

1. किस देश ने वस्तु एवं सेवा कर सबसे पहले लागू किया था?

- A. कनाडा
- B. फ्रांस
- C. जर्मनी
- D. युएसए

Ans. B

Ans.

* **France**-The first country to implement GST in 1954.

* Today 160 countries have GST/VAT.

* Most European countries introduced GST back in the 1970s-80s,

* *The US is the only major economy that does not have GST. States enjoy high autonomy in taxation.*

* *China implemented GST in 1994 while Russia did it in 1991.*

2. पेड़ों की प्रसिद्ध प्रजाति 'सुंदरी' _____ में पायी जाती है।

- A. मैंग्रोव वन
- B. उष्णकटिबंधीय पर्णपाती वन
- C. हिमालय पर्वत
- D. उष्णकटिबंधीय वर्षावन

Ans. A

Ans.

* **Sundri is a small or medium-sized evergreen tree** which is found in the inland zone of mangrove forests in India.

* The Botanical name of Sundri is *Heritiera littoralis* Ait.

* In India, This tree is found in the inland zone of mangrove forests along the coasts

of peninsular India, the Sundarban in West Bengal state and the Andaman Islands it is often planted in gardens.

3. श्रृंखलन (catenation) का गुण _____ में प्रबल होता है।

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

Ans. D

Ans.

* In chemistry, **catenation is the bonding of atoms of the same element into a series**, called a chain.

* A chain or a ring shape may be open if its ends are not bonded to each other, or closed if they are bonded in a ring (a cyclic compound).

* **Catenation occurs most readily with carbon**, which forms covalent bonds with other carbon atoms to form longer chains and structures.

* This is the reason for the presence of the vast number of organic compounds in nature.

4. फिनलैंड के हेलसिंकी में आयोजित 38 वीं जीबी (Gee Bee) मुक्केबाजी टूर्नामेंट में भारत के लिए एकमात्र स्वर्ण पदक किसने जीता?

- A. नवीन कुमार
- B. कविंदर सिंह बिष्ट
- C. मोहम्मद हुस्सामुद्दीन

D. शिव थापा

Ans. B

Ans.

* The 38th GeeBee Boxing Tournament was **held at Helsinki, Finland.**

* The lone gold medal for India **was won by Kavinder Singh Bisht.**

* He won against Indian counterpart Mohammed Hussamuddin in summit clash in the 56kg category.

* Mohammed Hussamuddin settled for silver.

5.ओलंपिक काउंसिल ऑफ एशिया (ओसीए) ने _____ को 2018 में हटाए जाने के बाद हांगजॉ, चीन में आयोजित होने वाले एशियाई खेल, 2022 में फिर से शुरू करने का फैसला किया है।

A. फूटबॉल

B. फेंसिंग

C. क्रिकेट

D. वॉलीबॉल

Ans. C

Ans.

* The Olympic Council of Asia (OCA) has decided to **reintroduce Cricket** in the 2022 Asian Games to be held at Hangzhou, China.

* Earlier Cricket had featured in 2010 and 2014 Asian Games but was dropped from the 2018 Asian Games.

6.निम्नलिखित में से किस स्थान पर वोडेयार राजवंश का शासन था?

A. पटना

B. मैसूर

C. जबलपुर

D. गुवाहाटी

Ans. B

Ans.

* The Wadiyar dynasty is an Indian Hindu dynasty that **ruled the Kingdom of Mysore from 1399 to 1947.**

* The dynasty was established in 1399 by Yaduraya Wodeyar. He ruled Mysore under the Vijayanagara Empire until 1423.

* After Yaduraya Wodeyar, the Mysore kingdom was succeeded by the Wadiyar rulers. The kingdom remained fairly small during this early period and was a part of the Vijayanagara Empire.

7.मलिमथ समिति की रिपोर्ट निम्नलिखित में से किससे संबंधित है?

A. आपराधिक न्याय प्रणाली सुधार

B. कपड़ा क्षेत्र सुधार

C. शेयर बाजार सुधार

D. न्यायिक विलंब

Ans. A

Ans.

* The Malimath committee gave 158 recommendations but these were not implemented by the successive govt. Recommendations of the committee

- a) It is the duty of state to protect the fundamental rights of all citizen.
- b) The Committee recommended **for the review and re-enactment of the IPC, CrPC** (Criminal Procedure Code) and Evidence Act and these laws should take a holistic view in respect to punishment, assestability and bailability.

8.1564 में मुगल सेनाओं से लड़ते हुए गढ़ कंटगा का बचाव करने के दौरान किस रानी की मृत्यु हो गई?

- A. रानी अवन्तीबाई
B. रानी दुर्गावती
C. रानी रुद्राबरा
D. रानी अहिल्याबाई

Ans. B

Ans.

* **रानी दुर्गावती की 1564 में गढ़ कंटगा की रक्षा के लिए मुगलों के खिलाफ लड़ते हुए मृत्यु हो गई।**

* रानी दुर्गावती 1550 से 1564 तक गोंडवाना की एक शासक रानी थीं। उनका जन्म चंदेल राजा कीरत राय के परिवार में हुआ था। उनका जन्म कालिंजर के किले में हुआ था।

9. मिथाइल प्रोपेन निम्नलिखित में से किस का एक समावयव है?

- A. एन-ब्यूटेन
B. एन-पेंटेन
C. एन-हेक्सेन
D. एन-प्रोपेन

Ans. A

Ans. A

Ans.

* **Butane or C₄H₁₀ has two structural isomers called normal butane and isobutane, or i-butane.**

* According to IUPAC nomenclature, these isomers are called butane and 2-methylpropane.

* Isomers are molecules that have the same molecular formula but different chemical structures.

* In the case of butane, its two isomers will have these structural formulas.

10. दोराबजी टाटा द्वारा 'टाटा आयरन एंड स्टील कंपनी (टिस्को)' की स्थापना किस वर्ष में की गई?

- A. 1913
B. 1919
C. 1911
D. 1907

Ans. D

Ans.

* **TISCO was born in 1907.**

* In 1907, TATA Team finally chooses Sakchi village in present-day Jharkhand, which has since grown into the steel town of Jamshedpur.

11. इकोनोमिस्ट इंटेलिजेंस यूनिट 'वर्ल्डवाइड कॉस्ट ऑफ लिविंग सर्वे 2019' के

अनुसार, निम्नलिखित में से कौन-सा शहर भारत के तीन सबसे सस्ते शहरों में से एक नहीं है?

- A. नई दिल्ली
- B. मुंबई
- C. बंगलुरु
- D. चेन्नई

Ans. B

Ans.

* According to economist intelligence unit report 2019 in most cheap cities india has **three cities which are Bengluru, delhi and Chennai.**

* Bengaluru, Chennai, and New Delhi ranked among the world's ten cheapest cities in a ranking released by EIU.

* Amongst the most expensive cities in the world, Singapore and Hong Kong topped the rankings, along with Paris, followed by Zurich and Geneva.

12.19 मार्च से 4 अप्रैल, 2019 तक आयोजित हुई भारत-इंडोनेशिया समन्वित गश्ती (इंड-इंडो कोपर्ट) के _____ संस्कारण का उदघाटन पोर्ट ब्लेयर, अंडमान निकोबार द्वीप समूह में किया गया।

- A. 33
- B. 23
- C. 45
- D. 42

Ans. A

Ans.

* **The 33rd edition of India-Indonesia coordinated patrol (IND-INDO CORPAT)** was inaugurated at Port Blair, Andaman & Nicobar Islands.

* The IND-INDO CORPAT 2019 is held from 19 Mar to 04 Apr 2019.

* Navies of both countries have been carrying out coordinated patrolling twice a year since 2002 in an effort to keep the Indian Ocean region (IOR) safe and secure for commercial shipping and international trade.

13.बुरी आत्माओं को भगाने के लिए बौद्धों द्वारा किया जाने वाला _____ नृत्य हिमाचल प्रदेश के नृत्य का एक रूप है।

- A. गोगरा
- B. छम
- C. धाम
- D. नाट्य

Ans. B

Ans.

* **The Cham Dance** is a vibrant masked and costumed ritual with roots in Buddhism.

* The ritual is performed for the greater good of humanity, destruction of bad spirits and for moral instruction to viewers.

14.उच्चतम न्यायालय के पहले न्यायधीश का नाम बताइए, जिनके खिलाफ स्वतंत्र भारत में संसद में महाभियोग का प्रस्ताव पेश किया गया था।

- A. जस्टिस रामसवामी
- B. जस्टिस महाजन
- C. जस्टिस वीरस्वामी
- D. जस्टिस सुब्बा राव

Ans. A

Ans.

