

AFCAT 1 2025 Practice Paper 03

Q1. A composite-panel OEM books three export lots in a single quarter. Lot-P has CP Rs. 4,80,000 and is billed at a gross margin of +18%; Lot-Q has CP Rs. 3,20,000 and is billed at a loss of -12%; Lot-R has CP Rs. 2,00,000 and is billed at a gross margin of +30%. On the aggregate billed value a uniform export levy of 5% is deducted from the OEM's receipts. The OEM's overall gain/loss percent on total CP is closest to:



- (A) +4.9% (B) +5.6%
(C) +6.1% (D) +3.4%

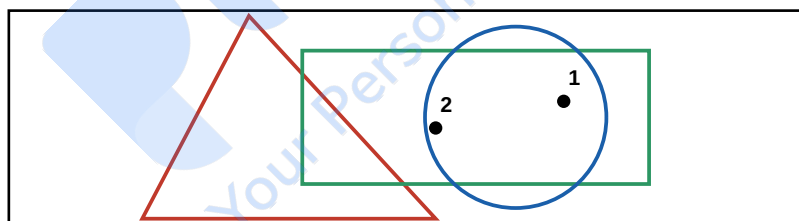
Q2. In the sentence 'The Air Marshal's trenchant critique of the emerging doctrine, delivered before the joint services board, left no serving officer with the comfort of equivocation', the underlined word most nearly means:

- (A) Insipid and equivocating (B) Incisive and forceful
(C) Halting and irresolute (D) Diffident and self-effacing

Q3. ISRO's SpaDeX (Space Docking Experiment), which established India as only the fourth nation to autonomously dock two spacecraft in orbit, involved two 220-kg-class satellites bearing the mission designations:

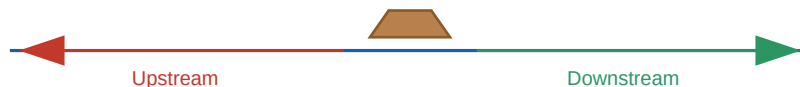
- (A) SDX-01 (Target) and SDX-02 (Chaser) (B) Aditya-C1 (Chaser) and Aditya-C2 (Target)
(C) IRNSS-1J (Chaser) and IRNSS-1K (Target) (D) SSLV-D3A (Target) and SSLV-D3B (Chaser)

Q4. [Dot Situation] In the problem figure below, three overlapping shapes share a common region. Dot-A is placed inside BOTH the rectangle and the circle but OUTSIDE the triangle; Dot-B is placed in the region common to all three shapes. Identify the option that preserves the SAME dot-region conditions for A and B.



- (A) Rectangle & circle overlap holds a dot outside triangle; triple-overlap region holds a second dot (B) All three shapes drawn concentric with dots randomly placed
(C) Two shapes disjoint from the third with no valid triple region (D) Circle fully inside triangle, rectangle isolated

Q5. A patrol launch on a river covers 44 km downstream and 30 km upstream in 10 hours; on another day it covers 55 km downstream and 40 km upstream in 13 hours. Assuming the stream's current is constant, determine the boat's speed in still water (km/h).



- (A) 9 (B) 10
(C) 11 (D) 8

Q6. Identify the segment containing a grammatical error: 'Neither the Wing Commander / nor the flight cadets / was informed about / the sudden weather diversion issued by the ATC.'

- (A) Neither the Wing Commander (B) nor the flight cadets
(C) was informed about (D) the sudden weather diversion issued by the ATC

Q7. INS Vagsheer, commissioned in January 2025 alongside INS Nilgiri and INS Surat at the Naval Dockyard Mumbai, is the sixth and final submarine of which programme, thereby completing an entire Scorpene-family production line built domestically at Mazagon Dock Shipbuilders?

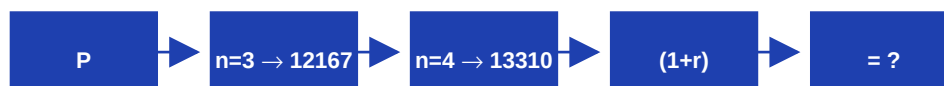
- (A) Project 75I (B) Project 75 (Kalvari-class Scorpene)
(C) Project 17A stealth frigate follow-on (D) Project 28A ASW corvette

Q8. In a certain code, 'RADAR' = '18-1-4-1-18' (alphabet-position mapping) and 'SONAR' = '19-15-14-1-18'. Following the same rule strictly, how will 'LIDAR' be encoded?



