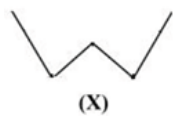


1. उस विकल्प का चयन करें जिसमें दी गई आकृति अंतर्निहित है।



- A.
- B.
- C.
- D.

Ans. D

Sol.

On observing the options we can see that the figure given under option (B) is indeed embedded in the original figure. It has been represented below,



Hence, option (d) is correct.

2. निम्नलिखित शब्दों को एक तार्किक और सार्थक क्रम में व्यवस्थित करें:

- 1) छात्र
- 2) नौकरी
- 3) साक्षात्कार
- 4) शिक्षा
- 5) सेवानिवृत्ति
- 6) डिग्री

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

Ans. B

Sol.

सही क्रम हैं -

- 1) छात्र
- 2) नौकरी
- 3) साक्षात्कार
- 4) शिक्षा
- 5) सेवानिवृत्ति
- 6) डिग्री

Option (B) [1, 4, 6, 3, 2, 5] is correct response.

3. निम्नलिखित दिए गए विकल्पों में से उस शब्द युग्म का चयन कीजिए जो आपस में उसी प्रकार से संबंधित है जिस प्रकार नीचे लिखे गए शब्द युग्म के दोनों शब्द आपस में संबंधित हैं।

निराशा : उत्तेजना

- A. युद्ध : हमला
- B. संधि : मित्रता
- C. नामांकन : रोजगार
- D. निराकरण : सम्मान

Ans. D

Sol.

Sadness is the opposite of Excitement.

Similarly, Condemnation is the opposite of Respect.

Hence, option D is the correct response.

4. दो मिश्रण में दूध और जूस 2:1 और 4:5 के अनुपात में हैं। यदि दो मिश्रणों की बराबर मात्रा को एक-साथ मिलाया जाता है, तो परिणामस्वरूप मिश्रण में दूध से जूस का अनुपात क्या होगा?

- A. 7:5
- B. 1:1
- C. 5:3
- D. 5:4

Ans. D

Sol. Let the quantity of the mixture be 9 litres each

Therefore

In Mixture 1:

Milk : juice = 2 : 1 = 6 : 3 i.e total = 9

In Mixture 2 :

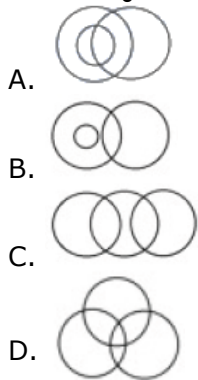
Milk : juice = 4:5 i.e total = 9

After mixing both the mixtures the ratio milk : juice will be = $6+4 : 3 + 5 = 10:8 = 5:4$

Hence, option D is the correct answer.

5. वेन आरेख का चयन करें जो निम्नलिखित वर्गों के बीच के संबंध को सबसे अच्छा दिखाता है।

सांप, सरीसृप, विषाक्त



Ans. A

Sol.

All snakes are reptiles.

Some snakes and reptiles are poisonous.

So, the best venn diagram is-



Option (a) is right.

6. निम्नलिखित चार संख्याओं में से तीन एक निश्चित तरीके से एक-समान हैं और एक भिन्न है। वह संख्या चुनें जो शेष से भिन्न है।

- A. 338
- B. 217
- C. 28
- D. 65

Ans. D

Sol.

$$217 - (6 \times 6 \times 6) + 1$$

$$28 - (3 \times 3 \times 3) + 1$$

$$65 - (4 \times 4 \times 4) + 1$$

338 is not following that rule.

Hence, option A is the correct response.

7. अक्षरों के उस संयोजन का चयन करें जो दी गई अक्षर श्रृंखला के अंतराल में क्रमिक रूप से रखे जाने पर श्रृंखला को पूरा करेंगे।

bac_cab_cd_a_ac_ca

- A. bdabc
- B. dcbac
- C. cadbc
- D. dacbd

Ans. D

Sol.

The series will be,

bacdca/bacdca/bacdca

8. निम्नलिखित समीकरण को सही बनाने के लिए किन दो संकेतों को परस्पर बदला जाना चाहिए?

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

- A. + और ÷
- B. - और +
- C. ÷ और x
- D. x और +

Ans. B

Sol.

According to the question,

If we interchange the - and + sign the above equation become correct.

$$10 - 5 \div 10 \times 8 + 10 \text{ (Applying BODMAS)}$$

$$\Rightarrow 10 - 0.5 \times 8 + 10$$

$$\Rightarrow 10 - 4 + 10$$

$$\Rightarrow 20 - 4$$

$$\Rightarrow 16$$

The correct option is (b).

9. निम्नलिखित चार शब्दों में से तीन एक निश्चित तरीके से एक-समान हैं और एक भिन्न है। विषम शब्द का चयन करें।

- A. कृष्णा
- B. महानदी
- C. ताप्ति
- D. गोदावरी

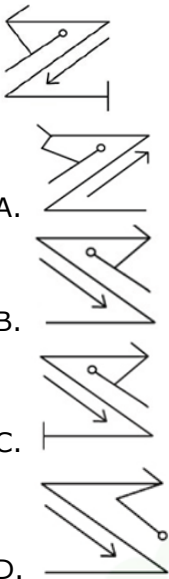
Ans. C

Sol.

Tapti river flows towards westwards while all the three rivers flows eastwards.

Hence, option (C) is odd word.

10. दी गई आकृति की सही दर्पण छवि का चयन करें जब दर्पण को आकृति की दाईं ओर स्थापित किया जाता है।



Ans. C

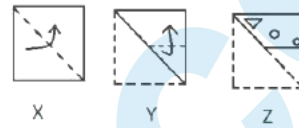
Sol.

In a plane mirror, a mirror image is a reflected duplication of an object that appears almost identical, but it is reversed in the direction perpendicular to the mirror surface. As an optical effect it results from reflection of substances such as a mirror or water.



Hence, option (c) is correct.

11. वर्गाकार कागज (आकृति X और Y) के एक टुकड़े को मोड़ने का क्रम और जिस तरह से मोड़े गए कागज को काटा जाता है (आकृति Z) नीचे दर्शाया गया है। जब कागज को खोला जाएगा तो ये कैसा दिखाई देगा?



- A.
- B.
- C.
- D.

Ans. A

Sol.

the paper is unfolded in two steps :-

Step-1



Step - 2



Hence, option (a) is correct.

12. एक कूट भाषा में, COMPUTER को OCREPMTU के रूप में लिखा जाता है। उसी कूट भाषा में DAUGHTER को किस प्रकार लिखा जाएगा?

- A. READTHGU
- B. ADTHREGU
- C. ADREGUTH
- D. ADERUGTH

Ans. C

Sol.

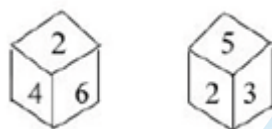
C O M P U T E R
O C R E P M T U

Similarly,

D A U G H T E R
A D R E G U T H

Hence, option (c) is correct.

13. एक ही पासे की दो अलग-अलग स्थितियां दिखाई गई हैं। यदि 4 सबसे नीचे है तो कौन सी संख्या सबसे ऊपर होगी?



- A. 3
- B. 6
- C. 5
- D. 1

Ans. A

Sol.

Moving in the clockwise direction:

Cube 1- 2 6 4

Cube 2- 2 5 3

Clearly, 4 is opposite to 3.

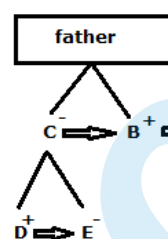
14. D, C का पुत्र और E का भाई है तथा E, F की भतीजी (niece) है। C, B की बहन है तथा A की

आंट है। B के पिता के दो बच्चे अर्थात् एक पुत्र और एक पुत्री है। यदि A, F का पुत्र है तो, F का C से क्या संबंध है?

- A. चचेरा भाई
- B. बुआ
- C. भाभी
- D. बहन

Ans. C

Sol.



F is the wife of C's brother.

Hence, F is the sister-in-law of C.

Option (c) is correct.