* **Veeraswami Ramaswami** was a judge of the Supreme Court of India and the first judge against whom removal proceedings were initiated in independent India.

* The removal motion was placed in the Lok Sabha for debate and voting on 10 May 1993. Well known lawyer and a Congress politician Kapil Sibal was his defence lawyer.

* Of 401 members present in the Lok Sabha that day, there were 196 votes for impeachment and no votes against and 205 abstentions by ruling Congress and its allies.

15. निम्न में से कौन-सा तत्व एक उपधातु है?

- A. टिन
- B. सिलिकोन
- C. फोस्फोरस
- D. बिस्मूथ

Ans. B

Ans.

* A metalloid is a chemical element that exhibits some properties of metals and some of non metals.

* **Boron, silicon, germanium, arsenic, antimony, tellurium, and polonium are metalloids.**

* Metalloids tend to be semiconductors and silicon is the best known example of a semiconductor.

* Most microchips and microprocessors are made with silicon.

16. किस गैस को उसकी ठोस अवस्था में शुष्क बर्फ भी कहा जाता है?

- A. कार्बन डाइऑक्साइड
- B. ऑक्सीजन
- C. नाइट्रोजन
- D. हाइड्रोजन

Ans. A

Ans.

* **Dry Ice is the common name for solid carbon dioxide (CO₂).**

* It gets this name because it does not melt into a liquid when heated; instead, it changes directly into a gas (This process is known as sublimation).

17. 1026 ईस्वी में प्रसिद्ध सोमनाथ मंदिर पर हमला और लूटपाट किसने की?

- A. मुहम्मद गौरी
- B. महमूद गजनी
- C. चंगेज खान
- D. नादिर शाह

Ans. B

Ans.

* In 1025 AD, Somnath Temple was destroyed and plundered by the Afghan ruler, **Mahmud of Ghazni**.

* The temple was dedicated to Lord Shiva, was rebuilt by the Paramara king Bhoja of Malwa and the Solanki king Bhimdev I of Anhilwara between 1026 and 1042 AD.

18. पुडुचेरी में पहली महिला पुलिस महानिदेशक कौन थी?

- A. किरण बेदी
- B. अशथी तांग
- C. सुंदरी नंदा
- D. कंचन चौधरी

Ans. C

Ans.

* Puducherry will have its first woman Director General of Police (DGP) **with S Sundari Nanda being appointed to the top post in 2019.**

* Sundari Nanda, a 1988 batch police officer belonging to the AGMU cadre has been transferred from National Capital Territory of Delhi (NCTD) and posted as Director General of Police (DGP) of Union Territory of Puducherry.

* Kiran Bedi, the first woman IPS officer of the country, is the Lt Governor of the Union Territory.

19. निम्नलिखित में से किस पदार्थ का ओडिशा की बदमपहाड़ खानों में खनन किया जा रहा है?

- A. हेमेटाइट
- B. ऐयूराइट
- C. डोलोमाइट
- D. बॉक्साइट

Ans. A

Ans.

* The Iron ore deposits are found in **Badampahar mines of Odisha** and Kudremukh deposits of Karnataka.

* In **Badampahar** high grade hematite ores are found.

20. _____ फेसबुक के संस्थापक हैं।

- A. जिमी वेल्स
- B. ब्रायन ऐक्टन
- C. लैरी पेज
- D. मार्क जुकरबर्ग

Ans. D

Ans.

* Facebook, Inc. is an American online social media and social networking service company based in California.

* It was founded by **Mark Zuckerberg**.

* It acquired Instagram, WhatsApp, Oculus, and GrokStyle and independently developed Facebook Messenger, Facebook Watch, and Facebook Portal.

21. 1876 में कलकत्ता में _____ द्वारा इंडियन नेशनल एसोसिएशन की स्थापना की गयी थी।

- A. वी. के. चिपलंकर
- B. आनंद मोहन बोस
- C. शिशिर कुमार घोष
- D. बदरुद्दीन तैयबजी

Ans. B

Ans.

* Indian National Association was the first declared Nationalist Organization founded in British India by **Surendranath Banerjee and Anand Mohan Bose in 1876.**

* It was originally established as Bharat Sabha and held its first annual conference in Calcutta.

* It merged in INC in 1885.

22. खेल नृत्य रूप 'थोडा' का संबंध किस राज्य से है?

- A. आंध्र प्रदेश
- B. सिक्किम
- C. हिमाचल प्रदेश
- D. हरियाणा

Ans. C

Ans.

* **Thoda is a sports dance belongs to Sikkim.**

* Thoda, a game of archery where the target is a dancing human, is played between two teams called pasha and saatha who identify themselves as descendants of Pandavas and Kauravas.

* Himachal Pradesh Chief Minister Virbhadra Singh recently announced the

state's traditional Thoda dance would be included in the rural games.

23. मुसी तथा भीमा _____ नदी की सहायक नदियां हैं।

- A. ब्रह्मपुत्र
- B. महानदी
- C. कावेरी
- D. कृष्णा

Ans. D

Ans.

* **Major tributaries of kaveri are** -Bhima River, Tungabhadra River, Koyna River, Musi River, Malaprabha River, Kundali River, Ghataprabha River, Yerla River and Warna River

* Krishna River originates in the Western Ghats and conjoins the sea in the Bay of Bengal at Hamasaledevi in Andhra Pradesh.

* It flows through the states of Maharashtra, Karnataka and Andhra Pradesh.

24. जे जे थॉमसन को _____ की खोज के लिए भौतिकी में नोबेल पुरस्कार प्राप्त हुआ।

- A. इलेक्ट्रॉन
- B. पोजीट्रॉन
- C. प्रोटोन
- D. न्यूट्रोन

Ans. A

Ans.

* **J.J. Thomson, An** English physicist who helped revolutionize the knowledge of atomic structure by his discovery of the electron (1897).

* He received the Nobel Prize for Physics in 1906 and was knighted in 1908.

25.मार्च, 2019 में मनोहर पर्रिकर के निधन के बाद गोवा के नए मुख्यमंत्री के रूप में किसने शपथ ली?

- A. एच डी कुमारस्वामी
- B. अशोक गहलोट
- C. वसुंधरा राजे
- D. प्रमोद सावंत

Ans. D

Ans.

* **Pramod Pandurang Sawant** is an Indian politician who is the 13th and current Chief Minister of Goa.

* Sawant represents the Sanquelim constituency in the Goa Legislative Assembly and is a member of the Bharatiya Janata Party. He is a Ayurveda practitioner by profession.

26.उस समुच्चय का चयन कीजिए जिसमें संख्याएँ उसी तरह आपस में संबंधित हैं जिस प्रकार संख्याएँ नीचे दिए गए समुच्चय में आपस में संबंधित हैं।

- (3, 24, 4)
- A. (2, 30, 8)
- B. (12, 84, 4)
- C. (6, 35, 11)

D. (4, 72, 9)

Ans. D

Ans.

$$3 \times 4 = 12 \times 2 = 24$$

Similarly,

$$4 \times 9 = 36 \times 2 = 72$$

Hence, (d) is the correct response

27.नीचे दिए गए समीकरण को सही करने के लिए किन दो चिन्हों को आपस में बदला जाना चाहिए

$$12 - 8 + 12 \times 9 \div 3 = 9$$

A. - और ÷

B. + और ÷

C. + और ×

D. + और -

Ans. B

Ans.

According to the question,

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

$$12 - 8 \div 12 \times 9 + 3 \text{ (applying BODMAS)}$$

$$\Rightarrow 12 - 2 \times 3 + 3$$

$$\Rightarrow 12 - 6 + 3$$

$$\Rightarrow 15 - 6$$

$$\Rightarrow 9$$

Hence, the correct option is (b)

28.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।

3, 7, 16, 35, ?, 153

- A. 74
- B. 78
- C. 63
- D. 84

Ans. A

Ans.

The series will be,

$$3 \times 2 = 6, 6 + 1 = 7$$

$$7 \times 2 = 14, 14 + 2 = 16$$

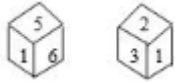
$$16 \times 2 = 32, 32 + 3 = 35$$

$$35 \times 2 = 70, 70 + 4 = 74$$

$$74 \times 2 = 148, 148 + 5 = 153$$

Hence, (a) is the correct option.

29. एक ही पासे की दो भिन्न स्थितियों को दर्शाया गया है। यदि संख्या 6 निचले फलक पर है तो ऊपरी फलक पर कौन-सी संख्या होगी?



- A. 3
- B. 4
- C. 2
- D. 5

Ans. C

Ans.

Moving in clockwise direction

Cube 1- 1 5 6

Cube 2- 1 3 2

Clearly, 6 is opposite to 2.

