Combined Graduate Level Examination 2024 Tier I

Exam Date	19/09/2024
Exam Time	4:00 PM - 5:00 PM
Subject	Combined Graduate Level Examination Tier I

Section : General Intelligence and Reasoning

Q.1 Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the letter-cluster that is different.

Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster...11

Ans

√ 1. MOP

X 2. NPR

X 3. HJL

X 4. TVX

Q.2 What will come in place of the question mark (?) in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

 $69 + 2485 \times 5 - 912 \div 2 = ?$

Ans

1. 1396

X 2. 1639

X 3. 1963

X 4. 1936

Q.3 Select the option in which the numbers share the same relationship as that shared by the given pair of numbers. (NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

11:62

13:64

Ans

X 1. 14 : 37

X 2. 12 : 92

3. 16 : 67

X 4.9:59

Q.4 In a certain code language,

X + Y means 'X is the sister of Y',

X - Y means 'X is the wife of Y',

X × Y means 'X is the mother of Y',

X ÷ Y means 'X is the father of Y'.

Based on the above, how is H related to L if 'H \times I – J \div K + L'?

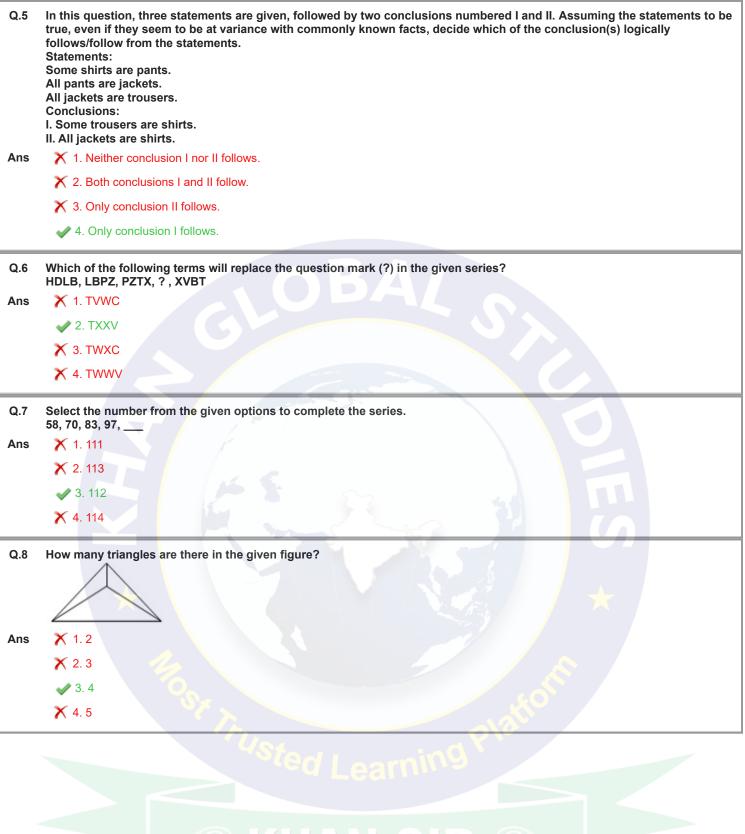
Ans

X 1. Father's mother

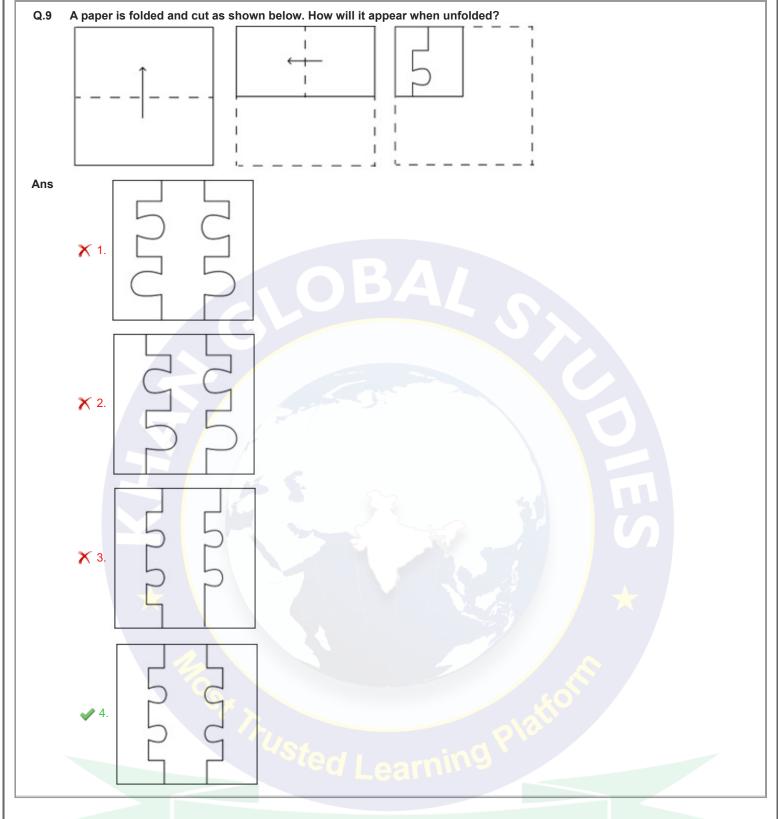
X 2. Father's sister

X 3. Mother

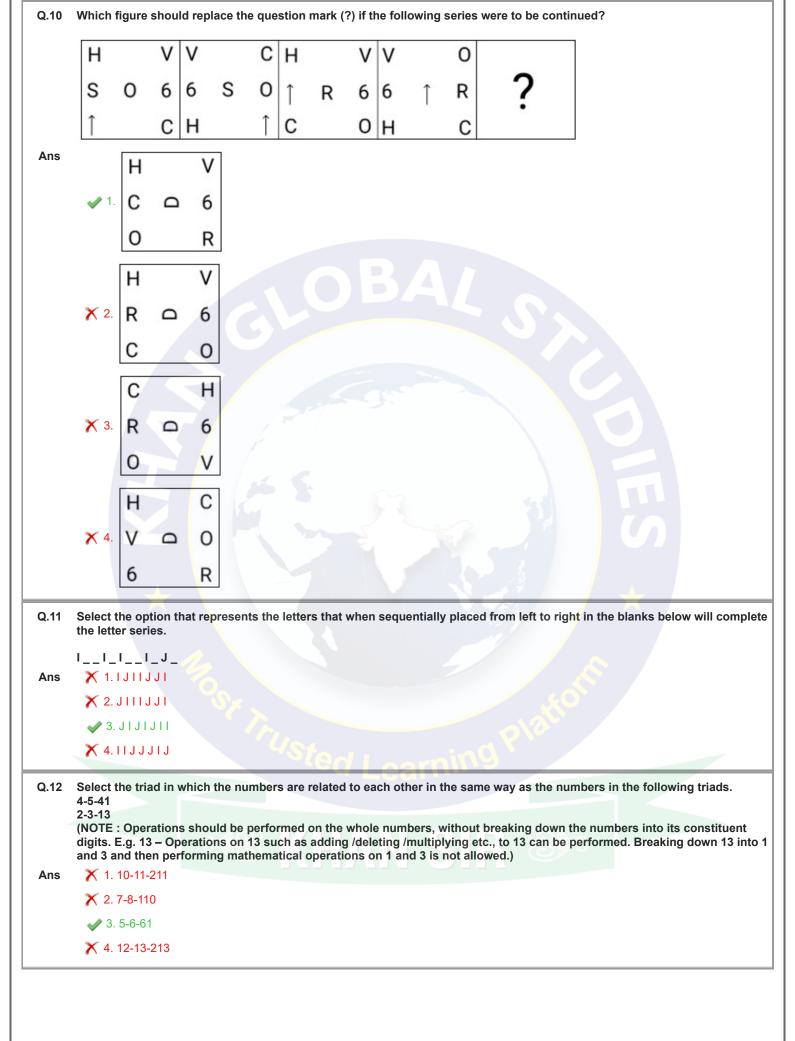
4. Mother's mother

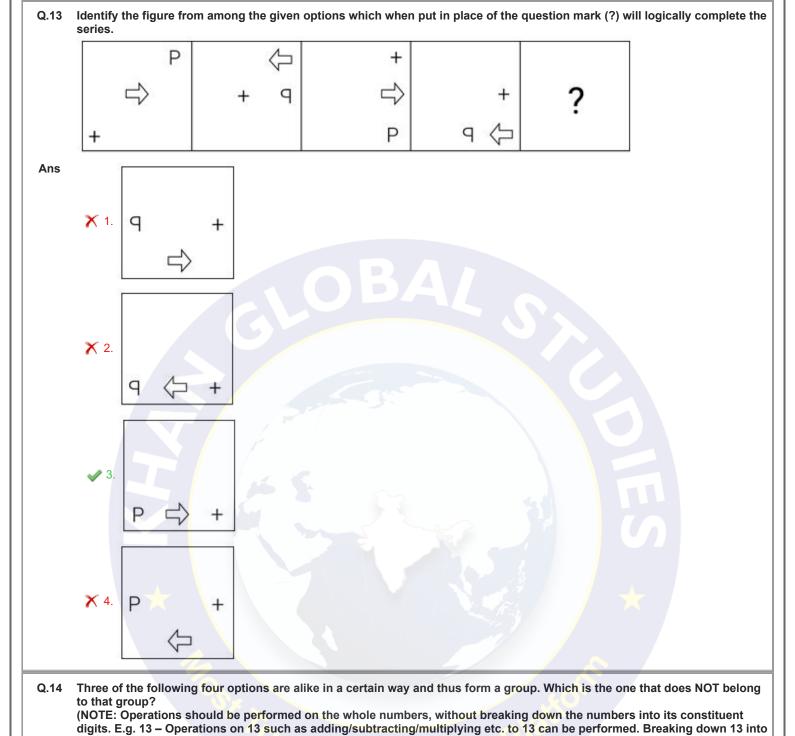






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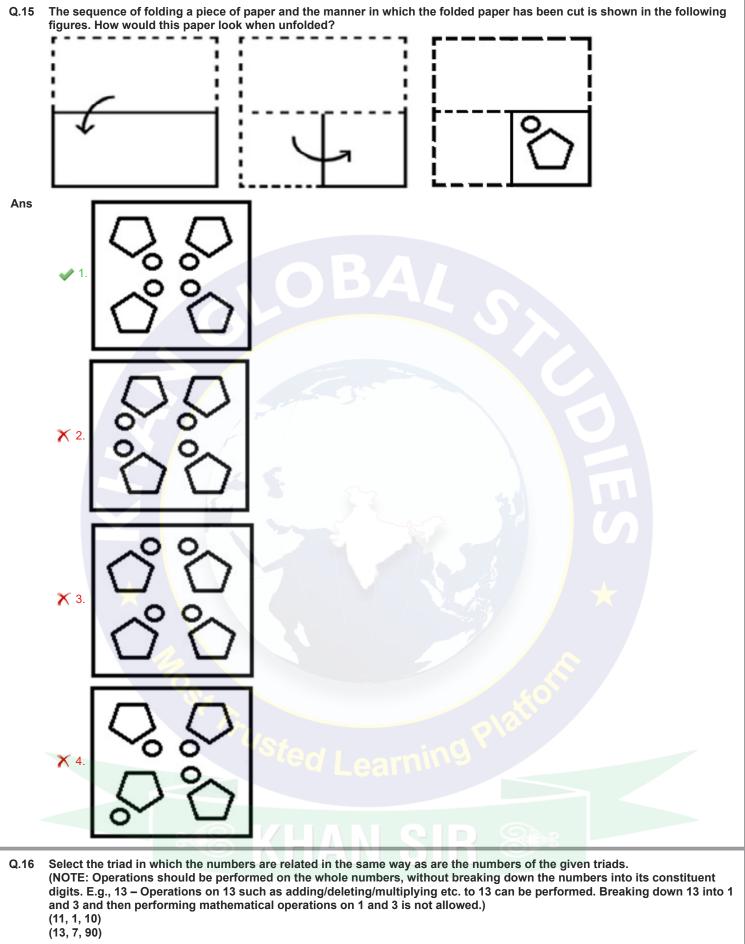




