DSSSB JULY 2018

PGT CHEMISTRY FEMALE

Section : Mental Ability

Q.1 Arjun starts from his home and goes straight for 3 km. Then he turns right and goes for 5 km. Finally, he turns left and goes for 3 km to reach the temple. To which direction is the temple located from Arjun's home if he started his journey facing North?

Question ID : **1679437232**

Ans

✗ 1. North-West

✗ 2. South-West

✓ 3. North-East

✗ 4. South-East

Q.2 The statement below is followed by two conclusions labelled I and II. Assuming that the information in the statement is true, even if it appears at variance from generally established facts, decide which conclusion(s) logically and definitely follow(s) from the information given in the statement.

Statement: Only hard-working students have scored more than 60 per cent marks in the annual exam. Rishabh scored 66 per cent marks.

Conclusion I: Rishabh is very intelligent.
Conclusion II: Rishabh is a hard-working student.

Question ID : **1679437244**

Ans

✓ 1. Only conclusion II follows.

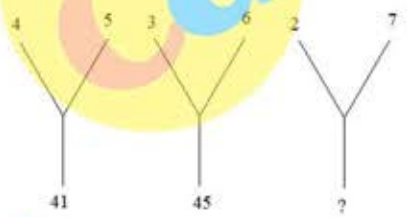
✗ 2. Only conclusion I follows.

✗ 3. Both conclusions follow.

✗ 4. Neither conclusion I nor conclusion II follows.

Q.3 Select the option that will correctly replace the question mark (?) and complete the series.

Question ID : **1679437241**



Ans

✗ 1. 56

✓ 2. 53

✗ 3. 51

✗ 4. 67

Q.4 Three out of the four words below are similar in a certain way and one is different. Select the option that is different from the others.

Question ID : **1679437231**

Ans

✗ 1. Axe

✗ 2. Knife

✓ 3. Scissors

✗ 4. Hatchet

Q.5 Select the option that is related to the third term in the same way as the second term is related to the first term.

Bicycle : Ride : : Boat : ?

Question ID : **1679437228**

Ans

✗ 1. Pull

✗ 2. Push

✗ 3. Float

✓ 4. Row

Q.6 The statement below is followed by two arguments labelled I and II. Read the arguments in relation with the statement and identify the strong argument. Assume that all information in the given statements is true.

Statement: Children under the age of 12 years should not be allowed to use mobile phones.

Argument I: Mobile phones are expensive and all children cannot afford them.
Argument II: By using mobile phones, children under 12 years can get exposed to harmful radiation.

Question ID : **1679437243**

Ans

✗ 1. Both arguments are strong.

✓ 2. Only argument II is strong.

✗ 3. Only argument I is strong.

✗ 4. Neither argument I nor argument II is strong.

Q.7 Six friends, Aman, Bipin, Chhagan, Jagan, Magan, and Tapan, are sitting around a circular table facing one another, such that each friend is seated exactly opposite another friend. Aman does not sit next to Bipin or Tapan. Magan sits to Tapan's immediate right. Chhagan is sitting opposite Magan. Jagan is sitting to Aman's immediate right.

Between whom is Bipin sitting?

Question ID : **1679437235**

Ans

✓ 1. Tapan and Chhagan

✗ 2. Magan and Jagan

✗ 3. Tapan and Jagan

✗ 4. Chhagan and Aman

Q.8 If '÷' is replaced by '$'; if '×' is replaced by '&'; '−' is replaced by '@'; and '+' replaced by '#', find the value of the following equation.

217 $ 7 & 4 # 5 @ 6

Question ID : **1679437238**

Ans

✓ 1. 123

✗ 2. 135

✗ 3. 121

✗ 4. 131

Q.9 Six friends, Aman, Bipin, Chhagan, Jagan, Magan, and Tapan, are sitting around a circular table facing one another, such that each friend is seated exactly opposite another friend. Aman does not sit next to Bipin or Tapan. Magan sits to Tapan's immediate right. Chhagan is sitting opposite Magan. Jagan is sitting to Aman's immediate right.

Who is sitting exactly opposite Tapan?

Question ID : **1679437236**

Ans

✗ 1. Aman

✗ 2. Magan

✗ 3. Chhagan

✓ 4. Jagan

Q.10 In this question, two statements labelled I and II are given. Read both the statements and decide which option correctly shows the relationship between these given statements.

Statement I: The government has banned fishing in the lake.
Statement II: High amount of hazardous toxins were found in the lake water.

Question ID : **1679437246**

Ans

✗ 1. Both the statements I and II are effects of independent causes.

✗ 2.

Both the statements I and II are independent causes.

✔ 3.

Statement II is the cause and statement I is its effect.

✘ 4.

Statement I is the cause and statement II is its effect.

Q.11 Select the option that is related to the third term in the same way as the second term is related to the first term.

234 : 24 : : 456 : ?

Question ID : **1679437230**

Ans

✘ 1. 240

✘ 2. 56

✔ 3. 120

✘ 4. 60

Q.12 Select the option that is related to the third term in the same way as the second term is related to the first term.

5 : 25 : : 9 : ?

Question ID : **1679437229**

Ans

✔ 1. 81

✘ 2. 54

✘ 3. 90

✘ 4. 63

Q.13 What will come in place of the blank in the series?

1, 3, 7, 15, 31, 63, _____

Question ID : **1679437240**

Ans

✘ 1. 125

✔ 2. 127

✘ 3. 157

✘ 4. 112

Q.14 Misha starts from her home and goes straight for 2 km. Then she turns right and goes for 3 km. Finally, she turns left and goes for 2 km to reach the mall. What is the shortest distance between Misha's home and the mall?

Question ID : **1679437233**

Ans

✘ 1. 3.5 km

✘ 2. 4.5 km

✘ 3. 6 km

✔ 4. 5 km

Q.15 Study the following scenario (situation) and answer the question that follows.

You are playing cricket with your friends near your home. When you hit the ball with your bat, the ball hits and breaks the window pane of a neighbour. Select the option that describes the most appropriate action that you will take in this situation.

Question ID : **1679437245**

Ans

✘ 1.

Sneak into the neighbour's house and get the ball quietly

✔ 2.

Apologise to the concerned neighbour and offer to clean the mess and replace the broken glass

✘ 3.

Blame the bowler who had thrown a bouncer at you

✘ 4.

Ask the fielder to get the ball as he was responsible for stopping the ball

Q.16

Question ID : **1679437242**

In this question, two statements are given, which are followed by two conclusions numbered 1 and 2. Take the given statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follow(s) from the given statements, disregarding commonly known facts.

Statements:
All songs are stories.
Some stories are novels.

Conclusions:
1. All novels are stories.
2. Some stories are songs.

Ans ✗ 1. Neither conclusion 1 nor conclusion 2 follows.

✗ 2. Only conclusion 1 follows.

✓ 3. Only conclusion 2 follows.

✗ 4. Both conclusion 1 and conclusion 2 follow.

Q.17 Karan said to Navika, "Your father's mother's only daughter-in-law is my sister." How is Karan related to Navika's mother?

Question ID : **1679437227**

Ans

✗ 1. Spouse

✗ 2. Brother-in-law

✓ 3. Brother

✗ 4. Cousin

Q.18 In a code language, FEDERAL is coded as GDEDSZM. How will GENETIC be coded in that language?

Question ID : **1679437237**

Ans

✓ 1. HDODUHD

✗ 2. EDOFUHD

✗ 3. FFMFSJB

✗ 4. HFODSJB

Q.19 Six friends are riding horses. Visajirao rides faster than Dipajirao. Prataprao rides faster than Visajirao. Dipajirao rides faster than Hilal but slower than Vithalrao. Vithalrao does not ride as fast as Visajirao. Who among the following rides the fastest?

Question ID : **1679437239**

Ans

✗ 1. Vithalrao

✓ 2. Prataprao

✗ 3. Dipajirao

✗ 4. Visajirao

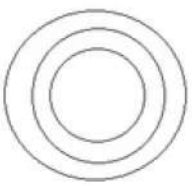
Q.20 Select the diagram that best represents the relationship among the terms given below:

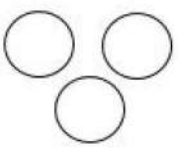
Question ID : **1679437234**

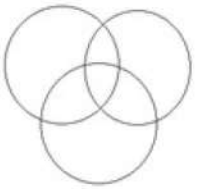
Lahore, Asia, Pakistan

Ans

✗ 1. 

✓ 2. 

✗ 3. 

✗ 4. 

Section : **General Awareness**

Q.1 Who was the First Speaker of the First Lok Sabha? Question ID : **1679437254**

Ans
- ✗ 1. Sardar Hukam Singh
- ✗ 2. Bali Ram Bhagat
- ✗ 3. Gurdial Singh
- ✓ 4. Ganesh Vasudev Mavalankar

Q.2 Who among the following national leaders attended the second Round Table Conference on behalf of the Indian National Congress in 1931? Question ID : **1679437249**

Ans
- ✗ 1. Sardar Patel
- ✓ 2. Mahatma Gandhi
- ✗ 3. Jawahar Lal Nehru
- ✗ 4. Maulana Abul Kalam Azad

Q.3 How many Olympic Medals has India won in the sport of Wrestling as on June 2018? Question ID : **1679437261**

Ans
- ✗ 1. 7
- ✗ 2. 3
- ✗ 3. 2
- ✓ 4. 5

Q.4 The noted dancer Ranjana Gauhar is an exponent of which of the following dance styles? Question ID : **1679437258**

Ans
- ✗ 1. Kathak
- ✗ 2. Bharatnatyam
- ✓ 3. Odissi
- ✗ 4. Kuchipudi

Q.5 Which of the following rivers ends in the Arabian Sea? Question ID : **1679437251**

Ans
- ✗ 1. Brahmaputra
- ✗ 2. Ganga
- ✓ 3. Narmada
- ✗ 4. Kaveri

Q.6 Which among the following has become India's first $100 billion market capitalisation IT company? Question ID : **1679437265**

Ans
- ✗ 1. Satyam
- ✗ 2. Accenture
- ✓ 3. TCS

✗ 4. Wipro

Q.7 Who among the following is the Vice Chairperson of NITI Aayog as on June 2018?

Question ID : **1679437256**

Ans
✗ 1. Amitabh Kant
✓ 2. Rajiv Kumar
✗ 3. Ramesh Chand
✗ 4. VK Paul

Q.8 In which state is the Onam festival primarily celebrated?

Question ID : **1679437257**

Ans
✗ 1. Tamil Nadu
✓ 2. Kerala
✗ 3. Telangana
✗ 4. Karnataka

Q.9 The Indian Councils Act of 1909 is also known as the:

Question ID : **1679437248**

Ans
✗ 1. the Pitts India Act
✗ 2. the Indian Independence Act
✗ 3. the Regulating Act
✓ 4. the Morley-Minto Reforms

Q.10 What is the number of members in UNESCO as on June 2018?

Question ID : **1679437263**

Ans
✓ 1. 195
✗ 2. 163
✗ 3. 112
✗ 4. 67

Q.11 Who was the last Viceroy and the first Governor General of independent India?

Question ID : **1679437247**

Ans
✗ 1. Lord Wavell
✗ 2. Lord Reading
✗ 3. Lord Curzon
✓ 4. Lord Mountbatten

Q.12 Which among the following Indian cities has NOT figured in the list of world's 20 most polluted cities in terms of particulate matter PM2.5 levels?

Question ID : **1679437266**

Ans
✗ 1. Agra
✓ 2. Chandigarh
✗ 3. Patna
✗ 4. Gurgaon

Q.13 Fundamental Duties (under Article 51A) were added to the Constitution by the _____ Amendment of the Constitution.

Question ID : **1679437252**

Ans
✓ 1. 42^{nd}
✗ 2. 44^{th}

3. 7^{th}

4. 11^{th}

Q.14 The paintings and sculptures of Ajanta Caves in Maharashtra are related to which of the following religions?

Question ID : **1679437259**

Ans

1. Hinduism
2. Zoroastrianism
3. Jainism
4. Buddhism

Q.15 _____ provides provisions in case of failure of constitutional machinery in States.

Question ID : **1679437253**

Ans

1. Article 356
2. Article 350
3. Article 351
4. Article 333

Q.16 Which of the following works as the best fire extinguisher?

Question ID : **1679437262**

Ans

1. O_2
2. CO
3. CO_2
4. SO_2

Q.17 Minimum Support Prices are decided by:

Question ID : **1679437255**

Ans

1. Ministry of Finance
2. NITI Aayog
3. Fiscal Prudence Commission
4. Cabinet Committee on Economic Affairs

Q.18 What was the Crude Oil growth rate of India in March 2018?

Question ID : **1679437264**

Ans

1. –0.7%
2. –1.6%
3. –3.8%
4. –2.3%

Q.19 What is the total length of India's coastline?

Question ID : **1679437250**

Ans

1. 7517 km
2. 6517 km
3. 5517 km
4. 8517 km

Q.20 What is the highest ever medal tally achieved by India at Commonwealth Games?

Question ID : **1679437260**

Ans

1. 126
2. 101

3. 94

4. 83

Section : **Arithmetic Ability**

Q.1 The value of $\frac{5}{7}$ of $\left[\frac{1}{1\frac{3}{7}} + \frac{6}{5} \text{ of } \frac{3\frac{1}{3} - 2\frac{1}{2}}{2\frac{5}{21} - 2}\right] + \left[\frac{7}{5 - 2\frac{2}{3}} \div \frac{3 - \frac{2}{3 - 1\frac{1}{2}}}{4 - 1\frac{1}{2}}\right]$ is:

Question ID : **1679437270**

Ans

1. 4

2. 8

3. 16

4. 2

Q.2 A boat takes 3 hours more to travel a distance of 30 km upstream than it takes to travel the same distance downstream. If the speed of the boat in still water is three times the speed of the stream, then how much time will it take to travel a distance of 180 km in still water?

Question ID : **1679437279**

Ans

1. 24 hours

2. 20 hours

3. 25 hours

4. 18 hours

Q.3 The number of boys is 50% more than the number of girls in a school. If 20% of the number of boys and 30% of the number of girls are scholarship holders, then the percentage of students who are NOT scholarship holders is:

Question ID : **1679437273**

Ans

1. 72

2. 78

3. 75

4. 76

Q.4 The ratio of the incomes of A, B and C last year was 3 : 5 : 7. The ratios of their individual incomes last year to that this year are 2 : 3, 3 : 4 and 4 : 5, respectively. If their total present income is ₹ 83,650, then what is the present income of C?