Hence, the correct option is (c)

30. जिस प्रकार 'अधिवक्ता' का संबंध 'न्याय' से है उसी प्रकार 'मध्यस्थ' का संबंध _____ से है।

- A. समझौता
- B. संचार
- C. निर्णय
- D. अन्याय

Ans. A

Ans.

Advocate helps in provide justice.

Similarly, mediator helps in agreement.

Option (a) is correct.

31. नीचे दो कथन दिए गए हैं और उसके बाद निष्कर्ष I, II और III दिए गए हैं। कथन को सत्य मानते हुए, चाहे वह सामान्यतः ज्ञात तथ्यों से भिन्न प्रतीत होते हों, आपको या निर्णय करना है कि दिए गए कथनों से कौन-सा निष्कर्ष तर्कसंगत रूप से निकलता है।

कथन :

सभी शासक मशीने हैं।

कुछ मशीने महंगी वस्तुएँ हैं।

निष्कर्ष :

I. कुछ शासक महंगी वस्तुएँ हैं।

II. कुछ महंगी वस्तुएं मशीने हैं।

III. सभी महंगी वस्तुएं मशीने हैं।

A. दोनों निष्कर्ष I और II निकलते हैं।

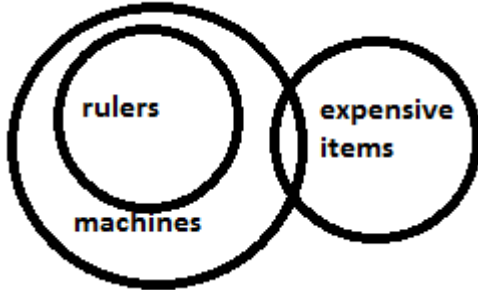
B. दोनों निष्कर्ष II और III निकलते हैं।

C. केवल निष्कर्ष II निकलता है।

D. केवल निष्कर्ष I निकलता है।

Ans. C

Ans.



Conclusion:

I. Some rulers are expensive items.- (false) as there is no relation between them.

II. Some expensive items are machines. - (true) it is given that some machines are expensive items which also means that some expensive items are machines.

III. All expensive items are machines. - (false) it is a possibility case.

Hence, option (c) is correct.

32. निम्नलिखित शब्दों को एक तार्किक एवं अर्थपूर्ण क्रम में व्यवस्थित कीजिए।

1) खरीदना

2) भोजन

3) बाजार

4) सब्जियाँ

5) पकाना

A. 1, 4, 5, 3, 2

B. 4, 5, 3, 1, 2

C. 3, 5, 4, 1, 2

D. 3, 4, 1, 5, 2

Ans. D

Ans.

The logical order of the above words is-

3. Market

4. Vegetables

1. Buying

5. Cook

2. Food

Hence, option (d) [3, 4, 1, 5, 2] is the correct order.

33. 1875 रुपये A, B और C में इस प्रकार विभाजित किए गए हैं कि A का हिस्सा B और C के संयुक्त हिस्से का आधा है और B का हिस्सा A और C के संयुक्त हिस्से का एक-चौथाई है। C का हिस्सा A के हिस्से से कितना अधिक है?

A. ` 200

B. ` 250

C. ` 225

D. ` 500

Ans. B

Ans.

$$2A = B + C \quad (\text{adding A on both sides})$$

$$2A + A = A + B + C$$

$$3A = A + B + C$$

$$3A = 1875$$

$$A = 625$$

$$4B = A + C \quad (\text{adding B on both sides})$$

$$4B + B = A + B + C$$

$$5B = 1875$$

$$B = 375$$

$$C = 1875 - (625 + 375)$$

$$C = 1875 - 1000$$

$$C = 875$$

$$C - A = 875 - 625 = 250$$

Hence, the correct response is option (b)

34. निम्नलिखित चार संख्याओं में से तीन संख्याएँ किसी प्रकार एकसमान हैं और एक संख्या असमान है। उस असमान संख्या का चयन कीजिए।

- A. 254
- B. 217
- C. 126
- D. 189

Ans. A

Ans.

$$6^3 + 1 = 216 + 1 = 217$$

$$5^3 + 1 = 125 + 1 = 126$$

$$9^3 + 1 = 729 + 1 = 730$$

254 does not follow the above pattern.

Therefore, option (a) is different.

35. उस अक्षर संयोजन का चयन कीजिए जिसे नीचे दी गई अक्षर श्रृंखला के रिक्त स्थानों पर क्रमानुसार रखने से दी गई श्रृंखला पूर्ण हो जाए।

b_bab_bc_abbb_ba_b

- A. cbabc
- B. bcbab
- C. cbbcb
- D. cbbac

Ans. C

Ans.

The sequence is - *bcbabb*

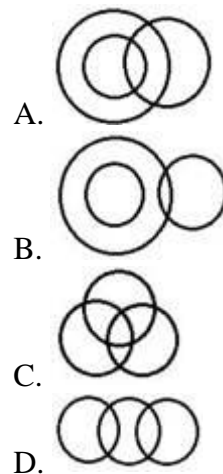
The complete series is as follows-

bcbabb/bcbabb/bcbabb.

The correct option is (c)

36. दी गई श्रेणियों के बीच सर्वश्रेष्ठ संबंध को दर्शाने वाले वें आरेख का चयन कीजिए।

चाचा, रिश्तेदार, धनी



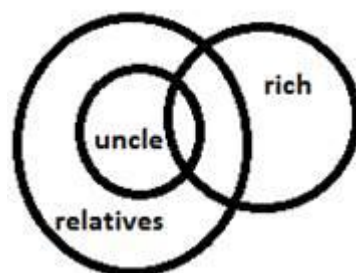
Ans. A

Ans.

Some relatives are uncle but all the uncles are relative.

Some of the relatives as well as uncle are rich.

So the diagram that shows the best relationship between them is-



Option (a) is the correct answer.

37. निम्नलिखित चार-अक्षर समूहों में से तीन अक्षर-समूह किसी प्रकार से एक

समान हैं और एक असमान है | असमान अक्षर-समूह का चयन कीजिए |

- A. CFIL
- B. GHIJ
- C. PSUX
- D. MOQS

Ans. C

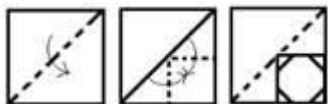
Ans.

C	<u>+3</u>	F	<u>+3</u>	I	<u>+3</u>	L
G	<u>+1</u>	H	<u>+1</u>	I	<u>+1</u>	J
P	<u>+3</u>	S	<u>+2</u>	U	<u>+4</u>	X
M	<u>+2</u>	O	<u>+2</u>	Q	<u>+2</u>	S

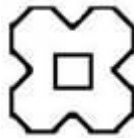
We can see that PSUX is different from others.

Hence, the odd option is (c)

38. एक कागज को मोड़ा गया और नीचे दर्शाए गए अनुसार काटा गया है | इसे खोलने पर यह कैसा दिखाई देगा?



- A.
- B.
- C.



D.

Ans. B

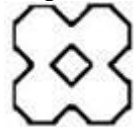
Ans.

The paper is unfolded in 2 steps.

Step-1



Step- 2



Hence, the correct option is (b)

39. यदि नीचे दी गई आकृति के दाएं और दर्पण रखा जाए तो बनने वाले सही दर्पण प्रतिबिंब का चयन कीजिए |



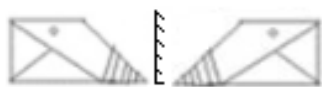
- A.
- B.
- C.
- D.

Ans. B

Ans.

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, the correct answer is option (b)

40. उस समुच्चय का चयन कीजिए जिसमें संख्याएँ उसी तरह आपस में संबन्धित हैं जिस प्रकार संख्याएँ नीचे दिए गए समुच्चय में आपस में संबन्धित हैं।

(9, 35, 16)

A. (36, 55, 25)

B. (25, 30, 4)

C. (81, 65, 36)

D. (16, 50, 64)

Ans. A

Ans.

The relation between the given number set is- the middle number is obtained from the [(difference of first and third number) \times 5]
 $16 - 9 = 7 \times 5 = 35$ (middle number)
 Similarly, $36 - 25 = 11 \times 5 = 55$ (middle number)

Hence, the correct option is (a)

41. आठ व्यक्तियों के एक परिवार में, दो युगल हैं, दोनों युगल के दो-दो बच्चे हैं। B और D भाई हैं और उन दोनों के दो-दो बच्चे हैं। E, A की चाची है, A, C का चचेरा भाई है। C, H की बहन है, H, G का चचेरा भाई है। F, B की पत्नी है। H किस प्रकार F से संबन्धित है?