1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X 1. 56 - 31 - 205

2.88 - 23 - 245
 3.22 - 13 - 85
 4.18 - 12 - 72

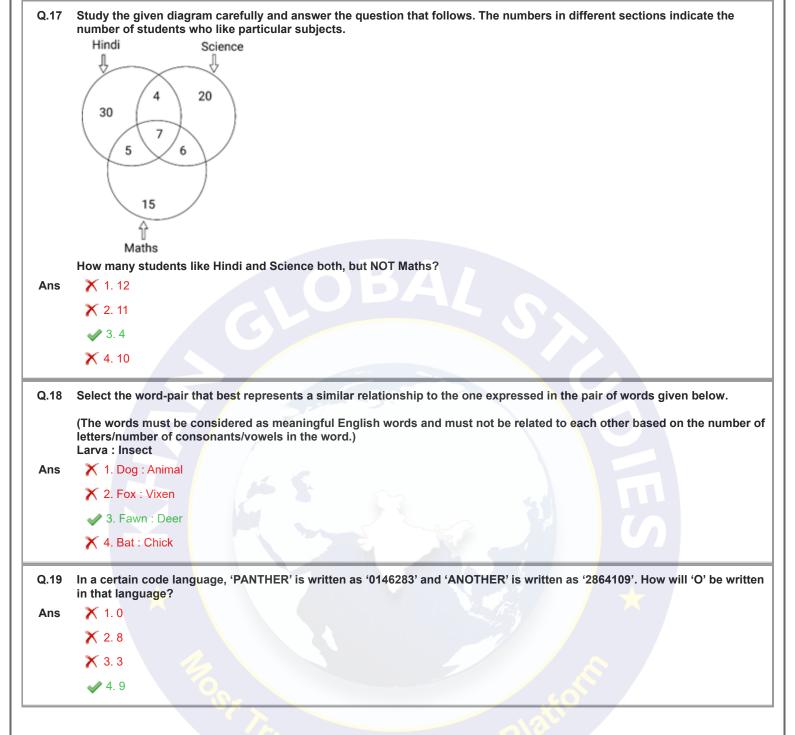


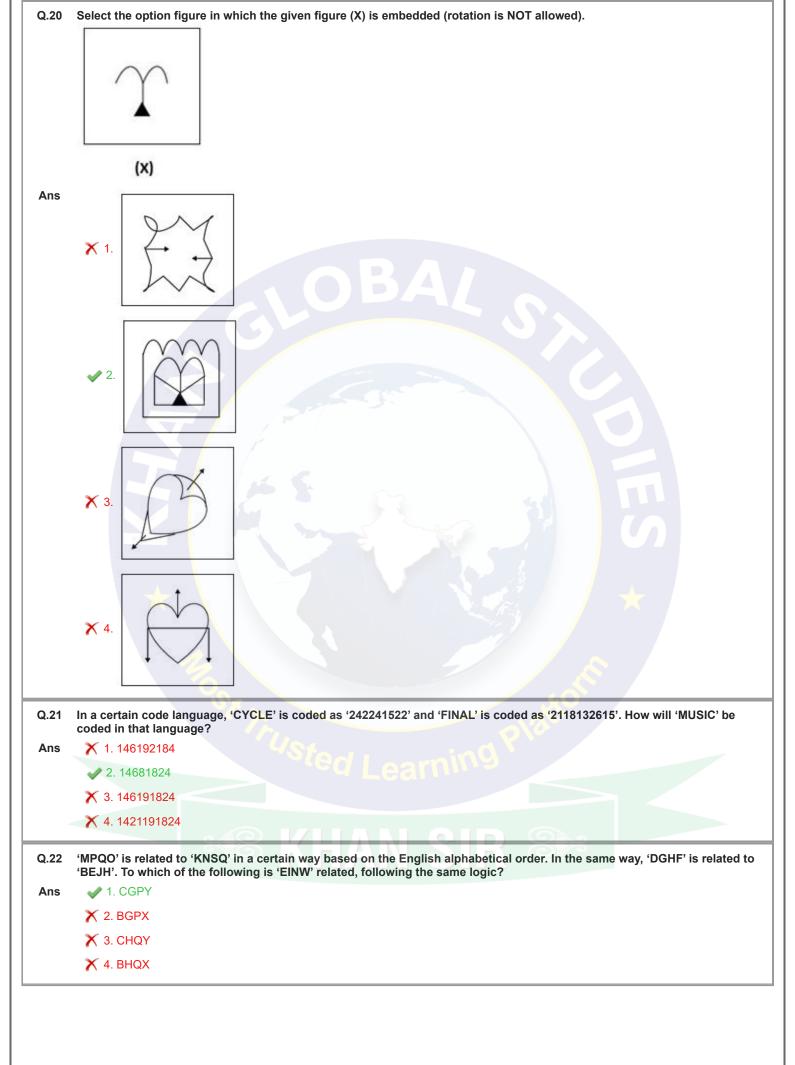
Ans **X** 1. (3, 6, 23)