Question ID : **1679437272**

Ans

1. ₹ 12,600

2. ₹ 28,000

3. ₹ 36,750

4. ₹ 32,640

Q.5 The HCF of two numbers is 18 and their product is 5832. If the numbers lie between 30 and 200, then the sum of their reciprocals is:

Question ID : **1679437277**

Ans

1. $\frac{11}{324}$

2. $\frac{7}{162}$

3. $\frac{11}{162}$

4. $\frac{7}{324}$

Q.6

Question ID : **1679437268**

The value of $\frac{(1.01)^3+0.000001}{1.0201-(0.01)^2} \times \frac{(7.85)^2-4.6225}{7.85-2.15}$ is:

Ans
1. 0.0101
2. 1.01
3. 0.00101
4. 10.101

Q.7

Question ID : **1679437269**

On simplification, $\frac{(625)^{6.25} \times (\sqrt{5})^{10.4}}{(\sqrt{5})^{5.4} \times (5)^{1.2} \times (25)^{0.5}}$ reduces to:

Ans
1. 25
2. 5
3. $\sqrt{5}$
4. $5\sqrt{5}$

Q.8 Let x and y be the largest four-digit and the smallest five-digit numbers, respectively, that when divided by 789 leaves a remainder of 7 in each case. What is the value of $|x - y|$?

Question ID : **1679437267**

Ans
1. 786
2. 798
3. 789
4. 678

Q.9 A can complete a task in 6 more days than what B takes to complete the same task. B starts the task and works for 4 days. Then, A alone completes it in 12 days. The time taken (in days) by B alone to complete the same task will be:

Question ID : **1679437280**

Ans
1. 10
2. 16
3. 15
4. 12

Q.10 A sum amounts to ₹9,680 in 2 years and ₹10,648 in 3 years at a certain rate per annum, interest compounded yearly. The same sum will amount to how much after $3\frac{1}{4}$ years at double the rate of interest (nearest to a whole number)?

Question ID : **1679437275**

Ans
1. ₹15,989
2. ₹15,889
3. ₹15,898
4. ₹15,988

Q.11 Let x be the least number that when divided by 16, 28, 40 and 77 leaves a remainder of 7 in each case, but is divisible by 19. What will be the remainder when x is divided by 219?

Question ID : **1679437278**

Ans
1. 91
2. 19
3. 69
4. 37

Q.12 The marked price of an article is ₹1,600. A retailer buys it after getting two successive discounts for ₹1,080. The first discount is 25%. If the retailer sells the article by allowing a single discount that is 150% of the second discount on the marked price. The percentage of profit is approximately:

Question ID : **1679437274**

Ans
1. 30
2. 22

✔ 3. 26

✘ 4. 24

Q.13 In a school, the ages of $\frac{1}{5}$ of the total number of students is less than 10 years. 60 girls are more than 10 years of age and this number is equal to $\frac{3}{2}$ of the number of boys who are more than 10 years of age. What is $\frac{3}{5}$ of the total number of students?

Question ID : **1679437271**

Ans

✘ 1. 72

✘ 2. 60

✘ 3. 54

✔ 4. 75

Q.14 Water flows at a rate of 5 km/h through a pipe of radius 7 cm into a rectangular tank of length 100 m and breadth 88 m. The time (in hours) in which the level of water in the tank will rise by 14 cm is (take $\pi = 22/7$):

Question ID : **1679437276**

Ans

✘ 1. 10

✔ 2. 16

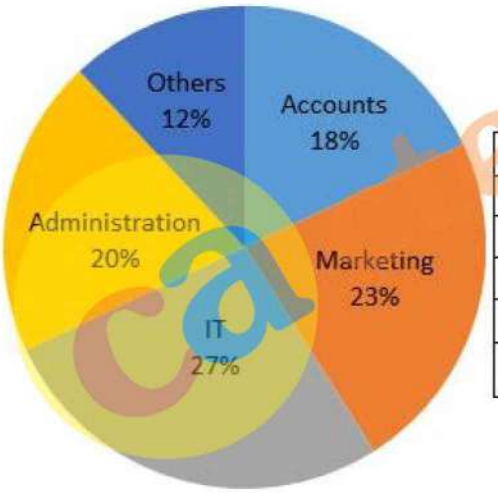
✘ 3. 15

✘ 4. 12

Comprehension:

Study the following pie-chart and table and answer the questions that follow:

Distribution of employees in different departments of a company
Total number of employees = 3000



Male and Female Ratio

Department	Male : Female
Accounts	11 : 7
Marketing	12 : 11
IT	14 : 13
Administration	3 : 2
others	4 : 5

SubQuestion No : 15

Q.15 What is the ratio of the total number of male employees working in Accounts and IT to that of female employees working in Marketing and Administration?

Question ID : **1679437282**

Ans

✘ 1. 23 : 18

✘ 2. 17 : 15

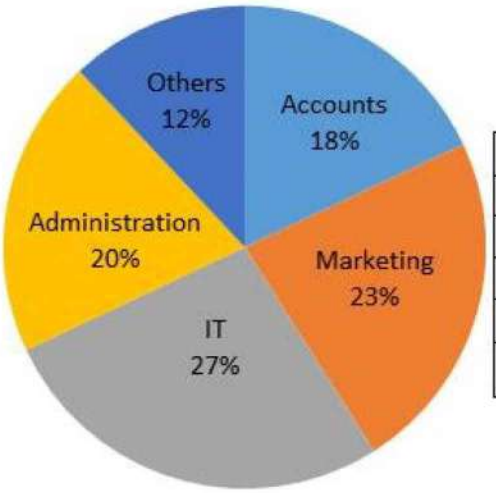
✘ 3. 25 : 13

✔ 4. 25 : 19

Comprehension:

Study the following pie-chart and table and answer the questions that follow:

Distribution of employees in different departments of a company
Total number of employees = 3000



Male and Female Ratio

Department	Male : Female
Accounts	11 : 7
Marketing	12 : 11
IT	14 : 13
Administration	3 : 2
others	4 : 5

SubQuestion No : 16

Q.16 If the total number of male employees in the company is x% more than the total number of female employees, then the value of x (nearest to an integer) is:

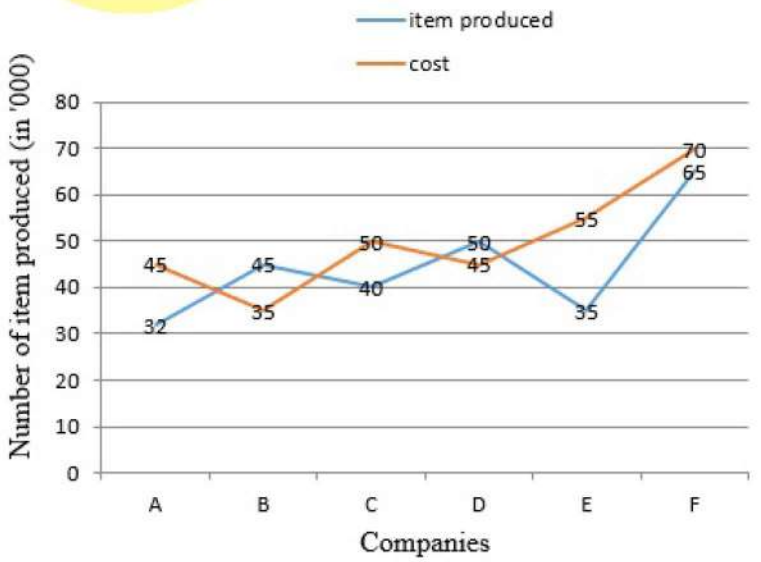
Question ID : **1679437283**

Ans
1. 20 ✗
2. 19 ✓
3. 17 ✗
4. 18 ✗

Comprehension:

Study the following graph and answer the questions that follow:

Number of items produced (in thousands) and cost (in ₹) per hundred items in six companies.



SubQuestion No : 17

Q.17 What is the total cost of the items produced by companies A, C and E together?

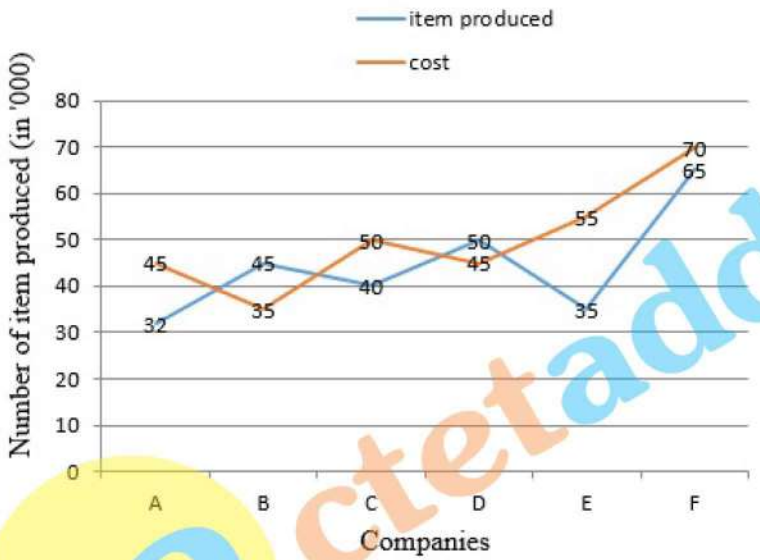
Question ID : **1679437285**

Ans
1. ₹ 52,450
2. ₹ 53,560
3. ₹ 52,250
4. ₹ 53,650

Comprehension:

Study the following graph and answer the questions that follow:

Number of items produced (in thousands) and cost (in ₹) per hundred items in six companies.



SubQuestion No : 18

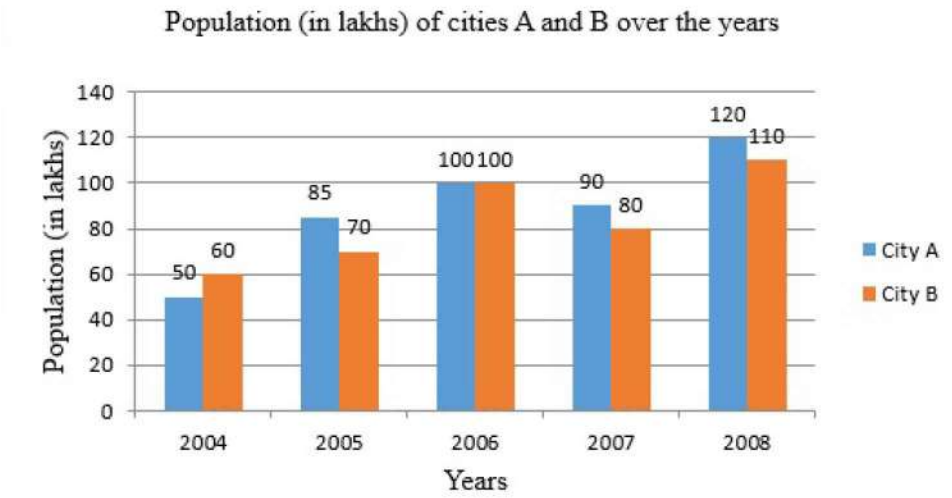
Q.18 If the number of items produced by company D increases by 40% and the number of items produced by company F decreases by 40%. What will be the total cost of items produced by the two companies?

Question ID : **1679437286**

Ans
1. ₹ 58,800
2. ₹ 56,600
3. ₹ 56,400
4. ₹ 58,400

Comprehension:

Study the following bar graph which shows the population of two cities A and B over the years and answer the questions that follow:



SubQuestion No : 19

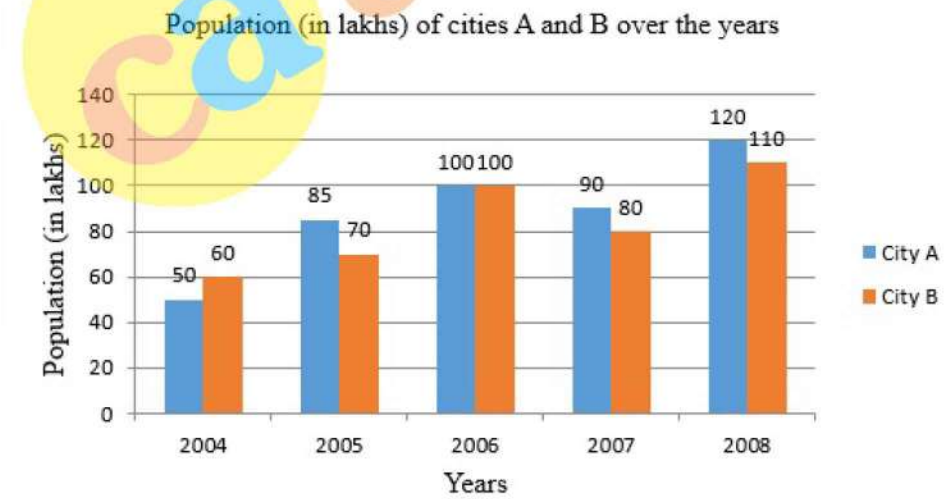
Q.19 Population of city A in 2004, 2006 and 2008 together is what per cent more than the population of city B in 2005 and 2007 together?

Question ID : **1679437289**

Ans
1. 75%
2. 48.8%
3. 44.4%
4. 80%

Comprehension:

Study the following bar graph which shows the population of two cities A and B over the years and answer the questions that follow:



SubQuestion No : 20

Q.20 For which city and in which year was the per cent rise in population from the previous year the highest?

Question ID : **1679437288**

Ans
1. City A - 2008
2. City B - 2008

✔ 3. City A - 2005

✘ 4. City B - 2006

Section : **General English**

Q.1 Choose the correct ANTONYM of:

Question ID : **1679437291**

HAUGHTY

Ans

✘ 1. Disobedient

✘ 2. Arrogant

✘ 3. Disturbing

✔ 4. Humble

Q.2 Choose the correct ANTONYM of the underlined word to fill in the blank.

Though the lion appeared to be gentle, it turned out that it was quite _____ and snarled at the visitors.

Question ID : **1679437292**

Ans

✘ 1. innocent

✘ 2. depressed

✘ 3. timid

✔ 4. ferocious

Q.3 Choose the best option to combine the given sentences.

I won the book, The Diary of Anne Frank at the competition. The book is very dear to me.

Question ID : **1679437300**

Ans

✘ 1.

The book which is The Diary of Anne Frank won at the competition is very dear to me.

✘ 2.

I won the book The Diary of Anne Frank at a competition however it is very dear to me.

✘ 3.

The book is very dear to me, The Diary of Anne Frank, which I won at the competition.

✔ 4.

The book, The Diary of Anne Frank that I won at the competition, is very dear to me.

Q.4 Choose the correct word to fill in the blank.

My car is giving me good mileage. It gives me 20 kilometres _____ litre.

Question ID : **1679437293**

Ans

✘ 1. some

✔ 2. a

✘ 3. the

✘ 4. any

Q.5 In the following sentences, four words or phrases have been underlined. One of them is incorrect. Choose the INCORRECT word or phrase from the given options.

The tsunami hit the coastal towns with such ferocity that each and all dwelling was destroyed. Many precious lives were lost too.

Question ID : **1679437297**

Ans

✘ 1. hit the coastal towns

✔ 2. each and all dwelling

✘ 3. was destroyed.

✗ 4. lives were lost

Q.6 Choose the word that is correctly spelt.