A. भतीजा

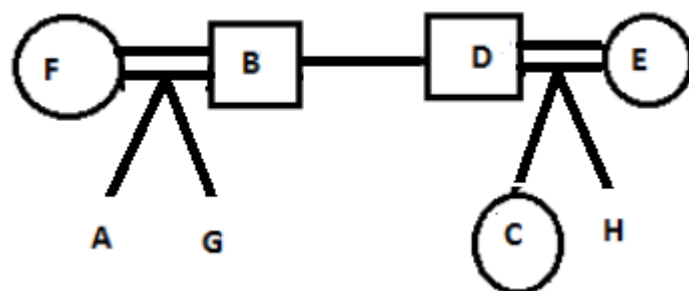
B. दामाद

C. साला

D. पुत्र

Ans. A

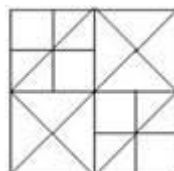
Ans.



Here, circle represents Female, and square represents Male.

From the question, we can't determine the gender of H. So, from the options the most appropriate answer is option (A).

42. नीचे दी गई आकृति में कितने वर्ग हैं?



A. 13

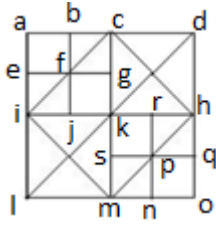
B. 14

C. 12

D. 16

Ans. B

Ans.



The numbers of squares in this figure are - adol, chmi, abef, bcfg, efij, fgjk, acik, iklm, khmo, pqno, krsp, rhpq, spmn, cdkh. Total squares are 14. Hence, (b) is the correct response.

43. किसी कूट भाषा

में, VICTORY को CIVSYRO लिखा जाता है। उसी कूट भाषा में TRAITOR को क्या लिखा जाएगा?

- A. ARTHROT
- B. RATHORT
- C. RTAJORT
- D. ARTJOTR

Ans. A

Ans.

VICTORY coded as CIVSYRO

The pattern of code language is first three letters and last three letters are written in reverse order and the remaining middle letter is replaced by its preceding letter.

Therefore, the code of TRAITOR will be ARTHROT

Option (a) is correct response.

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



परिक्रमण की अनुमति नहीं है

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

Ans. B

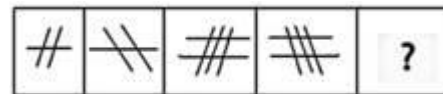
Ans.

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,

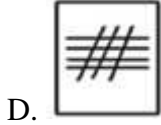
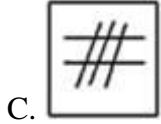


Option (b) is the correct response.

45. निम्नलिखित आकृति श्रृंखला में आने वाली अगली आकृति का चयन कीजिए।



- A.
- B.



Ans. A

Ans.

In the above series, the first figure has one horizontal line intersecting 2 vertical lines and the next figure showing its mirror image.

In the 3rd figure, there is two horizontal lines intersecting 3 vertical lines.

So, according to the above sequence, the next figure is-



Hence, option (a) is correct.

46. दिए गए विकल्पों में से उस शब्द युग्म का चयन कीजिए जिसके दोनों शब्द आपस में उसी प्रकार संबंधित हैं जिस प्रकार नीचे लिखे गए शब्द युग्म के शब्द आपस में संबंधित हैं।

पुस्तक : ज्ञानकोश

A. सरीसृप : अजगर

B. फर्नीचर : लकड़ी

C. टेनिस : बॉल

D. वृक्ष : वन

Ans. A

Ans. As, Encyclopedia is a type of book.

Similarly, Python is a type of reptile.

47. उस संख्या युग्म का चयन कीजिए जिसमें दोनों संख्याएँ आपस में उसी प्रकार संबंधित हैं जिस प्रकार दोनों संख्याएँ नीचे दिए गए संख्या युग्म में आपस में संबंधित हैं।

36 : 84 :: ? : ?

A. 57 : 135

B. 27 : 63

C. 21 : 51

D. 45 : 95

Ans. B

Ans.

36 = 3 x 12

84 = 7 x 12

Similarly,

27 = 3 x 9

63 = 7 x 9

Hence, option (b) is the correct answer

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

CEGI : AGEK :: DFHJ : ?

A. CHFI

B. CGIK

C. BDJK

D. BHFL

Ans. D

Ans.

$$\begin{array}{cccc} C & E & G & I \\ -2 & +2 & -2 & +2 \\ A & G & E & K \end{array}$$

Similarly,

$$\begin{array}{cccc} D & F & H & J \\ -2 & +2 & -2 & +2 \\ B & H & F & L \end{array}$$

Hence, option (d) is correct.

49. यदि DIG को 25 के रूप में और CUT को 49 के रूप में कुतबद्ध किया जाता है तो KICK को किस रूप में कूटबद्ध किया जाएगा?

- A. 43
- B. 34
- C. 41
- D. 39

Ans. D

Ans.

The pattern of the above code language is the sum of place value of all the alphabets of the given word + 5.

$$DIG = 4 + 9 + 7 = 20 + 5 = 25$$

$$CUT = 3 + 21 + 20 = 44 + 5 = 49$$

Similarly,

$$KICK = 11 + 9 + 3 + 11 = 34 + 5 = 39$$

Hence, the correct response is option (d)

50. निम्नलिखित चार शब्दों में से तीन शब्द किसी प्रकार से एक समान हैं और एक शब्द असमान है। असमान शब्द का चयन कीजिए।

- A. मूँगफली
- B. सौंफ
- C. जीरा
- D. सरसों

Ans. A

Ans.

Except *peanut*, all the three are the types of ingredients used in making vegetables.

Hence, the odd word is option (a)

51. $2 \times 3 \div 2$ का $3 \times 2 \div (4 + 4 \times 4 \div 4$ का $4 - 4 \div 4 \times 4)$ का मान है:

- A. 8
- B. 2
- C. 1
- D. 4

Ans. B

Ans.

$$\frac{2 \times 3 \div 2 \text{ of } 3 \times 2 \div (4 + 4 \times 4 \div 4 \text{ of } 4 - 4 \div 4 \times 4)}{4 - 4 \div 4 \times 4}$$

$$= 2 \times 3 \div 6 \times 2 \div (4 + 4 \times 4 \div 16 - 1 \times 4)$$

$$= 2 \times \frac{3}{6} \times 2 \div \left(4 + 4 \times \frac{4}{16} - 4\right)$$

$$= 2 \div (4 + 1 - 4)$$

$$= 2 \div 1$$

$$= 2$$

$$= 2$$

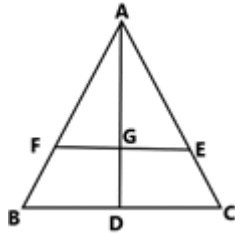
52. $\triangle ABC$ में, AB और AC भुजाओं पर क्रमशः बिंदु F और E इस प्रकार हैं कि $FE \parallel BC$ तथा FE त्रिभुज को समान क्षेत्रफल वाले दो भागों में विभाजित करती

हैं। यदि $AD \perp BC$ और AD , बिंदु G पर FE को काटती हैं तो $GD : AG = ?$

- A. $(\sqrt{2} + 1) : 1$
 B. $(\sqrt{2} - 1) : 1$
 C. $2\sqrt{2} : 1$
 D. $\sqrt{2} : 1$

Ans. B

Ans.



Since, $EF \parallel BC$

$$\frac{AF}{FB} = \frac{AG}{GD} = \frac{AE}{EC}$$

$$\Rightarrow \frac{AF}{AB} = \frac{AG}{AD} = \frac{AE}{AC}$$

Also, $\triangle ABC \sim \triangle AFE$

$$\frac{\text{Area}(\triangle ABC)}{\text{Area}(\triangle AFE)} = \frac{AD^2}{AG^2}$$

$$\frac{AD^2}{AG^2} = \frac{2 \times \text{Area}(\triangle AFE)}{\text{Area}(\triangle AFE)}$$

$$\frac{AD}{AG} = \frac{\sqrt{2}}{1}$$

$$\frac{AD}{AG} - 1 = \frac{\sqrt{2}}{1} - 1$$

$$\frac{DG}{AG} = \frac{(\sqrt{2} - 1)}{1}$$

$$\frac{DG}{AG} = \frac{(\sqrt{2} - 1)}{1}$$

53. एक ट्रक किसी निश्चित गति से 384 km की दूरी तय करता है। यदि गति को 16 km/h कम किया जाता है तो उसी दूरी को

तय करने में दो घंटे अधिक लगेंगे। मूल गति (km/h में) का 75% कितना है?

- A. 54
 B. 42
 C. 45
 D. 48
 Ans. D

Ans. D

Ans.

