

(General Awareness)

Q.1 Name the Indian Space Research Organization (ISRO) chairman and Padma Bhushan awardee who created and unleashed a historical moment when Mars Orbiter became the first Indian spacecraft to enter Martian orbit in a maiden attempt.

1. Nandan Nilekani
2. K Radhakrishnan
3. Sundar Pichai
4. Fali Nariman

Correct Answer : K Radhakrishnan

Q.2 Which of the following metals is the most ductile metal?

1. Tin
2. Gold
3. Aluminium
4. Copper

Correct Answer : Gold

Q.3 Who was awarded the Rabindranath Tagore Literary Prize 2019 for the Novel 'Solo'?

1. Nayanjyot Mukherjee
2. Amitabh Ghosh
3. Rana Dasgupta
4. Jhumpa Lahiri

Correct Answer : Rana Dasgupta

Q.4 The Badami Chalukyas first had their capital at _____ before they moved it to Badami.

1. Aihole
2. Hubli
3. Bijapur
4. Pattadakal

Correct Answer : Aihole

Q.5 Who founded and named the science of electromagnetism?

1. Michael Faraday
2. James Clerk
3. HChristian Oersted
4. Andre Marie Ampère

Correct Answer : Andre Marie Ampère

Q.6 Which of the following ministries implemented the Midday Meal scheme?

1. Ministry of Social Justice and Empowerment

2. Ministry of Social Welfare
 3. Ministry of Human Resource Development
 4. Ministry of Home Affairs
- Correct Answer : Ministry of Human Resource Development

Q.7 In February 2019, India won ____gold medal/s and five silver medals at the Makran Cup Boxing in Chabahar, Iran.

1. three
2. four
3. one
4. two

Correct Answer : one

Q.8 _____ was the first Muslim ruler whose empire covered almost the whole of India up to its extreme south.

1. Jalal-ud-din Khilji
2. Ghiyas ud din Balban
3. Alauddin Khilji
4. Feroz Shah Tughlaq

Correct Answer : Alauddin Khilji

Q.9 What is deposited on iron in the process of galvanisation?

1. Tin
2. Zinc
3. Copper
4. Aluminium

Correct Answer : Zinc

Q.10 Who among the following was a slave of Muhammad Ghori? He became the ruler after the death of his master and founded the Slave Dynasty.

1. Qutub-ud-din Aibak
2. Iltutmish
3. Ghiyas ud din Balban
4. Nasir-ud-din Mahmud

Correct Answer : Qutub-ud-din Aibak

Q.11 In February 2019, _____ won a gold medal at the Makran Cup in Chabahar, Iran.

1. Deepak Singh
2. Satish Kumar
3. Rohit Tokas

4. Manish Kaushik

Correct Answer : Deepak Singh

Q.12 Which of the following does NOT come under the Quarternary sector?

1. Manufacturing
2. Mining
3. Fisheries
4. Information Technology

Correct Answer : Information Technology

Q.13 The colourful art named Nandna block print, which uses graceful yet aligned arrangements of motifs on fabric, is practised in Tarapur village of _____.

1. Madhya Pradesh
2. Maharashtra
3. Uttarakhand
4. Odisha

Correct Answer : Madhya Pradesh

Q.14 Where is the Bandipur National Park located?

1. Sikkim
2. Karnataka
3. Kerala
4. Gujarat

Correct Answer : Karnataka

Q.15 Right to move freely throughout the territory of India' is a fundamental right under _____ of the Constitution of India.

1. Article 24
2. Article 14
3. Article 21
4. Article 19

Correct Answer : Article 19

Q.16 Which Indian received the Nobel Peace Prize after Mother Teresa?

1. K Radhakrishnan
2. Kailash Satyarthi
3. P Sathasivam
4. Fali Nariman

Correct Answer : Kailash Satyarthi

Q.17 Which of the following destroys the ozone layer?