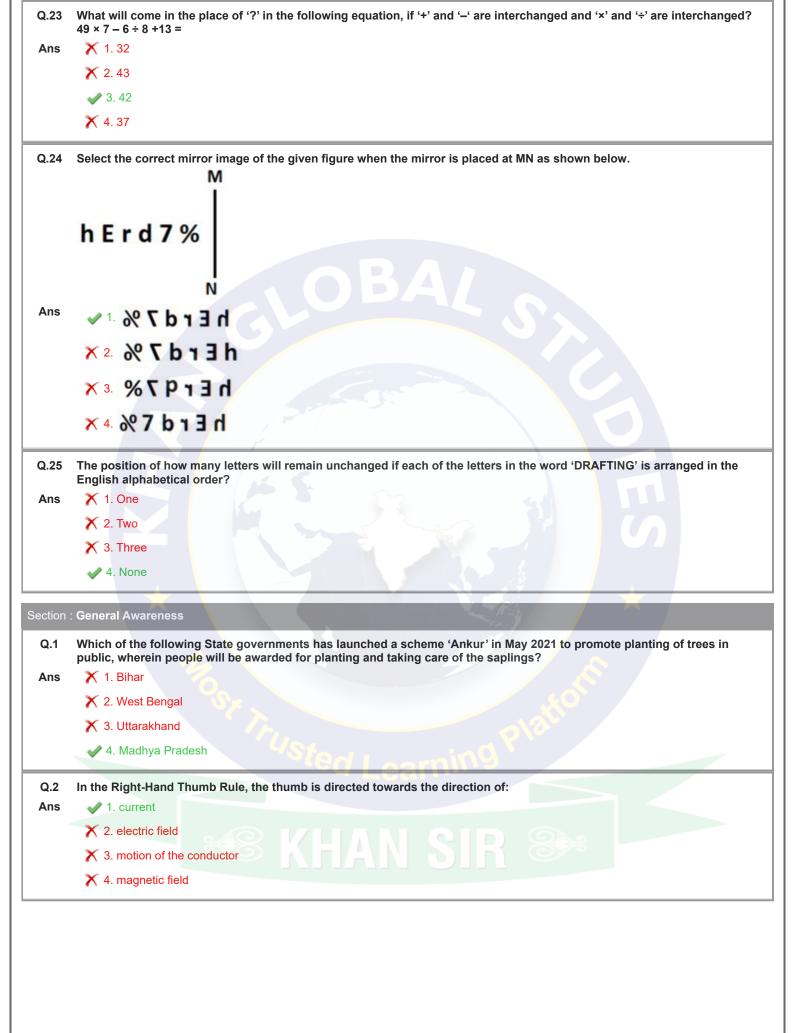
X 2. (1, 2, 15)

X 3. (2, 6, 28)

4. (4, 5, 19)