Let the truck at speed v km/h takes t hrs and at speed $(v-16)$ km/h it takes $(t+2)$ hrs.

Then,

$$384 \left(\frac{1}{t} - \frac{1}{t+2} \right) = v - (v - 16)$$

$$384 \left(\frac{t+2-t}{t(t+2)} \right) = 16$$

$$24 \times \frac{2}{t(t+2)} = 0$$

$$t^2 + 2t - 48 = 0$$

$$(t+8)(t-6) = 0$$

$$t = 6$$

$$\text{Original speed} = \frac{384}{6} = 64 \text{ km/h}$$

75% of original

$$\text{speed} = 64 \times \frac{75}{100} = 48 \text{ km/h}$$

54. तालिका में विभिन्न प्रकार की कारों के उत्पादन को (हजारों में) दर्शाया गया है।

वर्ष/ कारें	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

वर्ष 2013 और 2016 में A प्रकार की कारों के कुल उत्पादन की तुलना में वर्ष 2012, 2014, और 2015 में B प्रकार की कारों का कुल उत्पादन लगभग कितने प्रतिशत अधिक रहा है?

- A. 34.4
- B. 33.2
- C. 31.9
- D. 36.3

Ans. C

Ans.

Production of B type car in 2012, 2014 and 2015 together = $42 + 40 + 38 = 120$ thousand

Production of A type car in 2013 and 2016 = $35 + 56 = 91$ thousand

Required % = $\frac{120-91}{91} \times 100 = 31.86 \approx 31.9\%$

55. बारह संख्याओं का औसत 42 है | अंतिम पाँच संख्याओं का औसत 40 है और पहली चार संख्याओं का औसत 44 है | छठी संख्या, पाँचवीं संख्या से 6 कम है और सातवीं संख्या से 5 कम है | 5 वीं और 7 वीं संख्याओं का औसत क्या होगा?

- A. 44
- B. 44.5
- C. 43
- D. 43.5

Ans. B

Ans.

Sum of twelve number = $12 \times 42 = 504$

Sum of last five numbers = $5 \times 40 = 200$

Sum of first four numbers = $4 \times 44 = 176$

Sum of 5th, 6th and 7th numbers = $504 - (200 + 176)$
= $504 - 376$
= 128

Let 5th, 6th and 7th numbers are (x+6), x and (x+5). Then,

$x + 6 + x + x + 5 = 128$

$3x = 128 - 11$

$x = \frac{117}{3} = 39$

Average of 5th and 7th number

$\frac{x + 6 + x + 5}{2}$
= $\frac{39 + 39 + 11}{2}$
= $\frac{89}{2} = 44.5$

56. तालिका में विभिन्न प्रकार की कारों के उत्पादन को (हजारों में) दर्शाया गया है |

वर्ष/ कारें	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

यदि E प्रकार की कारों के उत्पादन से संबंधित आंकड़ों को पाई-चार्ट के द्वारा दर्शाया जाता है तो 2013 में कारों के

उत्पादन को दर्शाने वाले आंकड़ों का त्रिज्यखंड (सेक्टर) का केंद्रीय कोण होगा:

- A. 102°
- B. 84°
- C. 70°
- D. 80°

Ans. B

Ans.

Total production of E type cars throughout the given years = $20 + 42 + 40 + 35 + 43$
= **180** thousand

Required angle
= $\frac{42}{180} \times 360^\circ$
= $42 \times 2^\circ$
= 84°

57. $\frac{2 + \tan^2 \theta + \cot^2 \theta}{\sec \theta \operatorname{cosec} \theta}$ बराबर है :

- A. $\sec \theta \operatorname{cosec} \theta$
- B. $\cot \theta$
- C. $\tan \theta$
- D. $\cos \theta \sin \theta$

Ans. A

Ans.

$$\frac{2 + \tan^2 \theta + \cot^2 \theta}{\sec \theta \operatorname{cosec} \theta}$$

$$= \frac{\frac{\sec \theta \operatorname{cosec} \theta}{1 + \tan^2 \theta + 1 + \cot^2 \theta}}{\sec \theta \operatorname{cosec} \theta}$$

$$= \frac{\sec^2 \theta + \operatorname{cosec}^2 \theta}{\sec \theta \operatorname{cosec} \theta}$$

$$= \sec \theta \sin \theta + \operatorname{cosec} \theta \cos \theta$$

$$= \frac{\sin \theta}{\cos \theta} + \frac{\cos \theta}{\sin \theta}$$

$$= \frac{\sin^2 \theta + \cos^2 \theta}{\sin \theta \cos \theta}$$

$$= \frac{1}{\sin \theta \cos \theta}$$

$$= \sec \theta \operatorname{cosec} \theta$$

58. चार वर्ष पूर्व A और B की आयु का अनुपात 4 : 5 था। अब से आठ वर्ष बाद A और B की आयु का अनुपात 11 : 13 होगा। उन दोनों की वर्तमान आयु की कुल योग क्या है?

- A. 76 वर्ष
- B. 72 वर्ष
- C. 80 वर्ष
- D. 96 वर्ष

Ans. C

Ans.

Let the ages of A and B four years ago were $4x$ and $5x$

$$\frac{4x + 4 + 8}{5x + 4 + 8} = \frac{11}{13}$$

$$55x - 52x = 156 - 132$$

$$3x = 24$$

$$x = 8$$

Sum of the present ages of A and B
= $4x + 4 + 5x + 4$
= $9x + 8$
= $72 + 8$
= **80**

59. यदि $4 - 2 \sin^2 \theta - 5 \cos \theta = 0$, $0^\circ < \theta < 90^\circ$ है, तो $\sin \theta + \tan \theta$ का मान है :

- A. $\frac{3\sqrt{3}}{3}$
 B. $3\sqrt{2}$
 C. $\frac{3\sqrt{2}}{2}$
 D. $2\sqrt{3}$

Ans. A

Ans.

$$4 - 2 \sin^2 \theta - 5 \cos \theta = 0$$

$$4 - 2(1 - \cos^2 \theta) - 5 \cos \theta = 0$$

$$2 \cos^2 \theta - 5 \cos \theta + 2 = 0$$

$$2 \cos^2 \theta - 4 \cos \theta - \cos \theta + 2 = 0$$

$$(2 \cos \theta - 1)(\cos \theta - 2) = 0$$

$$\therefore -1 \leq \cos \theta \leq 1$$

$$\Rightarrow \cos \theta \neq 2$$

$$\Rightarrow \cos \theta = \frac{1}{2} = \cos 60^\circ$$

$$\Rightarrow \theta = 60^\circ$$

$$\Rightarrow \sin \theta + \tan \theta = \frac{\sqrt{3}}{2} + \sqrt{3} = \frac{3\sqrt{3}}{2}$$

60. यदि नौ अंकों की संख्या $985x367y$, संख्या 72 से विभाज्य है, तो $(4x - 3y)$ का मान होगा :

- A. 4
 B. 6
 C. 5
 D. 3

Ans. A

Ans.

Since the given number is divisible by 72, it must be divisible by 4, 8 and 9. Since, it is divisible by 4, last two digit must be

divisible by 4. So, possible values of y are 0, 4, 8. Since it is divisible by 8, last three digits must be divisible by 8. As 780 and 788 are not divisible by 8, the only possible value of y is 4. Now, since the number is divisible by 9, its sum of digits will be divisible by 9.

$$9 + 8 + 5 + x + 3 + 6 + 7 + 8 + y$$

$$= 46 + x + y$$

$$= 46 + x + 4$$

$$= 50 + x$$

For $x = 4$, 54 is divisible by 9.

$$4x - 3y = 4 \times 4 - 3 \times 4 = 4$$

61. यदि $x + y + z = 19$, $x^2 + y^2 + z^2 = 133$ और $xz = y^2$ है, तो z और x के बीच अंतर है:

- A. 3
 B. 4
 C. 6
 D. 5

Ans. D

Ans.

$$(x + y + z)^2 = x^2 + y^2 + z^2 + 2(xy + yz + zx)$$

$$19^2 = 133 + 2(xy + yz + y^2)$$

$$2y(x + y + z) = 361 - 133$$

$$2y \times 19 = 228$$

$$y = \frac{228}{38} = 6$$

Now,

$$x + z = 19 - y$$

$$x + z = 19 - 6 = 13$$

$$x - z = \sqrt{(x + z)^2 - 4xz}$$

$$= \sqrt{13^2 - 4y^2}$$

$$= \sqrt{169 - 4 \times 36}$$

$$= \sqrt{169 - 144}$$

$$= 5$$

62. किसी व्यक्ति ने एक वस्तु को 15% की हानि पर बेचा। अगर वह उसे 30.60 अधिक पर बेचता तो उसे 9% का लब्ध होता। 10% लाभ प्राप्त करने के लिए, उसे उस वस्तु को कितने में बेचना चाहिए था?