Question ID : **1679437302**

Ans
✓ 1. Preference
✗ 2. Boundry
✗ 3. Deppressed
✗ 4. Forein

Q.7 Choose the passage that is correctly punctuated.

Question ID : **1679437301**

Ans
✗ 1.
She took a quick bath. sipped a cup of hot coffee; made a few important calls; and sat down for a conference call with Ashish.

✗ 2.
she took a quick bath sipped a cup of hot coffee made a few important calls and sat down. For a conference call with Ashish.

✗ 3.
She took a quick bath sipped a cup of hot coffee. made a few important calls and sat down for a conference call with ashish.

✓ 4.
She took a quick bath, sipped a cup of hot coffee, made a few important calls and sat down for a conference call with Ashish.

Q.8 Choose the most appropriate INDIRECT SPEECH for the following sentence.

Mother said to Ravi, "You must return home before it gets dark. Don't get late!"

Question ID : **1679437299**

Ans
✓ 1.
Mother reminded Ravi to return home before it got dark and warned him not to get late.

✗ 2.
Mother was reminding Ravi that he must return home before it got late and warned him to reach before it got dark

✗ 3.
Ravi told mother that he must return home before it got dark and would not get late.

✗ 4.
Mother requested Ravi that he should return home before dark and warns him not to get late.

Q.9 Choose the PASSIVE VOICE form of the given sentence.

The audience enjoyed the opening song of the show and cheered loudly when it finished.

Question ID : **1679437298**

Ans
✗ 1.
The audience enjoyed the opening song of the show and when it finished they were cheering loudly.

✓ 2.
The opening song of the show was enjoyed by the audience and they cheered loudly when it finished.

✗ 3.
The audience was finding the opening song enjoyable during the show and cheered loudly when it finished.

✗ 4.
The audience is finding the opening song during the show enjoyable and so they cheered loudly when it finished.

Q.10 Choose the correct SYNONYM of:

SURPRISE

Question ID : **1679437290**

Ans
✗ 1. Excitement
✗ 2. Expectation
✗ 3. Relief
✓ 4. Amazement

Q.11

Question ID : **1679437295**

Fill in the blank with the appropriate word.

My friend is quite ill. I visit her _____ in the hospital.

Ans
✔ 1. daily
✘ 2. hardly
✘ 3. completely
✘ 4. usually

Q.12 Fill in the blank with the appropriate phrasal verb.

It is now becoming more and more difficult for black money hoarders to _____ income tax evasion.

Question ID : **1679437303**

Ans
✘ 1. get off with
✘ 2. get on with
✘ 3. get through
✔ 4. get away with

Q.13 Fill in the blank with the appropriate idiom.

I told Asha to be humble and not _____, as her superiors would surely recognise her skills.

Question ID : **1679437304**

Ans
✔ 1. to blow her own trumpet
✘ 2. cut a sorry figure
✘ 3. to call a spade a spade
✘ 4. blow hot and cold

Q.14 Fill in the blank with the appropriate word (s).

I _____ my birthday on Saturday at my house. Please do come at 7 pm.

Question ID : **1679437294**

Ans
✘ 1. celebrates
✘ 2. celebrated
✘ 3. was celebrating
✔ 4. am celebrating

Q.15 In the following sentences, four words or phrases have been underlined. One of them is incorrect. Choose the INCORRECT word or phrase from the given options.

The maintenance of the parks and gardens has been entrusted to a private agency that has promised to do a professional job. We do hope the parks are now be maintained well.

Question ID : **1679437296**

Ans
✘ 1. has promised
✔ 2. are now be maintained
✘ 3. has been entrusted
✘ 4. do hope

Comprehension:

Read the following passage and answer the questions that follow.

T'ai chi is a Chinese martial art and a form of stylised, meditative exercise consisting of slow circular and stretching movements and positions of bodily balance.
When a lot of people got sick owing to population explosion and lack of sufficient medical care, in 1956, during the communist revolution, top t'ai chi practitioners in China got together and came up with a short programme of teaching t'ai chi at a national level. The healthy practice of ending the day with some t'ai chi instead of remaining glued to the TV set or mobile phone would not only melt away the aches and pains acquired during the day but also induce a truly restful sleep.
T'ai chi's social benefits are well documented. The technique – Push Hands, where two people pair off — one uses his hands to push the partner, and the partner yields and neutralises the first and maintains his equilibrium — has been shown to have psychological value. It has tremendous healing effect on those suffering from loneliness.
All moves in t'ai chi involve bending and stretching. It starts with opening and closing in the joints. The joints get smaller while closing and expand while opening. At the physical level, this raises the practitioner's vitality. T'ai chi unites the mind, body and heart exponentially.
According to t'ai chi classics, the lower dantian — the area between the navel and the pubic bone — is the energetic centre that affects every action you make. It is the body's main switch box. A part of your mind should always remain present in your lower dantian. If everything comes from your lower dantian, it floods all the energy channels of your body evenly and balances them. The increased energy in the lower dantian increases your sense of physicality in everything you do, be it health, power, strength or focus.

SubQuestion No : 16

Q.16 Choose the option that completes the sentence given below.

Question ID : **1679437310**

The effect of the mind focussing on lower dantian is that _____.

Ans
1. ✗ it makes you healthy
2. ✓ there is a flow of energy in the whole body
3. ✗ it gives you power and focus
4. ✗ you become stronger in the lower part

Comprehension:

Read the following passage and answer the questions that follow.

T'ai chi is a Chinese martial art and a form of stylised, meditative exercise consisting of slow circular and stretching movements and positions of bodily balance.
When a lot of people got sick owing to population explosion and lack of sufficient medical care, in 1956, during the communist revolution, top t'ai chi practitioners in China got together and came up with a short programme of teaching t'ai chi at a national level. The healthy practice of ending the day with some t'ai chi instead of remaining glued to the TV set or mobile phone would not only melt away the aches and pains acquired during the day but also induce a truly restful sleep.
T'ai chi's social benefits are well documented. The technique – Push Hands, where two people pair off — one uses his hands to push the partner, and the partner yields and neutralises the first and maintains his equilibrium — has been shown to have psychological value. It has tremendous healing effect on those suffering from loneliness.
All moves in t'ai chi involve bending and stretching. It starts with opening and closing in the joints. The joints get smaller while closing and expand while opening. At the physical level, this raises the practitioner's vitality. T'ai chi unites the mind, body and heart exponentially.
According to t'ai chi classics, the lower dantian — the area between the navel and the pubic bone — is the energetic centre that affects every action you make. It is the body's main switch box. A part of your mind should always remain present in your lower dantian. If everything comes from your lower dantian, it floods all the energy channels of your body evenly and balances them. The increased energy in the lower dantian increases your sense of physicality in everything you do, be it health, power, strength or focus.

SubQuestion No : 17

Q.17 Choose the option that answers the question given below.

Question ID : **1679437308**

"It has been shown to have psychological value."
What is the psychological value of practicing t'ai chi?

Ans
1. People feel happy at being alive.
2. The joints contract and expand.
3. It maintains body balance.
4. It helps those who are feeling alone.

Comprehension:

Read the following passage and answer the questions that follow.

T'ai chi is a Chinese martial art and a form of stylised, meditative exercise consisting of slow circular and stretching movements and positions of bodily balance.
When a lot of people got sick owing to population explosion and lack of sufficient medical care, in 1956, during the communist revolution, top t'ai chi practitioners in China got together and came up with a short programme of teaching t'ai chi at a national level. The healthy practice of ending the day with some t'ai chi instead of remaining glued to the TV set or mobile phone would not only melt away the aches and pains acquired during the day but also induce a truly restful sleep.
T'ai chi's social benefits are well documented. The technique – Push Hands, where two people pair off — one uses his hands to push the partner, and the partner yields and neutralises the first and maintains his equilibrium — has been shown to have psychological value. It has tremendous healing effect on those suffering from loneliness.
All moves in t'ai chi involve bending and stretching. It starts with opening and closing in the joints. The joints get smaller while closing and expand while opening. At the physical level, this raises the practitioner's vitality. T'ai chi unites the mind, body and heart exponentially.
According to t'ai chi classics, the lower dantian — the area between the navel and the pubic bone — is the energetic centre that affects every action you make. It is the body's main switch box. A part of your mind should always remain present in your lower dantian. If everything comes from your lower dantian, it floods all the energy channels of your body evenly and balances them. The increased energy in the lower dantian increases your sense of physicality in everything you do, be it health, power, strength or focus.

SubQuestion No : 18

Q.18 Choose the option that answers the question given below.

Question ID : **1679437307**

Which of the following is NOT an advantage of doing t'ai chi?

Ans

✗ 1. It gives bodily balance.

✗ 2. It helps you get rid of pains.

✗ 3. People get together.

✓ 4. One remains attached to the mobile phone.

Comprehension:

Read the following passage and answer the questions that follow.

T'ai chi is a Chinese martial art and a form of stylised, meditative exercise consisting of slow circular and stretching movements and positions of bodily balance.
When a lot of people got sick owing to population explosion and lack of sufficient medical care, in 1956, during the communist revolution, top t'ai chi practitioners in China got together and came up with a short programme of teaching t'ai chi at a national level. The healthy practice of ending the day with some t'ai chi instead of remaining glued to the TV set or mobile phone would not only melt away the aches and pains acquired during the day but also induce a truly restful sleep.
T'ai chi's social benefits are well documented. The technique – Push Hands, where two people pair off — one uses his hands to push the partner, and the partner yields and neutralises the first and maintains his equilibrium — has been shown to have psychological value. It has tremendous healing effect on those suffering from loneliness.
All moves in t'ai chi involve bending and stretching. It starts with opening and closing in the joints. The joints get smaller while closing and expand while opening. At the physical level, this raises the practitioner's vitality. T'ai chi unites the mind, body and heart exponentially.
According to t'ai chi classics, the lower dantian — the area between the navel and the pubic bone — is the energetic centre that affects every action you make. It is the body's main switch box. A part of your mind should always remain present in your lower dantian. If everything comes from your lower dantian, it floods all the energy channels of your body evenly and balances them. The increased energy in the lower dantian increases your sense of physicality in everything you do, be it health, power, strength or focus.

SubQuestion No : 19

Q.19 Choose the option that completes the sentence given below.

Question ID : **1679437309**

The greatest benefit of t'ai chi is that it _____.

Ans
✗ 1. raises energy levels
✗ 2. makes the joints smaller
✗ 3. creates social interaction
✓ 4. increases the unity of mind, body and soul

Comprehension:

Read the following passage and answer the questions that follow.

T'ai chi is a Chinese martial art and a form of stylised, meditative exercise consisting of slow circular and stretching movements and positions of bodily balance.
When a lot of people got sick owing to population explosion and lack of sufficient medical care, in 1956, during the communist revolution, top t'ai chi practitioners in China got together and came up with a short programme of teaching t'ai chi at a national level. The healthy practice of ending the day with some t'ai chi instead of remaining glued to the TV set or mobile phone would not only melt away the aches and pains acquired during the day but also induce a truly restful sleep.
T'ai chi's social benefits are well documented. The technique – Push Hands, where two people pair off — one uses his hands to push the partner, and the partner yields and neutralises the first and maintains his equilibrium — has been shown to have psychological value. It has tremendous healing effect on those suffering from loneliness.
All moves in t'ai chi involve bending and stretching. It starts with opening and closing in the joints. The joints get smaller while closing and expand while opening. At the physical level, this raises the practitioner's vitality. T'ai chi unites the mind, body and heart exponentially.
According to t'ai chi classics, the lower dantian — the area between the navel and the pubic bone — is the energetic centre that affects every action you make. It is the body's main switch box. A part of your mind should always remain present in your lower dantian. If everything comes from your lower dantian, it floods all the energy channels of your body evenly and balances them. The increased energy in the lower dantian increases your sense of physicality in everything you do, be it health, power, strength or focus.

SubQuestion No : 20

Q.20 Choose the most appropriate option to complete the sentence.

Question ID : **1679437306**

T'ai chi was started _____.

Ans
1. ✗ by a communist movement or revolution
2. ✗ owing to population explosion
3. ✓ because of the need for medical care
4. ✗
because people were getting very slow in their life

Section : **General Hindi**

Comprehension:

निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए।

परिश्रम का वही कमाल हैं। इतिहास में यह कमाल बार बार भिन्न भिन्न रूपों में देखा हैं। चन्द्रगुप्त हो या चाणक्य; सिकंदर हो या नेपोलियन; डिजरायली हो या लिंकन; सतलिज हो या खुशचेन; शंकराचार्य हो या खण्डन मिश्र; नेहरू हो या लालबहादुर शास्त्री सभी का जीवन परिश्रम और अध्यवसाय की रोमांचक कथा हैं। तालियों की गड़गड़ाहट के बिच वे संकुचित होकर बैठ गए। पर उन्होंने हिम्मत नहीं हारी। एकांत जंगल में, झाड़ियो और पेड़ों के सामने वे बोलने कर अभ्यास करते रहे। पुरे एक वर्ष बाद जब ये फिर से ब्रिटिश संसद में बोलने खड़े हुए तो उनके धरा-प्रवाह भाषण से सांसदों की साँस रुक गई। वर्षो से उन्होंने ऐसा ओजस्वी और प्रभावपूर्ण भाषण नहीं सुना था। वह चमत्कार परिश्रम का ही परिणाम था।

कहते हैं महान कार-निर्माता उद्योगपति 'फोर्ड' एक साधारण टेक्नीशियन ये, खुशचेन खान मजदूर थे, टाटा, बिरला, मोदी आदि हमारे भारतीय उद्योगपति भी आरंभ में सामान्य-साधारण थे, किंतु निरंतर अटूट परिश्रम ने उन्हें सफलता और सम्पनता के आकाश पर चढ़ दिया। कहने का तात्पर्य यह हैं की जहाँ-जहाँ, जिस जिस क्षेत्र में भी आप सफलता और उत्कर्ष के चमत्कार पाएँगे, उनके पीछे अटूट परिश्रम और लगन की ही कहानी होगी।

विद्यार्थियों के लिए परिश्रम का विशेष महत्त्व हैं। विद्यार्थी कल साधना कल हैं। यही वह समय हैं जब विद्यार्थी को केवल अपने अध्यनन-मनन और शारीरिक स्वास्थ बनाने के अतिरिक्त और कुछ भी करना नहीं। होता उसका एकमात्र ध्यान अपने शारीरिक-मानसिक विकास को समृद्ध करने की ओर रहता हैं। खाने-पिने, पहनने-ओढ़ने अथवा पढाई-लिखाई के खर्चे आदि की उन्हें कोई चिंता नहीं होती। ऐसी स्थिति में भी यदि वे परिश्रम से जी चुराए तो उनका दुर्भाग्य हैं; क्योकि कहा गया हैं-