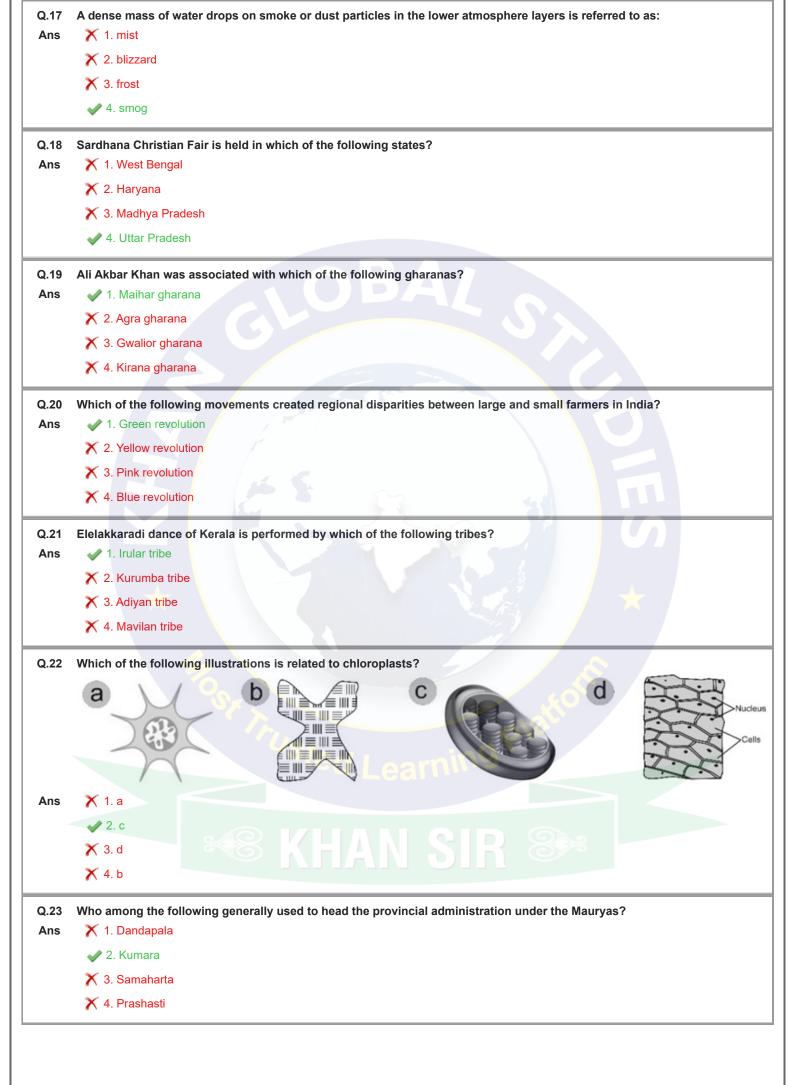


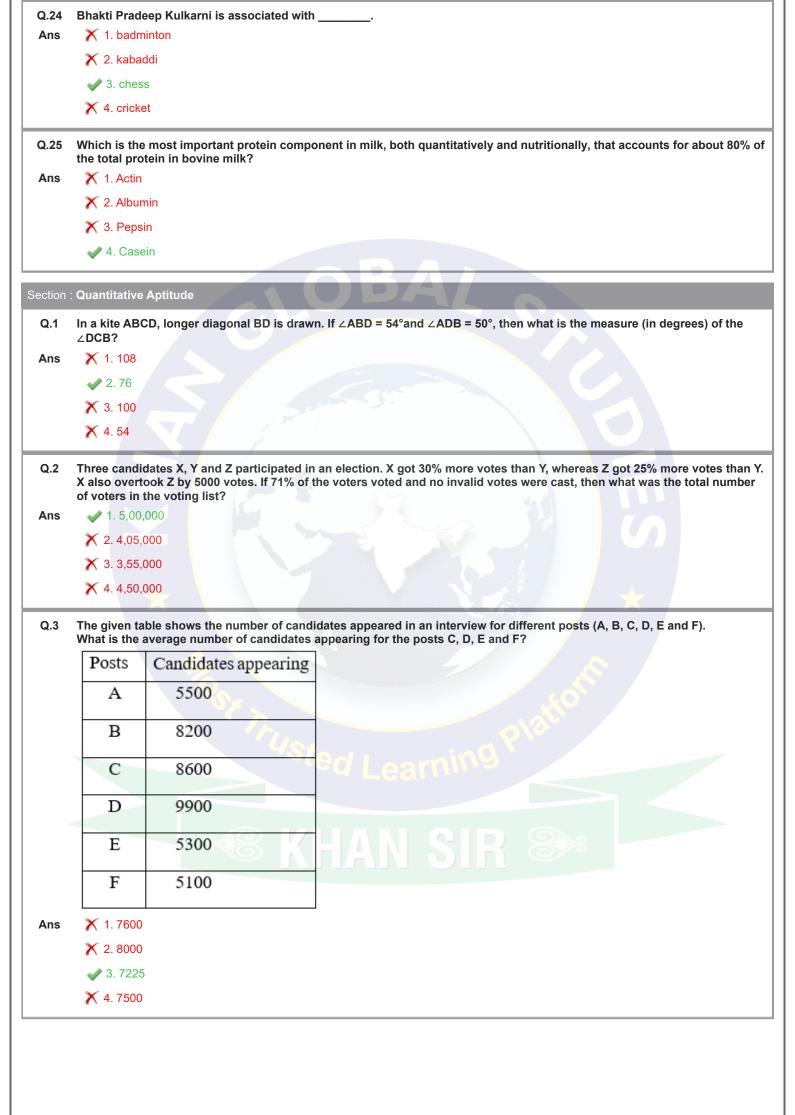
Q.3	Match the following Sportsman in List I and Award in List II:			
		LIST I- Sportsman		LIST II-Award
	A	Devendra Jhajharia	i	Padma Shri 2022
	В	Sumit Antil	ii	Padma Bhushan 2022
	\mathbf{C}	Neeraj Chopra	iii	Arjun Award 2021
	D	Shikhar Dhawan	iv	Major Dhyan Chand Khel Ratna
				Award 2021
Ans	v 1	A-ii, B-i, C-iv, D- iii		
	X 2.	A-iii, B-iv, C-i, D-ii		
	X 3.	A-i, B-iii, C-ii, D-iv		
	X 4.	A-iv, B-i, C-iii, D-ii		5A/
Q.4			n Constit	ution CANNOT be suspended even during an emergency declared on the
Ans		Is of war or external aggression? Articles 15 and 17		
		Articles 20 and 21		
	-	Articles 14 and 16		35
	X 4.	Articles 30 and 32		
Q.5	Which	of the following is the largest inhabi	tad rivari	ne island in the world?
Ans		Peacock	tou mvom	The Island III the World !
	v 2	. Majuli		24
	-	Bhavani		
	X 4.	Lakshadweep		
Q.6	In whic	ch year <mark>wa</mark> s the <mark>b</mark> attle of Buxar fough	nt?	
Ans	X 1.			
	X 2.			
	-	. 1764		
	X 4.	1757		40
Q.7		vas the main objective of the Second		Revolution in India?
Ans		Ensuring food security in the western s Promoting conventional agricultural pra		Learning '
		Focusing on holistic development in a		Lealin
		Increasing the use of chemical fertilize		sticides
				IN OID 9
Q.8 Ans		mong the following was the younges Semmangudi Radhakrishna Srinivasa		nt of the Sangeetha Kalanidhi awarded by the Music Academy in 1947?
AllS	-	Ariyakudi Ramanuja Iyengar	iyei	
		Mallikarjun Bheemarayappa Mansur		
		Bhimsen Joshi		
	~ 4.	חווווסכוו אייסטווו		
Q.9			ium and	were found to be the same.
Ans		sodium		
		aluminium		
		magnesium		
	X 1	beryllium		I

Ans	\checkmark 1. M V = P T
	\times 2. M T = V P
	\times 3. $M = S + I$
	\times 4. $\frac{M}{V} = \frac{T}{P}$
Q.11	Which web portal was launched by the Department of Telecommunications for sharing information on mobile towers and EMF emission compliance?
Ans	★ 1. E-Amrit
	★ 2. Namaste
	✓ 3. Tarang Sanchar
	X 4. PM-Daksh
Q.12	Which of the following Acts passed under Warren Hastings was also called 'half-loaf system'?
Ans	1. Pitt's India Act 1784
	2. Government of India Act 1858
	X 3. Charter Act 1813
	★ 4. Regulating Act 1773
Q.13	Which Article of the Indian Constitution mentions that 'The State shall endeavour to promote cottage industries on an individual or co-operative basis in rural areas'?
Ans	★ 1. Article 44
	X 2. Article 49
	★ 4. Article 42
Q.14	Which of the following is the most controversial Article in the Indian Constitution, which provides for President's rule in any state?
Ans	★ 1. Article 358
	✓ 2. Article 356
	★ 3. Article 360
	★ 4. Article 352
Q.15	In 1539, the Battle of Chausa was fought between Humayun and
Ans	X 1. Ibrahim Lodhi
	✓ 2. Sher Shah Suri
	X 3. Sikandar Suri
	🗙 4. Rana Sanga
Q.16	India hosted the Asian Games in which of the following years?
Ans	★ 1. 1954 and 1986
	√ 2. 1951 and 1982

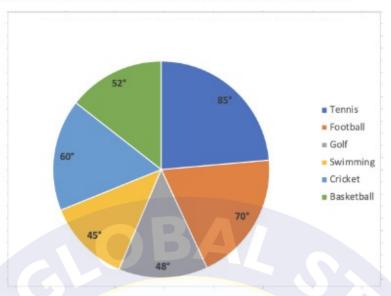
Q.10 Which of the following is Fisher's equation of exchange?

X 3. 1951 and 1986 X 4. 1954 and 1982





Q.4 The pie-chart below shows the expenditures (in ₹ lakh) of a country on various sports during a particular year. Study the graph carefully and answer the question given below it.



What is the average expenditure (in ₹ lakh) on tennis, golf, swimming, and basketball, if the expenditure on cricket is ₹72 lakh?

