

12 APRIL FIRST SHIFT

QUESTIONS

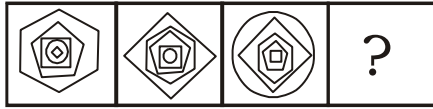
Part-I : General Intelligence and Reasoning

भाग-I : सामान्य बुद्धिमत्ता एवं तर्कशक्ति

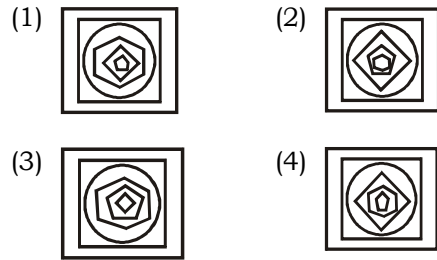
1. Select the figure from among the given options that can replace the question mark (?) in the following series.

दिए गए विकल्पों में से उस आकृति का चयन करें जो निम्न श्रृंखला में प्रश्नवाचक चिह्न (?) के स्थान पर आ सकती है।

Question figure/प्रश्न आकृति :



Answer figure/उत्तर आकृति :



2. Select the option that is related to the third number in the same way as the second number is related to the first number.

उस विकल्प का चयन कीजिए, जिसका तीसरी संख्या से वही संबंध है, जो दूसरी संख्या का पहली संख्या से है।

52 : 91 :: 72 : ?

- (1) 98 (2) 126
(3) 109 (4) 138

3. If the signs '+' and '÷' are interchanged, then which of the following equations can be correctly balanced?

यदि चिह्नों '+' और '÷' को आपस में बदल दिया जाए, तो निम्नलिखित में से कौन-सा समीकरण संतुलित हो जाएगा?

- (1) $12 + 4 - 8 \div 3 = 11$
(2) $24 - 12 \div 6 + 3 = 20$
(3) $16 + 4 \times 8 \div 3 = 45$
(4) $22 + 11 \times 8 \div 3 = 19$

4. In a certain code language, 'your attention please' is written as 'puw cuw zuw', 'kind attention' is written as 'muw zuw', and 'please pay attention' is written as 'puw zuw ruw'. How will 'pay' be written in that language?

एक निश्चित कूट भाषा में, 'your attention please' को 'puw cuw zuw' लिखा जाता है, 'kind attention' को 'muw zuw' लिखा जाता है और 'please pay attention' को 'puw zuw ruw' लिखा जाता है। उसी भाषा में 'pay' को कैसे लिखा जाएगा?

- (1) puw (2) zuw
(3) ruw (4) cuw

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

उस विकल्प का चयन करें जो तीसरे पद से उसी प्रकार संबंधित है जिस प्रकार दूसरा पद पहले पद से संबंधित है।

FRONTIER : GSNOUHDS :: CLOSING : ?

- (1) DMNTHOH (2) BMPTHOH
(3) DMNRHLH (4) DKNTJOH
6. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

दिए गए कथनों और निष्कर्षों को ध्यानपूर्वक पढ़ें। यह मानते हुए कि कथनों में दी गई जानकारी सत्य है, भले ही वह सामान्य रूप से ज्ञात तथ्यों से भिन्न प्रतीत होती हो, तब करें कि दिए गए निष्कर्षों में से कौन से निष्कर्ष कथनों का तार्किक रूप से अनुसरण करता है/करते हैं।

Statements/कथन :

All fruits are leaves./सभी फल, पत्ते हैं।
Some mangoes are rotten./कुछ आम, सड़े हैं।

All rotten are fruits./सभी सड़े, फल हैं।

Conclusions/निष्कर्ष :

I. Some leaves are rotten./कुछ पत्ते, सड़े हैं।

II. Some mangoes are fruits./कुछ आम, फल हैं।

III. All leaves are either rotten or mangoes./सभी पत्ते या तो सड़े हैं या आम हैं।

(1) All the conclusions follow./सभी निष्कर्ष अनुसरण करते हैं।

(2) Only conclusion II and III follow./केवल निष्कर्ष II और III अनुसरण करते हैं।

(3) Only conclusion II follows./केवल निष्कर्ष II अनुसरण करता है।

(4) Only conclusions I and II follow./केवल निष्कर्ष I और II अनुसरण करते हैं।

7. Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series.

अक्षरों के उस संयोजन का चयन करें जिसे दी गई श्रृंखला के रिक्त स्थानों में क्रमिक रूप से रखे जाने पर वह श्रृंखला को पूर्ण करेगा।

C _ B N _ _ V _ H C _ B _ H

- (1) VCBHNVN (2) HVCNBVN
(3) VHCBNVN (4) VHBNCNV

8. Select the number from among the given options that can replace the question mark (?) in the following series.

दिए गए पैटर्न का ध्यानपूर्वक अध्ययन करें और दिए गए विकल्पों में से उस संख्या का चयन करें जो उसमें प्रश्नवाचक चिह्न (?) के स्थान पर आ सकती है।

16, 35, ?, 217, 653, 1309

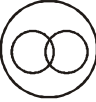
- (1) 72 (2) 128
(3) 77 (4) 107

9. Select the Venn diagram that best represents the relationship between the following.

उस वेन आरेख का चयन करें जो निम्नलिखित के बीच के संबंध को सर्वोत्तम रूप से दर्शाता है।

Planets, Mars, Venus

ग्रह, मंगल, शुक्र

- (1)  (2) 
(3)  (4) 

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

चार अक्षर-समूह दिए गए हैं, जिनमें से तीन किसी न किसी तरह से समान हैं और एक असंगत है। उस असंगत अक्षर-समूह का चयन करें।

- (1) TVYCH (2) NPSWB
(3) UWZBI (4) ACFJO

11. Select the correct mirror image of the given combination when the mirror is placed at 'PQ' as shown.

जब दर्पण को निम्नांकित चित्र के अनुसार 'PQ' पर रखा गया हो, तब दिए गए संयोजन का दर्पण में निर्मित सही प्रतिबिम्ब चयनित करें।

Question figure/प्रश्न आकृति :



Answer figure/उत्तर आकृति :

- (1) d 6 Я 7 Y x 3
(2) d p Я 7 Y x 3
(3) q p Я 7 Y x 3
(4) d p Я 7 Y x 3

12. 'A # B' means 'A is the father of B'.
'A % B' means 'A is the mother of B'.
'A @ B' means 'A is the sister of B'.
'A & B' means 'A is the son of B'.
If 'G # M # T % S @ H & R & W @ U', then which of the following statements is NOT correct?

'A # B' का अर्थ है कि 'A, B का पिता है'।
'A % B' का अर्थ है कि 'A, B की माता है'।
'A @ B' का अर्थ है कि 'A, B की बहन है'।
'A & B' का अर्थ है कि 'A, B का पुत्र है'।

यदि 'G # M # T % S @ H & R & W @ U', है, तो निम्नलिखित में से कौन-सा कथन सही नहीं है?

- (1) G is the paternal grandfather of T./G, T का दादा है।
(2) W is the maternal grandmother of H./W, H की नानी है।
(3) R is the husband of T./R, T का पति है।
(4) M is the maternal grandfather of S./M, S का नाना है।

13. Select the correct option that indicates the arrangement of the given course of actions in a logical and meaningful order.

उस सही विकल्प का चयन करें जो दिए गए कार्यों की व्यवस्था को तार्किक और सार्थक क्रम में इंगित करता है।

1. Open email account/ईमेल खाता खोलें
2. Compose email/ईमेल लिखें
3. Start computer/कंप्यूटर शुरू करें
4. Enter email address/ईमेल पता दर्ज करें

5. Write the content/विषय लिखें
6. Send the mail/मेल भेजें

- (1) 3, 1, 2, 4, 5, 6
(2) 2, 5, 1, 3, 4, 6
(3) 3, 2, 6, 1, 5, 4
(4) 3, 1, 2, 6, 5, 4

14. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

दिए गए विकल्पों में से उस अक्षर-समूह का चयन कीजिए जो निम्नलिखित श्रृंखला में प्रश्नचिह्न (?) के स्थान पर आ सकता है।

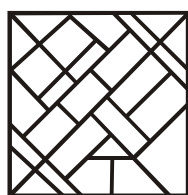
HDMS, OVVI, VNEY, CFNO, ?