15. दो कथनों के बाद तीन निष्कर्ष संख्या I, II और III दिए गए हैं। दिए गए कथनों को सत्य मानें भले ही वे सामान्यतः ज्ञात तथ्यों से भिन्न प्रतीत होते हों, फिर निर्णय लें कि कौन सा निष्कर्ष दिए गए कथनों का तार्किक रूप से अनुसरण करता है।

कथन:

कोई कौवा पक्षी नहीं है।

सभी पक्षी पशु हैं।

निष्कर्ष:

I. कुछ जानवर कौवे हैं।

II. कुछ जानवर पक्षी हैं।

III. कोई जानवर कौवा नहीं है।

A. केवल निष्कर्ष I और III अनुसरण करता है

B. कोई भी निष्कर्ष अनुसरण नहीं करता है

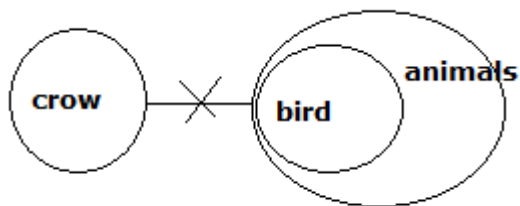
C. केवल निष्कर्ष III अनुसरण करता है

D. केवल निष्कर्ष II और या तो निष्कर्ष I या III

अनुसरण करता है

Ans. D

Sol.



Conclusions:

- I. Some animals are crows. -(false) it may be possible
- II. Some animals are birds. - (true)
- III. No animal is a crow.- (false) it may be possible

The correct option is (d) conclusion II and either conclusion I or III follows.

16. यदि CAB को 6 के रूप में तथा BED को 40 के रूप में कूटबद्ध किया गया है, तो HAD को किस प्रकार कूटबद्ध किया जाएगा?

- A. 16
- B. 52
- C. 32
- D. 46

Ans. C

Sol.

$$C = 3, A = 1, B = 2$$

The code is given by the multiplication of these place values.

$$CAB = 3 \times 1 \times 2 = 6$$

$$\text{Similarly, } BED = 2 \times 5 \times 4 = 40$$

$$\text{Therefore, } HAD = 8 \times 1 \times 4 = 32$$

Option (c) is correct response.

17. उस सेट का चयन करें जिसमें संख्याएं उसी प्रकार से संबंधित हैं जिस प्रकार से निम्नलिखित सेट की संख्याएं संबंधित हैं।

(5,13,12)

- A. (13,17,11)
- B. (11,15,9)

C. 15,19,13)

D. (6,10,8)

Ans. D

Sol.

The sum of all the numbers in the given number set is even

$$5 + 13 + 12 = 30$$

So, the given options-

$$13 + 17 + 11 = 41 \text{ (odd)}$$

$$11 + 15 + 9 = 35 \text{ (odd)}$$

$$15 + 19 + 13 = 47 \text{ (odd)}$$

$$6 + 10 + 8 = 24 \text{ (even)}$$

Clearly, only option (d) is related to the given number set.

18. निम्नलिखित चार अक्षर-समूहों में से तीन एक निश्चित तरीके से एक-समान हैं और एक भिन्न है। विषम का पता लगाएं।

- A. RQST
- B. FGHJ
- C. MLNO
- D. CBDE

Ans. B

Sol.

Except FGHJ, all other options are having first two letters in reverse order.

Hence, option (b) is different from the rest.

19. 'सिनेमा', 'दर्शकों' से संबंधित है उसी प्रकार से 'चर्च' किससे संबंधित है।

- A. समूह
- B. ध्यान
- C. एकाग्रता
- D. प्रार्थना

Ans. A

Sol.

As 'Audience' is a group of people who come to the Cinema. Similarly,

'Congregation' is a group of people who assembled for religious worship in Church. Hence, option D is the correct response.

20. उस संख्या-युग्म का चयन करें जिसमें दो संख्याएँ उसी प्रकार से संबंधित हैं जिस प्रकार से निम्नलिखित संख्या-युग्म की दो संख्याएँ संबंधित हैं।

7 : 32

A. 3:11

B. 13:98

C. 12:85

D. 16:145

Ans. B

Sol.

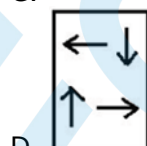
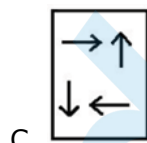
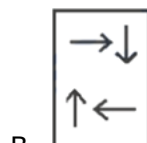
$$7 \times 4 + 4 = 32$$

Similarly,

$$13 \times 7 + 7 = 98$$

Hence, option B is the correct response.

21. उस आकृति का चयन करें जो निम्न आकृति श्रृंखला में अगली आकृति होगी।



Ans. B

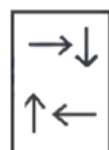
Sol.

In question figure, we can clearly see that the 1st & 3rd figure contain similar objects and 2nd & 4th have same objects.

We get the 3rd figure after interchanging the two horizontal arrow lines.

↓↑ Similarly, we get the 4th figure after interchanging left with its diagonal.

According to the above pattern, the next figure in the series is-



Option (b) is correct.

22. निम्नलिखित आकृति में कितने वर्ग हैं?



A. 12

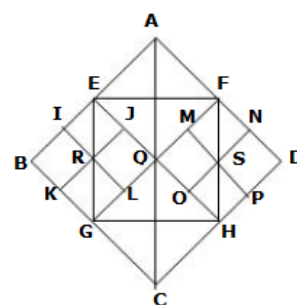
B. 18

C. 16

D. 14

Ans. D

Sol.



The following squares formed in the figure-

ABCD, EFGH, EBGQ, FDHQ, AEQF, QGCH, BIRK, EIRJ, JRLQ, RKGL, QMSO, FMSN, NDPS, SPHO

The total number of squares is - 14.

Therefore, option (d) is correct.

23. उस विकल्प का चयन करें जो तीसरे अक्षर-समूह से उसी प्रकार से संबंधित है जिस प्रकार से दूसरा अक्षर-समूह पहले अक्षर-समूह से संबंधित है।

MNOP : LONQ :: FGHI : ?

- A. GFII
- B. EGHJ
- C. DHGK
- D. EHGJ

Ans. D

Sol.

M	N	O	P
-1	+1	-1	+1
L	O	N	Q

Likewise,

F	G	H	I
-1	+1	-1	+1
E	H	G	J

Thus, the correct answer is option (D).

24. उस सेट का चयन करें जिसमें संख्याएँ उसी प्रकार से संबंधित हैं जिस प्रकार से निम्नलिखित सेट की संख्याएँ संबंधित हैं।

(8, 12, 24)

- A. (6, 9, 18)
- B. (12, 20, 40)
- C. (6, 10, 18)
- D. (9, 18, 27)

Ans. A

Sol.

	+6	
8	+4	12
	+12	24

Similarly,

	+6	
6	+3	9
	+9	18

Hence, the correct option is (a)

25. एक अनुक्रम दिया गया है, जिसमें से एक पद लुप्त है। दिए गए विकल्पों में से वह सही विकल्प चुनिए, जो अनुक्रम को पूरा करे।

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

- A. 58
- B. 60
- C. 61
- D. 63

Ans. C

Sol.

The series will be,

98	-3	95	-3^2	86	-4	82	-4^2	66	-5	61	-5^2	36
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Hence, option C is the correct response.

26. मदर टेरेसा के बाद किस भारतीय को शांति का नोबेल पुरस्कार मिला?

- A. के. राधाकृष्णन
- B. फली नरीमन
- C. पी. सदाशिवम
- D. कैलाश सत्यार्थी

Ans. D

Sol.

• Kailash Satyarthi received the Nobel Peace Prize after Mother Teresa from India. He shared the prize with Malala Yusufzai of Pakistan in 2014.

- Satyarthi is a Children Activist and founder of Bachpan Bachao Andolan, Global March Against Child Labour and Global Campaign for Education.

27. निम्नलिखित में से कौन सी धातु सबसे अधिक प्रतिक्रियाशील धातु है?

- A. कॉपर
- B. कैल्शियम
- C. लौह
- D. जिंक

Ans. B

Sol.

- **Calcium is the most reactive element in above given elements.**

• The reactivity of elements in periodic table can be predicted by The activity series which is basically a chart of metals listed in order of declining relative reactivity.

- Calcium comes after Lithium, Potassium and Strontium in Activity series of metals.

28. निरंतर प्रबंधित वन योगदान की एक विस्तृत श्रृंखला कैसे प्रदान की जाए इस पर अंतर्राष्ट्रीय वन संरक्षण दिवस 2019, 21 मार्च को थीम _____ के साथ मनाया गया।

- A. प्रदूषण मुक्त वन
- B. वन और शिक्षा
- C. वन और पर्यावरण
- D. वन हमारे रक्षक

Ans. B

Sol.