- (A) 12-9-4-1-18 (B) 11-9-4-1-18
(C) 12-8-4-1-18 (D) 12-9-4-2-18

Q9. A sum invested at CI, compounded annually at a fixed rate, amounts to Rs. 12,167 at end of 3 years and Rs. 13,310.24 at end of 4 years. Determine the sum (principal) closest to:



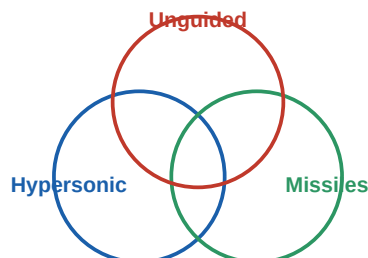
CI amounts at 3 & 4 years — find principal

- (A) Rs. 10,000 (B) Rs. 9,500
(C) Rs. 8,500 (D) Rs. 8,000
- Q10.** 'Tarang Shakti 2024', the IAF's largest-ever multinational air exercise, was conducted in two phases across India. The two IAF air stations that hosted the back-to-back phases were:
- (A) Sullur (Phase-I) and Jodhpur (Phase-II) (B) Kalaikunda (Phase-I) and Halwara (Phase-II)
(C) Ambala (Phase-I) and Hindan (Phase-II) (D) Tezpur (Phase-I) and Chabua (Phase-II)

Q11. In the sentence 'Deep-fake propaganda campaigns are a nascent but rapidly maturing threat vector in modern grey-zone warfare', the underlined word's most precise antonym is:

- (A) Emerging (B) Fledgling
(C) Mature and fully-developed (D) Inchoate

Q12. Statements: (1) All hypersonic vehicles are missiles. (2) Some missiles are unguided. (3) No unguided missile is precision-class. Conclusions: I. Some hypersonic vehicles are unguided. II. Some missiles are not precision-class. III. No hypersonic vehicle is precision-class. Which conclusion(s) definitely follow?

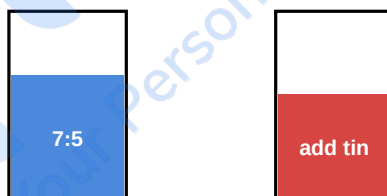


- (A) Only I follows (B) Only II follows
(C) Only II and III follow (D) Only II and I follow

Q13. Under Article 352, once a Proclamation of National Emergency is approved by both Houses, it initially remains in force for six months and may be extended by successive resolutions. In this manner it can continue:

- (A) For a maximum of 6 months only, non-extendable (B) For a maximum of exactly 1 year
(C) Indefinitely, subject to Parliamentary approval every 6 months (D) For an absolute ceiling of 3 years

Q14. A 120-litre alloy contains copper and tin in ratio 7:5. Pure tin (x litres) is added so the new ratio becomes 5:6. Find x.



mix to get target ratio

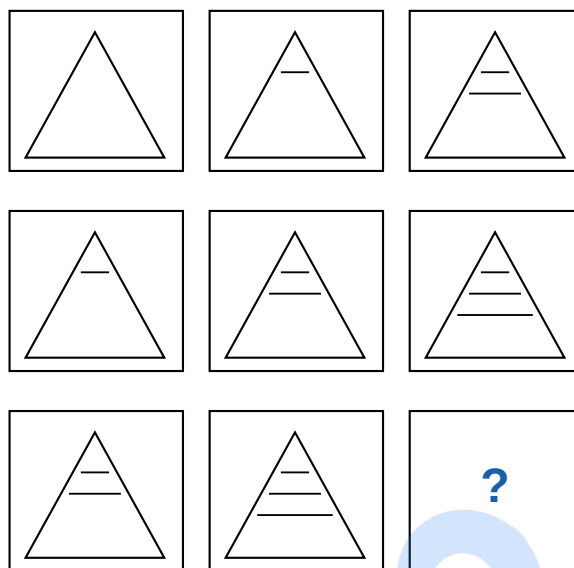
Alloy: 120 L Cu:Sn = 7:5 → add pure tin → 5:6

- (A) 24 L (B) 34 L
(C) 28 L (D) 20 L

Q15. Choose the correct one-word substitute for: 'A speech, essay or piece of writing that praises someone or something very highly and with ceremonial formality.'