- (1) JYWF (2) JXWE
(3) KXWE (4) JXXF

15. Select the option that is embedded in the given figure (X) (rotation in NOT allowed).

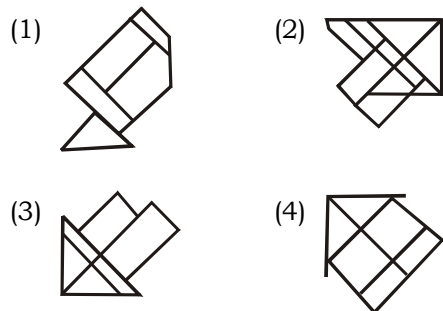
वह विकल्प का चयन करें जिसमें दी गई आकृति (X) में सन्निहित है (घुमाने की अनुमति नहीं है)।

Question figure/प्रश्न आकृति :



(X)

Answer figure/उत्तर आकृति :



16. A is 25 years younger than B. The age of B would be double the age of C after 15 years. The current age of B is three times the current age of C. What is the current age of A?

A, B से 25 वर्ष छोटा है। 15 वर्ष बाद, B की आयु C की आयु की दोगुनी हो जाएगी। B की वर्तमान आयु, C की वर्तमान आयु की तीन गुनी है। A की वर्तमान आयु कितनी है?

- (1) 25 years/25 वर्ष
(2) 20 years/20 वर्ष
(3) 15 years/15 वर्ष
(4) 30 years/30 वर्ष

17. Eight north-facing restaurants named P, Q, R, S, T, U, V and W are located in a straight line. S is second to the left of T. W is third to the left of P. T is between P and V. S is third to the left of V. W is to the immediate right of U. R is third to the right of P. Who is sitting fourth to the right of S?

P, Q, R, S, T, U, V और W नाम के आठ उत्तर-मुखी रेस्तरां एक सीधी पंक्ति में स्थित हैं। S, T के बायें दूसरे स्थान पर है। W, P के बायें तीसरे स्थान पर है। T ठीक P और V के बीच में है। S, V के बायें तीसरे स्थान पर है। W, U के ठीक दायें पड़ोस में है। R, P के दायें तीसरे स्थान पर है। S के दायें चौथे स्थान पर कौन सा रेस्तरां स्थित है।

- (1) U (2) W
(3) R (4) V

18. Study the given pattern carefully and select the number from among the given options that can replace the question mark (?) in it.

दिए गए पैटर्न का ध्यानपूर्वक अध्ययन करें और दिए गए विकल्पों में से उस संख्या का चयन करें जो उसमें प्रश्नवाचक चिह्न (?) के स्थान पर आ सकती है।

11	15	9
14	16	?
75	31	88

- (1) 13 (2) 22
(3) 18 (4) 25

19. Three different positions of the same dice are shown, the six faces of which are numbered from 1 to 6. Select the number that will be on the face opposite to the face having the number '5'.

एक ही पासे की तीन अलग-अलग स्थितियां दिखाई गई हैं, जिसके फलकों पर 1 से 6 तक की संख्याएं अंकित हैं। उस संख्या का चयन करें जो संख्या '5' वाले फलक के विपरीत वाले फलक पर होगी।



- (1) 3 (2) 1
(3) 6 (4) 2

20. Srinija walked 9 km towards the west from her home, then turned towards the south and walked 11 km. Then she walked 13 km towards the east, and finally walked 4 km towards the west. How far is Srinija from her initial position?

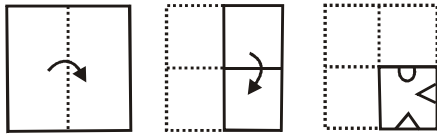
श्रीनिजा अपने घर से 9 किमी. पश्चिम की ओर चली, फिर दक्षिण की ओर मुड़ी और 11 किमी. चली। फिर वह पूर्व की ओर 13 किमी. चली और अंत में पश्चिम की ओर 4 किमी. चली। अब श्रीनिजा अपने प्रारंभिक स्थान से कितनी दूरी पर है?

- (1) 11 km/किमी. (2) 15 km/किमी.
(3) 13 km/किमी. (4) 10 km/किमी.

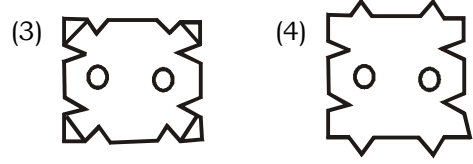
21. The Sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in the following figures. How would this paper look when unfolded?

निम्नांकित आकृतियों में कागज के एक टुकड़े को मोड़ने का क्रम और मुड़े हुए कागज को काटने का तरीका दिखाया गया है। यह कागज खोलने पर कैसा दिखेगा?

Question figure/प्रश्न आकृति :



Answer figure/उत्तर आकृति :



22. Select the number from among the given options that can replace the question mark (?) in the following series.

दिए गए विकल्पों में से वह संख्या चुनिए जो निम्नलिखित श्रेणी में प्रश्नवाचक चिह्न (?) के स्थान पर आ सकती है।

62, 74, 80, 86, 95, ?, 158

- (1) 100 (2) 108
(3) 122 (4) 113

23. In a code language, 'SOUP' is written as 'TNVO'. How will 'BOWL' be written in that language?

एक निश्चित कूट भाषा में, 'SOUP' को 'TNVO' के रूप में लिखा जाता है। उसी कूट भाषा में, 'BOWL' को किस रूप में लिखा जाएगा?

- (1) CPVM (2) ANVK
(3) APVM (4) CNXK

24. If A denotes 'addition', B denotes 'multiplication', C denotes 'subtraction', and D denotes 'division', then what will be the value of the following expression?

यदि A 'जोड़ना' को, B 'गुणा' को, C 'घटाना' को और D 'भाग' को दर्शाता है, तो निम्नलिखित व्यंजक का मान कितना होगा?

46 C (6 A 7) B 5 A 24 D 6 B (27 D (9 D 3))

- (1) 21 (2) 17
(3) 39 (4) 65

25. In a code language, if PEN is written as 17717, then how will CAP be written in the same language?

एक कूट भाषा में, 'PEN' को '17717' लिखा जाता है, तो उसी भाषा में, 'CAP' को क्या लिखा जाएगा?

- (1) 4319 (2) 2320
(3) 4219 (4) 2319

Part-II : General Awareness**भाग-II : सामान्य जानकारी**

26. The Nobel Prize in Literature 2020 was awarded to _____.
2020 का साहित्य नोबेल पुरस्कार _____ को प्रदान किया गया था।
(1) Olga Tokarczuk/ओल्गा टोकार्जुक
(2) Kazuo Ishiguro/काजुओ इशिगुरो
(3) Louise Gluck/लुईस ग्लूक
(4) Peter Handke/पीटर हैंडके
27. Who among the following was elected as the President of the Asian Cricket Council (ACC) in January 2021?
निम्नलिखित में से किसे जनवरी 2021 में एशियाई क्रिकेट परिषद (ACC) का अध्यक्ष चुना गया था?
(1) Sachin Tendulkar/सचिन तेंदुलकर
(2) Sourav Ganguly/सौरव गांगुली
(3) Anurag Thakur/अनुराग ठाकुर
(4) Jay Shah/जय शाह
28. Which of the following is NOT a part of a flower?
निम्नलिखित में से कौन सा फूल का एक भाग नहीं है?
(1) Stamen/पुंकेसर
(2) Petiole/पुष्प-वृंत
(3) Sepal/बाह्यदल
(4) Pistil/स्त्रीकेसर
29. As a part of Mission Sagar-IV, Indian Naval Ship Jalashwa arrived at Port Anjouan, Comoros on 14 March 2021 to deliver 1,000 metric tonnes of:
मिशन सागर-IV के हिस्से के रूप में, भारतीय नौसेना का जहाज जलाश्व 14 मार्च 2021 को अंजुआन बंदरगाह, कोमोरोस में 1000 मीट्रिक टन _____ की आपूर्ति करने पहुंचा।
(1) rice/चावल (2) tea/चाय
(3) sugar/चीनी (4) wheat/गेहूँ
30. Which of the following diseases can not be prevented by vaccination?
निम्नलिखित में से किस रोग को टीकाकरण द्वारा रोका नहीं जा सकता है?
(1) Rabies/रेबीज
(2) Beri beri/बेरी बेरी
(3) Typhoid/टाइफाइड
(4) Measles/खसरा
31. Which law of Newton provides a quantitative definition of force?
न्यूटन का निम्नलिखित में से कौन-सा नियम बल की परिमाणात्मक परिभाषा देता है?
(1) Universal law of gravitation/सार्वत्रिक गुरुत्वाकर्षण का नियम
(2) Second law of motion/गति का दूसरा नियम
(3) First law of motion/गति का पहला नियम
(4) Third law of motion/गति का तीसरा नियम
32. The foul smell from a body specially during a sultry summer is due to the action of _____ on sweat.
विशेष रूप से उमस भरी गर्मी के दौरान शरीर से निकलने वाली दुर्गंध पसीने पर _____ की क्रिया के कारण होती है।
(1) melanin/मेलानिन
(2) moisture/नमी
(3) bacteria/जीवाणुओं
(4) virus/विषाणुओं
33. Who among the following first argued that in the face of high deficits, people save more?
निम्नलिखित में से किसने सबसे पहले यह तर्क दिया कि उच्च घाटे की स्थिति में लोग अधिक बचत करते हैं?