- **International Day of Forests 2019 was observed on 21st March** with the theme of Forest and Education.

• The theme for each International Day of Forests is chosen by the Collaborative Partnership on Forests.

29. निम्नलिखित में से कौन सी धातु सबसे अधिक नमनीय (कोमल) धातु है?

- A. टिन
- B. गोल्ड
- C. कॉपर
- D. एल्यूमिनियम

Ans. B

Sol.

- **Gold is the most ductile metal**, one ounce of gold can be drawn into more than 80 Km of thin gold wire.

• Ductility is the ability of a material to undergo plastic deformation before rupture.

- Ductility is often characterized by a material's ability to be stretched into a wire.

30. भारत के क्षेत्र (प्रदेश) में स्वतंत्र रूप से घूमने का अधिकार 'भारत के संविधान का एक मूलभूत अधिकार है।

- A. अनुच्छेद 24
- B. अनुच्छेद 21
- C. अनुच्छेद 14
- D. अनुच्छेद 19

Ans. D

Sol.

Article 19(1) says :

- (a) to freedom of speech and expression
- (b) to assemble peaceably and without arms
- (c) to form associations or unions
- (d) to move freely throughout the territory of India
- (e) to reside and settle in any part of the territory of India
- (f) to practice any profession, or to carry on any occupation, trade or business.

31. निम्नलिखित में से कौन सा क्वाटर्नरी सेक्टर के अंतर्गत आता है?

- A. सूचना प्रौद्योगिकी
- B. खनन
- C. विनिर्माण
- D. मत्स्य

Ans. A

Sol.

• Quaternary sector is a sector in economy which include Knowledge based economic sectors.

• **Information Technology, Media Research and development, Software solutions, Blogging, Designing etc comes under this category.**

32. नंदना ब्लॉक प्रिंट नाम की रंगीन कला, जो कपड़ों पर रूपांकनों (मूलभाव) के व्यवस्थित चित्रांकन उपयोग करती है, का अभ्यास _____ के तारापुर गांव में किया जाता है।

- A. उत्तराखंड
- B. मध्य प्रदेश
- C. ओडिशा
- D. महाराष्ट्र

Ans. B

Sol.

• **Nandna block print is colourful art printing of motifs on fabric practiced in Tarapur village of Madhya Pradesh.**

• Nandna printed fabric was regularly worn by the ladies of Bhil tribe.

• It include Traditionally four motifs namely, Mirch (chilli), Champakali (magnolia bud), Amba (mango) & Jalam buta (creeper web).

33. किसे उपन्यास 'सोलो' के लिए रवींद्रनाथ टैगोर साहित्य पुरस्कार 2019 से सम्मानित किया गया था?

- A. नयनज्योत मुखर्जी
- B. राणा दासगुप्ता
- C. अमिताभ घोष

D. झुम्पा लाहिड़ी

Ans. B

Sol.

• **Rana Dasgupta was awarded the Rabindranath Tagore Literary Prize 2019 for the novel 'SOLO'.**

• Dasgupta is the Literary Director of the JCB Prize for Literature.

• Tokyo Cancelled was the first of Rana Dasgupta.

34. _____, जो सिक्किम को तिब्बत से जोड़ता है, 1962 में भारत पर चीनी आक्रमण के बाद बंद हो गया था, लेकिन 2006 में फिर से खोल दिया गया क्योंकि दोनों देशों की सरकारों ने भूमि मार्गों के माध्यम से अपने व्यापार को बढ़ाने का फैसला किया।

- A. लमिस ला
- B. पनसी ला
- C. लानक ला
- D. नाथू ला

Ans. D

Sol.

• **Nathu La Pass connects Sikkim to Tibet.**

• Nathu La pass was closed in 1962 after Chinese Aggression and reopened in 2006.

• Nathu La is one of the three open trading border posts between China and India, the others are Shipkila in Himachal Pradesh and Lipulekh at the trisection point of Uttarakhand-India, Nepal and China.

35. निम्नलिखित में से कौन मुहम्मद गोरी का गुलाम था? वह अपने मालिक की मृत्यु के बाद शासक बना और गुलाम वंश की स्थापना की।

- A. घियास उद दीन बलबन
- B. इल्तुतमिश
- C. नासिर-उद-दीन महमूद
- D. कुतुब-उद-दीन ऐबक

Ans. D

Sol.

- **Qutbuddin Aibak was slave of Muhammad Ghori and became ruler of Delhi in 1206 and his dynasty was recognized as Slave Dynasty.**
- Aibak was succeeded by Aram Shah, and then by his former slave Iltutmish.
- He constructed Qutub Minar in Delhi and Adhai Din ka Jhopra in Ajmer.

36. भारतीय अंतरिक्ष अनुसंधान संगठन (ISRO) के अध्यक्ष और पद्म भूषण अवार्ड से सम्मानित, जिसने एक ऐतिहासिक क्षण का निर्माण किया, जब मंगल ऑर्बिटर पहले ही प्रयास में मंगल ग्रह की कक्षा में प्रवेश करने वाला पहला भारतीय अंतरिक्ष यान बन गया।

- A. सुंदर पिचाई
- B. के. राधाकृष्णन
- C. फली नरीमन
- D. नंदन नीलेकणि

Ans. B

Sol.

- **K Radhakrishnan was the chairman of Indian Space Research Organization during 2009-2014 and played vital role in making the Mars Orbital Mission a success.**
- Mars orbital mission was planned and executed between 2010-2014 and India became the first country to make it a success in its maiden attempt.
- It costed about 4.5 billion INR.

37. भारत में सबसे लंबा राष्ट्रीय राजमार्ग कौन सा है?

- A. राष्ट्रीय राजमार्ग 48
- B. राष्ट्रीय राजमार्ग 44
- C. राष्ट्रीय राजमार्ग 53
- D. राष्ट्रीय राजमार्ग 27

Ans. B

Sol.

- **National Highway 44 is the longest highway in India.**
- It begins from Srinagar and ends at Kanyakumari passing through Delhi and 10 States.
- Central Public Works Department is maintaining National Highway 44.

38. लोक अदालत का निर्माण _____ के तहत किया गया है।

- A. कानूनी सेवा प्राधिकरण अधिनियम
- B. न्याय प्रशासन अधिनियम
- C. मध्यस्थता और समाधान अधिनियम
- D. कानूनी समाधान अधिनियम

Ans. A

Sol.

- **Lok Adalat have been created under Legal Services Authority Act, 1987.**
- Concept of Lok Adalat is mentioned under Article 39A and its objective is to provide free legal services for the citizens.
- There are two types of Lok Adalat i.e. permanent and non permanent.

39. भारत पर शासन करने वाला पहला मुस्लिम वंश कौन सा था?

- A. गुलाम वंश
- B. तुगलक वंश
- C. लोधी वंश
- D. खिलजी वंश

Ans. A

Sol.

- **Slave dynasty rule from 1206-90 and became the first Muslim dynasty ruled over India.**
- Though India was invaded multiple times before this i.e. Muhammad Qassim,

Muhammad Gori etc. but Slave dynasty became the first dynasty to rule over India.

- Qutbuddin Aibak, Iltutmish, Razia Sultan, Balban were eminent kings of this dynasty.

40. निम्नलिखित में से किस मंत्रालय ने मध्याह्न भोजन योजना लागू की?

- A. सामाजिक न्याय और अधिकारिता मंत्रालय
- B. गृह मंत्रालय
- C. मानव संसाधन विकास मंत्रालय
- D. समाज कल्याण मंत्रालय

Ans. C

Sol.

• **Ministry of Human Resources and Development is implementing Mid day Meal Scheme.**

- This scheme was launched as a Centrally Sponsored Scheme on 15th August, 1995.
- In 2001 MDMS became a cooked Mid Day Meal Scheme under which every child in every Government and Government aided primary school was to be served a prepared Mid Day Meal with a minimum content of 300 calories of energy and 8-12 gram protein per day for a minimum of 200 days.

41. विश्व ____ दिवस 2019, 22 मार्च को अधिकारहीन समूहों पर ध्यान केन्द्रित करने के लिए 'लीविंग नॉ वन बिहाइंड' विषय के साथ मनाया गया।

- A. पर्यावरण
- B. वन
- C. जल
- D. पेट्रोलियम

Ans. C

Sol.

- **Water day is observed every year on 22nd March.**

• The theme of 2019 Water day was 'Leaving no one behind' to focus on marginalized groups.