- A. ₹ 128.40
B. ₹ 130
C. ₹ 140.25
D. ₹ 132

Ans. C

Ans.

Let the CP = Rs. 100, then SP = Rs. 85

SP for 9% profit = Rs. 109

Difference in SP = 109 - 85 = 24

When difference = Rs. 24, then CP = Rs. 100

when difference = Rs. 30.6, then CP

$$= 100 \times \frac{30.6}{24} = \frac{3060}{24} = 127.5$$

To get 10% profit,

$$SP = 127.5 \times \frac{110}{100} = \text{Rs. } 140.25$$

63. कोई राशि एक निश्चित प्रतिशत ब्याज दर पर 3 वर्षों में ₹ 8,028 और 6 वर्षों में 12,042 हो जाती है, जब ब्याज वार्षिक संयोजित है। राशि है?

- A. ₹ 5,352
B. ₹ 5,235
C. ₹ 5,253

D. ₹ 5,325

Ans. A

Ans.

$$12042 = P \left(1 + \frac{r}{100}\right)^6 \dots \dots (i)$$

$$8028 = P \left(1 + \frac{r}{100}\right)^3$$

$$(8028)^2 = P^2 \left(1 + \frac{r}{100}\right)^6 \dots \dots (ii)$$

Dividing (ii) by (i), we get

$$P = \frac{8028 \times 8028}{12042}$$

$$= 5352$$

64. तालिका में विभिन्न प्रकार की कारों के उत्पादन को (हजारों में) दर्शाया गया है।

वर्ष/ कारें	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

वर्ष 2014 में A और 2013 में C प्रकार की

कारों के कुल उत्पादन तथा

वर्ष 2016 में B और 2015 में E प्रकार की

कारों के कुल उत्पादन का अनुपात क्या है?

- A. 11 : 12
B. 12 : 11
C. 10 : 11
D. 12 : 13

Ans. D

Ans.

total production of C type cars in year 2013 & A in year 2014 = 36 + 48 = 84 thousand

total production of B in year 2016 & E type cars in 2015 = 56 + 35 = 91

Required ratio = 84:91 = 12:13

65. 13824 cm³ आयतन वाले एक ठोस घन को समान आयतन वाले आठ घनों में काटा जाता है। मूल घन के पृष्ठीय क्षेत्रफल तथा तीन छोटे घनों के पृष्ठीय क्षेत्रफल के कुल योग का अनुपात होगा:

- A. 2 : 3
- B. 2 : 1
- C. 4 : 3
- D. 8 : 3

Ans. C

Ans.

Edge of the original

$$\text{cube} = (13824)^{\frac{1}{3}} = 24$$

Surface area of the original cube

$$= 6(24)^2$$

$$= 6 \times 576$$

$$= 3456$$

Volume of one smaller cube

edge of one smaller

$$\text{cube} = (1728)^{\frac{1}{3}} = 12$$

Total surface area of three smaller cubes

$$= 3 \times 6 \times (12)^2$$

$$= 18 \times 144$$

$$= 2592$$

Required ratio = 3456:2592 = 4:3

66. यदि $x^4 + x^{-4} = 194$, $x > 0$ है, तो $(x - 2)^2$ का मान क्या होगा?

- A. 6
- B. 2
- C. 1
- D. 3

Ans. D

Ans.

$$x^4 + x^{-4} = 194$$

$$x^4 + \frac{1}{x^4} = 194$$

$$x^2 + \frac{1}{x^2} = \sqrt{194 + 2} = 14$$

$$x + \frac{1}{x} = \sqrt{x^2 + \frac{1}{x^2} + 2}$$

$$x + \frac{1}{x} = \sqrt{14 + 2} = 4$$

$$x^2 - 4x + 1 = 0$$

$$x = \frac{4 \pm \sqrt{16 - 4}}{2} = 2 \pm \sqrt{3}$$

$$(x - 2)^2 = 3$$

67. यदि $\sin \theta = \frac{p^2 - 1}{p^2 + 1}$, है, तो $\cos \theta$ बराबर है

:

A. $\frac{2p}{p^2 - 1}$

B. $\frac{2p}{1 + p^2}$

C. $\frac{p}{1 + p^2}$

D. $\frac{p}{p^2 - 1}$

Ans. B

Ans.

$$\sin \theta = \frac{P^2 - 1}{P^2 + 1}$$

$$\cos^2 \theta = 1 - \sin^2 \theta$$

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

$$\cos^2 \theta = 1 - \frac{P^4 - 2P^2 + 1}{P^4 + 2P^2 + 1}$$

$$\cos^2 \theta = \frac{4P^2}{(P^2 + 1)^2}$$

$$\cos \theta = \frac{2P}{P^2 + 1}$$

68. यदि

$$(5\sqrt{5}x^3 - 81\sqrt{3}y^3) \div (\sqrt{5}x - 3\sqrt{3}y)$$

$$= (Ax^2 + By^2 + Cxy) \text{ है, तो}$$

$$(6A + B - \sqrt{15}C) \text{ का मान क्या होगा?}$$

A. 12

B. 15

C. 10

D. 9

Ans. A

Ans.

$$\frac{(5\sqrt{5}x^3 - 81\sqrt{3}y^3)}{(\sqrt{5}x - 3\sqrt{3}y)} = Ax^2 + By^2 + Cxy$$

$$\frac{(\sqrt{5}x - 3\sqrt{3}y)(5x^2 + 3\sqrt{15}xy + 27y^2)}{\sqrt{5}x - 3\sqrt{3}y}$$

$$5x^2 + 3\sqrt{15}xy + 27y^2 = Ax^2 + By^2 + Cxy$$

$$A = 5, B = 27, C = 3\sqrt{15}$$

$$6A + B - \sqrt{15}C = 30 + 27 - 45 = 12$$

69. A, B और C की दक्षताओं का अनुपात 2 :

5 : 3 है। एक साथ काम करने पर वे तीनों

उसे 27 दिनों में पूरा कर सकते

हैं। B और C, दोनों मिलकर उस काम

$\frac{4}{9}$

के $\frac{4}{9}$ वें हिस्से को कितने दिनों में पूरा करेंगे?

A. 15 दिनों में

B. $17\frac{1}{7}$ दिनों में

C. 27 दिनों में

D. 24 दिनों में

Ans. A

Ans.

Ratio of efficiencies, A:B:C = 2:5:3

$$(A + B + C):(B + C) = 10:8 = 5:4$$

$$\frac{M_1 \times D_1}{W_1} = \frac{M_2 \times D_2}{W_2}$$

$$\frac{5 \times 27}{1} = \frac{4 \times D_2}{\frac{4}{9}}$$

$$1 = \frac{4}{9}$$

$$D_2 = \frac{5 \times 27 \times 4}{4 \times 9} = 15$$

$$D_2 = \frac{5 \times 27 \times 4}{4 \times 9} = 15$$

70. ΔABC में $\angle B$ और $\angle C$ के

समद्विभाजक (bisectors) त्रिभुज के अंदर

बिंदु O पर मिलते हैं। यदि $\angle BOC =$

122° है, तो $\angle A$ की माप क्या होगी?

A. 62°

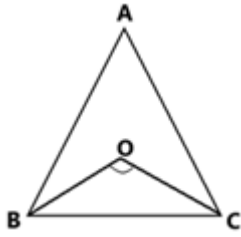
B. 64°

C. 72°

D. 68°

Ans. B

Ans.



$$\angle BOC = 122^\circ$$

$$\angle BOC = 90^\circ + \frac{1}{2} \angle A$$

$$122^\circ - 90^\circ = \frac{1}{2} \angle A$$

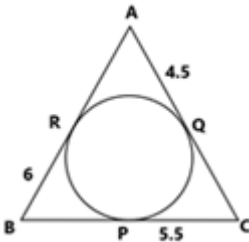
$$\angle A = 2 \times 32^\circ = 64^\circ$$

71. किसी त्रिभुज ABC के अंतर्गत एक वृत्त बनाया गया है | वह AB, BC और AC भुजाओं को क्रमशः R, P और Q बिंदुओं पर स्पर्श करता है | यदि AQ = 4.5 cm, PC = 5.5 cm और BR = 6 cm है, तो त्रिभुज ABC की परिमाप है:

- A. 32 cm
- B. 28 cm
- C. 30.5 cm
- D. 26.5 cm

Ans. A

Ans.



AQ = AR = 4.5 cm, PC = CQ = 5.5 cm,
BR = BP = 6 cm.