- (A) Epitaph (B) Encomium
(C) Elegy (D) Epigram

Q16. [Visual Matrix] Study the 3x3 matrix of circular figures. Each row shows a circle whose interior is progressively divided by an increasing number of straight chords: row-1 (0,1,2), row-2 (1,2,3), row-3 (2,3,?). Identify the figure that must occupy the missing bottom-right cell.



Replace '?' in the bottom-right cell

- (A) Circle with 4 chords
(C) Circle with 2 chords

- (B) Circle with 3 chords
(D) Square with 4 chords

Q17. The IAF's No. 18 Squadron 'Flying Bullets', re-raised on 27 May 2020 at AFS Sullur as the second Tejas-equipped unit after No. 45 Squadron, currently operates:

- (A) MiG-29 UPG in point-defence role
(C) Su-30MKI in air-superiority role

- (B) HAL Tejas Mk-1 and progressively Mk-1A
(D) SEPECAT Jaguar DARIN-III in maritime strike role

Q18. A can independently complete a job in 30 days, B in 40 days and C in 60 days. All three begin working together; however, A leaves 4 days before completion and B leaves 6 days before completion. In how many total days is the work finished?



Three-worker plan with staggered exits

- (A) 16
(C) 18

- (B) 17.4
(D) 16.8

Q19. Convert to indirect speech: The pilot said, 'I will complete the sortie by dusk if the visibility holds and if the tanker is on-station over the FIR boundary.'

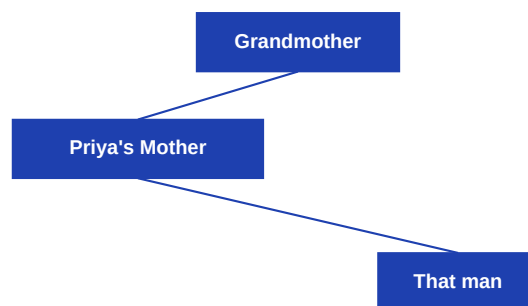
- (A) The pilot said that he would complete the sortie by dusk if the visibility held and if the tanker was on-station over the FIR boundary.

- (B) The pilot told he will complete the sortie if visibility holds and the tanker was there.

- (C) The pilot said that he will complete the sortie by dusk if the visibility holds.

- (D) The pilot said he had completed the sortie by dusk when the tanker was there.

Q20. Pointing to a man in a photograph, Priya said, 'His father is the only son of my mother's mother-in-law's daughter-in-law.' Based only on this statement, how is Priya related to that man?



- (A) Sister
(B) Aunt (paternal)
(C) Mother
(D) Cousin

Q21. 'Project Kusha', the DRDO-led indigenous long-range surface-to-air missile system for the IAF with layered engagement out to ~350 km, is broadly positioned as a functional counterpart to which foreign system?

- (A) MIM-104 Patriot PAC-3 MSE
(B) S-400 Triumf (long-range layer)
(C) Iron Dome (very-short-range CRAM)
(D) Aster-30 SAMP/T (medium-range)

Q22. The average of 15 numbers is 60. If the average of the first 8 numbers is 55 and the average of the last 8 numbers is 65, find the value of the 8th number (counted in both halves).



- (A) 70
(B) 60
(C) 40
(D) 50

Q23. Fill in the blank with the most precise word: 'The Air Chief's _____ tone during the closed-door briefing masked the gravity of the intelligence he was about to disclose to the assembled operations staff.'

- (A) Sardonic (mockingly cynical)
(B) Sanguine (cheerfully optimistic)
(C) Saccharine (unpleasantly sweet)
(D) Anodyne (bland, non-committal)

Q24. In a certain code, 'CHARLIE' is written as 'EJCTNKG' (each letter shifted forward by exactly 2 positions). Following the identical rule, how will 'DELTA' be encoded?

