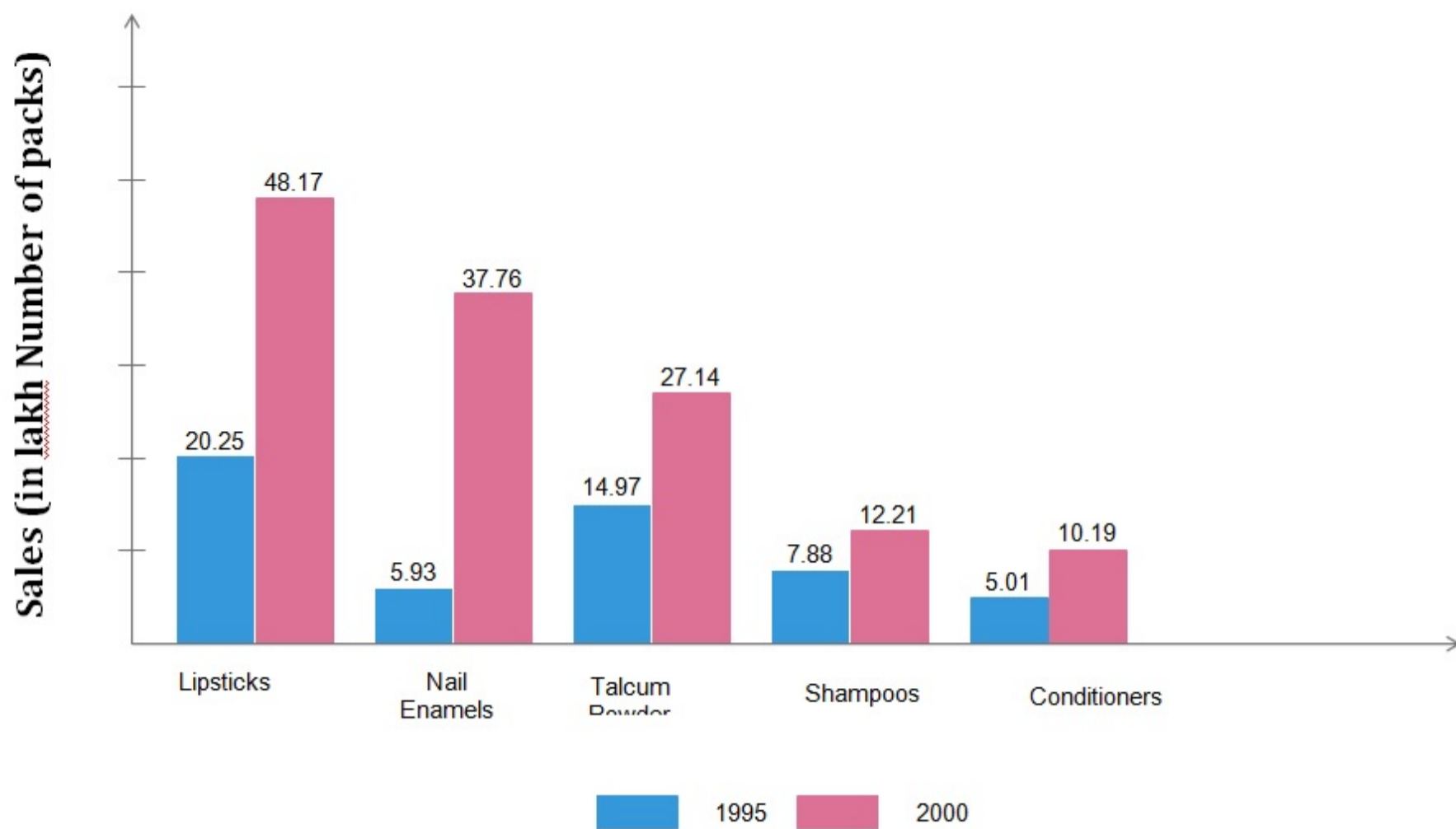
- I. (A) Beard (B) Lawn (C) Wool (D) Shrub
 II. (P) Shave (Q) Mow (R) Trim (S) Shear

- A) DR
 B) AP
 C) BQ
 D) CS

Answer: A

Q.No : 54 - Reasoning

Directions for Question: A cosmetic company provides five different products. The sales of these five products (in lakh number of packs) during 1995 and 2000 are shown in the following bar graph. Sales (in lakh number of packs) of five different products of cosmetic company during 1995 and 2000.