Perimeter

$$= AB + BC + AC$$

$$= AR + BR + BP + PC + AQ + QC$$

$$= 4.5 + 6 + 6 + 5.5 + 5.5 + 4.5$$

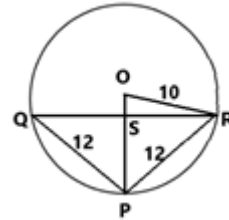
$$= 32 \text{ cm}$$

72. O केंद्र वाले एक वृत्त की त्रिज्या 10 cm है, PQ तथा PR प्रत्येक 12 cm की जीवाएँ हैं | PO, QR जीवा को बिंदु S पर काटती है | OS की लंबाई क्या है?

- A. 3.2 cm
- B. 2.8 cm
- C. 3 cm
- D. 2.5 cm

Ans. B

Ans.



Let OS = x, then

$$OR^2 - OS^2 = PR^2 - PS^2$$

$$10^2 - x^2 = 12^2 - (10 - x)^2$$

$$100 - x^2 = 144 - 100 - x^2 + 20x$$

$$20x = 56$$

$$x = 2.8 \text{ cm}$$

73. तालिका में विभिन्न प्रकार की कारों के उत्पादन को (हजारों में) दर्शाया गया है |

	2012	2013	2014	2015	2016
A	30	35	48	45	56
B	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

वर्षों की संख्या, जिनमें B प्रकार की कारों का उत्पादन, सभी वर्षों में हुए, D प्रकार की

कारों के औसत उत्पादन से कम है, निम्न है:

- A. 2
- B. 3
- C. 1
- D. 4

Ans. A

Ans.

Average production of D type cars during the years 2012 to 2016

$$= \frac{51 + 24 + 30 + 46 + 54}{5}$$

$$= \frac{205}{5} = 41$$

In 2014 and 2015 production of B type cars are less than the average.

74. यदि 120 को $x\%$ कम किया जाए तो वही परिणाम प्राप्त होगा जो 40 को $x\%$ बढ़ाने पर प्राप्त होता है। तब 210 का $x\%$, 180 के $(x + 20)\%$ से कितने प्रतिशत कम होगा?

- A. 18
- B. $16\frac{2}{3}$
- C. 20
- D. $33\frac{1}{3}$

Ans. B

Ans.

$$120 \left(1 - \frac{x}{100}\right) = 40 \left(1 + \frac{x}{100}\right)$$

$$3 - \frac{3x}{100} = 1 + \frac{x}{100}$$

$$\frac{4x}{100} = 2$$

$$x = 50$$

$$x\% \text{ of } 210 = 210 \times \frac{50}{100} = 105$$

$$(x + 20)\% \text{ of } 180 = 180 \times \frac{70}{100} = 126$$

Required

$$\text{percentage} = \frac{126 - 105}{126} \times 100 = 16\frac{2}{3}\%$$

75. किसी वस्तु के अंकित मूल्य पर क्रमिक दो छूट, प्रत्येक $x\%$ देने के बाद कुछ छूट 259.20 है। यदि वस्तु का अंकित मूल्य 720 है, तो x का मान क्या होगा?

- A. 25
- B. 24
- C. 18
- D. 20

Ans. D

Ans.

Two successive discount equivalents to

$$= -x - x + \frac{x^2}{100}$$

$$= -2x + \frac{x^2}{100}$$

Total rate of discount

$$= 259.20 \times \frac{100}{720}$$

$$= 36\%$$

Now,

$$-2x + \frac{x^2}{100} = -36$$

$$x^2 - 200x + 3600 = 0$$

$$x^2 - 180x - 20x + 3600 = 0$$

$$(x - 180)(x - 20) = 0$$

$$x = 20 \text{ or } 180$$

$\Rightarrow x = 20\%$

76.

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

His company has the _____ of producing the best cricket balls in the country.

- A. opinion
- B. reputation
- C. brand
- D. position

Ans. B

Ans. The sentence implies that it is believed that his company produces the best cricket balls in the country.

Reputation means ‘the beliefs or opinions that are generally held about someone or something’. It is the correct filler for the blank. Hence, **option B** is the right answer.

Other words do not produce a logical meaning in the sentence.

77.

|||Common||| 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 park your car here, the traffic police **has fined you**

- A. will fine you
- B. fine you
- C. No improvement
- D. fined you

Ans. A

Ans. The sentence is an example of first conditional sentences. Such sentences are used to show what action one will take in a particular situation. Like in the given sentence, the second clause shows the action of the traffic police when someone parks a car at some location. In such sentences, we use simple present tense with the 'if' clause and simple future tense with the main clause. See the structure below:

if + present simple, ... will + infinitive

Example: If I have money, I will help the needy.

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

78.

|||Common||| 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.

Seoul's city government is asking people for help to correct poorly translated Street signs - with prizes on offer for _____(###Q1###) who spot the most errors. It's running _____(###Q2###) two-week campaign calling on Koreans and foreigners _____(###Q3###) to keep their eyes peeled for _____(###Q4###) in English, Japanese and Chinese text, the Korea Times reports. There's a _____(###Q5###) focus on

public transport signs, maps and information signs at historic sites, as part of a drive to improve the experience of foreign tourists in the South Korean capital. |||End|||

Select the most appropriate option for the blank.

- A. that
- B. this
- C. these
- D. those

Ans. D

Ans. The blank needs a word which refers to the people who spot most errors. 'Those' used in singling out someone or something and ascribing a distinctive feature to them is the perfect fit for the blank. Hence, **option D** is the correct answer.

79.

Select the most appropriate option for the blank.

- A. the
- B. a
- C. an
- D. one

Ans. B

Ans. A determiner is required to fill in the blank. An indefinite article 'a' is required because it precedes a word that begins with a consonant sound.

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

Please do not get confused in thinking that

the word "two-week" makes the noun "campaign" plural. Two-week is acting as an adjective here and it is only showing duration. It is not making the noun "campaign" plural.

80. Select the most appropriate option for the blank.

- A. same
- B. alike
- C. likely
- D. similarly

Ans. B

Ans. The blank needs an adverb, not an adjective. Therefore, the use of "same" would be incorrect as it is an adjective. Likely is out of context as the sentence is talking about some probability. Between "alike" and "similarly", 'alike' is the correct choice. It means (of two or more people or things) similar to each other.

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

81. Select the most appropriate option for the blank.

- A. guffaws
- B. oversight
- C. mistakes
- D. blunder

Ans. C

Ans. The meanings of the words are as follows:

Guffaws: a loud and hearty laugh.

Oversight: an unintentional failure to notice or do something.

Mistakes: something, especially a word, figure, or fact, which is not correct; an inaccuracy.

Blunder: a stupid or careless mistake.

Therefore, 'mistakes' is the apt word to fill in the blank. 'Blunder' would be a too strong word to be used in the given context. Hence, **option C** is the correct answer.

82. Select the most appropriate option for the blank.

- A. meticulous
- B. signifying
- C. important
- D. particular

Ans. D

Ans. The sentence implies that there is a **special** focus on public transport signs, maps and information signs at historic sites, as part of a drive to improve the experience of foreign tourists in the South Korean capital. 'Particular' meaning 'especially great or intense' is the apt word for the blank. Hence, **option D** is the correct answer. Other words do not produce the required meaning to the sentence.

83.

|||Common||| Select the antonym of the given word. |||End|||
SCARCE

- A. scanty
- B. seldom
- C. plentiful
- D. few

Ans. C

Ans. The meanings of the words are:

Scarce: (especially of food, money, or some other resource) insufficient for the demand.

Scanty: small or insufficient in quantity or amount.

Seldom: not often; rarely.

Plentiful: existing in or yielding great quantities; abundant.

Few: a small number of.

Therefore, **'plentiful'** is the antonym of the given word.

84.

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

A) An environmental group performed a necropsy on the animal and found about 40 kilograms of plastic, Including grocery bags and rice sacks.

B) A 4.7-metre long whale died on Saturday in Philippines where it was stranded a day earlier.

C) "It's very disgusting and heartbreaking," he said. "We've done necropsies on 61 dolphins and whales in the last 10 years and this is one of the biggest amounts of plastic we've seen:"

- D) ‘The animal died from starvation and was unable to eat because of the trash filling its stomach;’ said Darrell Blatchley, Director of D’ Bone Collector Museum Inc
- A. DABC
 - B. BADC
 - C. BACD
 - D. ABCD

Ans. B

Ans. Sentence B would be the first sentence of the passage as it introduces the subject i.e. ‘a 4.7 metre long whale’. Sentence A would be the next in the sequence as it presents some astonishing fact about the dead whale. DC would be the mandatory pair because the pronoun ‘he’ in sentence C represents Darrell Blatchley who is the director of D’ Bone Collector Museum Inc. mentioned in sentence D. Therefore, **option B** is the correct answer.