1. Carbon

2. Chlorine
3. Silicon
4. Sulphur

Correct Answer : Chlorine

Q.18 International Day of Forests 2019 was observed on 21st March with the theme _____ to raise awareness on how sustainably managed forests provide a wide array of contributions.

1. Pollution-free Forests'
2. Forests Our Saviour'
3. Forests and Environment'
4. Forests and Education'

Correct Answer : Forests and Education'

Q.19 World ___ Day 2019 was observed on 22nd March with the theme 'Leaving no one behind' to focus on marginalised groups.

1. Environment
2. Forest
3. Petroleum
4. Water

Correct Answer : Water

Q.20 Which is the longest national highway in India?

1. National Highway 48
2. National Highway 27
3. National Highway 44
4. National Highway 53

Correct Answer : National Highway 44

Q.21 _____, which connects Sikkim with Tibet, was closed after the Chinese aggression on India in 1962 but was reopened in 2006 as the governments of the two countries decided to enhance their trade through land routes.

1. Lanak La
2. Imis La
3. Pensi La
4. Nathu La

Correct Answer : Nathu La

Q.22 Lok Adalats have been created under _____.

1. Arbitration and Conciliation Act
2. Administration of Justice Act
3. Legal Conciliation Act
4. Legal Services Authority Act

Correct Answer : Legal Services Authority Act

Q.23 Which was the first Muslim dynasty that ruled India?

1. Khilji dynasty
2. Tughlaq dynasty
3. Lodhi dynasty
4. Slave dynasty

Correct Answer : Slave dynasty

Q.24 The popular Bagh cave paintings are found in _____.

1. Sikkim
2. Madhya Pradesh
3. Himachal Pradesh
4. Odisha

Correct Answer : Madhya Pradesh

Q.25 Which of the following metals is the most reactive metal?

1. Zinc
2. Copper
3. Iron
4. Calcium

Correct Answer : Calcium

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General English

Q.1 Select the most appropriate word to fill in the blank.

There is hope that better forestry management will help in the _____ of the wild life that is constantly facing threat because of increasing human activities.

1. salvation
2. supervision
3. guarding
4. conservation

Correct Answer : conservation

Q.2 Select the antonym of the given word.

AGONY

1. misery
2. distress
3. anxiety
4. comfort

Correct Answer : comfort

Q.3 Select the word which methe same as the group of words given. an enclosure to keep the birds in

1. aviary
2. apiary
3. stable
4. sanctuary

Correct Answer : aviary

Q.4 Select the most appropriate option for blank No. 1.

1. along
2. about
3. against
4. among

Correct Answer : among

Q.5 Select the most appropriate option for blank No. 2.

Comprehension:

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

Pigeon racing has become increasingly popular in parts of China (1) _____ the country's elite and its middle class. Sun Yan, the deputy general-secretary of Beijing Racing Pigeons Association, (2) _____ that at least 100,000 pigeon breeders live in Beijing, and (3) _____ 90,000 of them are registered with Racing Pigeons Associations at (4) _____ levels, to qualify for the games held in the spring and autumn. Competitions can be lucrative for (5) _____ owners, with some prizes amounting to tens of thousands of dollars. Liu said in recent years, pigeon racing has been surging in popularity across China.

1. told
2. said
3. advised

4. clarified

Correct Answer : said

Q.6 Select the most appropriate option for blank No. 3.

Comprehension:

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

Pigeon racing has become increasingly popular in parts of China (1)_____ the country's elite and its middle class. Sun Yan, the deputy general-secretary of Beijing Racing Pigeons Association,(2)_____ that at least 100,000 pigeon breeders live in Beijing, and (3)_____ 90,000 of them are registered with Racing Pigeons Associations at (4)_____ levels, to qualify for the games held in the spring and autumn. Competitions can be lucrative for (5)_____ owners, with some prizes amounting to tens of thousands of dollars. Liu said in recent years, pigeon racing has been surging in popularity across China.

1. utmost

2. nearby

3. exact

4. almost

Correct Answer : almost

Q.7 Select the most appropriate option for blank No. 4.