Ans

- X 1.138
- X 2.44
- **3.69**
- X 4.120

Q.5 In a rectangular field, the sum of the length and the breadth is 9 cm and area is 18 cm². If the length is 'a' and breadth is 'b', then find the value of $(a^2 - ab + b^2)$.

Ans

- **X** 1. 36
- **X** 2. 24
- **X** 3. 18
- **4**. 27

Q.6 Which of the following numbers is NOT divisible by 8?

- **X** 1. 7344
- **X** 2. 5544
- **3**. 7497
- **X** 4. 4608



Q.7

The given table shows the expenditure in (in crores ₹) of three companies A, B and C and the percentage profit of these companies in different years. Given that:

Income = Expenditure + Expenditure
$$\times \frac{\text{Profit }\%}{100}$$

Years	Company A		Compa	ny B	Company C	
	Expenditure	Profit	Expenditure	Profit	Expenditure	Profit
2002	24	50%	20	40%	40	45%
2003	30	45%	15	25%	50	55%
2004	36	40%	25	35%	60	65%
2005	40	60%	35	48%	80	75%

What is the income (in crore ₹) of Company C in the year 2003?

Ans

- **X** 1. 75.7
- **2**. 77.5
- **X** 3. 105
- **X** 4. 69.8

Q.8 If the area of a sector of a circle is 462 cm² and the central angle is 120°, then its radius is

Ans

- X 1. 18 cm
- X 2. 17 cm
- √ 3. 21 cm
- X 4. 14 cm

Q.9 The value of $[15 \div 3 \times 7 - 8 \text{ of } 2 + 6]$ is:

Ans

- X 1.13
- **2.25**
- X 3. -29
- X 4.39.5

Q.10 Two inlet pipes, P1 and P2, can fill a cistern in 20 hours and 30 hours, respectively. They were opened at the same time, but pipe P1 had to be closed 5 hours before the cistern was full. How many hours in total did it take for the two pipes to fill the cistern?

Ans

- 1. 15 hours
- X 2. 9 hours
- X 3. 12 hours
- X 4. 10 hours

If $\tan \theta = \frac{5}{8}$, then find the value of $\frac{(1 + \cos \theta)(1 - \cos \theta)}{(1 + \sin \theta)(1 - \sin \theta)}$.

- \times 1. $\frac{5}{64}$
- \times 2. $\frac{2}{25}$
- √ 3.
 ²⁵/₆₄
- \times 4. $\frac{64}{25}$

Q.13 A thief is spotted by a policeman from a distance of 195 metres. When the policeman starts the chase, the thief also starts running. If the speed of the thief is 22 km/h and that of the policeman is 27 km/h, then how far would the thief have run (in m) before he is overtaken?

Ans

X 4. 30%

- X 1.825
- **X** 2. 951
- **3.858**
- **X** 4. 958

Q.14 For the equations $ax + (a^2 + 1)y = 4$ and $4x + ay = a^2$, which of the following statements is TRUE?

Ans

- \times 1. If a = 6, then $x = \frac{325}{28}$, $y = -\frac{25}{28}$ are the solutions.
- \times 2. If a = 6, then x = 48, y = 4 are the solutions.
- \times 3. If a = -12, then $x = \frac{325}{28}$, $y = -\frac{25}{28}$ are the solutions.
- \checkmark 4. If a = -12, then x = 48, y = 4 are the solutions.

Q.15 A cooker is marked at ₹12,500. The dealer allows successive discounts of 6%, 6% and 4% on it. What is the net selling price of the cooker?

Ans

- 1. ₹10,603.20
- X 2. ₹10,306
- X 3. ₹12,230
- X 4. ₹12,320.60

Q.16 Pranav borrows a sum of ₹598397 at the rate of 20% per annum simple interest. At the end of the first year, he repays ₹24284 towards return of principal amount borrowed. If Pranav clears all pending dues at the end of the second year, including interest payment that accrued during the first year, how much does he pay (in ₹) at the end of the second year?

Ans

- **X** 1. 812514
- **2.808615**
- **X** 3. 818513
- X 4. 817567

Q.17 In Δ PQR, if PT is the median, then which of the following is correct?

$$\times$$
 1. $PQ^2 + PR^2 = PT^2 + QR^2$

$$\checkmark$$
 2. $PQ^2 + PR^2 = 2(PT^2 + QT^2)$

$$\times$$
 3. $PQ^2 + PR^2 = 2(PT^2 - QT^2)$

$$\times$$
 4. $PQ^2 + PR^2 = PT^2 + QT^2$

Q.18 Study the given table and answer the question that follows.

The given table shows the number of candidates who appeared (both male

and female) in a Public Examination and the percentage of those who qualified in the examination from two states X and Z. Few values are missing in the table (indicated by -----). You will be required to fill them

up according to the question.

Year	State	×	State Z		
	Number of appeared candidates	Percentage of qualified candidates	Number of appeared candidates	Percentage of qualified candidates	
2008	480	70%		70%	
2009	560	75%		80%	
2010	<u> </u>	60%	650	50%	
2011	450	89%	720	72%	
2012	790		660		

The number of appeared candidates from State Z increased by 100% from 2008 to 2009. If the total number of qualified candidates from State Z in 2008 and 2009 together is 552, what is the number of appeared candidates from State Z in 2009?

Ans

Q.19 The total surface area of a closed cube is given as 1152 cm². What is the length (in cm) of each side of the cube?

Ans

Q.20 If $\tan \theta + \cot \theta = 2$, and θ is an acute angle, then the value of θ is:

Ans

Q.21 From a point A, a tangent line is drawn to the circle of radius 7 units. From the same point, a secant is drawn to the circle which cuts the circle at B and C and the point B is near A than C. What is the length of BC in units if the length of the tangent to the circle from point A is 21 units and the length of AB is 14 units?