85.

|||Common||| Select the most appropriate word to fill in the blank. |||End|||
Around sixty bands in colourful _____ took part in the Notting Hill Carnival.

- A. clothings
- B. dressing
- C. apparels
- D. costumes

Ans. D

Ans. The blank requires a word which means a set of clothes particular to a group

of people.

The word "dressing" means a sauce for salads. It does not fit in the sentence.

The word "clothings" is incorrect. Clothing represents a set of clothes and it cannot be written in plural form.

Apparels is also incorrect as it is also used in its singular form usually.

‘**Costumes**’ meaning ‘a set of clothes worn by an actor or performer for a particular role’ is the apt word for the blank. Hence, **option D** is the correct answer.

86.

|||Common||| Select the word which means the same as the group of words given.

|||End|||

A person, animal or plant much below the usual height

- A. creature
- B. wizard
- C. dwarf
- D. witch

Ans. C

Ans. The meanings of the words are:

Creature: an animal, as distinct from a human being.

Wizard: (in legends and fairy tales) a man who has magical powers.

Dwarf: a person who is of unusually or abnormally small stature because of a medical condition; a person affected by dwarfism.

Witch: a woman thought to have magic powers, especially evil ones, popularly depicted as wearing a black cloak and pointed hat and flying on a broomstick. Hence, **option C** is the correct answer.

87.

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

A) The cafe's owner says he's interested in conservation, and hopes customers will realize the animals are worth saving, even though they often have a bad reputation.

B) None of them are venomous, meaning customers can get up close and personal with the reptiles.

C) Here you sip your drink in the company of 35 snakes.

D) This cafe, which has just opened in Tokyo, is not for the faint-hearted.

A. DCBA

B. ABCD

C. DBCA

D. ABDC

Ans. A

Ans. Sentence D is the introductory sentence as it mentions the subject of the passage i.e. 'a café which has just opened in Tokyo'. Sentence C should be the second sentence as it provides a distinctive

feature of the café. Sentence B aptly follows the sentence C as 'them' in the sentence denotes the 'snakes' present in the sentence C. Sentence A is the concluding sentence. Hence, **option A** is the correct answer.

88.

|||Common||| Select the word which means the same as the group of words given.

|||End|||

A student who idly or without excuse absents himself/herself from school

A. migrant

B. itinerant

C. truant

D. vagrant

Ans. C

Ans. The meanings of the words are:

Migrant: a person who moves from one place to another, especially in order to find work or better living conditions.

Itinerant: travelling from place to place.

Truant: a pupil who stays away from school without leave or explanation.

Vagrant: a person without a settled home or regular work who wanders from place to place and lives by begging.

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

89.

|||Common||| Select the most appropriate option to substitute the underlined segment

in the given sentence. If no substitution is required, select No improvement. |||End|||

The workers of this textile factory **demand** **higher wages** for a long time.

- A. have been demanding higher wages
- B. demanded higher wages
- C. has demanded higher wages
- D. No improvement

Ans. A

Ans. The phrase "for a long time" indicates the duration of some activity which started in past and still continues. We use present/past perfect continuous to represent such actions. Out of the given alternatives, only option A represents the correct tense. Therefore, it is the correct answer.

90.

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

Do not buy medicines without the doctor's prescription.

- A. Medicines need not be bought without the doctor's prescription
- B. Medicines should not be bought without the doctor's prescription.
- C. Medicines could not be bought without the doctor's prescription
- D. Medicines might not be bought without the doctor's prescription

Ans. B

Ans. 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 will be used as a main verb in the Passive Voice.
- Therefore, **option B** correctly provides the passive form of the given sentence.

91.

|||Common||| Select the correct active form of the given sentence. |||End|||

Every passing vehicle was being thoroughly checked by the guards.

- A. The guards were thoroughly checking every passing vehicle.
- B. Every passing vehicle were thoroughly checking the guards.
- C. The guards have been thoroughly checking every passing vehicle.
- D. The guards have thoroughly checked every passing vehicle.

Ans. A

Ans.

Basic rules to be followed for Active/Passive conversions are:

1. The object of the active verb becomes the subject of the passive verb.
2. The finite form of the verb is changed (to be+ past participle).
3. The subject of the active sentence becomes the object of the passive sentence (or is dropped).
4. Preposition "by" is used before object.

The given sentence is in passive voice. The structures for active/passive voices are:

Active: Subject + was/were + verb (ing) + object...

Passive: Object + was/were + being + verb (IIIrd form) + by + subject...

So, with the help of the above structures, we can convert the given sentence into active voice:

The guards were thoroughly checking every passing vehicle.

92.

|||Common||| Select the synonym of the given word. |||End|||

COERCE

- A. pressurize
- B. leave
- C. enchant
- D. cajole

Ans. A

Ans. The meanings of the words are as follows:

Coerce: persuade (an unwilling person) to do something by using force or threats.

Pressurize: attempt to persuade or coerce (someone) into doing something.

Leave: go away from.

Enchant: fill (someone) with great delight; charm.

Cajole: persuade (someone) to do something by sustained coaxing or flattery.

Hence, '**pressurize**' is the synonym of the given word.

93.

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

We had to decline several orders ;n case that the production was held up due to labour strike.

- A. due to labour strike
- B. the production was held up
- C. in case that
- D. We had to decline

Ans. C

Ans. The error is due to the fragment 'in case that'. It is a preposition and used in sentences like please do not use lift in case of fire. In the given sentence, it is a connecting a fragment which gives reason why the speaker had to decline the orders. It should be replaced by the conjunction "because" to provide correct meaning to the sentence.

94.

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

Cyclone Idai killed at least 157 people in Zimbabwe and Mozambique although ;t tore across Southern Africa.

- A. at least 157 people
- B. it tore across
- C. although

D. Cyclone Idai killed

Ans. C

Ans. The use of conjunction 'although' is incorrect in the sentence. Although means in spite of the fact that. Example: The coach ordered them to keep running although they were completely tired. This conjunction is not providing correct meaning to the sentence. It should be replaced by 'as' giving reasons to form a contextually correct sentence.

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

95.

|||Common||| Select the antonym of the given word. |||End|||

EXPANSION

- A. augmentation
- B. compression
- C. inflation
- D. extension

Ans. B

Ans. The meanings of the words are:

Expansion: the action of becoming larger or more extensive.

Augmentation: the action or process of making or becoming greater in size or amount.

Compression: the reduction in volume.

Inflation: the action of inflating something or the condition of being inflated.

Extension: a part that is added to something to enlarge or prolong it.

Hence, 'compression' is the antonym of the given word.

96.

|||Common||| Select the most appropriate meaning of the given idiom. |||End|||

At daggers drawn

- A. without hope
- B. bitterly hostile
- C. friendly with each other
- D. deceiving somebody

Ans. B

Ans. The idiom 'at daggers drawn' means '(of two people) be bitterly hostile towards each other'. For example: they have been **at daggers drawn** for weeks over tactics. Hence, **option B** is the correct answer.

97. Select the wrongly spelt word.

- A. Explode
- B. Expire
- C. Exploite
- D. Explicit

Ans. C

Ans. Option C has the incorrectly spelt word. The correct spelling is 'exploit' and it means 'make full use of and derive benefit from (a resource)'.

98. Select the wrongly spelt word.

- A. Career
- B. Carriage
- C. Calander

D. Callous

Ans. C

Ans. Option C has the wrongly spelt word.

The correct spelling is 'calendar' which means a chart or series of pages showing the days, weeks, and months of a particular year, or giving particular seasonal information.

99.

|||Common||| Select the synonym of the given word. |||End|||

CHRONIC

A. persistent

B. temporary

C. common

D. ordinary

Ans. A

Ans. The meanings of the words are as follows:

Chronic: (of an illness) persisting for a long time or constantly recurring.

Persistent: continuing to exist or occur over a prolonged period.

Temporary: lasting for only a limited period of time; not permanent.

Common: occurring, found, or done often; prevalent.

Ordinary: with no special or distinctive features; normal.

Hence, **persistent** is the synonym of the given word.

100.

|||Common||| Select the most appropriate meaning of the given idiom. |||End|||

To play ducks and drakes

A. to change places

B. to use recklessly

C. to be friendly

D. to act cleverly

Ans. B

Ans. The idiom 'to play ducks and drakes' means 'to behave recklessly; to idly squander one's wealth'. For example: She played **ducks and drakes** with her property. Hence, **option B** is the correct answer.