Comprehension:

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

Pigeon racing has become increasingly popular in parts of China (1)_____ the country's elite and its middle class. Sun Yan, the deputy general-secretary of Beijing Racing Pigeons Association,(2)_____ that at least 100,000 pigeon breeders live in Beijing, and (3)_____ 90,000 of them are registered with Racing Pigeons Associations at (4)_____ levels, to qualify for the games held in the spring and autumn. Competitions can be lucrative for (5)_____ owners, with some prizes amounting to tens of thousands of dollars. Liu said in recent years, pigeon racing has been surging in popularity across China.

1. different

2. differential

3. differed

4. differ

Correct Answer : different

Q.8 Select the most appropriate option for blank No. 5.

Comprehension:

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

Pigeon racing has become increasingly popular in parts of China (1)_____ the country's elite and its middle class. Sun Yan, the deputy general-secretary of Beijing Racing Pigeons Association,(2)_____ that at least 100,000 pigeon breeders live in Beijing, and (3)_____ 90,000 of them are registered with Racing Pigeons Associations at (4)_____ levels, to qualify for the games held in the spring and autumn. Competitions can be lucrative for (5)_____ owners, with some prizes amounting to tens of thousands of dollars. Liu said in recent years, pigeon racing has been surging in popularity across China.

1. bird

2. birds

3. animal
4. pigeons

Correct Answer : bird

Q.9 Select the wrongly spelt word.

1. controversial
2. conquer
3. cooperation
4. contamporary

Correct Answer : contemporary

Q.10 Given below are four jumbled sentences. Select the option that gives their correct order.

- A. Around 600 million of them live in areas of high to extreme water stress.
- B. India is suffering from the worst water crisis, with one billion people living in water scarcity.
- C. This is even more than that of China and US combined.
- D. The reason is that at 24 per cent, India uses the most groundwater drawn out globally.

1. BADC
2. BDAC
3. ADCB
4. ACBD

Correct Answer : BADC

Q.11 Select the word which methe same as the group of words given.

An inscription on a tombstone written in memory of the deceased

1. pillar
2. epitaph
3. basilica
4. slab

Correct Answer : epitaph

Q.12 Select the most appropriate meaning of the given idiom. pull yourself together

1. go to sleep
2. try to understand
3. do a good job
4. calm down

Correct Answer : calm down

Q.13 Select the wrongly spelt word.

1. expereince
2. explain
3. expire

4. except

Correct Answer : experience

Q.14 Select the antonym of the given word.

EMINENT

1. distinguished

2. exalted

3. impressive

4. inconspicuous

Correct Answer : inconspicuous

Q.15 In the sentence identify the segment which contains the grammatical error. Cyclone Idai is regarded as one of the worst tropical cyclone on record to affect Africa and the Southern Hemisphere as a whole.

1. Cyclone Idai is regarded

2. as a whole

3. to affect Africa

4. the worst tropical cyclone

Correct Answer : the worst tropical cyclone

Q.16 Select the synonym of the given word.

INDELIBLE

1. illegal

2. ineffective

3. inerasable

4. illegible

Correct Answer : inerasable

Q.17 Select the correct active form of the given sentence.

Their children were brought up with great care.

1. They brought up their children with great care.

2. Their children brought them up with great care.

3. They have been bringing up their children with great care.

4. They had brought up their children with great care.

Correct Answer : They brought up their children with great care

Q.18 Select the most appropriate word to fill in the blank.

The burning of the effigy of Ravana on Dussehra _____ the burning of all evils.

1. epitomizes

2. personifies

3. intensifies

4. symbolizes

Correct Answer : symbolizes

Q.19 Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement.

I try to solve this problem at least for two hours.

1. have been trying to solve
2. tried to be solving
3. am try to solve
4. No improvement

Correct Answer : have been trying to solve

Q.20 Select the correct passive form of the given sentence. At night, lock the outer gate.