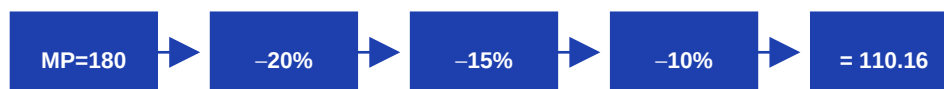


- (A) FGNVC
(B) FGNVD
(C) FHNVC
(D) FGOVC

Q25. Which Governor-General of India is remembered principally for legally abolishing the practice of Sati in Bengal (Regulation XVII of 1829), though the Doctrine of Lapse was not yet in force during his tenure?

- (A) Lord Dalhousie (B) Lord William Bentinck
(C) Lord Curzon (D) Lord Cornwallis

Q26. A trader marks his goods at 80% above cost price and offers three successive discounts of 20%, 15% and 10% to a bulk buyer. Ignoring taxes and freight, his net profit percent on cost is closest to:



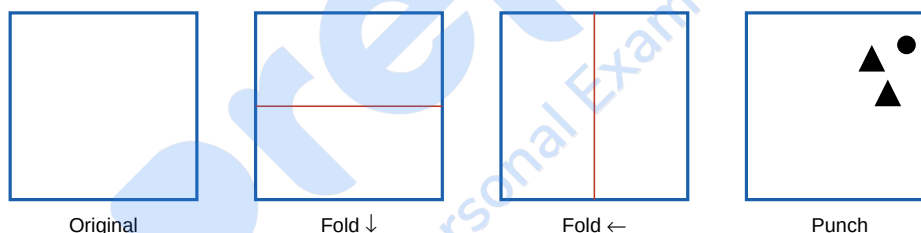
Three successive discounts

- (A) 10.16% (B) 11.36%
(C) 12.60% (D) 8.72%

Q27. Which of the following is the correctly spelt word (a military-intelligence term)?

- (A) Reconnaissance (B) Reconnaissance
(C) Reconaissance (D) Reconnaissance

Q28. [Paper Folding] A square sheet is folded once along its main diagonal (bottom-left to top-right), producing a right-angled triangle. This triangle is then folded once more along the horizontal median. In the resulting doubled region, one circular punch and one square punch are made. When the sheet is fully unfolded, how many total punch marks of each kind appear?



- (A) 4 circles and 4 squares (B) 2 circles and 2 squares
(C) 8 circles and 8 squares (D) 3 circles and 3 squares

Q29. 'Vajra Prahar 2024', a joint special-forces bilateral exercise emphasising counter-terrorism and airborne assault operations, was conducted between the special forces of India and:

- (A) Japan (B) United States
(C) France (D) Australia

Q30. The present ages of A and B are in the ratio 4:5. Six years from now, the same ratio will change to 5:6. Find A's present age (years).



Age-ratio equation

- (A) 20
(C) 16

- (B) 24
(D) 28

Q31. Choose the correct improvement of the underlined portion: 'No sooner had the runway lights turned green than the four-ship formation lifted off in perfect three-second trail spacing.'

- (A) when
(C) before

- (B) then
(D) No improvement

Q32. An airman walks 20 m due North from a chalk mark on the tarmac, turns East and walks 15 m, turns South and walks 40 m, and finally turns West and walks 15 m. How far and in which direction is he from the starting mark?



- (A) 20 m due South
(C) 40 m due South

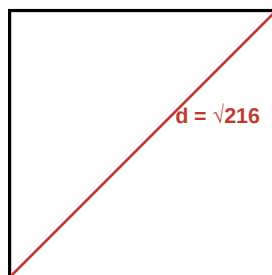
- (B) 20 m due North
(D) 15 m due East

Q33. For India's crewed 'Gaganyaan' orbital mission targeting three astronauts to LEO for up to seven days, the launch vehicle formally designated by ISRO after human-rating certification is:

- (A) PSLV-XL
(C) LVM3 (Human-Rated) - HRLV

- (B) GSLV Mk-II with cryogenic upper stage
(D) SSLV (Small Satellite Launch Vehicle)

Q34. The area of a rhombus with diagonals 24 cm and 18 cm equals the area of a certain square. Find the side length of the square (in cm).