- (1) Amartya Sen/अमर्त्य सेन
(2) Esther Duflo/एस्तेर डुफ्लो
(3) Adam Smith/एडम स्मिथ
(4) David Ricardo/डेविड रिकार्डो
34. Which of the following Harappan sites is in Haryana?
निम्नलिखित में से कौन-सा हड़प्पा स्थल हरियाणा में है?
(1) Kalibangan/कालीबंगा
(2) Lothal/लोथल
(3) Rakhigarhi/राखीगढ़ी
(4) Dholavira/धोलावीरी
35. The value of the Gross Domestic Product (GDP) of India is published by PIB in _____.
पीआईबी (PIB) द्वारा भारत के सकल घरेलू उत्पाद (GDP) का मूल्य _____ में प्रकाशित किया जाता है।
(1) US Dollar/अमेरिकी डॉलर
(2) Yen/येन
(3) Yuan/युआन
(4) Indian Rupee/भारतीय रुपये
36. Approximately how much percentage (nearest to integer) of total water on the surface of earth is accounted for by the oceans?
पृथ्वी की सतह पर कुल पानी का लगभग कितना प्रतिशत (निकटतम पूर्णांक तक) महासागरों में संचित है?
(1) 96 (2) 97
(3) 94 (4) 92
37. As per the Union Budget of 2021-22, how many textile parks are to be set up in 3 years?
2021-22 के केंद्रीय बजट के अनुसार, 3 वर्षों में कितने टेक्स्टाइल पार्क स्थापित किए जाने हैं?
(1) Eight/आठ (2) Six/छः
(3) Five/पांच (4) Seven/सात
38. Ozone is an allotrope of _____.
ओजोन _____ का एक अपरूप है।
(1) carbon dioxide/कार्बन डाइ ऑक्साइड
(2) oxygen/ऑक्सीजन
(3) hydrogen/हाइड्रोजन
(4) nitrogen/नाइट्रोजन
39. Who among the following athletes was appointed as the Deputy Superintendent of Police by the Assam Government in February 2021?
निम्नलिखित में से किस एथलीट को फरवरी 2021 में असम सरकार द्वारा पुलिस उपाधीक्षक के पद पर नियुक्त किया गया था?
(1) Deepika Kumari/दीपिका कुमारी
(2) Ekta Bhyan/एकता भ्यान
(3) Dutee Chand/दुतीचंद
(4) Hima Das/हिमा दास
40. Which of the following cities won the hosting rights of the 2030 Asian Games in December 2020?
निम्नलिखित में से किस शहर ने दिसंबर 2020 में 2030 में होने वाले एशियाई खेलों की मेजबानी के अधिकार जीते हैं?
(1) Jakarta/जकार्ता
(2) Doha/दोहा
(3) Seoul/सियोल
(4) Shanghai/शंघाई
41. The Deomali is the highest mountain peak of _____.
देवमाल _____ की सबसे ऊंची पर्वत चोटी है।
(1) Assam/असम
(2) West Bengal/पश्चिम बंगाल
(3) Bihar/बिहार
(4) Odisha/ओडिशा
42. Who among the following was a ruler of the Rashtrakuta dynasty?
निम्नलिखित में से कौन राष्ट्रकूट वंश का शासक था?

- (1) Kanishka/कनिष्क
(2) Samudragupta/समुद्रगुप्त
(3) Dhruva/ध्रुव
(4) Ashoka/अशोक
43. Which of the following is a UNESCO recognised dance form?
निम्नलिखित में से कौन-सा नृत्य रूप यूनेस्को द्वारा मान्यता प्राप्त है?
(1) Bhangra/भागड़ा
(2) Dalkhai/डालखाई
(3) Kalbelia/कालबेलिया
(4) Giddha/गिद्धा
44. Which of the following environment events is observed by switching off all lights at homes, business establishments, landmarks and so on for an hour?
निम्नलिखित में से कौन-सा पर्यावरणीय उत्सव घरों, व्यावसायिक प्रतिष्ठानों और अन्य विभिन्न स्थलों आदि की सभी लाइटों को एक घंटे एक बंद करके मनाया जाता है?
(1) World Environment Day/विश्व पर्यावरण दिवस
(2) Earth Hour/अर्थ आवर
(3) Earth Charter/अर्थ चार्टर
(4) Earth Day/पृथ्वी दिवस
45. Which of the following Amendments of the Constitution of India declared that the Parliament has the power to abridge or take away any of the Fundamental Rights under Article 368 and such an Act, will NOT be a law under the meaning of Article 13?
भारतीय संविधान के निम्नलिखित में से किस संशोधन ने घोषित किया कि संसद के पास अनुच्छेद 368 के तहत किसी भी मौलिक अधिकार को कम करने या हटाने की शक्ति है और ऐसा अधिनियम, अनुच्छेद 13 के तहत कानून नहीं होगा?
(1) Twenty-third Amendment/तेईसवें संशोधन
(2) Twentieth Amendment/बीसवें संशोधन
(3) Twenty-fourth Amendment/चौबीसवें संशोधन
(4) Twenty-eighth Amendment/अट्ठाईसवें संशोधन
46. Me-Dum-Me-Phi is an ancestor-worship festival celebrated in the state of _____.
मे-दम-मे-फी (Me-Dum-Me-Phi) पूर्वजों की पूजा का एक उत्सव है। यह _____ राज्य में मनाया जाता है।
(1) Madhya Pradesh/मध्य प्रदेश
(2) Himachal Pradesh/हिमाचल प्रदेश
(3) Assam/असम
(4) Goa/गोवा
47. Which of the following crops is described as – 'It is a crop which is used both as food and fodder. It is a Kharif crop that requires temperature between 21°C to 27°C and grows well in old alluvial soil'?
निम्नलिखित में से किस फसल का वर्णन इस प्रकार किया गया है- 'यह एक ऐसी फसल है जिसका उपयोग भोजन और चारे दोनों के रूप में किया जाता है। यह एक खरीफ की फसल है जिसे 21°C से 27°C के बीच तापमान की आवश्यकता होती है और यह पुरानी जलोढ़ मिट्टी में अच्छी तरह से बढ़ती है?'
(1) Sesamum/तिल
(2) Maize/मक्का
(3) Bajra/बाजरा
(4) Ragi/रागी

48. Who among the following presidents of India gave assent to the 100th Amendment of the Constitution of India?

भारतीय संविधान के 100वें संशोधन को मंजूरी, निम्नलिखित में से किस भारतीय राष्ट्रपति ने दी थी?

- (1) Pranab Mukherjee/प्रणब मुखर्जी
- (2) Ram Nath Kovind/रामनाथ कोविंद
- (3) A P J Abdul Kalam/ए. पी. जे. अब्दुल कलाम
- (4) Pratibha Devisingh Patil/प्रतिभा देवीसिंह पाटिल

49. During the rule of which of the following dynasties did Taimur or Tamerlane invade India in 1398 AD? निम्नलिखित में से किस राजवंश के शासन काल में तैमूर या तामेरलेन ने 1398 ई. में भारत पर आक्रमण किया था?

- (1) The Slave dynasty/गुलाम वंश
- (2) The Sayyad dynasty/सैय्यद वंश
- (3) The Tughlaq dynasty/तुगलक वंश
- (4) The Khilji dynasty/खिलजी वंश

50. The Government of National Capital Territory of Delhi (Amendment) Bill, 2021, which was passed in March 2021 amended the Government of National Capital Territory of Delhi Act, _____.