'सुखार्थिनो कुतो विद्या, विद्यार्थिनो कुतो सुखम'।

अर्थात सुख चाहने वाले के लिए विद्या कहाँ और विद्या की इच्छा रखने वाले को सुख कहाँ? परिश्रमी व्यक्ति को अपनी दृष्टि केवल अपने उदेश्य बिंदु पर गड़ाए आगे बढ़ना चाहिए। परिश्रम एक शक्ति हैं। जिसने भी यह शक्ति प्राप्त कर ली सफलता ने उसके गले में जयमाल डाल दी। परिश्रम के बल पर ही व्यक्ति असंभव की संभव कर दिखता हैं। परिश्रम से ही उसने कोयले से हीरे का निर्माण किया,

परिश्रम से ही उसने प्रकृति पर अपना अधिकार दिया।
परिश्रम जीवन की मूल शक्ति, उन्नति और सफलता का रहस्य हैं।

SubQuestion No : 1

Q.1 सफलता का आधार होता है:

Question ID : **1679437312**

Ans
✗ 1. विद्या
✗ 2. शक्ति
✗ 3. भाग्य
✓ 4. श्रम

Comprehension:

निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लीखिए।

परिश्रम का वही कमाल हैं। इतिहास में यह कमाल बार बार भिन्न भिन्न रूपों में देखा हैं। चन्द्रगुप्त हो या चाणक्य; सिकंदर हो या नेपोलियन; डिजरायली हो या लिंकन; सतलिज हो या खुशचेन; शंकराचार्य हो या खण्डन मिश्र; नेहरू हो या लालबहादुर शास्त्री सभी का जीवन परिश्रम और अध्यवसाय की रोमांचक कथा हैं। तालियों की गड़गड़ाहट के बिच वे संकुचित होकर बैठ गए। पर उन्होंने हिम्मत नहीं हारी। एकांत जंगल में, झाड़ियो और पेड़ों के सामने वे बोलने कर अभ्यास करते रहे। पुरे एक वर्ष बाद जब ये फिर से ब्रिटिश संसद में बोलने खड़े हुए तो उनके धरा-प्रवाह भाषण से सांसदों की साँस रुक गई। वर्षो से उन्होंने ऐसा ओजस्वी और प्रभावपूर्ण भाषण नहीं सुना था। वह चमत्कार परिश्रम का ही परिणाम था।
कहते हैं महान कार-निर्माता उद्योगपति 'फोर्ड' एक साधारण टेक्नीशियन ये, खुशचेन खान मजदूर थे, टाटा, बिरला, मोदी आदि हमारे भारतीय उद्योगपति भी आरंभ में सामान्य-साधारण थे, किंतु निरंतर अटूट परिश्रम ने उन्हें सफलता और सम्पनता के आकाश पर चढ़ दिया। कहने का तात्पर्य यह हैं की जहाँ-जहाँ, जिस जिस क्षेत्र में भी आप सफलता और उत्कर्ष के चमत्कार पाएँगे, उनके पीछे अटूट परिश्रम और लगन की ही कहानी होगी।
विद्यार्थियों के लिए परिश्रम का विशेष महत्त्व हैं। विद्यार्थी कल साधना कल हैं। यही वह समय हैं जब विद्यार्थी को केवल अपने अध्यनन-मनन और शारीरिक स्वास्थ बनाने के अतिरिक्त और कुछ भी करना नहीं। होता उसका एकमात्र ध्यान अपने शारीरिक-मानसिक विकास को समृद्ध करने की ओर रहता हैं। खाने-पिने, पहनने-ओढ़ने

अथवा पढाई-लिखाई के खर्चे आदि की उन्हें कोई चिंता नहीं होती। ऐसी स्थिति में भी यदि वे परिश्रम से जी चुराए तो उनका दुर्भाग्य हैं; क्योकि कहा गया हैं-

'सुखार्थिनो कुतो विद्या, विद्यार्थिनो कुतो सुखम'।

अर्थात सुख चाहने वाले के लिए विद्या कहाँ और विद्या की इच्छा रखने वाले को सुख कहाँ? परिश्रमी व्यक्ति को अपनी दृष्टि केवल अपने उदेश्य बिंदु पर गड़ाए आगे बढ़ना चाहिए। परिश्रम एक शक्ति हैं। जिसने भी यह शक्ति प्राप्त कर ली सफलता ने उसके गले में जयमाल डाल दी। परिश्रम के बल पर ही व्यक्ति असंभव की संभव कर दिखता हैं। परिश्रम से ही उसने कोयले से हीरे का निर्माण किया, परिश्रम से ही उसने प्रकृति पर अपना अधिकार दिया।

परिश्रम जीवन की मूल शक्ति, उन्नति और सफलता का रहस्य हैं।

SubQuestion No : 2

Q.2 परिश्रम व्यक्ति को नहीं देता:

Question ID : **1679437315**

Ans
✗ 1. उत्कर्ष
✓ 2. आत्मग्लानि
✗ 3. संपलता
✗ 4. सफलता

Comprehension:

निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लीखिए।

परिश्रम का वही कमाल हैं। इतिहास में यह कमाल बार बार भिन्न भिन्न रूपों में देखा हैं। चन्द्रगुप्त हो या चाणक्य; सिकंदर हो या नेपोलियन; डिजरायली हो या लिंकन; सतलिज हो या खुशचेन; शंकराचार्य हो या खण्डन मिश्र; नेहरू हो या लालबहादुर शास्त्री सभी का जीवन परिश्रम और अध्यवसाय की रोमांचक कथा हैं। तालियों की गड़गड़ाहट के बिच वे संकुचित होकर बैठ गए। पर उन्होंने हिम्मत नहीं हारी। एकांत जंगल में, झाड़ियो और पेड़ों के सामने वे बोलने कर अभ्यास करते रहे। पुरे एक वर्ष बाद जब ये फिर से ब्रिटिश संसद में बोलने खड़े हुए तो उनके धरा-प्रवाह भाषण से सांसदों की साँस रुक गई। वर्षो से उन्होंने ऐसा ओजस्वी और प्रभावपूर्ण भाषण नहीं सुना था। वह चमत्कार परिश्रम का ही परिणाम था।

कहते हैं महान कार-निर्माता उद्योगपति 'फोर्ड' एक साधारण

टेक्नीशियन थे, खुशचेन खान मजदूर थे, टाटा, बिरला, मोदी आदि हमारे भारतीय उद्योगपति भी आरंभ में सामान्य-साधारण थे, किंतु निरंतर अटूट परिश्रम ने उन्हें सफलता और सम्पनता के आकाश पर चढ़ दिया। कहने का तात्पर्य यह हैं की जहाँ-जहाँ, जिस जिस क्षेत्र में भी आप सफलता और उत्कर्ष के चमत्कार पाएँगे, उनके पीछे अटूट परिश्रम और लगन की ही कहानी होगी।

विद्याथियों के लिए परिश्रम का विशेष महत्त्व हैं। विद्यार्थी कल साधना कल हैं। यही वह समय हैं जब विद्यार्थी को केवल अपने अध्यनन-मनन और शारीरिक स्वास्थ बनाने के अतिरिक्त और कुछ भी करना नहीं। होता उसका एकमात्र ध्यान अपने शारीरिक-मानसिक विकास को समृद्ध करने की ओर रहता हैं। खाने-पिने, पहनने-ओढ़ने अथवा पढाई-लिखाई के खर्चे आदि की उन्हें कोई चिंता नहीं होती। ऐसी स्थिति में भी यदि वे परिश्रम से जी चुराए तो उनका दुर्भाग्य हैं; क्योकि कहा गया हैं-

'सुखार्थिनो कुतो विद्या, विद्यार्थिनो कुतो सुखम'।

अर्थात सुख चाहने वाले के लिए विद्या कहाँ और विद्या की इच्छा रखने वाले को सुख कहाँ? परिश्रमी व्यक्ति को अपनी दृष्टि केवल अपने उदेश्य बिंदु पर गड़ाए आगे बढ़ना चाहिए। परिश्रम एक शक्ति हैं। जिसने भी यह शक्ति प्राप्त कर ली सफलता ने उसके गले में जयमाल डाल दी। परिश्रम के बल पर ही व्यक्ति असंभव की संभव कर दिखता हैं। परिश्रम से ही उसने कोयले से हीरे का निर्माण किया, परिश्रम से ही उसने प्रकृति पर अपना अधिकार दिया।

परिश्रम जीवन की मूल शक्ति, उन्नति और सफलता का रहस्य हैं।

SubQuestion No : 3

Q.3 निम्नलिखित में से मजदुर कौन बनेगा?

Question ID : **1679437314**

Ans
✗ 1. टाटा
✓ 2. खुशचेन खान
✗ 3. फोर्ड
✗ 4. मोदी

Comprehension:

निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लीखिए।

परिश्रम का वही कमाल हैं। इतिहास में यह कमाल बार बार भिन्न भिन्न रूपों में देखा हैं। चन्द्रगुप्त हो या चाणक्य; सिकंदर हो या नेपोलियन; डिजरायली हो या लिंकन; सतलिज हो या खूशचेन;

शंकराचार्य हो या खण्डन मिश्र; नेहरू हो या लालबहादुर शास्त्री सभी का जीवन परिश्रम और अध्यवसाय की रोमांचक कथा हैं। तालियों की गड़गड़ाहट के बिच वे संकुचित होकर बैठ गए। पर उन्होंने हिम्मत नहीं हारी। एकांत जंगल में, झाड़ियो और पेड़ों के सामने वे बोलने कर अभ्यास करते रहे। पुरे एक वर्ष बाद जब ये फिर से ब्रिटिश संसद में बोलने खड़े हुए तो उनके धरा-प्रवाह भाषण से सांसदों की साँस रुक गई। वर्षो से उन्होंने ऐसा ओजस्वी और प्रभावपूर्ण भाषण नहीं सुना था। वह चमत्कार परिश्रम का ही परिणाम था।

कहते हैं महान कार-निर्माता उद्योगपति 'फोर्ड' एक साधारण टेक्नीशियन ये, खुशचेन खान मजदूर थे, टाटा, बिरला, मोदी आदि हमारे भारतीय उद्योगपति भी आरंभ में सामान्य-साधारण थे, किंतु निरंतर अटूट परिश्रम ने उन्हें सफलता और सम्पनता के आकाश पर चढ़ दिया। कहने का तात्पर्य यह हैं की जहाँ-जहाँ, जिस जिस क्षेत्र में भी आप सफलता और उत्कर्ष के चमत्कार पाएँगे, उनके पीछे अटूट परिश्रम और लगन की ही कहानी होगी।

विद्यार्थियों के लिए परिश्रम का विशेष महत्त्व हैं। विद्यार्थी कल साधना कल हैं। यही वह समय हैं जब विद्यार्थी को केवल अपने अध्यनन-मनन और शारीरिक स्वास्थ बनाने के अतिरिक्त और कुछ भी करना नहीं। होता उसका एकमात्र ध्यान अपने शारीरिक-मानसिक विकास को समृद्ध करने की ओर रहता हैं। खाने-पिने, पहनने-ओढ़ने अथवा पढाई-लिखाई के खर्चे आदि की उन्हें कोई चिंता नहीं होती। ऐसी स्थिति में भी यदि वे परिश्रम से जी चुराए तो उनका दुर्भाग्य हैं; क्योकि कहा गया हैं-

'सुखार्थिनो कुतो विद्या, विद्यार्थिनो कुतो सुखम'।

अर्थात सुख चाहने वाले के लिए विद्या कहाँ और विद्या की इच्छा रखने वाले को सुख कहाँ? परिश्रमी व्यक्ति को अपनी दृष्टि केवल अपने उदेश्य बिंदु पर गड़ाए आगे बढ़ना चाहिए। परिश्रम एक शक्ति हैं। जिसने भी यह शक्ति प्राप्त कर ली सफलता ने उसके गले में जयमाल डाल दी। परिश्रम के बल पर ही व्यक्ति असंभव की संभव कर दिखता हैं। परिश्रम से ही उसने कोयले से हीरे का निर्माण किया, परिश्रम से ही उसने प्रकृति पर अपना अधिकार दिया।

परिश्रम जीवन की मूल शक्ति, उन्नति और सफलता का रहस्य हैं।

SubQuestion No : 4

Q.4 गद्यांश का उपयुक्त शीर्षक होगा:

Question ID : **1679437316**

Ans
✗ 1. परिश्रम की देन
✗ 2. टाटा और उदयोग
✓ 3. परिश्रम का महत्व
✗ 4. छात्रों की सफलता

Comprehension:

निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लीखिए।

परिश्रम का वही कमाल हैं। इतिहास में यह कमाल बार बार भिन्न भिन्न रूपों में देखा हैं। चन्द्रगुप्त हो या चाणक्य; सिकंदर हो या नेपोलियन; डिजरायली हो या लिंकन; सतलिज हो या खुशचेन; शंकराचार्य हो या खण्डन मिश्र; नेहरू हो या लालबहादुर शास्त्री सभी का जीवन परिश्रम और अध्यवसाय की रोमांचक कथा हैं। तालियों की गड़गड़ाहट के बिच वे संकुचित होकर बैठ गए। पर उन्होंने हिम्मत नहीं हारी। एकांत जंगल में, झाड़ियो और पेड़ों के सामने वे बोलने कर अभ्यास करते रहे। पुरे एक वर्ष बाद जब ये फिर से ब्रिटिश संसद में बोलने खड़े हुए तो उनके धरा-प्रवाह भाषण से सांसदों की साँस रुक गई। वर्षो से उन्होंने ऐसा ओजस्वी और प्रभावपूर्ण भाषण नहीं सुना था। वह चमत्कार परिश्रम का ही परिणाम था।

कहते हैं महान कार-निर्माता उद्योगपति 'फोर्ड' एक साधारण टेक्नीशियन थे, खुशचेन खान मजदूर थे, टाटा, बिरला, मोदी आदि हमारे भारतीय उद्योगपति भी आरंभ में सामान्य-साधारण थे, किंतु निरंतर अटूट परिश्रम ने उन्हें सफलता और सम्पनता के आकाश पर चढ़ दिया। कहने का तात्पर्य यह हैं की जहाँ-जहाँ, जिस जिस क्षेत्र में भी आप सफलता और उत्कर्ष के चमत्कार पाएँगे, उनके पीछे अटूट परिश्रम और लगन की ही कहानी होगी।

विद्यार्थियों के लिए परिश्रम का विशेष महत्त्व हैं। विद्यार्थी कल साधना कल हैं। यही वह समय हैं जब विद्यार्थी को केवल अपने अध्यनन-मनन और शारीरिक स्वास्थ बनाने के अतिरिक्त और कुछ भी करना नहीं। होता उसका एकमात्र ध्यान अपने शारीरिक-मानसिक विकास को समृद्ध करने की ओर रहता हैं। खाने-पिने, पहनने-ओढ़ने अथवा पढाई-लिखाई के खर्चे आदि की उन्हें कोई चिंता नहीं होती। ऐसी स्थिति में भी यदि वे परिश्रम से जी चुराए तो उनका दुर्भाग्य हैं; क्योंकि वह सगा हैं।