If A is an acute angle, then $\sqrt{\frac{1-\cos A}{1+\cos A}} + \sqrt{\frac{1+\cos A}{1-\cos A}}$ is equal to:

Ans $\checkmark 1.2 \csc A$ $\checkmark 2.2 \cos A$ $\checkmark 3.2 \sec A$ $\checkmark 4.2 \sin A$ Q.23 Simplify $\frac{(25)^4 + 1250 + 1 - (25)^2}{(25)^2 + 25 + 1}$.

become 8: 11. Find the number of girls (initial) in the college.

action in a difficult situation in order to resolve the matter.

The occurence of this phenomenon is quite rare.

The ratio of boys to girls initial in a college is 5 : 6. If 40 boys leave the college and 50 girls join the college, the ratio will

A class of 30 students appeared in a test. The average score of 12 students is 62, and that of the rest is 68. What is the

After reflecting on the matter regarding his boss's selfish attitude, Raju decided to force himself to perform an unpleasant

Identify the INCORRECTLY spelt word in the following sentence and select its correct spelling from the given options.

Select the option that can be used as a one-word substitute for the given group of words.

Select the most appropriate option to substitute the underlined segment in the given sentence.

X 1. 602

2. 6013. 6034. 604

1.740
 2.860
 3.720
 4.640

X 1. 63.6

2. 65.63. 66.64. 64.6

Section: English Comprehension

X 1. Pathos

2. Engross3. Innuendos4. Chaos

1. bite the bullet
2. dodge the bullet
3. shoot the bullet
4. ignore the bullet

1. occurrance2. occerence3. occurrence4. occurance

average score of the class?