During the period 1995-2000, the minimum rate of increase in sales is in the case of?

- A) Shampoos
 B) Nail enamels
 C) Talcum powders
 D) Lipsticks

Answer: A

Q.No : 55 - Reasoning

Choose the correct alternative that will continue the same pattern and fill in the spaces. 8,9,8,7,10,9,6,11,10,(...),12

- A) 5
 B) 7
 C) 8
 D) 11

Answer: A

Q.No : 56 - General Knowledge

A polish astronomer, Nicolaus Copernicus is known for

- A) his discovery of heavenly bodies
 B) his discovery that the sun is the centre of the universe
 C) Both (a) and (b) are correct
 D) None of these

Answer: C

Q.No : 57 - General Knowledge

The New York version of Statue of Liberty was engineered by

- A) A. G. Eiffel
- B) American Sculptor Henry Smith
- C) Sir Edwin Lutyens
- D) None of these

Answer: **A**

Q.No : 58 - General Knowledge

Queen Maria Theresa is associated with the

- A) Civil was in England
- B) War of Austrian succession
- C) Seven-year War
- D) Thirty-year War

Answer: **B**

Q.No : 59 - General Knowledge

The Olympics Motto 'Citius, Altius, Fortius' have been taken from which language?

- A) Latin
- B) Spanish
- C) Greek
- D) French

Answer: **A**

Q.No : 60 - General Knowledge

The International Date Line passes through

- A) Exactly through 180° longitude
- B) Equator
- C) Approximately 180° east or west meridian
- D) Exactly 0° meridian

Answer: **C**

Q.No : 61 - General Knowledge

Assertion (A): The matter in the universe is in a state of rapid expansion.

Reason (R) : The light coming from the galaxies shifts to the red end of the spectrum.

- A) Both A and R are true and R is the correct explanation of A.
B) Both A and R are true and R is not a correct explanation of A.
C) A is true R is false.
D) R is true but A is false.

Answer: **A**

Q.No : 62 - General Knowledge

Who is the author of the famous play Halla Bol?

- A) Uma Shankar
B) Vatsyayan
C) Safdar Hashmi
D) Khushwant Singh

Answer: **C**

Q.No : 63 - General Knowledge

Which of the following statements is correct?

- A) Socrates was a disciple of plato
B) Plato was a disciple of Socrates
C) Plato was a disciple of Aristotle
D) Socrates and Plato were disciples of Aristotle

Answer: **B**

Q.No : 64 - General Knowledge

India's first technicolour film_____in the early 1950s was produced by_____.

- A) Jhansi Ki Rani, Sohrab Modi
B) Jhansi Ki Rani, Sir Syed Ahmed
C) Mirza Ghalib, Sohrab Modi
D) Mirza Ghalib, Munshi Premchand

Answer: **A**

Q.No : 65 - General Knowledge

Naese is otherwise known as

- A) oyster
B) amoeba
C) plankton
D) mother of pearl

Answer: **D**

Q.No : 66 - General Knowledge

Adolf Hitler was

- i. The Austria –born German dictator
- ii. The German-born Austrian dictator
- iii. The founder of Nazi party
- iv. Responsible for the outbreak of World War II

- A) (i), (iii) and (iv)
B) (ii) and (iii)
C) only (i)
D) (iii) and (iv)

Answer: **A**

Q.No : 67 - General Knowledge

Which of the following pairs are wrong?

- A) Iron Ore: Russia
B) Mica: Japan
C) Coal: USA
D) Aluminium: USA

Answer: **B**

Q.No : 68 - General Knowledge

Doctrine of Panchsheel was first advocated by

- A) India and Myanmar
B) India and USA
C) India and Indonesia
D) India and Pakistan

Answer: **A**

Q.No : 69 - General Knowledge

Kofi Anan was appointed as the Secretary General of UN in the year

- A) 2000
B) 1999
C) 1998
D) 1997

Answer: **D**

Q.No : 70 - General Knowledge

Transfer of surplus heat from the lower latitudes to higher latitudes is done by

- I. ocean currents
II. planetary winds
III. tides
IV. waves

- A) I and II
B) III and IV
C) I and IV
D) II and III

Answer: **A**

Q.No : 71 - English

Spot the error if any in the following sentence:

May I know Who I am talking to.