1. The outer gate is locked at night.
2. The outer gate be locked at night.
3. The outer gate is requested to be locked at night.
4. Let the outer gate be locked at night.

Correct Answer : Let the outer gate be locked at night

Q.21 Select the most appropriate meaning of the given idiom. give someone the cold shoulder

1. do something pointless
2. ignore someone
3. pamper someone
4. give away a secret

Correct Answer : ignore someone

Q.22 In the sentence identify the segment which contains the grammatical error. Every employee of the company were given a two bedroom flat as Diwali bonus.

1. were given
2. Every employee
3. as Diwali bonus
4. a two bedroom flat

Correct Answer : were given

Q.23 Select the synonym of the given word.

TRIUMPH

1. peace
2. attack
3. fight
4. victory

Correct Answer : victory

Q.24 Given below are four jumbled sentences. Select the option that gives their correct order.

- A. Mango, the so-called "king of fruits", is something of a national obsession in India.
- B. There was a bumper crop of mangoes in different states.
- C. It resulted in prices coming down and sales going up – much to the delight of buyers and sellers alike.
- D. 2017 proved to be a very good year for mango lovers.

- 1. CADB
- 2. CDAB
- 3. ADCB
- 4. ADBC

Correct Answer : ADBC

Q.25 Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement. If you listen to the English news, it improve your English.

- 1. No improvement
- 2. it will improve
- 3. it improved
- 4. it is improving

Correct Answer : it will improve

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Reasoning

Q 1. Select the set in which the numbers are related in the same way as are the numbers of the following set.

(8, 12, 24)

(A) (12, 20, 40)

(B) (9, 18, 27)

(C) (6, 9, 18)

(D) (6, 10, 18)

Ans.C

Q 2. Three of the following four number are alike in a certain way and one is different. Pick the number that is different from the rest.

(A) 65

(B) 217

(C) 28

(D) 338

Ans.D

Q 3. Which number will replace the question (?) mark in the following series?

98, 95, 86, 82, 66, ? , 36

(A) 58

(B) 63

(C) 61

(D) 60

Ans.C

Q 4. Three of the following four words are alike in a certain way and one is different .Pick the odd words out.

(A) Mahanadi

(B) Godavari

(C) Krishna

(D) Tapti

Ans.D

Q 5. In a code language, COMPUTER is written as OCREPMTU. How will DAUGHTER be written in the same language?

(A) ADTHREGU

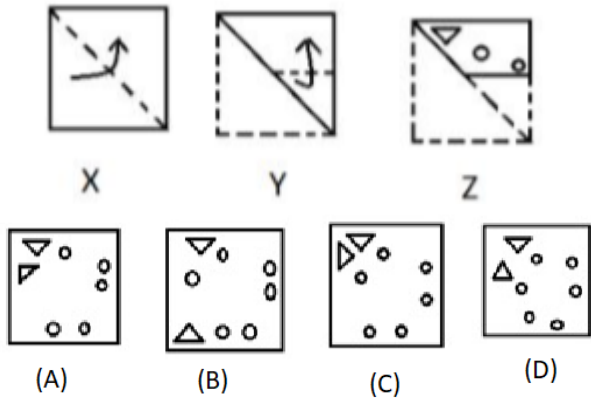
(B) ADERUGTH

(C) ADREGUTH

(D) READTHGU

Ans.C

Q 6. The Sequence of folding a piece of square paper (figure X and Y) and the manner in which the folded paper has been cut (figure Z) are shown. How will the paper appear when unfolded?



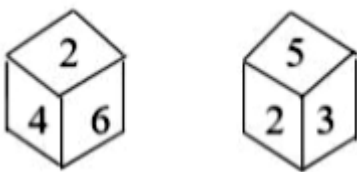
Ans.C

Q 7. If CAB is coded as 6 and BED is coded as 40, then how will HAD be coded as?

- (A) 52
- (B) 46
- (C) 32
- (D) 16

Ans.C

Q 8. Two different positions of the same dice are shown. Which number will be at the top if 4 is at the bottom?