है, क्योंकि कहा गया है-

'सुखार्थिनो कुतो विद्या, विद्यार्थिनो कुतो सुखम'।

अर्थात सुख चाहने वाले के लिए विद्या कहाँ और विद्या की इच्छा रखने वाले को सुख कहाँ? परिश्रमी व्यक्ति को अपनी दृष्टि केवल अपने उदेश्य बिंदु पर गड़ाए आगे बढ़ना चाहिए। परिश्रम एक शक्ति हैं। जिसने भी यह शक्ति प्राप्त कर ली सफलता ने उसके गले में जयमाल डाल दी। परिश्रम के बल पर ही व्यक्ति असंभव की संभव कर दिखता हैं। परिश्रम से ही उसने कोयले से हीरे का निर्माण किया, परिश्रम से ही उसने प्रकृति पर अपना अधिकार दिया।

परिश्रम जीवन की मूल शक्ति, उन्नति और सफलता का रहस्य हैं।

SubQuestion No : 5

Q.5 सफलता के लिए विद्यार्थी को छोड़ना पड़ता है: Question ID : **1679437313**

Ans
✗ 1. परिवार
✗ 2. दुःख
✗ 3. मित्र-बंधू
✓ 4. सुख

Q.6 'अत्याचार' शब्द में संधि है: Question ID : **1679437320**

Ans
✓ 1. यण् संधि
✗ 2. वृद्धि संधि
✗ 3. दीर्घ संधि
✗ 4. अयादि संधि

Q.7 धोनी का कुत्ता घर का न घाट का लोकोक्ति का अर्थ है: Question ID : **1679437331**

Ans
✗ 1. गधा बनना
✗ 2. धोनी के घर जाना
✓ 3. कही ठौर-ठिकाना न होना
✗ 4. धोनी के कुत्ते को रास्ता न मिलना

Q.8 निम्नलिखित शब्दों में से तत्सम शब्द चुनिए: Question ID : **1679437318**

Ans
✗ 1. सोना
✓ 2. आयु वधि
✗ 3. सुंदर हाथ

✗ 4. मुँह

Q.9 कान भरना मुहावरे का अर्थ है: Question ID : **1679437330**

Ans
✗ 1. कान साफ करना

✗ 2. कान में दवा डालना

✓ 3. किसी के विरुद्ध शिकायत कर किसी को बहकना

✗ 4. काना-कुसी करना

Q.10 'बाजार' शब्द का बहुवचन (अभिमालिक) होगा: Question ID : **1679437321**

Ans
✓ 1. बाजार

✗ 2. बाजारें

✗ 3. बजारों

✗ 4. बाजारो

Q.11 नीचे लिखे वाक्यों में से शुद्ध वाक्य छाँटिए: Question ID : **1679437329**

Ans
✗ 1. उसने रातभर सोया

✗ 2. मेरे को तेरे को दस रूपए देने है

✗ 3. तुम भी चलियेना क्या

✓ 4. शिक्षक कक्षा में है

Q.12 कौनसा शब्द 'जल' का पर्यायवाची है? Question ID : **1679437324**

Ans
✗ 1. अंबुधी

✗ 2. जलग

✗ 3. तोयद

✓ 4. चय

Q.13 निम्नलिखित में से कौन-सा शब्द पुलिंग है? Question ID : **1679437327**

Ans
✗ 1. भाषा

✗ 2. बात

✓ 3. कपुर

✗ 4. कोशिश

Q.14 'सदाबहुवचन' में प्रयुक्त होने वाला शब्द है: Question ID : **1679437322**

Ans
✗ 1. कल्याण

✔ 2. दर्शन

✗ 3. धन

✗ 4. मुनि

Q.15 निम्नलिखित में तद्भव शब्द छाँटिए: Question ID : **1679437317**

Ans

✗ 1. संदेश

✗ 2. विवाह

✔ 3. कपडा

✗ 4. माधुर्य

Q.16 निम्नलिखित में से कोनसी क्रिया अकर्मक है? Question ID : **1679437328**

Ans

✗ 1. देना

✗ 2. लाना

✔ 3. सोना

✗ 4. खाना

Q.17 'जो नष्ट होने वाला हो' इस वाक्यांश के लिए एक शब्द होगा: Question ID : **1679437326**

Ans

✗ 1. क्षणभंगुर

✗ 2. विनष्ट

✗ 3. अचिर

✔ 4. नशवर

Q.18 निम्नलिखित में से भाववाचक संज्ञा शब्द छाँटिए: Question ID : **1679437323**

Ans

✗ 1. लघु

✗ 2. तन्मय

✔ 3. वार्धक्य

✗ 4. विश्वसनीय

Q.19 'जंगम' शब्द का विलोम होता है: Question ID : **1679437325**

Ans

✗ 1. स्थिर

✗ 2. गतिशील

✔ 3. स्थावर

✗ 4. चांचल्य

Q.20 'नरसिंघ' शब्द में कौन-सा समास है? Question ID : **1679437319**

Ans

✗ 1. तत्पुरुष

✗ 2. बहुब्रीहि

✗ 3. अव्ययीभाव

✓ 4. कर्मधारय

Section : **Subject Related**

Q.1 For solutes showing association, the value of van't Hoff factor (i) is:

Question ID : **1679437342**

Ans

✗ 1. > 1

✗ 2. $= 1$

✗ 3. $= 0$

✓ 4. < 1

Q.2 A system that can exchange energy but not matter with the surroundings is called:

Question ID : **1679437349**

Ans

✗ 1. Isolated system

✗ 2. Isothermal system

✗ 3. Open system

✓ 4. Closed system

Q.3 Which of the following is independent of temperature?

Question ID : **1679437343**

Ans

✗ 1. Molarity

✓ 2. Molality

✗ 3. Normality

✗ 4. Formality

Q.4 According to Lindemann-Hinshelwood mechanism of unimolecular reactions, the observed order at low concentration follows:

Question ID : **1679437335**

Ans

✗ 1. Zero order

✗ 2. First order

✓ 3. Second order

✗ 4. Third order

Q.5 The ratio of specific rate constants at two different temperatures, separated by 10 °C, is called as:

Question ID : **1679437333**

Ans

✓ 1. Temperature coefficient

✗ 2. Threshold energy

✗ 3. Activation energy

✗ 4. Activity coefficient

Q.6 The vapour pressure of 0.1M KNO_3 at 100 °C is 730 Torr. The activity of water in the solution at this temperature is:

Question ID : **1679437346**

Ans

✗ 1. 0.28

✗ 2. 1

✓ 3. 0.96

✗ 4. 0.48

Q.7 75% of a first-order reaction is completed in 30 minutes. The time required for a 93.75% completion of the same reaction (in hours) is:

Question ID : **1679437339**

Ans
✓ 1. 1
✗ 2. 120
✗ 3. 60
✗ 4. 2

Q.8 The chemical reaction $2O_3 \rightarrow 3O_2$ proceeds as:

$O_3 \rightleftharpoons O_2 + O$ (fast)

$O + O_3 \rightarrow 2O_2$ (slow)

The rate law expression for this reaction should be:

Question ID : **1679437337**

Ans
✗ 1. $r = K[O_3][O_2]^2$
✗ 2. $r = K[O_3]^2$
✓ 3. $r = K[O_3]^2[O_2]^{-1}$
✗ 4. $r = K[O_3]^2[O_2]^1$

Q.9 The rate constant of a reaction at 40 °C is exactly twice of that at 30 °C. Then the energy of activation is approximately (in k Cal mol^{-1}):

Question ID : **1679437334**

Ans
✗ 1. 15.0
✗ 2. 14.2
✓ 3. 13.0
✗ 4. 12.2

Q.10 18.2 g of urea is dissolved in 100 g of water at 50 °C. The lowering of vapour pressure produces 5 mm of Hg. The molecular weight of urea is (given that the vapour pressure of water at 50 °C is 92 mm of Hg):

Question ID : **1679437341**

Ans
✗ 1. 92
✗ 2. 114.02
✗ 3. 64.09
✓ 4. 57.05

Q.11 For a two component system, the reduced phase rule equation is:

Question ID : **1679437348**

Ans
✓ 1. F = 3-P
✗ 2. F = 4-P
✗ 3. F = 2-P
✗ 4. F = 1-P

Q.12 Chemical reactions that proceed from reactants to products through one or more intermediate stage(s) are called:

Question ID : **1679437336**

Ans
✗ 1. Opposing reactions
✗ 2. Simple reactions
✓ 3. Consecutive reactions
✗ 4. Parallel reactions

Q.13 100 mL each of 1M $AgNO_3$ and 1M NaCl are mixed .The nitrate ion concentration in the resulting solution is:

Question ID : **1679437347**

Ans
1. 0.75 M
2. 1 M
3. 0.5 M
4. 0.25 M

Q.14 A solution of 0.635 g of a protein in 100 mL water has an osmotic pressure due to the protein of 2.35 cm H_2O at 27 °C. Then the molecular weight of the protein is:

Question ID : **1679437340**

Ans
1. 99,000
2. 69,000
3. 89,000
4. 79,000

Q.15 Temperature Jump Relaxation method is used to study:

Question ID : **1679437338**

Ans
1. Fast reactions
2. Moderate reactions
3. Substitution reactions
4. Slow reactions

Q.16 For an ideal solution, which of the following is true?

Question ID : **1679437345**

Ans
1. $\Delta V_{mix} = 0$
2. $\Delta G_{mix} = 0$
3. $\Delta H_{mix} \neq 0$
4. $\Delta S_{mix} = 0$

Q.17 0.220 g of substance dissolved in 22.0 g of benzene lowered the freezing point of benzene by 0.283. Then the molecular weight of the substance is (given that $K_f = 5.12$ °C mol^{-1}):

Question ID : **1679437344**

Ans
1. 468.2
2. 264.9
3. 378.4
4. 128.9

Q.18 For a given reaction $A_{2(g)} + 3B_{2(g)} \rightleftharpoons 2AB_{3(g)}, \Delta H = -ve$
For this reaction, the favorable condition for decomposition of AB_3 is:

Question ID : **1679437351**

Ans
1. High temperature, low pressure
2. Low temperature, high pressure
3. Low temperature, low pressure
4. High temperature, high pressure

Q.19 The equilibrium constant for a reaction is not affected by the presence of:

Question ID : **1679437350**

Ans
1. Temperature
2. Pressure
3. $P^H = 4$

✔ 4. Catalyst

Q.20 If the half of a reactant is independent of its initial concentration, then the order of the reaction is:

Question ID : **1679437332**

Ans

✗ 1. 0

✗ 2. 2

✔ 3. 1

✗ 4. 3

Section : **Subject Related**

Q.1 According to Freundlich adsorption isotherm, $a = Kp^n$, where n's value is:

Question ID : **1679437360**

Ans

✗ 1. $= 0$

✔ 2. < 1

✗ 3. $= 1$

✗ 4. > 1

Q.2 The hydrolysis constant for the salts of weak base and strong acid is given by:

Question ID : **1679437355**

Ans

✔ 1. $\frac{K_W}{K_a}$

✗ 2. $K_W * (Ka\ Kb)$

✗ 3. $\frac{K_W}{K_b}$

✗ 4. $\frac{K_W}{K_a k_b}$

Q.3 The catalytic action of an enzyme is:

Question ID : **1679437362**

Ans

✗ 1. Heterogeneous

✗ 2. Does not depend on the nature of substrate

✔ 3. Highly specific

✗ 4. Non specific

Q.4 A buffer solution contains 0.20 mole of NH_4OH and 0.25 mole of NH_4Cl per litre, then the pH value of the solution is (given that dissociation constant of NH_4OH at room temperature is 1.81×10^{-5}):

Question ID : **1679437356**

Ans

✗ 1. 11.89

✗ 2. 8.72

✗ 3. 10.3

✔ 4. 9.16

Q.5 According to Lewis concept, the trend in the relative basic strengths of $ClO_4^-, ClO_3^-, ClO_2^-$ is:

Question ID : **1679437367**

Ans

✗ 1. $ClO_4^- > ClO_2^- > ClO_3^-$

✗ 2. $ClO_3^- > ClO_2^- > ClO_4^-$

✔ 3. $ClO_4^- > ClO_3^- > ClO_2^-$

✗ 4. $ClO_2^- > ClO_3^- > ClO_4^-$

Q.6 The pH of 0.1M aqueous solution of CH_3COONa at 25 °C is (given that K_a for acetic acid = 1.75×10^{-7} & $K_W = 1.008 \times 10^{-14}$)

Question ID : **1679437354**

Ans

✓ 1. 8.88

✗ 2. 8.68

✗ 3. 8.58

✗ 4. 8.38

Q.7 "A given compound always contains exactly the same proportion of elements by weight" is stated under which law?

Question ID : **1679437371**

Ans

✗ 1. Law of multiple proportions

✓ 2. Law of definite proportions

✗ 3. Avogadro's law

✗ 4. Law of conservation of mass

Q.8 The transition for which the first derivative of the chemical potential with respect to temperature is continuous but its second derivative of the chemical potential with respect to temperature is discontinuous is classified as:

Question ID : **1679437359**

Ans

✗ 1. Zero-order phase transition

✗ 2. Lambda transition

✗ 3. First-order phase transition

✓ 4. Second-order phase transition

Q.9 Micelles from the ionic surfactants can be formed only above a certain temperature called as:

Question ID : **1679437366**

Ans

✗ 1. Boyle's temperature

✓ 2. Kraft temperature

✗ 3. Inversion temperature

✗ 4. Transition temperature

Q.10 Cake is an example of:

Question ID : **1679437361**

Ans

✗ 1. Solid in liquid

✗ 2. Liquid in solid

✓ 3. Gas in solid

✗ 4. Solid in solid

Q.11 The revised metric system was proposed by:

Question ID : **1679437368**

Ans

✗ 1. National Institute of Standards and Technology

✓ 2. General Conference on Weights and Measures

✗ 3. U.S. Metric Association

✗ 4. International Organization for Standardization

Q.12 Arsenic(III) sulphide forms a sol with a negative charge. Which of the following ionic substances should be most effective in the coagulating sol?