राष्ट्रीय राजधानी क्षेत्र दिल्ली सरकार (संशोधन) विधेयक, 2021, जिसे मार्च 2021 में पारित किया गया था, के द्वारा राष्ट्रीय राजधानी क्षेत्र दिल्ली सरकार अधिनियम, _____ में संशोधन किया गया।

- (1) 1998
- (2) 1994
- (3) 1996
- (4) 1991

Part-III : Quantitative Aptitude

भाग-III : मात्रात्मक अभिक्षमता

51. Find the value of $70^3 + 20^3 - 90^3$. $70^3 + 20^3 - 90^3$ का मान ज्ञात करें।

- (1) 0
- (2) 378000
- (3) -378000
- (4) -300000

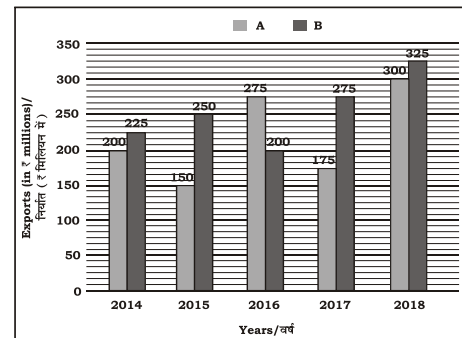
52. On simple Merest, a certain sum becomes ₹59,200 in 6 years and ₹72,000 in 10 years. If the rate of interest had been 2% more, then in how many years would the sum have become ₹76,000?

साधारण ब्याज पर कोई राशि 6 वर्षों में ₹59,200 और 10 वर्षों में ₹72,000 हो जाती है। यदि ब्याज की दर 2% अधिक होती, तो कितने वर्षों में यह राशि ₹76,000 हो जाती?

- (1) 10
- (2) 9
- (3) 8
- (4) 7

53. The given bar graph shows exports of cars of type A and B (in ₹ millions) from 2014 to 2018. Study the graph and answer the question that follows.

निम्नांकित बार ग्राफ 2014 से 2018 तक A और B प्रकार की कारों के निर्यात (₹ मिलियन में) को दर्शाता है। ग्राफ का अध्ययन करें और उसके बाद दिए गए प्रश्न का उत्तर दें।



What is the ratio of the total exports of cars of type A in 2014 and 2018 to the total exports of cars of type B in 2015 and 2017?

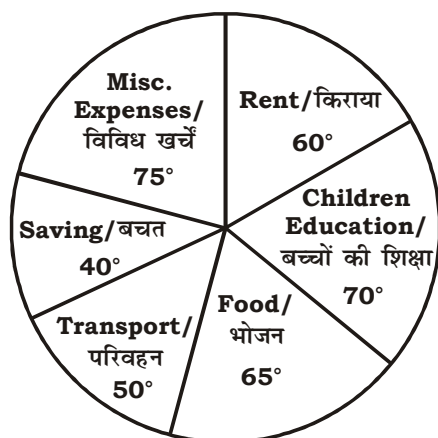
2014 और 2018 में A प्रकार की कारों के कुल निर्यात का, 2015 और 2017 में B प्रकार की कारों के कुल निर्यात से अनुपात कितना है?

- (1) 20 : 21 (2) 10 : 9
(3) 5 : 4 (4) 13 : 12

54. Monthly expenditure of a family on different heads is shown in the following pie chart.

निम्नांकित पाई चार्ट में एक परिवार का विभिन्न मदों पर होने वाला मासिक व्यय दर्शाया गया है।

**Expenditure on different Heads/
विभिन्न मदों पर होने वाला व्यय**



What is the percentage of family earnings spent on rent?

किराए पर खर्च की गई पारिवारिक आय का प्रतिशत कितना है?

- (1) $15\frac{3}{4}$ (2) $16\frac{2}{3}$
(3) $16\frac{1}{3}$ (4) 15

55. The difference between the two perpendicular sides of a right-angled triangle is 17 cm and its area is 84 cm². What is the perimeter (in cm) of the triangle?

किसी समकोण त्रिभुज की दो लंबवत भुजाओं के बीच का अंतर 17 सेमी. है और इसका क्षेत्रफल 84 सेमी.² है। त्रिभुज का परिमाण (सेमी. में) ज्ञात करें।

- (1) 40 (2) 49
(3) 36 (4) 56

56. Find the value of the following expression.

निम्नलिखित व्यंजक का मान ज्ञात कीजिए।

$$\frac{5 - 35 \div 5 \times 15 + 5}{12 - 2}$$

- (1) - 9.5 (2) - 13.5
(3) - 2.5 (4) 11.5

57. The average of 9 consecutive numbers is 20. The smallest of these numbers is

9 क्रमागत संख्याओं का औसत 20 है। उनमें से सबसे छोटी संख्या ज्ञात कीजिए।

- (1) 10 (2) 20
(3) 16 (4) 12

58. The price of petrol shot up by 5%. Before the hike, the price was ₹ 82 per litre. A man travels 3045 km every month and his car gives a mileage of 15 km per litre. What is the increase in the monthly expenditure (to the nearest ₹) on the man's travel due to the hike in the petrol prices?

पेट्रोल के मूल्य में 5% की वृद्धि हुई। वृद्धि से पहले पेट्रोल का मूल्य ₹ 82 प्रति लीटर था। एक आदमी प्रति महीने 3045 किमी. की यात्रा करता है और उसकी कार प्रति लीटर 15 किमी. का माइलेज देती है। पेट्रोल के मूल्य में वृद्धि के कारण उस आदमी की यात्रा पर किए जाने वाले मासिक व्यय (₹ लगभग) में कितनी वृद्धि होगी?

- (1) 832 (2) 859
(3) 758 (4) 944

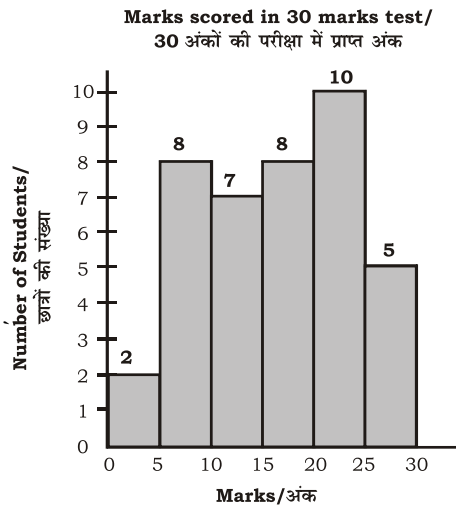
59. A trader sells an article for ₹ 425 and loses 15%. At what price (in ₹) should he sell the article to earn 5% profit?

एक व्यापारी एक वस्तु को ₹ 425 में बेचता है और उसे 15% की हानि होती है। 5% लाभ अर्जित करने के लिए उसे वस्तु को किस मूल्य पर (₹ में) बेचना चाहिए?

- (1) 505 (2) 510
(3) 445 (4) 525

60. The following histogram shows the marks scored by 40 students in a test of 30 marks. A student has to score a minimum of 10 marks to pass the test.

निम्नांकित हिस्टोग्राम 30 अंकों की एक परीक्षा में 40 छात्रों द्वारा प्राप्त किए गए अंकों को दर्शाता है। किसी छात्र को परीक्षा पास करने के लिए कम से कम 10 अंक प्राप्त करने होंगे।



How many students have scored less than two-third of the total marks?

कितने छात्रों ने कुल अंकों के दो-तिहाई से कम अंक प्राप्त किए हैं?

- (1) 35 (2) 17
(3) 25 (4) 32

61. A, B and C can do a work in 8, 10 and 12 days, respectively. After completing the work together, they received ₹ 5,550. What is the share of B (in ₹) in the amount received?

A, B और C एक काम को क्रमशः 8, 10 और 12 दिनों में कर सकते हैं। एक साथ मिलकर काम पूरा करने के बाद, उन्हें ₹ 5,550 प्राप्त हुए। प्राप्त राशि में B का हिस्सा (₹ में) कितना है?