- (A) 6
- (B) 3
- (C) 5
- (D) 1

Ans.B

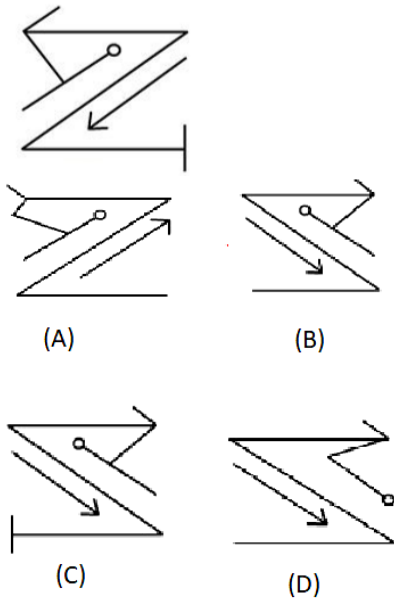
Q 9. Select the number pair which the two numbers are related in the same way as are the two numbers of the following pair.

7:32

- (A) 13:98
- (B) 12:85
- (C) 3:11
- (D) 16:145

Ans.A

Q 10. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



Ans.C

Q 11. Arrange the following words in a logical and meaningful order.

1. Student
2. Job
3. Interview
4. Education
5. Retirement
6. Degree

- (A) 1, 4, 6, 3, 2, 5
 (B) 1, 5, 3, 6, 4, 2
 (C) 5, 3, 2, 1, 4, 6
 (D) 3, 5, 4, 6, 1, 2

Ans.A

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

MNOP:LONQ :: FGHI:?

- (A) EGHJ
 (B) EHGJ
 (C) DHGK
 (D) GFIJ

Ans.B

Q 13. Select the Venn diagram that best illustrates the relationship between the following classes.

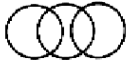
Snakes, Reptiles, Poisonous



A



B



C



D

Ans.D

Q 14. Two statements are given followed by the three conclusions numbered I, II and III. Assuming the statements to be true even if they seem to be at variance with commonly known fact, decide which of the conclusions logically follow(S) from the statements.

Statements:

No crow is a bird.

All birds are animals.

Conclusions:

I. Some animals are crows.

II. Some animals are birds.

III. No animal is a crow.

(A) Only conclusion III follows.

(B) Only conclusion I and III follow.

(C) None of the conclusions follows

(D) Conclusion II and either conclusion I or III follows

Ans.D

Q 15. Two mixtures contain milk and juice in the ratio of 2:1 and 4:5. If equal volumes of the two mixtures are mixed together, what would be ratio of milk to juice in the resulting mixture?

(A) 1:1

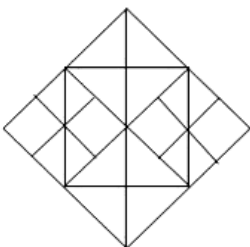
(B) 5:3

(C) 5:4

(D) 7:5

Ans.C

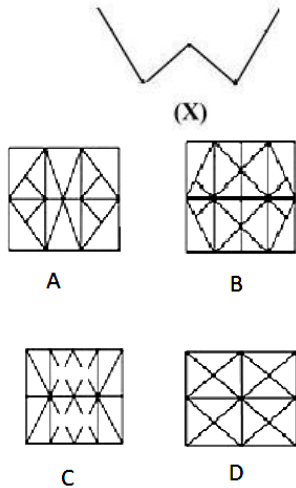
Q16. How many squares are there in the following figure?



- (A) 16
- (B) 14
- (C) 18
- (D) 12

Ans.B

Q 17. Select the option in which the given figure is embedded.



Ans.B

Q 18. 'Cinema' is related to 'Audience' in the same way as 'Church' is related to '_____'.
 (A) Concentration
 (B) Prayer
 (C) Congregation
 (D) Meditation

Ans.C

Q 19. Select the set in which the numbers are related in the same way as are the numbers of the following set.