• The sustainable development goal 6 aims to ensure availability and sustainable management of water for all by 2030.

• Every year, UN-Water sets a theme for World Water Day corresponding to a current or future challenge.

42. फरवरी 2019 में ईरान के चाबहार में ____ ने मकरान कप प्रतियोगिता में स्वर्ण पदक जीता।

- A. मनीष कौशिक
- B. दीपक सिंह
- C. रोहित टोकस
- D. सतीश कुमार

Ans. B

Sol.

• **Makran Cup Boxing Championship was held in feb, 2019 at Chabahar, Iran.**

- India won one gold medal in this cup which was snatched by Deepak Singh.
- P Lalitha Prasad (52kg), Manish Kaushik (60kg), Duryodhan Singh Negi (69kg), Sanjeet (91kg) and Satish Kumar (+91kg) are five silver medal winners.

43. फरवरी 2019 में, भारत ने ईरान के चाबहार में मकरान कप बॉक्सिंग में ____ स्वर्ण पदक और पांच रजत पदक जीते।

- A. दो
- B. तीन
- C. चार
- D. एक

Ans. D

Sol.

- **India won one gold medal and five silver medals at Makran Cup Boxing in Iran, in feb, 19.**

• Gold medal is snatched by Deepak Singh who defeated Jaafar Naseri in Finals.

44.बादामी प्रस्थापित करने से पहले, बादामी चालुक्यों ने अपनी राजधानी ____ में स्थापित की थी।

- A. पट्टकल
- B. ऐहोल
- C. हुबली
- D. बीजापुर

Ans. B

Sol.

• **Aihole is the first capital of Badami Chalukyas before they moved to Badami which is located at 35 kms from it.**

• Aihole is an important archaeological site and recognized as UNESCO World heritage site.

• It is situated near Malaprabha river valley, in Bagalakote district of Karnataka.

45.गैल्वनीकरण की प्रक्रिया में लोहे पर क्या लगाया जाता है?

- A. कॉपर
- B. जिंक
- C. टिन
- D. एल्यूमिनियम

Ans. B

Sol.

• **Galvanization is a process of applying a protective Zinc layer on Iron to prevent from rusting.**

• Iron is generally dipped in hot molten zinc in this process.

• Zinc layer on Iron eradicated direct contact of Iron to atmospheric moisture thus protecting it from corrosion.

46.लोकप्रिय बाग गुफा चित्र _____ में पाए जाते हैं।

- A. मध्य प्रदेश
- B. हिमाचल प्रदेश
- C. सिक्किम
- D. ओडिशा

Ans. A

Sol.

• **Bagh caves are situated in state of Madhya Pradesh, Dhar District.**

• Bagh caves are known for rock cut architecture. Mainly inspired from Buddhism.

• All of the 9 caves are viharas- the caves used for residence by Buddhist Monks.

47.बांदीपुर राष्ट्रीय उद्यान कहाँ स्थित है?

- A. कर्नाटक
- B. केरल
- C. गुजरात
- D. सिक्किम

Ans. A

Sol.

• The bandipur National Park is **situated in Karnataka** and it is established in 1974.

• It is a tiger reserve National park.

• Bandipur is located in Gundlupet taluq of Chamarajanagar district.

48._____ पहला मुस्लिम शासक था जिसके साम्राज्य ने लगभग पूरे भारत को उसके दक्षिण भारत तक घेरा हुआ था।

- A. अल्लाउद्दीन खिलजी
- B. जलाल-उद-दिन खिलजी
- C. घियास उद दीन बलबन
- D. फिरोज शाह तुगलक

Ans. A

Sol.

- **Allaudin Khilji covered almost the whole of India up to its extreme south.**
- He fought many battles, conquered Gujarat, Ranthambhore, Chittoor, Malwa, and Deccan. During his reign of 20 years.
- He died in 1316 AD and after his death Khilji dynasty came to end.

49.इलेक्ट्रोमैग्नेटिज़्म के विज्ञान की स्थापना और नाम किसने दिया?

- A. माइकल फैराडे
- B. जेम्स क्लर्क
- C. हंस क्रिश्चियन ओर्स्टेड
- D. आंद्रे मैरी एम्पीयर

Ans. D

Sol.

- **Andre Marie ampere founded the science of electromagnetism.**

- Electromagnetism is the science of charge and of the forces and fields associated with charge.
- Electricity and magnetism are two aspects of electromagnetism.

50.निम्नलिखित में से कौन ओजोन परत को नष्ट करता है?

- A. सल्फर
- B. कार्बन
- C. क्लोरीन
- D. सिलिकॉन

Ans. A

Sol.

- **Chlorine is responsible for destruction of ozone layer. Bromine also does the same effect.**

- Chlorofluorocarbons, hydro chloro fluoro carbons, carbon tetra chloride etc are some other ozone depletion compounds.

- Ozone layer absorbs harmful UV radiations of sun.

51.नीचे दी गई तालिका 5 वर्षों में एक कंपनी द्वारा विभिन्न कारों के उत्पादन को दर्शाती है (हजार में).

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

वर्ष 2015 में टाइप C और वर्ष 2017 में टाइप D के एकसाथ कुल उत्पादन का वर्ष 2016 में टाइप B और वर्ष 2017 में टाइप A के एकसाथ कुल उत्पादन से कितना अनुपात है?

- A. 12:11
- B. 13:10
- C. 11:9
- D. 4:3

Ans. D

Sol.

Production of type C cars in 2015=53

Production of type D cars in 2017=67

Total production =53+67= 120

Production of type B cars in 2016=47

Production of type A cars in 2017=43

Total production =47+43 =90

Ratio =120 : 90

=4 : 3

52.A और B क्रमशः बिंदु P और Q से एकदूसरे की ओर यात्रा कर रहे हैं। एकदूसरे को पार करने के बाद A और B अपने गन्तव्य Q और P पर पहुंचने के

लिए क्रमशः $6\frac{1}{8}$ घंटे और 8 घंटे का समय लेते हैं। यदि B की गति 16.8 कि.मी/घंटा है, तो A की गति है (कि.मी/मै):

- A. 20.8
- B. 19.8
- C. 19.2

D. 20.4

Ans. C

Sol.

$$\frac{\text{speed of A}}{\text{speed of B}} = \frac{\text{time taken by B to complete the remaining distance}}{\text{time taken by A to complete the remaining distance}}$$

$$\frac{\text{speed of A}}{\text{speed of B}} = \sqrt{\frac{8}{6\frac{1}{8}}} = 8/7$$

$$\text{Speed of A} = (8/7) \times \text{speed of B}$$

$$\text{Speed of A} = 19.2 \text{ km/hr}$$

53. यदि $12 \cot^2 \theta - 31 \operatorname{cosec} \theta + 32 = 0$, $0^\circ < \theta < 90^\circ$, तो $\tan \theta$ का मान होगा:

A. $\frac{4}{3}, \frac{3\sqrt{7}}{7}$

B. $\frac{4}{5}, \frac{5\sqrt{7}}{7}$

C. $\frac{5}{4}, \frac{4}{3}$

D. $\frac{4}{5}, \frac{4}{3}$

Ans. A

Sol.

$$12 \cot^2 \theta - 31 \operatorname{cosec} \theta + 32 = 0$$

$$12(\operatorname{cosec}^2 \theta - 1) - 31 \operatorname{cosec} \theta + 32 = 0$$

$$12 \operatorname{cosec}^2 \theta - 31 \operatorname{cosec} \theta + 20 = 0$$

$$(4 \operatorname{cosec} \theta - 5)(3 \operatorname{cosec} \theta - 4) = 0$$

$$\operatorname{Cosec} \theta = 5/4 \text{ and } 4/3$$

We see, When $\operatorname{cosec} \theta = 5/4$

$$\text{Then } \tan \theta = 4/\sqrt{(5^2 - 4^2)} = 4/3$$

when $\operatorname{cosec} \theta = 4/3$,

$$\text{then } \tan \theta = 3/\sqrt{4^2 - 3^2}$$

$$\frac{3}{\sqrt{7}} = \frac{3\sqrt{7}}{7}$$

$$\text{Therefore, } \tan \theta = 4/3 \text{ and } \frac{3\sqrt{7}}{7}$$

54. ABCD एक समलंब है जिसमें $AB \parallel DC$ और इसके विकर्ण P पर काटते हैं। यदि $AP = (3x - 1)$

सेमी, $PC = (5x - 3)$ सेमी, $BP = (2x + 1)$ सेमी और $PD = (6x - 5)$ सेमी, तो DB की लंबाई है:

A. 14 से.मी

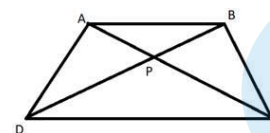
B. 12 से.मी

C. 10 से.मी

D. 16 से.मी

Ans. B

Sol.