- (1) 1,500 (2) 1,850
(3) 1,800 (4) 1,696

62. What is the difference in the volume (in cm^3) of a sphere of radius 7 cm and that of a cone of radius 7 cm and

height 10 cm? (Use $\pi = \frac{22}{7}$)

7 सेमी. त्रिज्या वाले एक गोले तथा 7 सेमी. त्रिज्या और 10 सेमी. ऊँचाई वाले एक शंकु के आयतनों का

अंतर (सेमी.³ में) ज्ञात कीजिए। ($\pi = \frac{22}{7}$ मानिए)

- (1) 250 (2) 704
(3) 924 (4) 1078

63. If $3 \sec^2 \theta + \tan \theta - 7 = 0$, $0^\circ < \theta < 90^\circ$, then what is the value of

$$\left(\frac{2 \sin \theta + 3 \cos \theta}{\operatorname{cosec} \theta + \sec \theta} \right)?$$

यदि $3 \sec^2 \theta + \tan \theta - 7 = 0$, $0^\circ < \theta < 90^\circ$

है, तो $\left(\frac{2 \sin \theta + 3 \cos \theta}{\operatorname{cosec} \theta + \sec \theta} \right)$ का मान ज्ञात कीजिए।

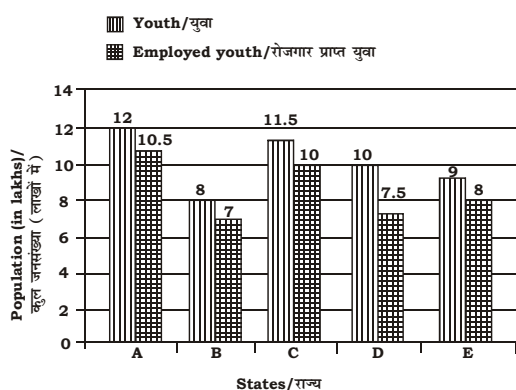
- (1) 10 (2) $\frac{5}{2}$
(3) $\frac{5}{4}$ (4) $4\sqrt{2}$

64. The bisector of $\angle B$ in $\triangle ABC$ meets AC at D. If AB = 12 cm, BC = 18 cm and AC = 15 cm, then the length of AD (in cm) is:

$\triangle ABC$ में, $\angle B$ का समद्विभाजक AC से बिंदु D पर मिलता है। यदि AB = 12 सेमी., BC = 18 सेमी. और AC = 15 सेमी. है, तो AD की लंबाई (सेमी. में) ज्ञात करें।

- (1) 6 (2) 5
(3) 12 (4) 9

65. The following bar graph shows the total number of youth (in lakhs) and the number of employed youth (in lakhs) in 5 states A, B, C, D and E. निम्नांकित बार ग्राफ 5 राज्यों A, B, C, D और E में युवाओं की कुल संख्या (लाखों में) और रोजगारशुदा युवाओं की संख्या (लाखों में) को दर्शाता है।



What is the ratio of the number of youth in states A, C and E taken together to the number of employed youth in states B, C and D taken together?

राज्यों A, C और E के मिलाकर कुल युवाओं की संख्या का, राज्यों B, C और D के मिलाकर कुल रोजगारशुदा युवाओं की संख्या से अनुपात कितना है?

(1) 65 : 59 (2) 65 : 49
(3) 8 : 7 (4) 57 : 49

66. A tangent is drawn from a point P to a circle, which meets the circle at T such that PT = 10.5 cm. A secant PAB intersects the circle in points A and B. If PA = 7 cm, what is the length (in cm) of the chord AB? बिंदु P से एक वृत्त तक स्पर्शरेखा खींची जाती है, जो वृत्त से बिंदु T पर इस प्रकार मिलती है कि PT = 10.5 सेमी. है। छेदक PAB, बिंदु A और B पर वृत्त को प्रतिच्छेदित करती है। यदि PA = 7 सेमी. है, तो जीवा AB की लंबाई (सेमी. में) ज्ञात करें।

- (1) 8.5 (2) 8.75
(3) 7.75 (4) 8.45
67. What is the remainder when the product of 335, 608 and 853 is divided by 13?

335, 608 और 853 के गुणनफल को 13 से विभाजित करने पर प्राप्त शेषफल क्या होगा?

- (1) 11 (2) 12
(3) 6 (4) 7

68. The marked price of an article is ₹ 625. After allowing a discount of 32% on the marked price, there was a profit of ₹ 25. The profit percentage (correct to the nearest integer) is: एक वस्तु का अंकित मूल्य ₹ 625 है। अंकित मूल्य पर 32% की छूट देने के बाद, ₹ 25 का लाभ हुआ। प्रतिशत लाभ (निकटतम पूर्णांक तक सही) ज्ञात कीजिए।

- (1) 5% (2) 4%
(3) 6% (4) 7%

69. At present, A is younger than B by 8 years. If 4 years ago, their ages were in the ratio 1 : 2, then what is the present age of B (in years) ?

वर्तमान में A, B से 8 वर्ष छोटा है। यदि 4 वर्ष पहले उनकी आयु 1 : 2 के अनुपात में थी, तो B की वर्तमान आयु (वर्षों में) कितनी है?

- (1) 11 (2) 20
(3) 12 (4) 18

70. Which is the smallest multiple of 7, which leaves 5 as remainder in each case, when divided by 8, 9, 12 and 15?

7 का सबसे छोटा गुणज कौन-सा है, जिसे 8, 9, 12 और 15 से विभाजित करने पर प्रत्येक स्थिति में 5 शेष बचता है?

- (1) 365 (2) 1085
(3) 2525 (4) 725

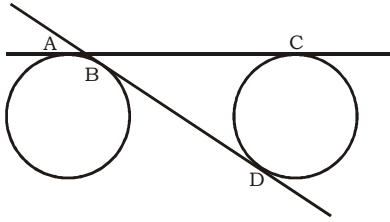
71. The ratio of the speeds of two trains is 2 : 7. If the first train runs 250 km in 5 hours, then the sum of the speeds (in km/h) of both the trains is:

दो ट्रेनों की चाल का अनुपात 2 : 7 है। यदि पहली ट्रेन 5 घंटे में 250 किमी. चलती है, तो दोनों ट्रेनों की चाल (किमी./घंटा में) का योग कितना है?

- (1) 250 (2) 175
(3) 150 (4) 225

72. Two common tangents AC and BD touch two equal circles of radius 7 cm, at points A, C, B and D, respectively, as shown in the figure. If the length of BD is 48 cm, what is the length of AC?

दो उभयनिष्ठ स्पर्श रेखाएँ AC और BD दो ऐसे समान वृत्तों को क्रमशः बिंदु A, C, B और D पर स्पर्श करती हैं, जिनमें से प्रत्येक की त्रिज्या 7 सेमी. है, जैसा कि चित्र में दिखाया गया है। यदि BD की लंबाई 48 सेमी. है, तो AC की लंबाई क्या है?



- (1) 40 cm/सेमी. (2) 30 cm/सेमी.
(3) 50 cm/सेमी. (4) 48 cm/सेमी.

73. If $x + y + z = 11$, $xy + yz + zx = -6$, and $x^3 + y^3 + z^3 = 1604$, then the value of xyz is

यदि $x + y + z = 11$, $xy + yz + zx = -6$, और $x^3 + y^3 + z^3 = 1604$ है, तो xyz का मान कितना होगा?

- (1) 25 (2) 4
(3) 1 (4) 5

74. If $\cot B = \frac{12}{5}$, what is the value of $\sec B$?

यदि $\cot B = \frac{12}{5}$ है, तो $\sec B$ का मान ज्ञात करें।

- (1) $\frac{5}{12}$ (2) $\frac{13}{12}$
(3) $\frac{13}{5}$ (4) $\frac{12}{13}$

75. A vertical pole and a vertical tower are on the same level ground in such a way that, from the top of the pole, the angle of elevation of the top of the tower is 60° and the angle of depression of the bottom of the tower is 30° . If the height of the pole is 24 m, then find the height of the tower (in m).

एक ऊर्ध्वाधर खंभा और एक ऊर्ध्वाधर मीनार एक ही समतल जमीन पर इस प्रकार हैं कि खंभे के शिखर से मीनार के शिखर का उन्नयन कोण 60° है तथा मीनार के तल का अवनमन कोण 30° है। यदि खंभे की ऊँचाई 24 मीटर है, तो मीनार की ऊँचाई (मीटर में) ज्ञात कीजिए।

- (1) $24\sqrt{3}(\sqrt{3} + 1)$ (2) 72
(3) 96 (4) $24(\sqrt{3} + 1)$

**Part-IV : (English Language
& Comprehension)**

76. Select the INCORRECTLY spelt word.
 (1) Progress (2) Mystery
 (3) Pilgrim (4) Symtoms
77. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.
 My older brother,/ which you'll / meet later,/ is a dentist.
 (1) My older brother
 (2) which you'll
 (3) meet later
 (4) is a dentist
78. Select the most appropriate ANTONYM of the given word.
 Rely
 (1) Move (2) Distrust
 (3) Await (4) Depend
79. Select the most appropriate meaning of the given idiom.
 To take after
 (1) To chase someone
 (2) To be similar in appearance
 (3) To mock someone
 (4) To change sides often
80. Select the option that expresses the given sentence in active voice.
 Hatred can be overcome by love.
 (1) Love can overcome hatred.
 (2) Love has overcome hatred.
 (3) Love is overcoming hatred.
 (4) Love can overcome hatred.
81. Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.
 A. However, when areas in Leh began to experience water shortages, life didn't grind to a halt.
 B. Ladakh is a cold desert with a low average annual rainfall.
 C. Thus, glaciers have been the main source of water for the people.
 D. This was because Chewang Norphel, a retired civil engineer came up with the idea of artificial glaciers.
 (1) CBDA (2) BCAD
 (3) DABC (4) BCDA
82. Select the most appropriate meaning of the given idiom.
 Foul play
 (1) Unfair or dishonest behaviour
 (2) A bad smelling theatre or playground
 (3) Unpleasant weather for playing
 (4) A drama which is badly produced
83. Select the option that can be used as a one-word substitute for the given group of words.
 Formally put an end to a system, practice, or institution
 (1) Stop (2) Destroy
 (3) Kill (4) Abolish
84. The following sentence has been divided into parts. One of them contains an error.
 Select the part that contains the error from the given options.