A B C D

- A) A
B) B
C) C
D) D

Answer: **B**

Q.No : 72 - English

Choose the appropriate word to fill in the blanks. Aerial photography has been... tool ever since the discovery that pattern of light and dark green in the first growth of grain often.... earthworks and roads buried beneath the fields.

- A) archaeological reflect
B) astronomical Reveal
C) agricultural Sense
D) architectural Determine

Answer: **A**

Q.No : 73 - English

Choose the correct meaning for the given idiom/ phrase
To be born with a silver spoon in one's mouth

- A) To be born in a rich home
- B) To be born in a jeweller's home
- C) To be fed milk with a silver spoon
- D) To be a first born child

Answer: **A**

Q.No : 74 - English

Two men staged a at the bank across the street from us yesterday afternoon.

- A) hold up
- B) hold in
- C) hold on
- D) hold away

Answer: **A**

Q.No : 75 - English

Transform the following Compound sentence into complex sentences.
Send the money in advance or you will not get the magazine.

- A) you will not got the magazine ,you sent the money in advance.
- B) you will not get magazine unless you sent the money in advance.
- C) you will not get the magazine unless you send the money in advance.
- D) you would not getting the magazine unless you send the money in advance.

Answer: **C**

Q.No : 76 - English

Choose the pair of words which has similar relationship as the given pair: **Propensity : Tendency**

- A) Prologue : Epilogue
- B) Master : Slave
- C) Audacity : Impudence
- D) Conduct : Immorality

Answer: **C**

Q.No : 77 - English

Change the following sentence into Passive - Voice
They can't put you in prison if they haven't tried you.

- A) You can't put in prison, you haven't been tired.
B) You can't be put in prison if you haven't been tired.
C) You couldn't be put in prison if you haven't being tired.
D) You couldn't put in prison, you haven't been tired.

Answer: **B**

Q.No : 78 - English

Identify the plural of the given word: **Pony**

- A) ponys
B) Ponyies
C) Ponecs
D) Ponics

Answer: **D**

Q.No : 79 - English

Choose the word similar in meaning to the given word: **Flotilla**

- A) a fleet of small ships
B) a floating dry docy
C) floating objects
D) a baking process

Answer: **A**

Q.No : 80 - English

Consider the following statement and assumptions

Statement: The improvement in the quality of T.V. programmes will lead to increase in the sales of T.V.

Assumptions : **I.** T.V. is a good entertainment medium.

II. The quality of T.V. programmes has improved recently.

Now select which of the assumptions is implicit in the statement

- A) If only assumption I is implicit
B) If only assumption II is implicit
C) If either I or II is implicit
D) If both I and II are implicit

Answer: **A**

Q.No : 81 - English

Complete the following by using the correct Question Tags: Everyone wanted a ticket,

- A) didn't they
- B) didn't he
- C) weren't they
- D) haven't they

Answer: **A**

Q.No : 82 - English

Choose the word most opposite in meaning to the given word: **Abortive**

- A) Successful
- B) Proportionate
- C) Financial
- D) Cumulative

Answer: **A**

Q.No : 83 - English

Change the sentence into indirect narration: 'Sumit said,'Father, I want to go abroad after I finish my studies here!'

- A) Sumit asked his father that he want to go abroad after he finishes his studies here.
- B) Sumit told his father he wants to go abroad after he finished his studies here.
- C) Sumit told his father that he wanted to go abroad after he finished his studies here.
- D) Sumit told to his father, he wanted to going abroad after he finishing his studies here.

Answer: **C**

Q.No : 84 - English

Find the proper sequence of these four sentences.

- A) They were generally fed in the afternoon.
- B) But father said that it was most interesting to see them being fed.
- C) Gopal wanted to see the tigers and the lions first.
- D) When we entered the gate, it was difficult to decide which way to go first.

- A) ACDB
- B) DCBA
- C) BCDA
- D) CBAD

Answer: **B**

Q.No : 85 - English

Identify the word with correct spelling.

- A) Burgeon
- B) cyanide
- C) filibuster
- D) foliage

Answer: **D**

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