Given, $AB \parallel DC$, $AP = (3x - 1)$ cm, $PC = (5x - 3)$ cm, $BP = (2x + 1)$ cm, $PD = (6x - 5)$ cm

$$\triangle APB \sim \triangle CPD$$

$$AP/PC = BP/PD$$

$$\frac{3x - 1}{5x - 3} = \frac{2x + 1}{6x - 5}$$

$$18x^2 - 21x + 5 = 10x^2 - x - 3$$

$$8x^2 - 20x + 8 = 0$$

$$2x^2 - 5x + 2 = 0$$

On solving further,

$$2x^2 - 4x - x + 2 = 0$$

$$(x - 2)(2x - 1) = 0$$

Therefore $x = 2, 1/2$

But x cannot be equal to $1/2$ as on putting $x = 1/2$ we will get negative values for PD and PC , which is not possible.

Putting $x = 2$

$$BD = BP + PD = 2x + 1 + 6x - 5 = 12 \text{ cm}$$

$$55. \sqrt{\sec^2 \theta + \operatorname{cosec}^2 \theta} \times \sqrt{\tan^2 \theta + \sin^2 \theta} \text{ का}$$

मान है:

A. $\operatorname{Cosec} \theta \sec^2 \theta$

B. $\sin \theta \sec^2 \theta$

C. $\sin \theta \cos^2 \theta$

D. $\operatorname{Cosec} \theta \cos^2 \theta$

Ans. B

Sol.

$$\begin{aligned}
 & \text{(solved for } \sqrt{\tan^2 \theta - \sin^2 \theta}) \\
 & \sqrt{\sec^2 \theta + \operatorname{cosec}^2 \theta} \times \\
 & \sqrt{\tan^2 \theta - \sin^2 \theta} \\
 & = \sec \theta \cdot \operatorname{cosec} \theta \times \sin^2 \theta \cdot \sec \theta \\
 & = \sin \theta \sec^2 \theta
 \end{aligned}$$

56. एक धात्विक बेलनाकार पाइप का आयतन 7480 घन सेमी है। यदि इसकी लंबाई 1.4 मी है और इसकी बाहरी त्रिज्या 9 से.मी है, तो इसकी मोटाई है: (

$$\pi = \frac{22}{7})$$

- A. 1 सेमी
B. 0.8 सेमी
C. 0.9 सेमी
D. 1.2 सेमी

Ans. A

Sol.

Given is $r_1 = 9\text{cm}$, $h = 1.4\text{m} = 140\text{cm}$

Volume of cylinder = 7480cm^3

$$\text{Volume of cylinder} = \frac{22}{7} [9^2 - r^2] \times 140$$

$$= 7480$$

$$= 81 - r_2^2 = 17$$

$$R_2 = \sqrt{64} = 8\text{cm}$$

Required thickness of cylinder = $r_1 - r_2 = 9 - 8 = 1\text{cm}$

57. यदि $x = a + \frac{1}{a}$ और $y = a - \frac{1}{a}$ तो

$$\sqrt{x^4 + y^4 - 2x^2y^2} \text{ बराबर है:}$$

- A. $16a^2$
B. 8

$$C. \frac{8}{a^2}$$

- D. 4

Ans. D

Sol.

$$\begin{aligned}
 & \sqrt{x^4 + y^4 - 2x^2y^2} \\
 & \sqrt{(x^2 - y^2)^2} \\
 & = x^2 - y^2 \\
 & \left(a + \frac{1}{a}\right)^2 - \left(a - \frac{1}{a}\right)^2 = 4
 \end{aligned}$$

58. G त्रिभुज ABC का केन्द्रक है, जहां AB, BC और CA क्रमशः 7 से.मी, 24 से.मी और 25 से.मी है, तो BG है:

$$A. 6\frac{1}{3}\text{cm}$$

$$B. 8\frac{1}{3}\text{cm}$$

$$C. 5\frac{1}{2}\text{cm}$$

$$D. 4\frac{1}{6}\text{cm}$$

Ans. B

Sol.

Triangle ABC is a right-angle triangle.

So, in ΔABC , median BP will be half Of hypotenuse.

$$\text{So, } BP = 25/2 = 12.5\text{cm}$$

We know that centroid divides the median in the ratio of 2: 1

$$\text{So, } BG = 2/3 \times 12.5 = 50/6 = 8\frac{1}{3}$$

59. नीचे दी गई तालिका 5 वर्षों में एक कंपनी द्वारा विभिन्न कारों के उत्पादन को दर्शाती है (हजार में).

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2018	38	40	54	68	70

सभी पांच वर्षों में टाइप B कार का कुल उत्पादन वर्ष 2017 में टाइप A, B और D कार से कितना प्रतिशत अधिक है?

$$A. 49.5$$

$$B. 4.5$$

C. 57.3

D. 32.2

Ans. D

Sol.

Total production of type B cars
= 54 + 45 + 47 + 50 + 40 = 236

Total production of type A, B and D cars
in 2017 = 43 + 50 + 67 = 160

% increase $236 - 160 / 236 = 32.2\%$

60. नीचे दी गई तालिका 5 वर्षों में एक कंपनी द्वारा विभिन्न कारों के उत्पादन को दर्शाती है (हजार में).

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

पांच वर्षों में टाइप D कार का उत्पादन वर्ष 2018 में टाइप E कार के उत्पादन से कितने प्रतिशत कम है? (निकटतम दशमलव तक)

A. 18.6

B. 16.8

C. 15.9

D. 17.4

Ans. A

Sol.

Total production of type D cars in 5 years
= 46 + 50 + 54 + 67 + 68 = 285

Average production of type D cars = $285 / 5$
= 57

Production of type E cars in 2018 = 70

% Less = $(70 - 57) / 70 \times 100 = 18.6$ approx.

61. यदि प्रत्येक 21, 22, 60 और 64 से x को घटाया जाता है, तो इस क्रम में प्राप्त संख्याएं समानुपाती हैं। $(x+1)$ और $(7x + 8)$ का माध्य समानुपात क्या है?

A. 27

B. 18

C. 24

D. 21

Ans. C

Sol.

Given numbers are 21, 22, 60 and 64

Now, x is subtracted from the number

So, $(21-x) : (22-x) :: (60-x) : (64-x)$

$(22-x)(60-x) = (21-x)(64-x)$

X = 8

Mean proportion of $(x+1)$ & $(7x+8)$

= $\sqrt{9 \times 64} = 24$

62. नीचे दी गई तालिका 5 वर्षों में एक कंपनी द्वारा विभिन्न कारों के उत्पादन को दर्शाती है (हजार में).

कार वर्ष	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

यदि 2018 में कार से संबंधित उत्पादन को पाई चार्ट द्वारा दर्शाया जाता है, तो C प्रकार के उत्पादन को प्रदर्शित करने वाले खंड का केन्द्रीय कोण होगा:

A. 72°

B. 59°

C. 93°

D. 91°

Ans. A

Sol.

Total production of cars in 2018

= 38 + 40 + 54 + 68 + 70

= 270

Production of type C car in 2018 = 54

Central angle = $54 / 270 \times 360^\circ$

= 72°

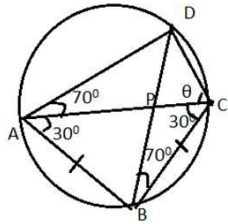
63. ABCD एक चक्रीय चतुर्भुज है जिसके विकर्ण बिन्दु P पर प्रतिच्छेद करते हैं। यदि AB = BC,

$\angle DBC = 70^\circ$ और $\angle BAC = 30^\circ$, तो $\angle PCD$ का माप है:

- A. 35°
- B. 50°
- C. 55°
- D. 30°

Ans. B

Sol.