- He was / late / for school / and punished.
- (1) for school
(2) late
(3) He was
(4) and punished
85. Select the most appropriate option to fill in the blank.
She hardly works on weekends, _____?
- (1) doesn't she (2) is she
(3) does she (4) isn't she
86. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'.
I wish I were listening to my parents.
- (1) am listening
(2) have listened
(3) No substitution required
(4) had listened
87. Select the option that expresses the given sentence in reported speech.
Mother said, "Abhinav slipped while trying to board a bus."
- (1) Mother told that Abhinav slipped while trying to board a bus.
(2) Mother said that Abhinav slipped while trying to board a bus.
(3) Mother says that Abhinav slipped while trying to board a bus.
(4) Mother said that Abhinav had slipped while trying to board a bus.
88. Select the most appropriate synonym of the given word.
DUO
- (1) Bond (2) Pair
(3) Loan (4) Debt
89. The following sentence has been divided into parts. One of them may contain an error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer.
It was a surprising / to receive the gift / from my brother.
- (1) No error
(2) It was a surprising
(3) from my brother
(4) to receive the gift
90. The following sentence has been divided into parts. One of them may contain an error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer.
The fisheries sector / have grown significantly / in the last one year.
- (1) have grown significantly
(2) in the last one year
(3) No error
(4) The fisheries sector
91. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.
My house / is more / spacious than / my sister.
- (1) is more
(2) My house
(3) my sister
(4) spacious than
92. Select the option that expresses the given sentence in passive voice.
Do you trust me?
- (1) Am I trusted by you?
(2) Do I am trusted by you?

- (3) Do I was trusted by you?
(4) I am trusted by you.
93. Select the most appropriate synonym of the given word.
Paranoid
(1) Convinced (2) Trustful
(3) Committed (4) Distrustful
94. Select the option that can be used as a one-word substitute for the given group of words.
Indifferent to pleasure and pain
(1) Cynic (2) Stoic
(3) Prudent (4) Lusty
95. Select the most appropriate ANTONYM of the given word.
Appal
(1) Alarm (2) Assure
(3) Amaze (4) Astound

Direction (96-100): In the following passage, some words have been deleted. Read the passage carefully and select

the most appropriate option to fill in each blank.

An old man lived in the village. He was one of the (96) _____ unfortunate people in the world. The whole village was tired (97) _____ him; he was always gloomy, he (98) _____ complained and was always in a bad mood. The (99) _____ he lived, the more vile he was becoming and the more (100) _____ were his words.

96. (1) maximum (2) utmost
(3) most (4) main
97. (1) from (2) of
(3) by (4) at
98. (1) mostly (2) commonly
(3) cyclically (4) constantly
99. (1) long (2) lengthy
(3) longer (4) longest
100. (1) fatal (2) mortal
(3) poisonous (4) toxic

12 APRIL FIRST SHIFT

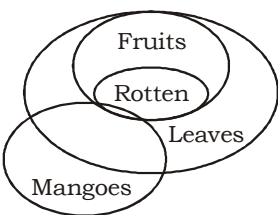
SOLUTIONS

1. (4)
2. (2) As, $52 + (52 \div 4) \times 3 = 91$
Similarly, $72 + (72 \div 4) \times 3 = 126$
3. (4) $22 + 11 \times 8 \div 3 = 19$
Change + and $\div$,
 $22 \div 11 \times 8 + 3 = 19$
 $16 + 3 = 19$
 $19 = 19$
4. (3) your attention please $\rightarrow$ puw cuw zuw
kind attention $\rightarrow$ muw zuw
please pay attention $\rightarrow$ puw zuw ruw
'pay' is coded as 'ruw'.
5. (1) As,

F	R	O	N	T	I	E	R
+1↓	+1↓	-1↓	+1↓	+1↓	-1↓	-1↓	+1↓
G	S	N	O	U	H	D	S

Similarly,

C	L	O	S	I	N	G
+1↓	+1↓	-1↓	+1↓	-1↓	+1↓	+1↓
D	M	N	T	H	O	H

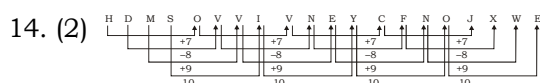
Note : Consonants are added + 1
Vowels are subtracted - 1
6. (4)


I. True II. True II. False
Hence, only conclusions I and II follow.
7. (3) C V B N H / C V B N H / C V B N H
8. (4)

16	35	107	217	653	1309
↑	↑	↑	↑	↑	↑
$\times 2+3$	$\times 3+2$	$\times 2+3$	$\times 3+2$	$\times 2+3$	
9. (2)
10. (3) (1) T—V—Y—C—H
 +2 +3 +4 +5
(2) N—P—S—W—B
 +2 +3 +4 +5
(3) U—W—Z—B—I
 +2 +3 +2 +7
(4) A—C—F—J—O
 +2 +3 +4 +5
11. (2)
12. (2)

G ⁺	
M ⁺	W ⁻ — U
T ⁻ ↔ R ⁺	
S ⁻ — H ⁺	

Hence, W is not the maternal grand-mother of H.
13. (1) 3. Start computer $\rightarrow$ 1. Open email account $\rightarrow$ 2. Compose email $\rightarrow$ 4. Enter email address $\rightarrow$ 5. Write the content $\rightarrow$ 6. Send the email



15. (2)

16. (2) Let the age of A be $2x$ years.

Age of B = $(2x + 25)$ years

After 15 years,

Age of B = $(2x + 40)$ years

Age of C = $(x + 20)$ years

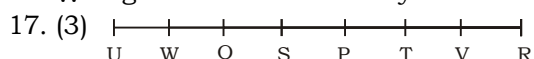
ATQ,

$$(x + 20 - 15) \times 3 = 2x + 25$$

$$3x + 15 = 2x + 25$$

$$x = 10$$

$$\therefore \text{Age of A} = 10 \times 2 = 20 \text{ years}$$



Hence, R is fourth to right to S.

18. (1) **In the first column,**

$$(14 + 11) \times (14 - 11) = 75$$

In the second column,

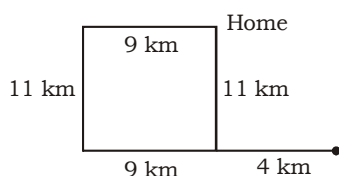
$$(15 + 16) \times (16 - 15) = 31$$

In the third column,

$$(9 + 13) \times (13 - 9) = 88$$

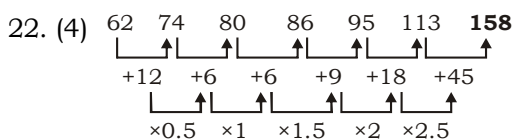
19. (2)

20. (1)



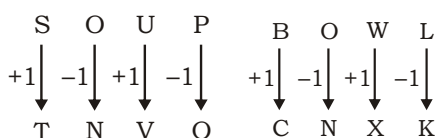
$$\therefore \text{Required distance} = 11 \text{ km}$$

21. (1)



23. (4) As,

Similarly,



24. (2) $46 \text{ C } (6 \text{ A } 7) \text{ B } 5 \text{ A } 24 \text{ D } 6 \text{ B } (27 \text{ D } (9 \text{ D } 3))$

Put the sign,

$$46 - (6 + 7) \times 5 + 24 \div 6 \times (27 \div (9 \div 3))$$

$$= 46 - 13 \times 5 + 4 \times 27 \div 3$$

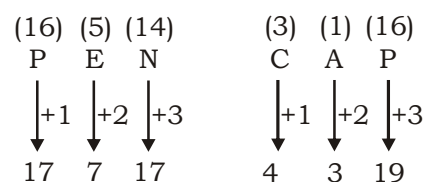
$$= 46 - 65 + 4 \times 9$$

$$= 46 + 36 - 65$$

$$= 82 - 65 = 17$$

25. (1) As,

Similarly,



26. (3) Nobel Prize in Literature 2020 was awarded to Louise Glöck "for her unmistakable poetic voice that with austere beauty makes individual existence universal."