An utter state of confusion

Ans

Q.24

Ans

Q.25

Ans

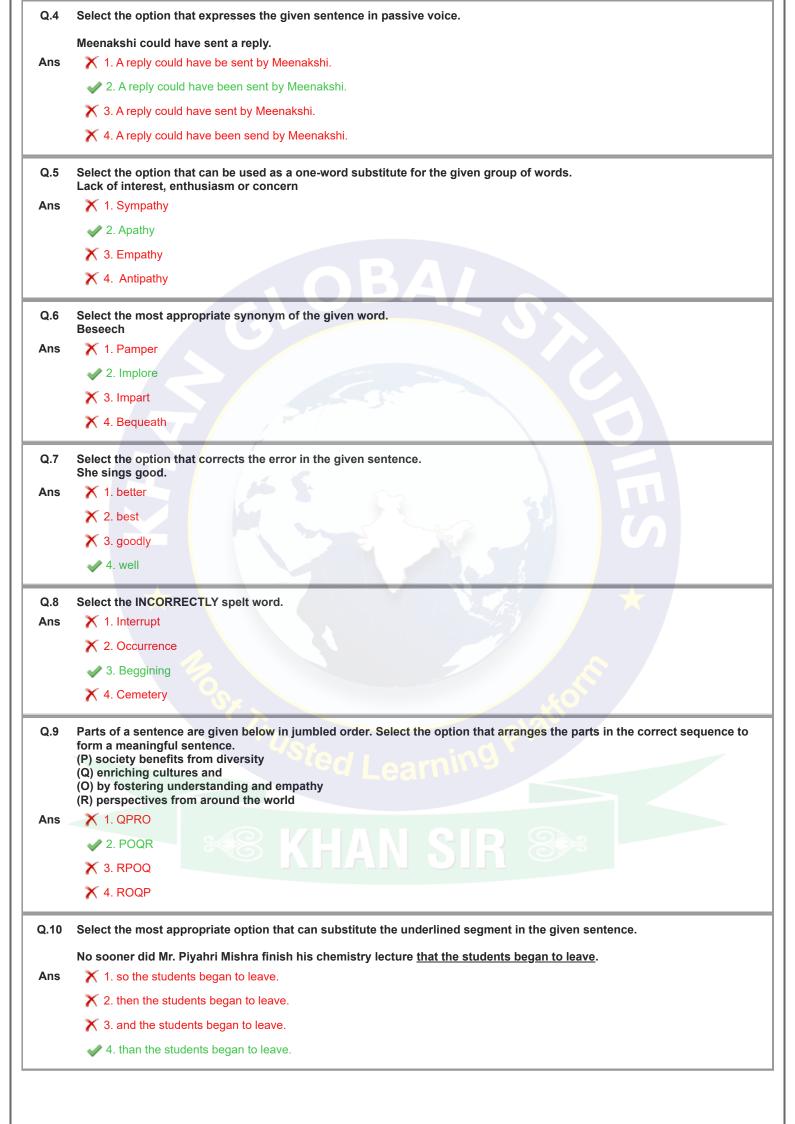
Q.1

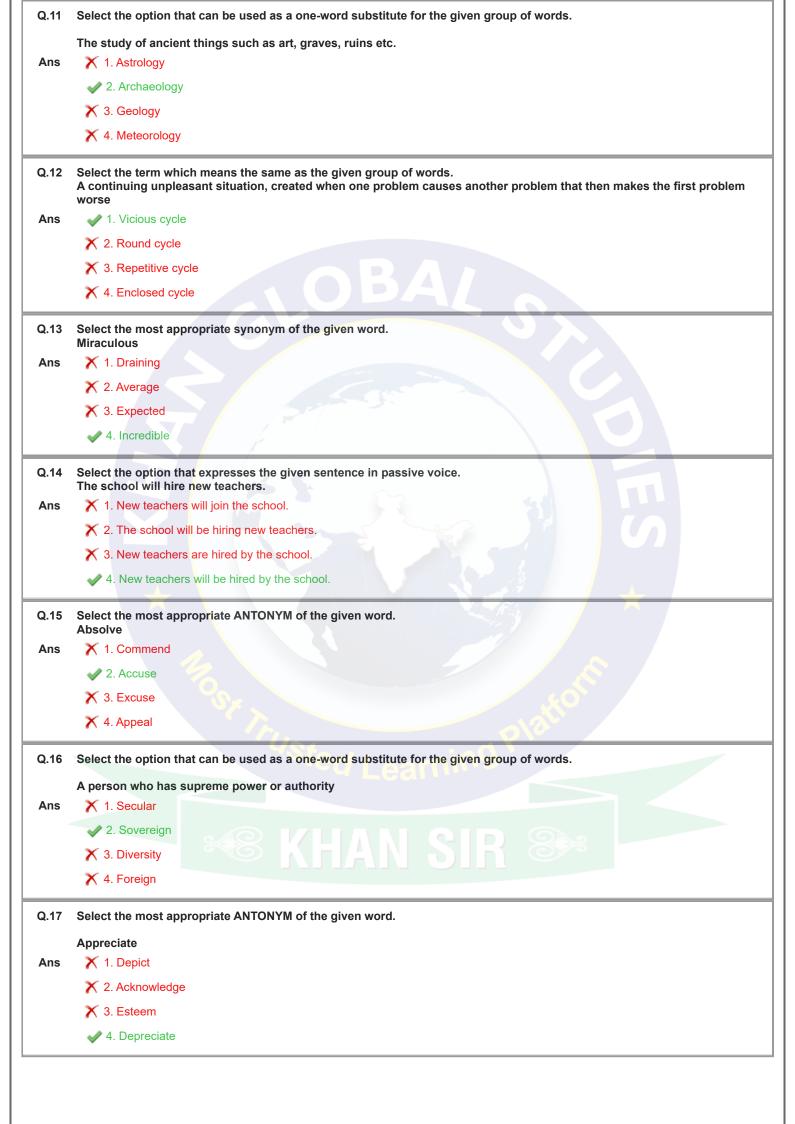
Ans

Q.2

Ans

Q.3





Q.18	Parts of the following sentence have been given as options. Select the option that contains an error. In some countries, you are not able to drink until you are 21.
Ans	X 1. In some countries,
	✓ 2. able to drink
	★ 3. until you are 21.
	🗙 4. you are not
Q.19	Select the most appropriate option to fill in the blank. The US building was built in the year 1800.
Ans	★ 1. capital
	🔀 2. cannibal
	🗙 3. captain
	✓ 4. capitol
Q.20	Select the most appropriate synonym of the given word.
	Magnificent
Ans	X 1. Slow
	★ 2. Sacred
	★ 3. Scared
	✓ 4. Splendid
	Comprehension:
	In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in
	each blank. Augmented reality and virtual reality are two types of reality technologies that either augment or replace a real-world environment with
	a (1) one. In augmented reality, a virtual environment coexists (2) the actual world, to be instructive and offer more
	data about the real world that a user can access without having to search. When a handset is pointed at a piece of malfunctioning (3), for example, industrial AR apps might provide rapid troubleshooting information. Virtual reality is a (4)
	environmental simulation that completely replaces the user's surroundings with a totally virtual world. For example, VR may provide a user with a box containing a cartoon (5) of Mike Tyson in a virtual boxing ring.
	SubQuestion No: 21
Q.21	Select the most appropriate option to fill in blank number 1.
Ans	√ 1. simulated
	★ 2. catered
	★ 3. revealed
	★ 4. suffocated
	Comprehension:
	In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in
	each blank.
	Augmented reality and virtual reality are two types of reality technologies that either augment or replace a real-world environment with a (1) one. In augmented reality, a virtual environment coexists (2) the actual world, to be instructive and offer more
	data about the real world that a user can access without having to search. When a handset is pointed at a piece of malfunctioning (3), for example, industrial AR apps might provide rapid troubleshooting information. Virtual reality is a (4)
	environmental simulation that completely replaces the user's surroundings with a totally virtual world. For example, VR may provide a user with a box containing a cartoon (5) of Mike Tyson in a virtual boxing ring.
	SubQuestion No: 22
Q.22	Select the most appropriate option to fill in blank number 2.
Ans	✓ 1. with
	× 2. behind
	★ 3. along
	★ 4. beyond

	Comprehension:
	In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in
	each blank. Augmented reality and virtual reality are two types of reality technologies that either augment or replace a real-world environment with a (1) one. In augmented reality, a virtual environment coexists (2) the actual world, to be instructive and offer more data about the real world that a user can access without having to search. When a handset is pointed at a piece of malfunctioning (3), for example, industrial AR apps might provide rapid troubleshooting information. Virtual reality is a (4) environmental simulation that completely replaces the user's surroundings with a totally virtual world. For example, VR may provide a user with a box containing a cartoon (5) of Mike Tyson in a virtual boxing ring.
	SubQuestion No : 23
Q.23	Select the most appropriate option to fill in blank number 3.
Ans	✓ 1. equipment
	★ 2. arsenal
	🗙 3. outfit
	★ 4. baggage
	N 4. buggage
	Comprehension:
	In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in
	each blank.
	Augmented reality and virtual reality are two types of reality technologies that either augment or replace a real-world environment with a (1) one. In augmented reality, a virtual environment coexists (2) the actual world, to be instructive and offer more
	data about the real world that a user can access without having to search. When a handset is pointed at a piece of malfunctioning
	(3), for example, industrial AR apps might provide rapid troubleshooting information. Virtual reality is a (4) environmental simulation that completely replaces the user's surroundings with a totally virtual world. For example, VR may provide a
	user with a box containing a cartoon (5) of Mike Tyson in a virtual boxing ring.
	SubQuestion No : 24
Q.24	Select the most appropriate option to fill in blank number 4.
Ans	√ 1. comprehensive
	× 2. conclusive
	★ 3. transgressive
	X 4. reprehensive
	The production of the state of
	Comprehension:
	In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in
	each blank. Augmented reality and virtual reality are two types of reality technologies that either augment or replace a real-world environment with
	a (1) one. In augmented reality, a virtual environment coexists (2) the actual world, to be instructive and offer more
	data about the real world that a user can access without having to search. When a handset is pointed at a piece of malfunctioning (3), for example, industrial AR apps might provide rapid troubleshooting information. Virtual reality is a (4)
	environmental simulation that completely replaces the user's surroundings with a totally virtual world. For example, VR may provide a
	user with a box containing a cartoon (5) of Mike Tyson in a virtual boxing ring.
	SubQuestion No : 25
Q.25	Select the most appropriate option to fill in blank number 5.
Ans	X 1. glossary
	X 2. network
	✓ 3. rendition
	X 4. resistance