Given that $AB = BC$

So, $\angle BAC = \angle BCA = 30^\circ$

And

$\angle DBC = \angle DAC = 70^\circ$ (Angle made by cord CD)

In cyclic quadrilateral opposite angles are supplementary angle

So $\angle BAD + \angle BCD = 180^\circ$

$100^\circ + \angle BCD = 180^\circ$

$\angle BCD = 80^\circ$

So, angle $\angle PCD = 80 - 30 = 50^\circ$

64. पाइप A और B एक टैंक को क्रमशः एक घंटे और दो घंटे में भर सकते हैं जबकि पाइप C इस टैंक को एक घंटे पंद्रह मिनट में खाली कर सकता है। A और C को एकसाथ 9 पूर्वाह्न पर खोला जाता है। दो घंटे बाद केवल A को बंद कर दिया जाता है और B को खुला रखा जाता है। टैंक कितने बजे खाली होगा?

- A. 12:10 मध्याह्न
- B. 11:30 पूर्वाह्न
- C. 10:30 पूर्वाह्न
- D. 12:20 मध्याह्न

Ans. D

Sol.

Let the total work = LCM of (1, 2, 5/4)

= 10 units

Efficiency of A = $10/1 = 10$ units per hour

Efficiency of B = $10/2 = 5$ units per hour

Efficiency of C = $10 \div 5/4 = 8$ units per hour

Work done by A+C in 2 hours = $(10+8) \times 2 = 36$ units

Efficiency of B and C = 13

Therefore, time taken by B+C to empty the tank = $36/13$ hours = 2 hours 48 minutes

Now the time = 11:00 + 2hr 48min = 1:48 p.m.

65. यदि 8 अंक की संख्या $2074x4y2$, 88 से विभाज्य है, तो $(4x + 3y)$ का मान है:

- A. 49
- B. 36
- C. 42
- D. 45

Ans. D

Sol.

For a number to be divisible by 88, the number should be divisible by both 11 and 8.

A number is divisible by 8 if the number formed by the last three digits is divisible by 8.

$4y2$ should be divisible by 8.

So, $y = 3$ or $y = 7$

A number is divisible by 11 if the difference of the sum of its digits at odd places and the sum of its digits at even places, is divisible by 11.

$(2+4+4+0) - (y+x+7+2) = 0$ or 11

Now, $x+y-1 = 0$ (for $y=3$)

$x+3-1=0$

$x=-2$ digit cannot be negative

And, $x+y-1 = 0$ (for $y = 7$)

$X = -6$ digit cannot be negative

So, $x+y-1=11$

$X = 5$ for $y = 7$

$4x+3y = 4 \times 5 + 3 \times 7 = 41$ (not in options)

$X=9$ for $y=3$

We have $x=9$ and $y=3$

$$4x+3y = 4 \times 9 + 3 \times 3 = 45$$

66. यदि $(8x^3 - 27y^3) \div (2x - 3y) = (Ax^2 + Bxy + Cy^2)$, तो $(2A+B-C)$ का मान है:

A. 4

B. 6

C. 5

D. 3

Ans. C

Sol.

$$\begin{aligned}(a^3 - b^3) &= (a - b)(a^2 + ab + b^2) \\&= (2x)^3 - (3y)^3 = (2x - 3y)[4x^2 + 9y^2 + 6xy] \\&= (8x^3 - 27y^3) / (2x - 3y) = (2x - 3y) \\&= 4x^2 + 9y^2 + 6xy\end{aligned}$$

Comparing the above equation with $Ax^2 + Bxy + Cy^2$

We have $A=4$, $B=6$, $C=9$

$$\text{Then } (2A+B-C) = 8+6-9 = 5$$

67. एक $\triangle ABC$ में एक वृत्त निर्मित है, जो AB को P पर, BC को Q पर और AC को R पर स्पर्श करता है। यदि $AR = 5$ सेमी, $RC = 6$ सेमी और $AB = 12$ सेमी, तो $\triangle ABC$ का परिमाण है:

A. 40 सेमी

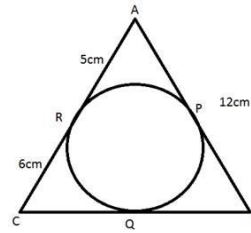
B. 32 सेमी

C. 37 सेमी

D. 36 सेमी

Ans. D

Sol.



In the above figure,

We know that $CR = CQ$, $AR = AP$, $BP = BQ$ (tangents on a circle from an external point are equal)

Therefore

$$AR = AP = 5\text{cm}$$

$$CR = CQ = 6\text{cm}$$

$$PB = AB - AP = 12 - 5 = 7\text{cm}$$

$$BP = BQ = 7\text{cm}$$

$$\begin{aligned}\text{Perimeter of the triangle} &= AR + AP + BP \\&+ BQ + CQ + CR = 36\text{cm}\end{aligned}$$

68. A की आय B की आय से 50% अधिक है। यदि A की आय में 40% वृद्धि की जाती है और B की आय में 90% से वृद्धि की जाती है, तो उनकी कुल में प्रतिशत वृद्धि है:

A. 64

B. 55

C. 60

D. 70

Ans. C

Sol.

Let starting income of B = 100

Then, starting Income of A = 150

Income of A is increased by 40%, so new

$$\text{income of A} = 150 \times 140 / 100 = 210$$

Income of B is increased by 90%, so

$$\text{New income of B} = 100 \times 190 / 100 = 190$$

$$\text{Total starting income} = 100 + 150 = 250$$

$$\text{Total new income} = 210 + 190 = 400$$

$$\% \text{ increase} = \frac{400 - 250}{250} \times 100 = 60\%$$

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

69. A. $\sec \theta \sin \theta$
 B. $\sec \theta \tan \theta$
 C. $\sec \theta + \tan \theta$
 D. $\sec \theta - \tan \theta$

Ans. C

Sol.

$$\frac{\sin \theta - \cos \theta + 1}{\sin \theta + \cos \theta - 1} \times \frac{\sin \theta - (\cos \theta - 1)}{\sin \theta + (\cos \theta - 1)} = \frac{\sin^2 \theta - (\cos \theta - 1)^2}{\sin^2 \theta + (\cos \theta - 1)^2}$$

On simplifying the above equation, we get

$$\begin{aligned} & \frac{2 - 2\cos\theta + 2\sin\theta - 2\sin\theta\cos\theta}{2\cos\theta(1 - \cos\theta)} \\ &= \frac{(1 - \cos\theta)(1 + \sin\theta)}{\cos\theta(1 - \cos\theta)} \\ &= \frac{1 + \sin\theta}{\cos\theta} = \sec \theta + \tan \theta \end{aligned}$$

70. यदि $ab + bc + ca = 8$ और $a^2 + b^2 + c^2 = 20$ है, तो $\frac{1}{2}(a+b+c)[(a-b)^2 + (b-c)^2 + (c-a)^2]$ का धनात्मक मूल्य है:

- A. 72
 B. 56
 C. 84
 D. 80

Ans. A

Sol.

We know,

$$(a + b + c)^2 = a^2 + b^2 + c^2 + 2(ab + bc + ca)$$

$$= 20 + 2 \times 8 = 36$$

$$a+b+c = 6$$

Therefore,

$$\begin{aligned} & \frac{1}{2}(a+b+c)[(a-b)^2 + (b-c)^2 + (c-a)^2] = \frac{1}{2} \\ & (a+b+c)[2(a^2 + b^2 + c^2) - 2(ab+bc+ca)] \\ &= \frac{1}{2} \times 6 [2(20-8)] \end{aligned}$$

$$= 72$$

71. एक दुकानदार अपनी वस्तुओं पर लागत मूल्य से 40% अधिक मूल्य अंकित करता है और अंकित मूल्य पर 25% की छूट प्रदान करता है। उसका लाभ या हानि प्रतिशत है:

- A. 5% हानि
 B. 15% लाभ
 C. 10% हानि
 D. 5% लाभ

Ans. D

Sol.

Let the cost price (CP) = ₹100

Now, Marked price (MP) = ₹140

At 25% discount,

Selling price (SP) = $140 \times \frac{75}{100} = ₹105$

$$\% \text{ profit} = \frac{105 - 100}{100} \times 100 = 5\%$$

72. 4. तेरहा संख्याओं का औसत 80 है। पहली पांच संख्याओं का औसत 74.5 है और अगली पांच संख्याओं का औसत 82.5 है। 11वीं संख्या 12वीं संख्या से 6 अधिक है और 12वीं संख्या 13वीं संख्या से 6 कम है। 11वीं और 13वीं संख्या का औसत क्या है?

- A. 87
 B. 86
 C. 86.5
 D. 87.5

Ans. A

Sol.