Question ID : **1679437364**

Ans
1. ✗ KCl
2. ✗ $MgCl_2$
3. ✓ $Al_2(SO4)_3$
4. ✗ Na_3PO_4

Q.13 The solubility of $Al(OH)_3$ in water at 25 °C is (given $K_{sp} = 8.5 \times 10^{-32}$):

Question ID : **1679437353**

Ans
1. ✓ 5.8×10^{-7} g/lit
2. ✗ 5.8×10^{-5} g/lit
3. ✗ 5.8×10^{-3} g/lit
4. ✗ 5.8×10^{-2} g/lit

Q.14 The SI unit for the amount of substance is:

Question ID : **1679437369**

Ans
1. ✗ Candela
2. ✗ Gram
3. ✓ Mole
4. ✗ Kilogram

Q.15 There is desorption of physical adsorption when:

Question ID : **1679437365**

Ans
1. ✗ Temperature decreases
2. ✗ Pressure increases
3. ✗ Concentration increases
4. ✓ Temperature increases

Q.16 Ostwald dilution law failed completely when it was applied to:

Question ID : **1679437352**

Ans
1. ✗ H_2CO_3
2. ✓ KCl
3. ✗ CH_3COOH
4. ✗ NH_3

Q.17 When a triatomic gas is adsorbed as atoms on the surface of a solid, the Langmuir adsorption isotherm becomes:

Question ID : **1679437358**

Ans
1. ✗ $\theta = \frac{KP}{(1+KP)}$
2. ✓ $\theta = \frac{KP^{\frac{1}{3}}}{(1+KP^{\frac{1}{3}})}$
3. ✗ $\theta = \frac{KP^{3}}{(1+KP^{3})}$
4. ✗ $\theta = \frac{KP^{\frac{1}{2}}}{(1+KP^{\frac{1}{2}})}$

Q.18 The number of significant figures in 2540 L is:

Question ID : **1679437370**

Ans
1. 4
2. 1
3. 3
4. 2

Q.19 The coagulating power of an effective ion carrying the charge opposite to the sol particles has been illustrated by:

Question ID : **1679437363**

Ans
1. Tyndall effect
2. Hardy-schulze rule
3. Gold number
4. Brownian movement

Q.20 Which of the following expressions represents the criterion for the reaction to be spontaneous?

Question ID : **1679437357**

Ans
1. $(dU)_{S,V} > 0$
2. $(dG)_{T,P} < 0$
3. $(dH)_{T,P} > 0$
4. $(dS)_{U,V} < 0$

Section : **Subject Related**

Q.1 The ingredients that makes up the baking powder are:

Question ID : **1679437389**

Ans
1. $NaHCO_3$, Starch and $NaAl(SO_4)_2$
2. $NaHCO_3$, Starch, $NaAl(SO_4)_2$ and $Ca(H_2PO_4)_2$
3. $NaHCO_3$ and Starch
4. Only $NaHCO_3$

Q.2 Spodumene is the mineral of which element?

Question ID : **1679437387**

Ans
1. Caesium
2. Sodium
3. Lithium
4. Potassium

Q.3 What is the mass percentage of S in H_2SO_4 ?

Question ID : **1679437372**

Ans
1. 28.00%
2. 65.30%
3. 32.65%
4. 48.32%

Q.4 Zeeman effect corresponds to the splitting of spectral lines in the presence of:

Question ID : **1679437375**

Ans
1. Magnetic field ✔
2. Electric field ✘
3. Neither electric field nor magnetic field ✘
4. Both electric and magnetic fields ✘

Q.5 The radius of the first Bohr orbit for hydrogen atom is:

Question ID : **1679437374**

Ans
1. 0.53×10^{-12} cm ✘
2. 0.53×10^{-10} cm ✘
3. 0.53×10^{-9} cm ✘
4. 0.53×10^{-8} cm ✔

Q.6 The element with atomic number 37 belongs to which block in the modern periodic table?

Question ID : **1679437380**

Ans
1. s-block ✔
2. p-block ✘
3. f-block ✘
4. d-block ✘

Q.7 Major cation in the intracellular fluid in animals is:

Question ID : **1679437391**

Ans
1. Potassium ✔
2. Magnesium ✘
3. Calcium ✘
4. Sodium ✘

Q.8 Which of the following metal hydrides has the crystal structure of rutile?

Question ID : **1679437383**

Ans
1. NaH ✘
2. LiH ✘
3. BaH_2 ✘
4. MgH_2 ✔

Q.9 What is the temporary hardness of water if water contains 7.3 mg/L $Mg(HCO_3)_2$, 16.2 mg/L $Ca(HCO_3)_2$, 9.5 mg/L $MgCl_2$ and 13.6 mg/L $CaSO_4$?

Question ID : **1679437386**

Ans
1. 25 mg/L ✘
2. 35 mg/L ✘
3. 15 mg/L ✔
4. 20 mg/L ✘

Q.10 Uncertainty in the position of an electron moving with a velocity of 200 m/s, accurate up to 0.01%, will be:

Question ID : **1679437378**

Ans
1. 2.9×10^{-1} m ✘
2. 2.9×10^{-5} m ✘
3. 2.9×10^{-3} m ✔
4. 2.9×10^{-2} m ✘

Q.11 What is the IUPAC name of the element with atomic number 112?

Question ID : **1679437381**

Ans
1. Unnilennium ✗
2. Ununnilium ✗
3. Unununium ✗
4. Ununbium ✓

Q.12 Which of the group 1 metal hydrides is stable up to 900 °C?

Question ID : **1679437388**

Ans
1. Sodium hydride ✗
2. Potassium hydride ✗
3. Caesium hydride ✗
4. Lithium hydride ✓

Q.13 Metallic crystal structure of calcium is:

Question ID : **1679437390**

Ans
1. Hexagonal close packing ✗
2. Body centered cubic ✗
3. Simple cubic ✗
4. Face centered cubic ✓

Q.14 The common zeolite used for softening of hard water is Natrolite. Its molecular formula is:

Question ID : **1679437385**

Ans
1. $Na_2OAl_2O_3.3SiO_2.2H_2O$ ✓
2. $MgOAl_2O_3.3SiO_2.2H_2O$ ✗
3. $CaOAl_2O_3.SiO_2.2H_2O$ ✗
4. $Na_2OAl_2O_3.2H_2O$ ✗

Q.15 The mass percentage composition of a compound is 76.71% C, 7.02% H and 16.27% N. What is its empirical formula?

Question ID : **1679437373**

Ans
1. $C_{10}H_{12}N_2$ ✗
2. $C_{11}H_{12}N_2$ ✓
3. $C_{11}H_{12}N_2O$ ✗
4. $C_{10}H_{14}NO$ ✗

Q.16 The relationship between atomic number (Z), effective nuclear charge (Z_{eff}) and shielding constant (σ) is:

Question ID : **1679437379**

Ans
1. $Z = Z_{eff} - \sigma$ ✗
2. $Z_{eff} = Z + \sigma$ ✗
3. $Z = Z_{eff} + \sigma$ ✗
4. $Z_{eff} = Z - \sigma$ ✓

Q.17 The correct order of increasing size for the ions $F^-, Na^+, O^{2-}, Al^{3+}, Mg^{2+}$ is:

Question ID : **1679437382**

Ans
1. $O^{2-} < F^- < Al^{3+} < Na^+ < Mg^{2+}$ ✗
2. $Al^{3+} < Na^+ < Mg^{2+} < F^- < O^{2-}$ ✗

✔ 3. $Al^{3+} < Mg^{2+} < Na^{+} < F^{-} < O^{2-}$

✘ 4. $Al^{3+} < Na^{+} < O^{2-} < F^{-} < Mg^{2+}$

Q.18 Which of the following methods can't be used for the preparation of hydrogen gas?

Question ID : **1679437384**

Ans

✘ 1. Steam reformer process

✘ 2. Reaction of saltlike hydrides with water

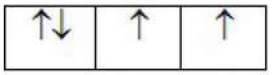
✘ 3. Electrolysis of the aqueous solution of NaOH or KOH

✔ 4. Reaction of ethanolamine solution with CO_2

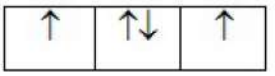
Q.19 Which of the following electronic configurations is correct according to Hund's rule?

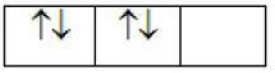
Question ID : **1679437377**

Ans

✔ 1. 

✘ 2. 

✘ 3. 

✘ 4. 

Q.20 Pauli exclusion principle can't be applied to:

Question ID : **1679437376**

Ans

✘ 1. He

✔ 2. H^{+}

✘ 3. H^{-}

✘ 4. Li

Section : Subject Related

Q.1 By using $SOCl_2$, alcohols are converted into:

Question ID : **1679437395**

Ans

✘ 1. Carboxylic acids

✘ 2. Alkenes

✔ 3. Alkyl halides

✘ 4. Alkanes

Q.2 Which of the following statements is correct?

Question ID : **1679437404**

Ans

✘ 1. Both are equally selective

✘ 2. Chlorination is more selective than bromination

✔ 3. Bromination is more selective than Chlorination

✗ 4. Bromination is less selective

Q.3 The total number of elements present in FCC and BCC crystal systems, respectively are:

Question ID : **1679437411**

Ans
✗ 1. 3 and 4
✗ 2. 2 and 4
✓ 3. 4 and 2
✗ 4. 2 and 3

Q.4 Which of the following is an antibiotic?

Question ID : **1679437406**

Ans
✗ 1. Rantidin
✗ 2. Dolo
✓ 3. Amoxycillin
✗ 4. Furosemide

Q.5 Calamine is the ore of:

Question ID : **1679437392**

Ans
✓ 1. Zn
✗ 2. Fe
✗ 3. Ca
✗ 4. Al

Q.6 Which of following compounds shows octahedral geometry?

Question ID : **1679437408**

Ans
✓ 1. SF_6
✗ 2. XeF_2
✗ 3. XeO_3
✗ 4. XeF_4

Q.7 SN_2 and SN_1 reactions follow:

Question ID : **1679437402**

Ans
✗ 1. Both follow first order
✗ 2. First and second order
✓ 3. Second and first order
✗ 4. Both follow second order

Q.8 Which of following reaction names is suitable for the below reaction?

Question ID : **1679437403**

$CH_3CH_2Br + HS^- \rightarrow CH_3CH_2SH + Br^-$

Ans
✗ 1. SN_{ar} reaction
✗ 2. SN_1 reaction
✓ 3. SN_2 reaction
✗ 4. SN_i reaction

Q.9 The transition state of SN_2 reaction has:

Question ID : **1679437401**

Ans

1. Square planar structure
2. Linear structure
3. Carbon tetrahedral structure
4. Normal tetrahedral structure

Q.10 Morphine consists of:

Question ID : **1679437407**

Ans
1. Tertiary amine and Quaternary carbon
2. Tertiary carbon
3. Quaternary carbon
4. Tertiary amine

Q.11 sp^3d^2 hybridisation is seen in:

Question ID : **1679437410**

Ans
1. ClF_3
2. $BrCl_3$
3. BrF
4. ICl_5

Q.12 During conversion of alcohol to alkyl halide, which of the below is correct?

Question ID : **1679437394**

Ans
1. $2° > 3° > 1°$
2. $3° > 2° > 1°$
3. $2° > 1° > 3°$
4. $1° > 2° > 3°$

Q.13 E_2 reactions are:

Question ID : **1679437405**

Ans
1. Syn eliminations
2. Stereoselective and anti-eliminations
3. Stereo specific
4. Srereo selective

Q.14 What is the total number of lone pairs in IF_5 molecule?

Question ID : **1679437409**

Ans
1. 0
2. 2
3. 1
4. 3

Q.15 The relative rate of dehydration of alcohols is given by:

Question ID : **1679437398**

Ans
1. $3° > 2° > 1°$
2. $2° > 3° > 1°$
3. $1° > 2° > 3°$
4. $2° > 1° > 3°$

Q.16 The compound Nonactin binds to which metal ion?

Question ID : **1679437397**

Ans
1. Ca^{+2} ✗
2. K^{+} ✓
3. Mg^{+2} ✗
4. Na^{+} ✗

Q.17 Stereochemistry of SN_2 reaction involves:

Question ID : **1679437399**

Ans
1. Racimisation with retention ✗
2. Inversion ✗
3. Racimisation with inversion ✗
4. Retention ✓

Q.18 Which of the following alcohols cannot be oxidised to a carbonyl compound?

Question ID : **1679437393**

Ans
1. Sec-butyl alcohol ✗
2. n-butyl alcohol ✗
3. 1-pentanol ✗
4. Ter-butyl alcohol ✓

Q.19 For an E_2 reaction, which of the following is correct?

Question ID : **1679437400**

Ans
1. R-Cl < R-Br < R-I ✓
2. R-Br < R-I < R-Cl ✗
3. R-Cl < R-I < R-Br ✗
4. R-Cl > R-Br > R-I ✗

Q.20 Consider the below reaction.

Question ID : **1679437396**

$$CH_3CH(OH)CH_3 \xrightarrow{\text{Chromic acid}} CH_3CH(O)CH_3$$

This reaction is an example of:

Ans
1. Reduction ✗
2. Redox reaction ✗
3. Disproportionation ✗
4. Oxidation ✓

Section : **Subject Related**

Q.1 If interplanar distance is 4 Å, the x-rays of wavelength 4 Å are diffracted and is known as first order reflection. Then calculate the angle.

Question ID : **1679437412**

Ans
1. 45° ✗
2. 30° ✓

✗ 3. $60°$

✗ 4. $90°$

Q.2 Which of the following conversion, product bond order increases compared to reactant bond order?

Question ID : **1679437427**

Ans

✓ 1. $N_2 \rightarrow N_2^+$

✗ 2. $NO \rightarrow NO^+$

✗ 3. $O_2 \rightarrow O_2^+$

✗ 4. $NO \rightarrow NO^-$

Q.3 The v-shaped graph represents conductometric titration of:

Question ID : **1679437417**

Ans

✓ 1. Strong acid vs strong base

✗ 2. Strong acid vs weak base

✗ 3. Strong acid & weak acid vs weak base

✗ 4. Weak acid vs weak base

Q.4 Dipole moment is maximum in:

Question ID : **1679437425**

Ans

✗ 1. HBr

✗ 2. HCl

✗ 3. HI

✓ 4. HF

Q.5 The most probable kinetic energy, per molecule and per mole, respectively, is given by:

Question ID : **1679437416**

Ans

✗ 1. $\frac{3}{2}RT$ and $\frac{KT}{2}$

✗ 2. $\frac{RT}{2}$ and $\frac{3}{2}RT$

✓ 3. $\frac{KT}{2}$ and $\frac{RT}{2}$

✗ 4. $\frac{RT}{2}$ and $\frac{KT}{2}$

Q.6 Which of the following metal carbonyls doesn't exhibit EAN rule?

Question ID : **1679437430**

Ans

✗ 1. $Ni(CO)_4$

✗ 2. $Cr(CO)_6$

✗ 3. $FE(CO)_5$

✓ 4. $Mn(CO)_5$

Q.7 The d^2sp^3 hydridisation shows which structure?

Question ID : **1679437428**

Ans

✗ 1. Tetrahedral

✗ 2. Square planar

✓ 3. Octahedral

✗ 4. Trigonal planar

Q.8 Cis isomer and trans isomers are examples of _____.

Question ID : **1679437431**

Ans
✗ 1. Ionisation isomerism
✓ 2. Geometrical isomerism
✗ 3. Hydrated isomerism
✗ 4. Posional isomerism

Q.9 Using MOT, calculate bond order for O_2^+ ion.