27. (4) The Asian Cricket Council has said the council members have unanimously decided that the tenure of Jay Shah as ACC President and that of the executive board, along with its committees, will continue until 2024. Shah was unanimously elected as the President of the Asian Cricket Council (ACC) on January 30, 2021.

28. (2) Pollen is formed in the anther, which is a component of the stamen. Pistil: The portion of a flower that produces ovules. The ovary frequently maintains a lengthy style with a stigma on top. Petals: Petals are modified leaves that enclose a flower's reproductive organs.

31. (2) Newton's second law of motion gives the quantitative measurement of force.

34. (3) The oldest site of Indus Valley Civilization, Bhirrana and the largest site Rakhigarhi are located in Indian state of Haryana.
36. (2) About 71 percent of the Earth's surface is water-covered, and the oceans hold about 96.5 percent of all Earth's water.
37. (4) Finance Minister Nirmala Sitharaman made the announcement while presenting the Budget 2021-22 in Parliament. "A scheme of mega investment textile parks will be launched in addition to the PLI scheme," Sitharaman said. She informed that 7 mega textile parks will be launched in three years as part of the scheme.
38. (2) Ozone is a powerful oxidizing allotropic form of oxygen. It is a pale blue gas and consists of three oxygen atoms. Formed in the ozone layer of the stratosphere, it is harmful to life. Ozone, O₃, is an allotrope of oxygen.
39. (4) Assam Chief Minister Sarbananda Sonowal on Friday formally presented international athlete Hima Das with the letter appointing her to the rank of Deputy Superintendent of Police.
40. (2) The Olympic Council of Asia announced Doha to be the host city of the 2030 Asian Games. The Asian Games is the 2nd largest multi-sport game after the Olympics. The Asian Games is held every four years from the first Asian Games held in 1951.
41. (4) Deomali Peak, with an elevation of about 1,672 m, is the highest peak in the state of Odisha. It is situated near Doodhari village, Pottangi Panchayat division which is about 70 km from Koraput via Semiliguda. It Surrounded by deep green forest, the peak is rich in flora and fauna.
44. (2) Earth Hour will be observed on Saturday, March 26. It is an event that is observed every year as an initiative to encourage people to switch-off their electrical appliances and non-essential lighting fixtures to show commitment towards meeting environmental challenges. Scroll down to know more.
45. (3) The 24th Amendment was enacted, by the Congress government headed by Indira Gandhi, to abrogate the Supreme Court ruling in Golaknath v. State of Punjab.
46. (3) Me-dam-me-phi is a state holiday in Assam. It is observed on 31 January every year. It is a communal festival for ancestor worship in memory of the departed. It is observed by the Ahom, or Tai-Ahom, ethnic community that is spread across the states of Assam and Arunachal Pradesh.
47. (2) Maize: It is a crop that is used both as food and fodder. It is a Kharif crop that requires a temperature between 21°C to 27°C. It grows well in old alluvial soil.
48. (1) Synopsis. President Pranab Mukherjee gave his assent to the Constitution (100th Amendment) Bill, 2015 on May 28 to ratify a 1974 agreement on the demarcation of a section of India-Bangladesh border and transfer of territories, Parliament sources said.
49. (3) In 1398, Timur invaded northern India, attacking the Delhi Sultanate ruled by Sultan Nasir-ud-Din Mahmud Shah Tughluq of the Tughlaq dynasty.

51. (3) $70^3 + 20^3 - 90^3$
 Let $a = 70$, $b = 20$, $c = 90$
 When $a + b + c = 0$, then $a^3 + b^3 + c^3$
 $= 3abc$
 $\therefore 70^3 + 20^3 - 90^3 = 3 \times 70 \times 20 \times -90$
 $= -378000$

52. (2) Amount after 6 years = ₹ 59200
 Amount after 10 years = ₹ 72000
 Interest for 1 year
 $= \frac{₹(72000 - 59200)}{4} = ₹ 3200$

Interest for 6 year = ₹ (3200×6)
 $= ₹ 19200$

Now, principal amount
 $= 59200 - 19200 = ₹ 40,000$

Rate = $\frac{3200 \times 100}{40,000 \times 1} = 8\%$

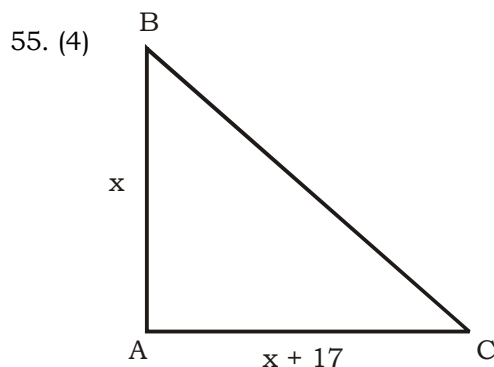
Now, new rate = 10%
 According to question,

$36000 = \frac{40000 \times 10 \times 1}{100}$

$T = \frac{36000 \times 100}{40000 \times 10} = 9 \text{ years}$

53. (1) Required ratio = $(200 + 300) : (250 + 275) = 500 : 525 = 20 : 21$

54. (2) Required earning spent on rent
 $= \frac{60}{360} \times 100 = 16\frac{2}{3}\%$



Let $AB = x$ and $BC = (x + 17)$
 According to question,

$\frac{1}{2} \times x \times (x + 17) = 84$

$x^2 + 17x = 168$

$x = 7$

Now,

$AC^2 = (7)^2 + (24)^2$

$AC^2 = 49 + 576$

$AC = 25$

$\therefore \text{Perimeter} = 7 + 24 + 25 = 56$

56. (1) $\frac{5 - 35 \div 5 \times 15 + 5}{12 - 2}$
 $= \frac{5 - 7 \times 15 + 5}{10} = \frac{5 - 105 + 5}{10}$
 $= \frac{-95}{10} = -9.5$

57. (3) Let the smallest number = x
 According to question,
 $x + x + 1 + x + 2 + x + 3 + x + 4 + x + 5 + x + 6 + x + 7 + x + 8 = 20 \times 9$
 $9x = 180 - 36$
 $x = \frac{144}{9} = 16$

58. (1) A man travels = 3045 km every month
 Average = 15 km/lit

Petrol consumption = $\frac{3045}{15} = 203$

Total cost of petrol = 82×203
 $= ₹ 16646$

Increase after hike

$= \frac{5}{100} \times 16646 \approx 832$

59. (4) Selling price = ₹ 425
 Loss = 15%

Cost price = $\frac{425}{85} \times 100 = 500$

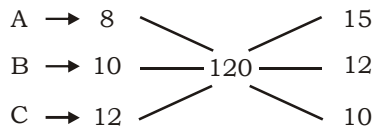
$\therefore \text{Required price} = \frac{105}{100} \times 500 = ₹ 525$

60. (3) Total marks = 30

$$\frac{2}{3} \text{ of total marks} = \frac{2}{3} \times 30 = 20$$

$$\text{Required students} = (2 + 8 + 7 + 8) = 25$$

61. (3) **Time taken** **Efficiency**



$$B' \text{ share} = \frac{12}{37} \times 5550 = ₹ 1800$$

62. (3) Required volume

$$= \frac{4}{3} \times \pi \times (7)^3 - \frac{1}{3} \times \pi \times (7)^2 \times 10$$

$$= \frac{1}{3} \times \pi \times (7)^2 (28 - 10)$$

$$= \frac{1}{3} \times \frac{22}{7} \times 7 \times 7 \times 18 = 924$$

63. (3) $\sec^2 \theta + \tan \theta - 7 = 0$
put $\theta = 45^\circ$

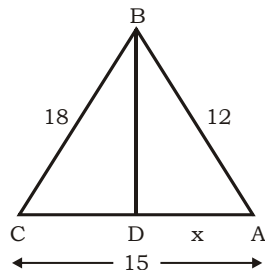
$$3 \times (\sqrt{2})^2 + 1 - 7 = 0$$

$$7 - 7 = 0$$

$$\frac{2 \sin 45^\circ + 3 \cos 45^\circ}{\operatorname{cosec} 45^\circ + \sec 45^\circ}$$

$$= \frac{2 \times \frac{1}{\sqrt{2}} + 3 \times \frac{1}{\sqrt{2}}}{\sqrt{2} + \sqrt{2}} = \frac{5}{\sqrt{2}} \times \frac{1}{2\sqrt{2}} = \frac{5}{4}$$