Sum of 13 number = $13 \times 80 = 1040$

Sum of first five number = $5 \times 74.5 = 372.5$

Sum of next five number = $5 \times 82.5 = 412.5$

Sum of first 10 number = $372.5 + 412.5 = 785$

Now, sum of last three number = $1040 - 785 = 255$

According to question,

$$x+6+x+x+6=255$$

$$X=81$$

$$11^{\text{th}} \text{ number}=87$$

$$13^{\text{th}} \text{ number}=87$$

$$\text{Average} = (87+87)/2 = 87$$

73.T $(5+3 \div 5 \times 5 \div (4+4 \div 4 \times 4 \text{ का } 4 \times 4 \div 4))$ का $(6 \text{ का } 3 \div 3)$ का मान है:

A. $8 \frac{1}{5}$

B. $7 \frac{1}{3}$

C. $9 \frac{3}{5}$

D. $6 \frac{2}{3}$

Ans. C

Sol.

$$\begin{aligned} & (5+3 \div 5 \times 5 \div (3 \div 3 \text{ of } 6) \text{ of } (4 \times 4 \div 4 \text{ of } 4+4 \div 4 \times 4)) \\ & = (5 + \frac{3}{5} \times 5) \div (3 \div 3 \times 6) \text{ of } (4 \times 4 \div 16 + 4 \div 4 \times 4) \\ & = 8 \div \left(\frac{1}{6}\right) \text{ of } \left(4 \times \frac{4}{16} + 1 \times 4\right) \\ & = 8 \div \frac{1}{6} \text{ of } 5 \\ & = 8 \div \frac{5}{6} \\ & = 8 \times \frac{6}{5} = 48/5 = 9 \frac{3}{5} \end{aligned}$$

74.15,000 रुपये की राशि को 16% प्रतिवर्ष चक्रवृद्धि ब्याज पर उधार दिया जाता है, दूसरे वर्ष और तीसरे वर्ष के लिए चक्रवृद्धि ब्याज के मध्य कितना अंतर है?

A. ₹544

B. ₹445.44

C. ₹454.88

D. ₹548

Ans. B

Sol.

$$\text{Amount after } 1^{\text{st}} \text{ year} = 15000(1+16/100) = \text{Rs. } 17400$$

$$\text{Amount after } 2^{\text{nd}} \text{ year} = 17400(1+16/100) = \text{Rs. } 20184$$

$$\text{Amount after } 3^{\text{rd}} \text{ years} = 20184(1+16/100) = 23413.44$$

$$\begin{aligned} \text{Interest for } 2^{\text{nd}} \text{ year} &= \text{amount after 2 years} \\ &- \text{amount after 1 year} = 20184 - 17400 = \text{Rs. } 2784 \end{aligned}$$

$$\begin{aligned} \text{Interest for } 3^{\text{rd}} \text{ year} &= \text{amount after 3 years} \\ &- \text{amount after 2 year} = 23413.44 - 20184 = 3229.44 \end{aligned}$$

$$\text{Difference in interest} = 3229.44 - 2784 = \text{Rs. } 445.44$$

75.एक व्यक्ति एक वस्तु को 8% की हानि पर बेचता है, यदि वह इसे 10.5% के लाभ पर बेचता तो उसे 92.50 रु अधिक प्राप्त होते। 12% लाभ प्राप्त करने के लिए उसे इस वस्तु को कितनी कीमत पर बेचना चाहिए?

A. ₹ 540.50

B. ₹560

C. ₹580

D. ₹537.40

Ans. B

Sol.

$$\begin{aligned} \text{Let the cost price be } 100 \text{ units and is sold at } 8\% \text{ loss, selling price (sp)} &= 100 \times 92/100 \\ &= ₹92 \end{aligned}$$

$$\begin{aligned} \text{Further } 10.5\% \text{ gain, selling price} &= 100 \times 110.5/100 \\ &= ₹110.5 \end{aligned}$$

According to the question, difference in selling prices is Rs.92.5

$$\text{So, } 110.5 - 92 = 18.5$$

$$18.5 \text{ unit} = 92.5$$

$$1 \text{ unit} = \text{Rs. } 5$$

$$\text{Therefore, cost price will be } = 100 \times 5 = 500$$

At 12% gain, selling price will be
= $500 \times \frac{112}{100}$
= 560

76. Select the wrongly spelt word.

- A. contamporary
- B. cooperation
- C. controversial
- D. conquer

Ans. A

Sol. Option A has the wrongly spelt word. The correct spelling of the word is '**contemporary**' and it means 'living or occurring at the same.'

77.

|||Common||| **Direction:** Given below are four jumbled sentences. Select the option that gives their correct order. |||End|||

- 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 of China and US combined.
 - D) The reason is that at 24 per cent, India uses the most groundwater drawn out globally.
- A. BADC
 - B. ACBD
 - C. ADCB
 - D. BDAC

Ans. A

Sol. The sentence B is the first sentence as it introduces the theme of the passage i.e. 'water crisis suffered by India'. The sentence A should follow the sentence B as it further gives the number of people

living in areas of high to extreme water stress. The sentence D tells the reason of water crisis, hence, becomes the third sentence in the passage. The sentence C finally concludes the passage aptly. Hence, **option A** is the correct answer.

78.

|||Common||| **Direction:** Select the synonym of the given word. |||End|||

TRIUMPH

- A. fight
- B. victory
- C. attack
- D. peace

Ans. B

Sol. The meanings of the given words are:
Triumph: a great victory or achievement.

Fight: take part in a violent struggle involving the exchange of physical blows or the use of weapons.

Victory: an act of defeating an enemy or opponent in a battle, game, or other competition.

Attack: take aggressive military action against (a place or enemy forces) with weapons or armed force.

Peace: freedom from disturbance; tranquillity.

Therefore, **option B** is the correct answer.

79.

|||Common||| **Direction:** Select the correct passive form of the given sentence. |||End|||

At night, lock the outer gate.

- A. The outer gate is requested to be locked at night.
- B. The outer gate be locked at night.
- C. Let the outer gate be locked at night.

D. The outer gate is locked at night.

Ans. A

Sol. The following rules should be considered while changing active form to passive voice:

- The places of subject and object will be interchanged in the sentence.
- Only 3rd form of the verb or Past Participle will be used as a main verb in the Passive Voice.

Therefore, **option A** correctly provides the passive form of the given sentence.

80.

|||Common||| **Direction:** Given below are four jumbled sentences. Select the option that gives their correct order. |||End|||

A) Mango, the so-called "king of fruits", is something of 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.

A. ADBC

B. CDAB

C. CADB

D. ADCB

Ans. A

Sol. The sentence A is the first sentence as it introduces the theme of the passage i.e. 'mangoes'. The sentence D should follow the sentence A as it further tells about the year which proved to be a very good year for mango lovers. The sentence B should be the third sentence as it tells the reason for the good year for mango

lovers. Finally, the sentence C concludes the passage aptly. Hence, **option A** is the correct answer.

81.

|||Common||| **Direction:** Select the most appropriate word to fill in the blank. |||End|||

The burning of the effigy of Ravana on Dussehra_____the burning of all evils.

A. epitomizes

B. intensifies

C. personifies

D. symbolizes

Ans. D

Sol. The sentence implies that the burning of the effigy of Ravana on Dussehra represents the burning of all evils.

'Symbolize' means 'be a symbol of' and it fits best in the context of the sentence. Therefore, **option D** is the correct answer.

82.

|||Common||| **Direction:** In the sentence identify the segment which contains the grammatical error. |||End|||

Every employee of the company were given a two bedroom flat as Diwali bonus.

A. as Diwali bonus

B. a two bedroom flat

C. Every employee

D. were given

Ans. D

Sol. 'Were given' is erroneous because the pronoun 'every' is always followed by a singular verb. Therefore, 'were' must be replaced with 'was' to form a grammatically correct answer.

Hence, **option D** is the correct answer.

83.

|||Common||| **Direction:** Select the antonym of the given word. |||End|||

AGONY

- A. anxiety
- B. distress
- C. comfort
- D. misery

Ans. C

Sol. The meanings of the given words are:

Agony: extreme physical or mental suffering.

Anxiety: a feeling of worry, nervousness, or unease about something with an uncertain outcome.

Distress: extreme anxiety, sorrow, or pain.

Comfort: a state of physical ease and freedom from pain or constraint.

Misery: a state or feeling of great physical or mental distress or discomfort.