Question ID : **1679437424**

Ans
✗ 1. 2
✓ 2. $2\frac{1}{2}$
✗ 3. $1\frac{1}{2}$
✗ 4. 3

Q.10 The two phenomenon associated with Debye-Hückel theory are:

Question ID : **1679437422**

Ans
✗ 1. Mesomeric and relaxation effect
✗ 2. Mesomeric and asymmetric effect
✗ 3. Relaxation and asymmetric effect
✓ 4. Relaxation effect and electrophoretic effect

Q.11 Find the activity coefficient of $BaCl_2$:

Question ID : **1679437418**

Ans
✗ 1. $(\gamma \pm m)^2$
✓ 2. $4\,\gamma\pm^3\,m^3$
✗ 3. $2\,\gamma\pm^3\,m^3$
✗ 4. $3\,\gamma\pm^3\,m^3$

Q.12 Shape of $Mg[Th(NO_3)_6]$ is:

Question ID : **1679437429**

Ans
✗ 1. Square antiprism
✗ 2. Pentagonal bipyramidal
✗ 3. Octahedral
✓ 4. Icosahedral

Q.13 Calculate the limiting value of molar conductance when degree of ionisation is 2.02 and molar conductance is 4.04 $Sm^2\ mole^{-1}$ at 25 °C.

Question ID : **1679437420**

Ans
✓ 1. $2\ Sm^2\ mole^{-1}$
✗ 2. $\frac{1}{2}\ Sm^{-2}\ mole^{-1}$
✗ 3. $2\ Sm^{-2}\ mole^{-1}$

✗ 4. $\frac{1}{2}$ Sm^2 $mole^{-1}$

Q.14 The donor band close to _____ and acceptor band close to _____ are found in n and p type semiconductors respectively.

Question ID : **1679437413**

Ans

✗ 1. valence band, conduction band

✗ 2. valence band, valence band

✓ 3. conduction band, valence band

✗ 4. conduction band, conduction band

Q.15 Which is the weak electrolyte among the below?

Question ID : **1679437423**

Ans

✗ 1. HBr

✓ 2. HF

✗ 3. HCl

✗ 4. HI

Q.16 $2\,N_2O_5 \Longleftrightarrow 4\,NO_2 + O_2$ reaction is what type of reaction?

Question ID : **1679437421**

Ans

✗ 1. Oxidation

✓ 2. Reduction

✗ 3. Com proportion

✗ 4. Redox reaction

Q.17 Calculate the Boyle temperature of CO_2 gas, given that van der Waal constants are a = 4 and b = 2.

Question ID : **1679437414**

Ans

✗ 1. 2R

✗ 2. R

✗ 3. $\frac{R}{2}$

✓ 4. $\frac{2}{R}$

Q.18 The force responsible for the contraction of surface of liquid is:

Question ID : **1679437415**

Ans

✗ 1. Surface energy

✗ 2. Capillary force

✓ 3. Surface tension

✗ 4. Vapour pressure

Q.19 What is the dipole moment μ when ɵ is bond angle and m is bond moment?

Question ID : **1679437426**

Ans

✓ 1. $\mu = m\cos\theta$

✗ 2. $\mu = 2m\cos\theta$

✗ 3. $\mu = m\frac{\cos\theta}{2}$

✗ 4. $\mu = 4m\cos\theta$

Q.20

What is the oxidation number of chromium in potassium dichromate?

Question ID : **1679437419**

Ans
1. +3
2. +2
3. +6
4. +12

Section : **Subject Related**

Q.1 Which of the following is weak field ligand?

Question ID : **1679437437**

Ans
1. NO_2^-
2. CN^-
3. CO
4. F^-

Q.2 Which of the following is isoelectric species?

Question ID : **1679437448**

Ans
1. Sn^{4-}, Se_9^{5+}
2. Se_9^{5+}, Bi_9^{5+}
3. Sn_9^{4-}, Al_9^{4-}
4. Sn_9^{4-}, Bi_9^{5+}

Q.3 Which of following compounds is formed by reaction of

Question ID : **1679437433**

$(CH_3)_2 C = CH_2$ with HBr?

Ans
1. $CH_3 - CH_2 - CH_2 - CH_2 - Br$
2. $(CH_3)_2 CH - CH_2 - Br$ and $CH_3 - CH(CH_3)(Br) - CH_3$
3. $(CH_3)_2 CH - CH_2 - Br$
4. $CH_3 - CH(CH_3)(Br) - CH_3$

Q.4 In group II B, which metal has greater tendency to form coordination compound?

Question ID : **1679437445**

Ans
1. Hg
2. Cd
3. Zn
4. Both Zn and Cd

Q.5 Which metals of the following have the greatest tendency to form metal clusters?

Question ID : **1679437446**

Ans
1. V, Nb, Ta
2. Zr, V, Nb
3. Cr, Mo, Tc
4. Nb, Mo, Tc

Q.6 In basic solution, Cl_2 disproponates to?

Question ID : **1679437442**

Ans
✔ 1. ClO and Cl^-
✗ 2. Cl and Cl^-
✗ 3. ClO^- and ClO_2-
✗ 4. Both ClO and Cl^- and ClO^- and ClO_2-

Q.7 $NH_4Cl + X \xrightarrow[CHCl_2CHCl_2]{146°C} PNCl_2.$

Question ID : **1679437451**

Here X = ?

Ans
✗ 1. PCl_3
✗ 2. $POCl_3$
✔ 3. PCl_5
✗ 4. H_3PO_4

Q.8 The structure of $(NH_3)_3CrO_4$ is:

Question ID : **1679437438**

Ans
✗ 1. Trigonal bipyramidal
✗ 2. Octahedral
✔ 3. Pentagonal bipyramidal
✗ 4. Tetrahedral

Q.9 Which of the following statements is correct?

Question ID : **1679437440**

Ans
✗ 1. None of these options
✗ 2.
4f electrons of the lanthanides interact much more with ligands than do the 5f electrons of the actinides
✗ 3.
5f electrons of the actinides interact much more with ligands than do the 4f electrons of the lanthanides; and 4f electrons of the lanthanides interact much more with ligands than do the 5f electrons of the actinides
✔ 4.
5f electrons of the actinides interact much more with ligands than do the 4f electrons of the lanthanides

Q.10 Which of the following salts has more conductivity?

Question ID : **1679437434**

Ans
✔ 1. $CaCl_2$
✗ 2. $LiCl_3$
✗ 3. LiCl
✗ 4. LiCl and $LiCl_3$

Q.11 Pale blue coloured $[Cu(H_2O)_6]^{2-}$ ion reacts with aqueous ammonia solution, to form which coloured ion?

Question ID : **1679437449**

Ans
✗ 1. Green coloured ion
✗ 2. Pale blue coloured ion

✔ 3. Deep blue coloured ion

✘ 4. Colourless

Q.12 Cis and trans isomers are possible in: Question ID : **1679437439**

Ans

✔ 1. $[Cr(NH_3)_6]^{3+}$

✘ 2. $[Cr(NH_3)_4Cl_2]^{+}$

✘ 3. $[Cr(NH_3)_6Cl]^{2+}$

✘ 4. $[Cr(NH_3)_3Cl_3]$

Q.13 What does a bacteriostatic drug do? Question ID : **1679437443**

Ans

✔ 1. It inhibits the growth of bacteria

✘ 2. It does not react with bacteria

✘ 3. It increases the growth of bacteria

✘ 4. It kills bacteria

Q.14 Antiulcer agents among the following is/are: Question ID : **1679437444**

Ans

✘ 1. Zantac

✘ 2. Both Paracetamol and Zantac

✔ 3. Paracetamol

✘ 4. Tolbutamide

Q.15 How many nodal planes are contained in Π^* molecular orbital? Question ID : **1679437432**

Ans

✘ 1. 1

✘ 2. 4

✘ 3. 3

✔ 4. 2

Q.16 In octahedral complexes, the difference in energy between two d-levels is? Question ID : **1679437436**

Ans

✘ 1. 1 Dq

✘ 2. 10 Dq

✘ 3. 1000 Dq

✔ 4. 100 Dq

Q.17 How many charges are present in $CoCl_3.3NH_3$ compound? Question ID : **1679437435**

Ans

✘ 1. 3

✘ 2. 4

✔ 3. 0

✘ 4. 1

Q.18 Which of the following is the high spin complex? Question ID : **1679437441**

Ans

1. $[Fe(CN)_6]^{3-}$

2. $[FeCl_6]^{3-}$

3. $[Mn(CN)_6]^{4-}$

4. $[Fe(bpy)_3]^{3+}$

Q.19 Which of the following is the correct statement?

Question ID : **1679437450**

Ans 1.

Square planar complex can exist in two isomeric forms

2. None of these

3.

Tetrahedral complex can exist only in one form

4.

Tetrahedral complex can exist only in one form and Square planar complex can exist in two isomeric forms

Q.20 Which orbit of the below forms the δ-bond?

Question ID : **1679437447**

Ans 1. dxy

2. $dx^2 - y^2$

3. dz^2

4. dyz

Section : **Subject Related**

Q.1 The melamine is formed by the trimerization of which of the following compounds?

Question ID : **1679437471**

Ans 1. Cyanamide

2. Polystyrene

3. Formaldehyde

4. Urea

Q.2 Formation of RNA from DNA is known as:

Question ID : **1679437467**

Ans 1. Polymerisation

2. Replication

3. Transcription

4. Translation

Q.3 Which of the following rubbers is hard and brittle?

Question ID : **1679437470**

Ans 1. Only at bonding sites

2. Complete rubber

3. Trans rubber

4. Cis rubber

Q.4 Which halogen forms a heptafluoride in interhalogen?

Question ID : **1679437452**

Ans
1. Cl ✗
2. At ✗
3. Br ✗
4. I ✓

Q.5 The water-insoluble fraction of the disaccharide sucrose is:

Question ID : **1679437463**

Ans
1. Complete sucrose ✗
2. Amylopectin ✓
3. Amylose ✗
4. α – linkages of sucrose ✗

Q.6 Polluting strength of water is given by:

Question ID : **1679437457**

Ans
1. BOD in water ✓
2. COD in water ✗
3. Amount of phosphates and carbonates in water ✗
4. Saline content in water ✗

Q.7 $KClO_3 \xrightarrow{\text{Moist oxalic acid}} ?$

Question ID : **1679437453**

Ans
1. $KCl + ClO_2$ ✗
2. $K_2C_2O_4 + ClO_2 + CO_2$ ✓
3. $KCl + ClO_2 + K_2C_2O_4$ ✗
4. $K_2C_2O_4 + ClO_4 + KCl$ ✗

Q.8 The place of the DNA at which it interacts with macromolecules is called:

Question ID : **1679437469**

Ans
1. Deoxy ribose rings ✗
2. Base pairs ✗
3. Minor groove ✗
4. Major groove ✓

Q.9 The change in optical rotation with time is called:

Question ID : **1679437462**

Ans
1. Internal rotation ✗
2. Optical activity ✗
3. Muta rotation ✓
4. Flipping ✗

Q.10 Which of the following is NOT a greenhouse gas?

Question ID : **1679437459**

Ans
1. Helium ✓

2. CO_2

3. CH_4

4. Methane derivatives

Q.11 Which of the following does not occur in DNA?

Question ID : **1679437468**

Ans
1. Uracil
2. Cytosine
3. Thymine
4. Guanine

Q.12 Amino acids at iso-electric point have:

Question ID : **1679437466**

Ans
1. Unequal acid-base ionisation
2. High solubility
3. No electrical conductivity
4. High mobility

Q.13 Which of the following is not an example of fibrous protein?

Question ID : **1679437465**

Ans
1. Fibroin
2. Haemoglobin
3. Collogen
4. Keratin

Q.14 Which of the following methods is not used for soil protection?

Question ID : **1679437458**

Ans
1. Afforestation
2. Uses of excess fertilisers
3. Neutralisation of acid in rain by adding lime
4. Minimising use of fossil fuels

Q.15 Thiocyanogen $(SCN)_2$ is stable only at:

Question ID : **1679437454**

Ans
1. Low temperature
2. Room temperature
3. Very high temperature
4. High temperature

Q.16 The pH of Acid rain is:

Question ID : **1679437460**

Ans
1. Below 5.6
2. Below 3.5
3. Between 8-9
4. Below 4.5

Q.17 A five-carbon ketose is known as:

Question ID : **1679437461**

Ans
1. Ketohexose
2. Pentulose
3. Ribose
4. Arabinose

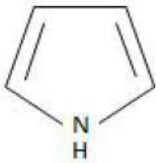
Q.18 The correct order of ionic radius of lanthanides is:

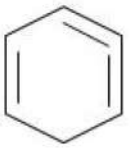
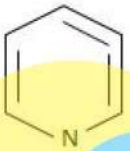
Question ID : **1679437455**

Ans
1. $Tb^{3+} > Ho^{3+} > Dy^{3+} > Yb^{3+}$
2. $Nd^{3+} > Gd^{3+} > Ho^{3+} > Tm^{3+}$
3. $Tb^{3+} > Sm^{3+} > Tm^{3+} > Yb^{3+}$
4. $Sm^{3+} < Ho^{3+} < Gd^{3+} < Lu^{3+}$

Q.19 Which of the following is not an aromatic compound?

Question ID : **1679437456**

Ans
1. 

2. 
3. 

4. 

Q.20 Which of the following is a basic amino acid?

Question ID : **1679437464**

Ans
1. Valine
2. Alanine
3. Tyrosine
4. Arginine

Section : **Subject Related**

Q.1 Which of the following is a co-polymer?

Question ID : **1679437475**

Ans
1. Bakelite
2. Melamine

✗ 3. PVC

✗ 4. Polyethylene

Q.2 Which of the following has the highest boiling point?

Question ID : **1679437484**

Ans

✗ 1. Dimethyl amine

✗ 2. Ethyl – methyl amine

✗ 3. Isopentane

✓ 4. Butylamine

Q.3 The nitrogen in the Quaternary ammonium salt is:

Question ID : **1679437481**

Ans

✗ 1. Bent

✗ 2. Linear

✓ 3. Tetrahedral

✗ 4. Square planar

Q.4 Which of the following methods is not used for separation of mixture of amines?

Question ID : **1679437478**

Ans

✗ 1. Hinsberg method

✗ 2. Fractional distillation

✗ 3. Hoffmann method

✓ 4. Curtius method

Q.5 Match the following.

Question ID : **1679437487**

a) NH_2 - OH i) Semicarbazide

b) NH_2 - NH_2 ii) Hydrazine

c) NH_2 - $NHCONH_2$ iii) Hydroxylamine

Ans

✓ 1. a-iii, b-ii, c-i

✗ 2. a-ii, b-i, c-iii

✗ 3. a-i, b-ii, c-iii

✗ 4. a-ii, b-iii, c-i

Q.6 Oxidation of Tollen's reagent is done by which of the following?

Question ID : **1679437488**

Ans

✗ 1. Fructose

✗ 2. Cellulose

✓ 3. Glucose

✗ 4. Sucrose

Q.7 Gabriel phthalimide reaction is used for preparation of:

Question ID : **1679437477**

Ans

✗ 1. Tertiary amines

2. Quaternary amines

3. Primary amines

4. Secondary amines

Q.8 Which of the following is not a dicarboxylic acid?