Rhombus area = square area $\rightarrow$ find side

- (A) $12 \times \sqrt{1.5}$ cm (B) $6 \times \sqrt{6}$ cm
(C) 18 cm (D) 12 cm

Q35. Select the correct one-word substitute: 'A person who is indifferent to pleasure or pain, remaining outwardly unmoved by fortune.'

- (A) Stoic (B) Epicurean
(C) Cynic (D) Sybarite

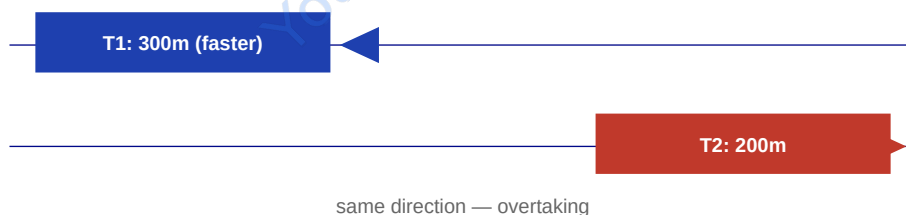
Q36. Find the odd one out from the following four missile designations, considering both role and country of origin:

- (A) Astra Mk-1 (B) Rudram-1
(C) MICA (D) R-77

Q37. Which strategic mountain pass connects Ladakh with China's Xinjiang province and lies on the historical caravan route to Yarkand, retaining sustained Indo-Chinese military significance since 1962?

- (A) Zoji La (B) Karakoram Pass
(C) Rohtang La (D) Bomdi La

Q38. Two trains of length 300 m and 200 m respectively move in the SAME direction on parallel tracks. The faster train fully overtakes the slower one in 50 seconds. If the slower train's speed is 54 km/h, find the speed of the faster train (km/h).



Same-direction overtaking in 50 s

- (A) 72 (B) 90
(C) 81 (D) 78

Q39. Choose the sentence in which the idiom is used correctly:

- (A) He threw his hat in the ring for the AFCAT interview. (B) He threw his ring in the hat during selection.
(C) He put his hat on the ring at the SSB. (D) He passed his hat in a ring.

Q40. In a row of 50 cadets facing due north, Ravi is 18th from the LEFT. He shifts 4 places to his right in strict sequence. What is his new position counted from the RIGHT end?



Row of 50 — Ravi shifts 4 places right

- (A) 28 (B) 29
(C) 30 (D) 27

Q41. The 'Anusandhan National Research Foundation (ANRF)', operationalised through the ANRF Act 2023 and functional from 2024, supersedes and subsumes which earlier autonomous body of the DST?

- (A) Indian Council of Scientific Research (B) Science and Engineering Research Board (SERB)
(C) Council of Scientific & Industrial Research (CSIR) (D) Department of Science & Technology (DST) as a whole

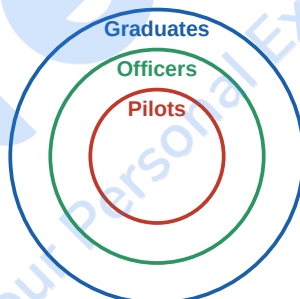
Q42. By selling an article at $\frac{4}{5}$ of its full selling price, a trader incurs a loss of 4%. Find the trader's gain percent when the article is sold at the actual selling price.

- (A) 16% (B) 20%
(C) 22% (D) 24%

Q43. Identify the segment containing a grammatical error: 'Each of the recruits / are expected to submit / their consolidated medical records / by Friday morning to the AFMS coordinator.'

- (A) Each of the recruits (B) are expected to submit
(C) their consolidated medical records (D) by Friday morning to the AFMS coordinator

Q44. [Venn Diagram] Which diagram best represents the set-relationship among 'Pilots, Officers, Graduates' under the premises: All Pilots are Officers; All Officers are Graduates; some Graduates are neither Pilots nor Officers?