- (5, 13, 12)
- (A) (6, 10, 8)
- (B) (11, 15, 9)
- (C) (13, 17, 11)
- (D) (15, 19, 13)

Ans.A

Q 20. Select the combination of letters that when sequentially placed in the gaps of the given letter series will complete the series.

bac_cab_cd_a_ac_ca

- (A) cadbc
- (B) dacbd
- (C) dcba
- (D) bdabc

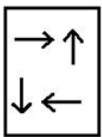
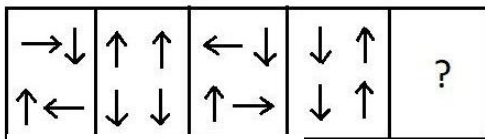
Ans.B

Q 21. Three of the following four letter-clusters are like in a certain way and one is different. Pick the odd one out.

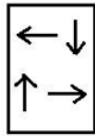
- (A) MLNO
- (B) CBDE
- (C) FGHI
- (D) RQST

Ans.C

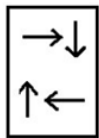
Q 22. Select the figure that will come next in the following figure series.



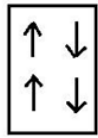
A



B



C



D

Ans.C

Q 23. Which two signs should be interchanged in the following equation to make it correct?

$$10 + 5 \div 10 \times 8 - 10 = 16$$

- (A) × and +
- (B) + and ÷
- (C) ÷ and ×
- (D) – and +

Ans.D

Q 24. Select the word-pair in which the two words are related in the same way as are the two words in the following word pair.

Apathy: Enthusiasm

- (A) Treaty: Friendship
- (B) Enrolment : Employment
- (C) Condemnation: Reverence
- (D) War:Attack

Ans.C

Q 25. D is the son of C and the brother of E, who is the niece of F. C is the sister of B and the aunt of A. B's father has two children, a son and a daughter. If A is the son of F, how is F related to C?

- (A) Aunt
- (B) Sister
- (C) Sister-in-law
- (D) Cousin

Ans.C

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Mathematics

Q 1. If $x = a + \frac{1}{a}$ and $y = a - \frac{1}{a}$ then $\sqrt{x^4 + y^4 - 2x^2y^2}$ is equal to

- (A) 4
 (B) $16a^2$
 (C) $\frac{8}{a^2}$
 (D) 8

Ans.A

Q 2. ABCD is a cyclic quadrilateral whose diagonals intersect at P. If $AB=BC$, $\angle DBC=70^\circ$ and $\angle BAC=30^\circ$, then the measure of $\angle PCD$ is:

- (A) 30°
 (B) 55°
 (C) 50°
 (D) 35°

Ans.C

Q 3. $\frac{\sin\theta - \cos\theta + 1}{\sin\theta + \cos\theta - 1} = ?$

- (A) $\sec\theta + \tan\theta$
 (B) $\sec\theta - \tan\theta$
 (C) $\sec\theta \tan\theta$
 (D) $\sec\theta \sin\theta$

Ans.A

Q 4. The table shows the production of different types of cars by a company (in thousands) in 5 years. The total production of type B cars in all the five year is what percent more than the total production of type A, B and D cars in 2017?

| Car Year | A | B | C | D | E |
|-------------|----|----|----|----|----|
| 2014 | 52 | 54 | 48 | 46 | 64 |
| 2015 | 47 | 45 | 53 | 50 | 45 |
| 2016 | 48 | 47 | 56 | 54 | 65 |
| 2017 | 43 | 50 | 57 | 67 | 63 |
| 2018 | 38 | 40 | 54 | 68 | 70 |

- (A) 49.5
 (B) 32.2
 (C) 57.3
 (D) 47.5

Ans.D

Q 5. A and B are travelling towards each other from the points P and Q respectively. After crossing each other, A and B take $6\frac{1}{8}$ hours, respectively, to reach their destinations Q and P, respectively. If the speed of B is 16.8 km/h, then the speed (in km/h) of A is:

- (A) 19.2
 (B) 20.4
 (C) 19.8
 (D) 20.8

Ans.A

Q 6. ABCD is a trapezium in which $AB \parallel DC$ and its diagonals intersect at P. If $AP = (3x - 1)cm$, $PC = (5x - 3)cm$, $BP = (2x + 1)cm$ and $PD = (6x - 5)cm$, then the length of DB is:

- (A) 10 cm
 (B) 16 cm
 (C) 14 cm
 (D) 12 cm

Ans.D

Q 7. The table shows the production of different types of cars by a company (in thousands) in 5 years. What is the ratio of the total production of type C cars in 2015 and type D cars in 2017 taken together to the total production of type B cars in 2016 and type A cars in 2017 taken together?

| Year \ Car | A | B | C | D | E |
|------------|----|----|----|----|----|
| 2014 | 52 | 54 | 48 | 46 | 64 |
| 2015 | 47 | 45 | 53 | 50 | 45 |
| 2016 | 48 | 47 | 56 | 54 | 65 |
| 2017 | 43 | 50 | 57 | 67 | 63 |
| 2018 | 38 | 40 | 54 | 68 | 70 |

- (A) 13:10
 (B) 12: 11
 (C) 11:9
 (D) 4:9

Ans.D

Q 8. The income of A is 50% more than that of B. If the income A is increased by 40% and the income of B is increased by 90%, then the percentage increase in their combined income will be:

- (A) 70
 (B) 55
 (C) 60
 (D) 64

Ans.C

Q 9. If $12 \cot^2 \theta - 31 \operatorname{cosec} \theta + 32 = 0$, $0^\circ < \theta < 90^\circ$, then the values of $\tan \theta$ will be:

- (A) $\frac{5}{4}, \frac{4}{3}$
 (B) $\frac{4}{3}, \frac{3\sqrt{7}}{7}$
 (C) $\frac{4}{5}, \frac{5\sqrt{7}}{7}$

(D) $\frac{4}{5}, \frac{4}{3}$

Ans.B

Q 10. The value of $\sqrt{\sec^2\theta + \operatorname{cosec}^2\theta} \times \sqrt{\tan^2\theta - \sin^2\theta}$ is equal to;

(A) $\sin\theta\sec^2\theta$

(B) $\operatorname{cosec}\theta\cos^2\theta$

(C) $\sin\theta\cos^2\theta$

(D) $\operatorname{cosec}\theta\sec^2\theta$

Ans.A

Q 11. A sum of 15,000 is lent at 16% p.a. compound interest. What is the difference between the compound interest for the second year and third year?

(A) Rs 548

(B) Rs 454.88

(C) Rs 445.44

(D) Rs 544

Ans.C

Q 12. The average of thirteen numbers is 80. The average of the first five numbers is 74.5 and that of the next five numbers is 82.5. The 11th number is 6 more than the 12th number and the 12th number is 6 less than the 13th number. What is the average of the 11th and the 13th numbers?

(A) 86.5

(B) 87.5

(C) 87

(D) 86

Ans.C

Q 13. A circle is inscribed in triangle ABC, touching AB at P, BC at Q and AC at R. If AR=5 cm, RC=6 cm and AB=12 cm, then the perimeter of triangle ABC is:

(A) 36cm

(B) 37 cm

(C) 40 cm

(D) 32 cm

Ans.A

Q 14. The table shows the production of different types of cars by a company (in thousands) in 5 years. The average production of type D cars in 5 years is what percent less than the production of type E cars in 2018?

| Car Year | A | B | C | D | E |
|-------------|----|----|----|----|----|
| 2014 | 52 | 54 | 48 | 46 | 64 |
| 2015 | 47 | 45 | 53 | 50 | 45 |
| 2016 | 48 | 47 | 56 | 54 | 65 |
| 2017 | 43 | 50 | 57 | 67 | 63 |
| 2018 | 38 | 40 | 54 | 68 | 70 |

- (A) 16.8 cm
- (B) 18.6
- (C) 17.4
- (D) 15.9

Ans.B

Q 15.