Question ID : **1679437486**

Ans

1. Butyric acid

2. Succinic acid

3. Malonic acid

4. Glutamic acid

Q.9 The common name of pentanoic acid is:

Question ID : **1679437491**

Ans

1. Lauric acid

2. Stearic acid

3. Valeric acid

4. Pivalic acid

Q.10 The length of C-N bonds in amines is:

Question ID : **1679437483**

Ans

1. 1.43 A°

2. 1.23 A°

3. 1.47 A°

4. 1.39 A°

Q.11 $C_6H_5COCH_3 \rightarrow C_6H_5CH_2CH_3$

Question ID : **1679437485**

The above reaction can be achieved using:

Ans

1. SnHCl

2. Friedal crafts reaction

3. NH_2NH_2

4. $LiAlH_4$

Q.12 The C-O bond in carboxylic acid is:

Question ID : **1679437489**

Ans

1. $sp^2 - sp^3$ shorter

2. $sp^2 - sp^3$ longer

3. $sp^3 - sp^3$ shorter

4. $sp^3 - sp^3$ longer

Q.13 Which of the following has highest pKa values?

Question ID : **1679437490**

Ans

1. Difluoro acetic acid

2. Fluoroacetic acid

✗ 3. Trifluoro acetic acid

✓ 4. Acetic acid

Q.14 Amines have:

Question ID : **1679437482**

Ans

✗ 1. Non-polar nature

✓ 2. High boiling points than non-polar compounds

✗ 3. High boiling points than alcohols

✗ 4. High boiling points than COOH's

Q.15 Formaldehyde polymerises at the temperature that is:

Question ID : **1679437473**

Ans

✗ 1. Above 200 ° C

✓ 2. Below 100 ° C

✗ 3. Between 200 - 300 ° C

✗ 4. Above 500 ° C

Q.16 Liebermann nitroso reaction is used for testing:

Question ID : **1679437480**

Ans

✓ 1. Secondary amines

✗ 2. Primary amines

✗ 3. Tertiary amines

✗ 4. Quaternary amines

Q.17 Benzaldehyde → $C_6H5CH_2NH_2$

Question ID : **1679437479**

Which of the following reagent is used for the conversion of above reaction?

Ans

✗ 1. PBr_3

✗ 2. $K_2Cr_2O7_7$

✓ 3. NH_3 , H_2 , Ni

✗ 4. NaOBr

Q.18 The word polymer is derived originally _____ from word.

Question ID : **1679437474**

Ans

✗ 1. Swiss

✓ 2. Greek

✗ 3. English

✗ 4. French

Q.19 Which of the following is not a fiber?

Question ID : **1679437472**

Ans

✓ 1. Neoprene

✗ 2. Myosin

✗ 3. Nylon 6

✗ 4. Nylon 6,6

Q.20 Ti ion in Ziegler Natta Catalyst is assumed to be in which oxidation state?

Question ID : **1679437476**

Ans

✗ 1. I

✗ 2. II

✗ 3. Zero

✓ 4. III

Section : **Subject Related**

Q.1 Reaction of alkyne with a solution of an alkali metal in liquid ammonia gives:

Question ID : **1679437510**

Ans

✗ 1. Cis alkene

✗ 2. Alkane

✗ 3. Primary amine

✓ 4. Trans alkene

Q.2 Half-filled f-shell of lanthanide ion is:

Question ID : **1679437494**

Ans

✓ 1. Tb^{4+}

✗ 2. Ce^{4+}

✗ 3. Yb^{2+}

✗ 4. Eu^{3+}

Q.3 Allene must have which of the following type of hybridised carbon?

Question ID : **1679437500**

Ans

✗ 1. sp^3d

✗ 2. sp^3

✗ 3. sp^2

✓ 4. sp

Q.4 Manganin is an alloy containing:

Question ID : **1679437492**

Ans

✗ 1. Ni, Mn, Zn

✗ 2. Zn, Cu, Mn

✓ 3. Cu, Mn, Ni

✗ 4. Mn, Co, Fe

Q.5 Which of the following statements is correct with regard to benzene substituent?

Question ID : **1679437507**

Ans

✗ 1.

The more deactivating substituent increases the acidity; and the more activating substituent decreases the acidity

✗ 2.

The more deactivating substituent increases the acidity

✗ 3.

The more activating substituent increases the acidity

4.

The more activating substituent decreases the acidity

Q.6 Hybridization of below compound is indicated by which option?

Question ID : **1679437503**

$CH3 - C \equiv N$

(a) (b) (c)

Ans

1. sp^3 sp sp
2. sp^3 sp^2 sp^2
3. sp^3 sp sp^2
4. sp^3 sp^2 sp^3

Q.7 Which of the following ions have magnetic moment as 7.9 BM?

Question ID : **1679437495**

Ans

1. Ce^{4+}
2. Yb^{2+}
3. Gd^{3+}
4. Eu^{3+}

Q.8 Which of the below compounds has lowest P^{ka} value?

Question ID : **1679437504**

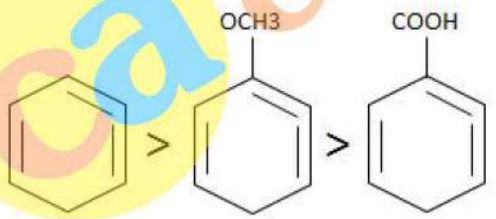
Ans

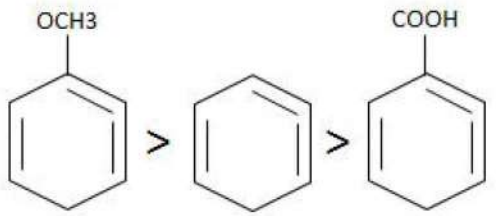
1. $HC \equiv CH$
2. $H_3C - CH_3$
3. $H_3C - CH = CH_2$
4. $H_2C - CH_2$

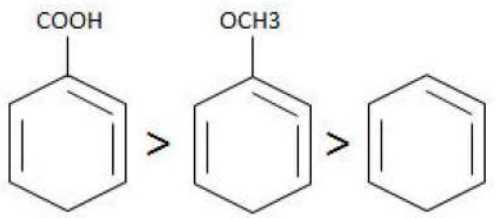
Q.9 Which of the following represents the decreasing order of the rate of electrophilic axomatic substitution?

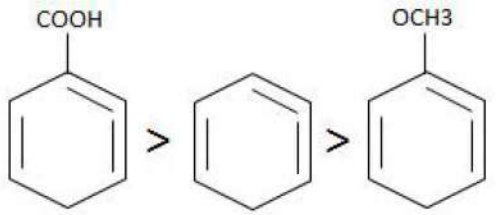
Question ID : **1679437506**

Ans

1. 

2. 

3. 

4. 

Q.10 Benzene is _____.

Question ID : **1679437502**

Ans

1. [18] Annulene
2. [16] Annulene
3. [6] Annulene
4. [3] Annulene

Q.11 Graphite has _____ hybridisation.

Question ID : **1679437497**

Ans

1. sp^2
2. sp^3 and sp
3. sp
4. sp^3

Q.12 Which of the following is/are the reason for the relatively low boiling point of branched alkanes?

Question ID : **1679437508**

Ans

1. Ionic bonds
2. Vander walls attraction
3. Hydrogen bonds
4. Ionic bonds and Hydrogen bonds

Q.13 The resonance hybrid structure of benzene indicates _____ geometry.

Question ID : **1679437501**

Ans

1. heptagonal
2. tetrahedral
3. hexagonal
4. pentagonal

Q.14 Which reagent is used for formation of aldehyde from alcohol?

Question ID : **1679437505**

Ans

1. Red P
2. $LiAlH_4$
3. $\frac{Zn}{HCl}$
4. $\frac{PCC}{CH_2Cl_2}$

Q.15 Benzene is less dense than:

Question ID : **1679437511**

Ans

1. Alkene

✔ 2. Water

✗ 3. Both Alkane and Alkene

✗ 4. Alkane

Q.16 Which of the following has the lowest bond angle?

Question ID : **1679437498**

Ans

✗ 1. NH_3

✔ 2. NH_4

✗ 3. CH_4

✗ 4. $^{+}NH_4$

Q.17 In monochlorination of methane, methyl radical is formed in _____

Question ID : **1679437499**

Ans

✗ 1. None of these options

✗ 2. Termination step

✗ 3. Initiation step

✔ 4. Propagation step

Q.18 Calcium carbide reacts vigorously with water to yield:

Question ID : **1679437509**

Ans

✔ 1. Acetylene

✗ 2. Ethane

✗ 3. Carbon

✗ 4. Ethene

Q.19 What is the correct decreasing order of the shielding effect of electrons?

Question ID : **1679437496**

Ans

✔ 1. $s > p > d > f$

✗ 2. $s > d > p > f$

✗ 3. $f > d > s > p$

✗ 4. $f > d > p > s$

Q.20 Which is the correct chemical formula of magnetite?

Question ID : **1679437493**

Ans

✗ 1. Mg_2O_3

✔ 2. Fe_2O_3

✗ 3. Fe_3O_4

✗ 4. $FeO(OH)$

Section : **Subject Related**

Q.1 Which of the following is an example of criterion-referenced evaluation?

Question ID : **1679437528**

Ans

✗ 1. Ram scores 50 marks in Science.

✗ 2.

Geeta corrected 80 items out of 100 items in a test within 60 minutes.

✗ 3. Mohan stood third in the class.

✓ 4. John is an average student in the class.

Q.2 Which of the following is a major development in free play?

Question ID : **1679437512**

Ans

✗ 1. Cognitive development

✗ 2. Emotional development

✗ 3. Physical development

✓ 4. Social and language development

Q.3 Select the correct option to complete the following sentence.

Question ID : **1679437522**

Linguistic creativity can be developed through activities like:

Ans

✓ 1. Storytelling

✗ 2. Reciting poems

✗ 3. Reading

✗ 4. Debate

Q.4 Identify the SEN (Special Educational Needs).

Madhu is the teacher of an inclusive class. She allows Nitin to walk around and gives him time to settle because she knows he:

Question ID : **1679437531**

Ans

✗ 1. is visually challenged

✗ 2. is child with learning difficulties

✓ 3. has ADHD

✗ 4. is on the Autistic spectrum

Q.5 Select the correct option to complete the following sentence.

Question ID : **1679437513**

Privatization of schools further added to the:

Ans

✓ 1. isolated girls from poor families, from school

✗ 2. supported the education for all initiatives

✗ 3. increased access to education

✗ 4. gave scope for adult education

Q.6 Sonu liked to play with balloons, until one day he got frightened by the sound when it burst. From then on, he cries at the sight of balloons. Which of the following theories by psychologists describes this occurrence?

Question ID : **1679437515**

Ans

✗ 1. Sign-gestalt theory of learning by Tolman

✗ 2. Law of effect by Thorndike

✗ 3. Operant conditioning by Skinner

✓ 4. Classical conditioning by Pavlov

Q.7 Select the correct option to complete the following sentence.

Question ID : **1679437516**

Listening comprehension is enhanced with a broader understanding in the:

Ans
✗ 1. Cooperative model
✗ 2. Bottoms-up model
✓ 3. Top-down model
✗ 4. Synchronous model

Q.8 Select the correct option to complete the following sentence.

Question ID : **1679437524**

Excel is a _____ software widely used to perform mathematical calculations.

Ans
✓ 1. Spreadsheet
✗ 2. Calculating
✗ 3. Mathematical
✗ 4. Sheet

Q.9 Select the correct option to complete the following sentence.

Question ID : **1679437517**

One of the main purposes of mathematics in real life is:

Ans
✗ 1. Calculating
✗ 2. Analysing
✗ 3. Reasoning
✓ 4. Quantifying everything

Q.10 Shilpa wants her students to learn about manufacture of sugar through the educational tour approach. What is essentially her role in this?

Question ID : **1679437520**

Ans
✗ 1. Informing parents
✗ 2. Accompany the students
✓ 3.
Briefing the students about the purpose and expectations from the tour
✗ 4. Organising the tour

Q.11 Select the correct option to complete the following sentence.

Question ID : **1679437519**

A significant feature of Self-Instructional Material (SIM) is:

Ans
✗ 1. Individualised Learning
✓ 2. Self-Learning
✗ 3. Organised Learning
✗ 4. Open Schooling

Q.12 Which of the following exemplifies Philosophy of Inclusion?

Question ID : **1679437530**

Ans
✗ 1. Exemptions in exams
✗ 2.
Infrastructural facilities provided in the school
✓ 3. Equal opportunities for participation

✗ 4.
Sitting in the same class in the main stream class

Q.13 Select the correct option to complete the following sentence.

One of the strategies to overcome barriers for reflecting and improving proficiency could be:

Question ID : **1679437529**

Ans
✗ 1. Seminars
✓ 2. Microteaching
✗ 3. Meetings with the principal
✗ 4. Demonstration

Q.14 Select the correct option to complete the following sentence.

Students are taking forward the traditional art culture of 'street plays' to create social awareness, now popular as _____ in the urban areas.

Question ID : **1679437523**

Ans
✗ 1. Stage Performances
✗ 2. Public Speeches
✗ 3. Social Gatherings
✓ 4. Flash Mobs

Q.15 Select the statement that is INCORRECT regarding hyperlinks.

Question ID : **1679437525**

Ans
✗ 1.
When a hyperlink is clicked, you are connected to other pages on the web.
✓ 2.
There should be only one hyperlink on one webpage.
✗ 3.
Hyperlinks are highlighted by underlining the text, displaying them in different colours or both.
✗ 4. It is a highlighted text on a webpage.

Q.16 Select the correct option to complete the following sentence.

The direct impact of Deforestation is:

Question ID : **1679437526**

Ans
✓ 1. soil erosion and ecological imbalance
✗ 2. surplus animal population
✗ 3. increased number of smaller plants
✗ 4. disrupted energy flow in the environment

Q.17 Select the correct option to complete the following sentence.

'Access to education for all girls' is one of the recommendations by:

Question ID : **1679437518**

Ans
✓ 1. NFG on Gender Issues (2006)
✗ 2.
NCERT National Steering Committee on Textbook Evaluation (1999)
✗ 3. NEP (1986)
✗ 4. CEDAW (1993)

Q.18

Question ID : **1679437527**

Select the correct option to complete the following sentence.

Blueprint essentially comprises:

Ans
1. list of questions and marks
2. content, type of questions, level of difficulty and score
3. lesson objectives and type of questions
4. number of questions and marks

Q.19 Select the correct option to complete the following sentence. Question ID : **1679437521**

While looking for any specific information, a reader:

Ans
1. scans through the content
2. does 'Study Reading'
3. skims through the content
4. reads the write-up fast

Q.20 Select the correct option to complete the following sentence. Question ID : **1679437514**

Alok closes his eyes while reciting rhymes and tables; he is most probably a:

Ans
1. Auditory learner
2. Kinesthetic learner
3. Tactile learner
4. Visual learner