Therefore, **option C** is the correct answer.

84.

|||Common||| **Direction:** Select the synonym of the given word. |||End|||

INDELIBLE

- A. illegal
- B. illegible
- C. inerasable
- D. ineffective

Ans. C

Sol. The meanings of the words are:

Indelible: (of ink or a pen) making marks that cannot be removed.

Illegal: contrary to or forbidden by law, especially criminal law.

Illegible: not clear enough to be read.

Inerasable: incapable of being erased.

Ineffective: not producing any significant or desired effect.

Therefore, **option C** is the correct answer.

85.

|||Common||| **Direction:** Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No. improvement. |||End|||

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

- A. am try to solve
- B. have been trying to solve
- C. tried to be solving
- D. No improvement

Ans. B

Sol. The tense of the underlined segment is incorrect. Present perfect continuous tense should be used here.

The present perfect continuous tense (also known as the present perfect progressive tense) shows that something started in the past and is continuing at the present time. The present perfect continuous is formed using the construction **has/have been + the present participle (root + -ing)**.

Therefore, **option B** is the correct answer.

86.

|||Common||| **Direction:** In the sentence identify the segment which contains the grammatical error. |||End|||

Cyclone Idai is regarded as one of the worst tropical cyclone on record to affect Africa and the Southern Hemisphere as a whole.

- A. cyclone Idai is regarded
- B. the worst tropical cyclone

- C. as a whole
- D. to affect Africa

Ans. B

Sol. 'The worst tropical cyclone' is erroneous. The noun following the phrase "one of the" is always a plural noun.

Therefore, 'cyclone' must be replaced with '**cyclones**' to resolve disagreement with the noun phrase.

Hence, **option B** is the correct answer.

87.

|||Common||| **Direction:** Select the most appropriate word to fill in the blank. |||End|||
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.

- A. salvation
- B. guarding
- C. supervision
- D. conservation

Ans. D

Sol. The wildlife is facing threat; hence, it should be protected from the human activities.

'**Conservation**' meaning 'preservation, protection, or restoration of the natural environment and of wildlife' is the apt fit for the blank.

Hence, **option D** is the correct answer.

88.

|||Common||| **Direction:** Select the correct active form of the given sentence. |||End|||
The children were brought up with great care.

- A. They had brought up their children with great care.

B. Their children brought them up with great care.

C. They brought up their children with great care.

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

Ans. C

Sol. The following rules should be considered while changing passive form to active voice:

- Identify the subject of the sentence - who is doing an action?
- Rewrite the sentence so the subject is performing the action.

Therefore, **option C** correctly provides the active form of the given sentence.

89. Select the wrongly spelt word.

- A. Explain
- B. Except
- C. Expire
- D. Expereince

Ans. D

Sol. Option D has the incorrectly spelt word. The correct spelling is '**experience**' which means 'practical contact with and observation of facts or events'.

Therefore, **option D** is the correct answer.

90.

|||Common||| **Direction:** 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 (###Q1###) the country's elite and its middle class. Sun Yan, the deputy general-secretary of Beijing

Racing Pigeons Association, (###Q2###) that at least 100,000 pigeon breeders live in Beijing, and (###Q3###) 90,000 of them are registered with Racing Pigeons Associations at (###Q4###) levels, to qualify for the games held in the spring and autumn. Competitions can be lucrative for (###Q5###) 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.

|||End|||

Select the most appropriate option for blank No.5. A. pigeons

B. birds

C. animal

D. bird

Ans. D

Sol. The passage is about pigeons. Hence, 'bird' is the apt fit for the blank. Therefore, **option D** is the correct answer.

91. Select the most appropriate option for blank No.4.

A. different

B. differed

C. differential

D. differ

Ans. A

Sol. The blank needs an adjective to modify the noun 'levels' which means 'distinct'. 'Different' meaning 'not the same as another or each other; unlike in nature, form, or quality' is the apt fit for the blank. Hence, **option A** is the correct answer.

92.

|||Common||| **Direction:** 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 (###Q1###) the country's elite and its middle class. Sun Yan, the deputy general-secretary of Beijing Racing Pigeons Association, (###Q2###) that at least 100,000 pigeon breeders live in Beijing, and (###Q3###) 90,000 of them are registered with Racing Pigeons Associations at (###Q4###) levels, to qualify for the games held in the spring and autumn. Competitions can be lucrative for (###Q5###) 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.

|||End|||

Select the most appropriate option for blank No.3. A. utmost

B. almost

C. nearby

D. exact

Ans. B

Sol. We need a word which goes with 'at least' specified in the first part of the sentence. 'At most' meaning 'not more than' is the apt fit for the blank.

Hence, **option B** is the correct answer.

93. Select the most appropriate option for blank No.2.

A. said

B. clarified

C. told

D. advised

Ans. A

Sol. The sentence implies that Sun Yan, the deputy general-secretary of Beijing Racing Pigeons Association, conveyed that at least 100,000 pigeon breeders live in Beijing.

Out of the given options, '**said**' meaning 'utter words so as to convey information, an opinion, a feeling or intention, or an instruction' is the apt word to fill in the blank. Hence, **option A** is the correct answer.

94.

Select the most appropriate option for blank No.1.

- A. against
- B. along
- C. among
- D. about

Ans. C

Sol. The blank needs a preposition which implies 'occurring in or shared by (some members of a group or community)'. '**Among**' means the same.

Therefore, **option C** is the correct answer.

95.

|||Common||| **Direction:** Select the most appropriate meaning of the given idiom.

|||End|||

Pull yourself together

- A. go to sleep
- B. calm down
- C. try to understand
- D. do a good job

Ans. B

Sol. The phrase 'pull yourself together' means 'to recover control of one's emotions'.

For example: You've got to pull yourself together and find a job.

Therefore, **option B** is the correct answer.

96.

|||Common||| **Direction:** Select the word which means the same as the group of words given. |||End|||

An inscription on a tombstone written in memory of the deceased

- A. pillar
- B. epitaph
- C. slab
- D. basilica

Ans. B

Sol. The meanings of the words are:

Pillar: a tall vertical structure of stone, wood, or metal, used as a support for a building, or as an ornament or monument.

Epitaph: a phrase or form of words written in memory of a person who has died, especially as an inscription on a tombstone.

Slab: a large, thick, flat piece of stone or concrete, typically square or rectangular in shape.

Basilica: a large oblong hall or building with double colonnades and a semicircular apse, used in ancient Rome as a law court or for public assemblies.

Therefore, **option B** is the correct answer.

97.

|||Common||| **Direction:** Select the antonym of the given word. |||End|||

EMINENT

- A. Exalted
- B. Inconspicuous
- C. Impressive
- D. Distinguished

Ans. B

Sol. The meanings of the words are:

Eminent: (of a person) famous and respected within a particular sphere.

Exalted: (of a person or their rank or status) at a high or powerful level.

Inconspicuous: not clearly visible or attracting attention.

Impressive: evoking admiration through size, quality, or skill; grand, imposing, or awesome.

Distinguished: very successful, authoritative, and commanding great respect.

Therefore, **option B** is the correct answer.

98.

99.

|||Common||| **Direction:** Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement. |||End|||

If you listen to the English news, it improve your English.

- A. it is improving
- B. it will improve
- C. it improved
- D. No improvement

Ans. B

Sol. The given sentence is an example of first conditional sentences. The first conditional is a structure we use when we want to talk about possibilities in the present or in the future. The first conditional has simple present after 'if' or 'when', then the simple future in the other clause. Hence, **option B** is the correct answer.

|||Common||| **Direction:** Select the most appropriate meaning of the given idiom.

|||End|||

Give someone the cold shoulder

- A. Ignore someone
- B. give away a secret
- C. do something pointless
- D. pamper someone

Ans. A

Sol. If someone gives you the cold shoulder, they deliberately stop being friendly to you and ignore you.

For example: He was upset to find his previously friendly colleagues giving him the cold shoulder.

100.

|||Common||| **Direction:** Select the word which means the same as the group of words given. |||End|||

An enclosure to keep the birds in

- A. Aviary
- B. Apiary
- C. Stable
- D. Sanctuary

Ans. A

Sol. The meanings of the words are:

Aviary: a large cage, building, or enclosure for keeping birds in.

Apiary: a place where bees are kept; a collection of beehives.

Stable: a building set apart and adapted for keeping horses.

Sanctuary: a nature reserve.

Therefore, **option A** is the correct answer.