If $ab + bc + ca = 8$ and $a^2 + b^2 + c^2 = 20$, then a possible value of $\frac{1}{2}(a + b + c)[(a - b)^2 + (b - c)^2 + (c - a)^2]$ is:

- (A) 84
- (B) 72
- (C) 56
- (D) 80

Ans.B

Q 16. A person sold an article at a loss of 8%. Had he sold it at a gain of 10.5%. he would have received Rs 92.50 more. To gain 12% he should have sold it for:

- (A) 540.50
- (B) 560
- (C) 537.40
- (D) 580

Ans.B

Q17. If the 8 digit number $2074x4y2$ is divisible by 88, then the value of $(4x + 3y)$ is:

- (A) 42
- (B) 36
- (C) 45
- (D) 49

Ans.C

Q 18. Pipes A and B can fill a tank in one hour and two hours respectively while pipe C can empty the filled up tank in one hour and fifteen minutes. A and C are turned on together at 9 a.m. After 2 hours, only A is closed and B is turned on. When will the tank be emptied?

- (A) 11:30 a.m
- (B) 10:30 a.m
- (C) 12:20 a.m
- (D) 12:10 a.m

Ans.C

Q 19. A shopkeeper marks his good at 40% more than their cost price and allows a discount of 25% on the marked price. His gain or loss percent is:

- (A) 5 % loss

- (B) 10% loss
 (C) 5 % gain
 (D) 15 % gain

Ans.C

Q 20. The volume of metallic cylindrical pipe is 7840 cm^3 . If its length is 1.4 m and its external radius is 9 cm, then its thickness (given $\pi = \frac{22}{7}$)

- (A) 1.2 cm
 (B) 0.8 cm
 (C) 0.9 cm
 (D) 1 cm

Ans.D

Q.21 The value of $(5 + 3 \div 5 \times 5) \div (3 \div 3 \text{ of } 6)$ of $(4 \times 4 \div 4 \text{ of } 4 + 4 \div 4 \times 4)$ is:

- (A) $6\frac{2}{3}$
 (B) $7\frac{1}{3}$
 (C) $8\frac{1}{5}$
 (D) $9\frac{1}{5}$

Ans.D

Q.22 The table shows the production of different types of cars by a company (in thousands) in 5 years.

| Car Year | A | B | C | D | E |
|-------------|----|----|----|----|----|
| 2014 | 52 | 54 | 48 | 46 | 64 |
| 2015 | 47 | 45 | 53 | 50 | 45 |
| 2016 | 48 | 47 | 56 | 54 | 65 |
| 2017 | 43 | 50 | 57 | 67 | 63 |
| 2018 | 38 | 40 | 54 | 68 | 70 |

If the data related to the production of cars in 2018 is represented by pie chart, then the central angle of the sector representing the production of type C cars will be:

- (A) 91°
 (B) 93°
 (C) 72°
 (D) 59°

Ans.C

Q.23 If $(8x^3 - 27y^3) \div (2x - 3y) = (Ax^2 + Bxy + Cy^2)$, then the value of $(2A + B - C)$ is:

- (A) 3
 (B) 4
 (C) 5
 (D) 6

Ans.C

Q 24. When x is subtracted from each of 21, 22, 60 and 64, the numbers so obtained, in this order, are in proportion. What is the mean proportional between $(x + 1)$ and $(7x + 8)$?

- (A) 21
- (B) 24
- (C) 18
- (D) 27

Ans.B

Q 25. G is the centroid of the triangle ABC, where AB, BC and CA are 7 cm, 24 cm and 25 cm respectively, then BG is:

- (A) $8\frac{1}{3}$ cm
- (B) $6\frac{1}{3}$ cm
- (C) $4\frac{1}{6}$ cm
- (D) $5\frac{1}{2}$ cm

Ans.A

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