64. (1)



Let $AD = x$, then

$$CD = 15 - x$$

BD is bisector of angle $\angle B$

Taken,

$$\left(\frac{BC}{BC} = \frac{CD}{DA} \right)$$

$$\frac{18}{12} = \frac{15 - x}{x}$$

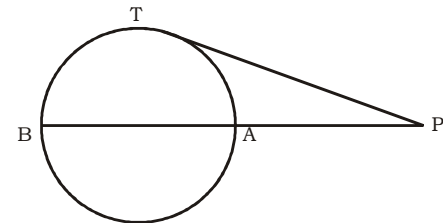
$$18x = 12 \times 15 - 12x$$

$$30x = 180$$

$$x = 6$$

65. (2) Required ratio of number of youth
 $= (12 + 11.5 + 9) : (7 + 10 + 7.5)$
 $= 32.5 : 24.5 = 325 : 245 = 65 : 49$

66. (2)



$$PT = 10.5 \text{ cm}$$

$$PA = 7 \text{ cm}$$

We know that,

$$PA \times PB = PT^2$$

$$7 \times PB = 10.5 \times 10.5$$

$$PB = 10.5 \times 1.5$$

$$PB = 15.75$$

$$\therefore AB = 15.75 - 7 = 8.75 \text{ cm}$$

67. (4) $\frac{335 \times 608 \times 853}{13}$

Remainder will be 7.

68. (3) Marked price = ₹ 625

Discount = 32%

$$\text{Selling price} = \frac{68}{100} \times 625 = ₹ 425$$

$$\text{Profit} = ₹ 25$$

$$\text{Cost price} = ₹ (425 - 25) = ₹ 400$$

$$\therefore \text{Profit\%} = \left(\frac{25}{400} \times 100 \right) \% = 6.25\% \approx 6\%$$

69. (2) Let the present age of A = x years
Present age of B = (x + 8) years
According to question,

$$\frac{x-4}{(x+8)-4} = \frac{1}{2}$$

$$2x - 8 = x + 4$$

$$x = 12$$

B's present age = 20 years

70. (3) Smallest multiple of 7 which leaves 5 as remainder in each case when divided by 8, 9, 12, 15
LCM of 8, 9, 12, 15 = 360 K
Number = 360 K + 5

$$= \frac{357K + 3K + 5}{7} = \frac{3K + 5}{7}, \text{ Put } K = 3$$

$$\therefore \text{Required No.} = 360 \times 3 + 5 \\ = 1080 + 5 = 1085$$

71. (4) Ratio of speed of two trains = 2 : 7
for 1st train, distance = 250 km
Time = 5 hours

$$\text{Speed} = \frac{250}{5} = 50 \text{ km/h}$$

$$2 \text{ unit} \rightarrow 50 \text{ km/h}$$

$$1 \text{ unit} \rightarrow 25 \text{ km/h}$$

$$\text{Sum of speed of both train} = (2 + 7) = 9$$

$$\therefore \text{Speed} = 9 \times 25 = 225 \text{ km/h}$$

72. (3) $\triangle OBX \cong \triangle O'DX$

$$OX = O'X$$

$$\text{Let } BX = x, XB = (48 - x)$$

$$(7)^2 + (48 - x)^2 = x^2 + (7)^2$$

$$49 + 2304 + x^2 - 96x = x^2 + 49$$

$$x = 24$$

$$OX^2 = 49 + 576$$

$$OX = 25, OX' = 25$$

$$\therefore AC = 25 + 25 = 50 \text{ cm}$$

73. (1) $x + y + z = 11, xy + yz + zx = -6$

$$x^3 + y^3 + z^3 = 1604, xyz = ?$$

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

$$121 = x^2 + y^2 + z^2 + 2(-6)$$

$$x^2 + y^2 + z^2 = 121 + 12 = 133$$

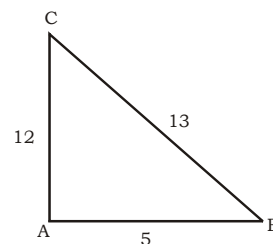
Now,

$$1604 - 3xyz = 11 [133 - (-6)]$$

$$1604 - 3xyz = 11 (139)$$

$$xyz = \frac{1604 - 1529}{3} = 25$$

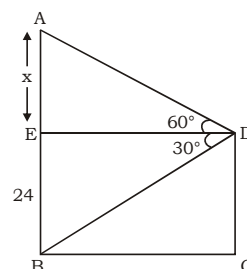
74. (2)



$$\cot B = \frac{12}{5}$$

$$\therefore \sec B = \frac{13}{12}$$

75. (3)



In $\triangle EBD$,

$$\frac{24}{ED} = \tan 30^\circ$$

$$ED = 24\sqrt{3}$$

Now In $\triangle AED$,

$$\frac{x}{24\sqrt{3}} = \tan 60^\circ$$

$$x = 24\sqrt{3} \times \sqrt{3} = 72$$

$$\therefore \text{Height of the tower} = 72 + 24 = 96 \text{ m}$$

77. (2) 'Who must be used in place of 'which' to make it correct.
74. (4) Use 'get punished' in place of 'and punished'.
86. (4) Use 'had listened' in place of 'were listening' to correct.
89. (2) Article is used before singular countable noun, we can not use article before surprising.
90. (1) Use 'has' in place of 'have' to make it singular.
91. (3) More and than is used to compare two things.
Use 'my sister's house in place of 'my sister'.

**12 APRIL FIRST SHIFT
(ANSWER KEY)**

1. (4)	11. (3)	21. (1)	31. (2)	41. (4)	51. (3)	61. (3)	71. (4)	81. (2)	91. (3)
2. (2)	12. (2)	22. (4)	32. (3)	42. (3)	52. (2)	62. (3)	72. (3)	82. (1)	92. (1)
3. (4)	13. (1)	23. (4)	33. (4)	43. (3)	53. (1)	63. (3)	73. (1)	83. (4)	93. (4)
4. (3)	14. (2)	24. (2)	34. (3)	44. (2)	54. (2)	64. (1)	74. (2)	84. (4)	94. (2)
5. (1)	15. (2)	25. (1)	35. (4)	45. (3)	55. (4)	65. (2)	75. (3)	85. (3)	95. (2)
6. (4)	16. (2)	26. (3)	36. (2)	46. (3)	56. (1)	66. (2)	76. (4)	86. (4)	96. (3)
7. (3)	17. (3)	27. (4)	37. (4)	47. (2)	57. (3)	67. (4)	77. (2)	87. (4)	97. (2)
8. (4)	18. (1)	28. (2)	38. (2)	48. (1)	58. (1)	68. (3)	78. (2)	88. (2)	98. (4)
9. (2)	19. (2)	29. (1)	39. (4)	49. (3)	59. (4)	69. (2)	79. (2)	89. (2)	99. (3)
10. (3)	20. (1)	30. (2)	40. (2)	50. (4)	60. (3)	70. (2)	80. (1)	90. (1)	100. (3)

MEANINGS IN ALPHABETICAL ORDER

Words	Meaning in English	Meaning in Hindi
Abolish	to end a law or system officially	समाप्त करना
Appal	feeling disgust	स्तब्ध
Astound	great surprise	हैरान
Bond	joins groups of people together	बंधन
Convinced	Completely sure about something	राजी
Cynic	someone who believes that people act selfishly	दोषदर्शी
Distrust	lack of trust	अविश्वास
Distrustful	showing distrust	अविश्वासी
Duo	Two people playing music together	युगलवादन
Fatal	causing or ending in death	घातक
Lusty	glutinous	जोरदार
Mortal	must die	नश्वर
Paranoid	wrongly believing that other people are trying to harm you	पागलपन-संबंधी
Pilgrim	a person who visit religious place	तीर्थयात्री
Prudent	rational	विवेकी
Rely	keep faith	भरोसा करना
Stoic	frigid	उदासीन
Toxic	poisonous	विषैला
Utmost	greatest	अधिकतम