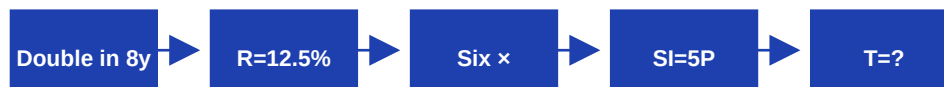
$Pilots \subset Officers \subset Graduates$

- (A) Three mutually disjoint circles (B) Three concentric circles (Pilots subset Officers subset Graduates)
(C) Three mutually intersecting circles (D) Two overlapping circles inside a third

Q45. The Union Budget 2025-26 announced a 'Nuclear Energy Mission for Viksit Bharat' including capital allocation for the Bharat Small Reactor (BSR) programme. The headline aspirational target for installed nuclear capacity by 2047 is:

- (A) 50 GW (B) 100 GW
(C) 150 GW (D) 200 GW

Q46. A sum of money doubles itself in exactly 8 years under simple interest. At the same rate, in how many years will the same sum grow to six times its original value?



SI multiplication of principal

- (A) 32 (B) 40
(C) 48 (D) 56

Q47. Directions (Q47-Q50): Read the passage carefully and answer. 'Modern armed conflict has bifurcated. Kinetic engagements - the movement of platforms and the exchange of ordnance - form the visible tier. Alongside them operates a persistent grey-zone tier of cyber intrusions, spoofed satellite feeds, and deep-fake influence campaigns, calibrated to remain below the threshold of any formal declaration of war. The doctrinal danger this poses is that grey-zone success is measured not in decisive battles won but in accumulated ambiguity - a slow drift in the operating environment. A state may lose sovereignty inch by inch without ever recognising that an act of war has taken place.' The principal doctrinal danger identified is:

- (A) That kinetic weapon systems are rapidly becoming obsolete
(B) That a state may lose sovereignty gradually through accumulated ambiguity
(C) That grey-zone operations are prohibitively expensive to conduct at scale
(D) That cyber-defence agencies are replacing conventional militaries

Q48. Per the passage in Q47, grey-zone success is measured chiefly in:

- (A) Decisive battlefield victories over adversaries
(B) Accumulated ambiguity in the operating environment
(C) Formal treaty gains obtained through negotiation
(D) Enemy casualties inflicted

Q49. The overall tone of the author across the passage in Q47 is best described as:

- (A) Alarmist and polemical
(B) Analytical and cautionary
(C) Nostalgic and mournful
(D) Purely celebratory

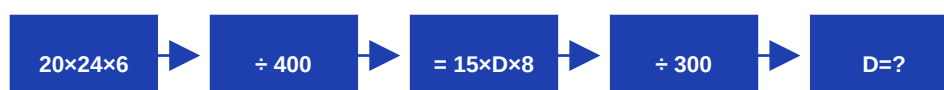
Q50. In the Q47 passage, the phrase 'a state may lose sovereignty inch by inch' most directly implies that:

- (A) Territorial invasion by armoured formations is the primary risk
(B) Sovereignty erodes gradually and cumulatively below the detection threshold
(C) Sovereignty is formally ceded through a public treaty instrument
(D) Sovereignty transfers through a legal change of jurisdiction

Q51. Chandrayaan-3's Vikram lander achieved a soft touchdown near the Moon's south pole in August 2023, making India the first nation to do so. The touchdown coordinates are approximately:

- (A) 69.37 S, 32.35 E (Shiv Shakti Point)
(B) 89 S near the geometric south pole
(C) 0 N on the lunar equator
(D) 30 N, 60 W near Mare Imbrium

Q52. If 20 workers can build a 400 m highway divider in 24 days working 6 h/day, how many days will 15 workers take to build a 300 m divider working 8 h/day?



Man-day-hour proportion

- (A) 18 (B) 20
(C) 16 (D) 24

Q53. Find the missing term of the series: 7, 15, 32, 67, 138, ?



Pattern: $2 \cdot \text{prev} + k$

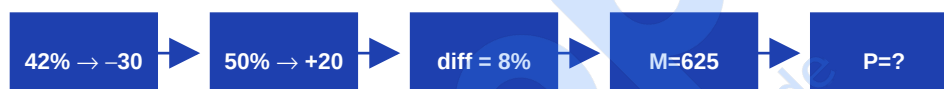
Find missing term

- (A) 281 (B) 283
(C) 279 (D) 285

Q54. Which Constitutional Amendment Act formally introduced the anti-defection provisions by inserting the Tenth Schedule?

- (A) 42nd Amendment (1976) (B) 52nd Amendment (1985)
(C) 61st Amendment (1989) (D) 73rd Amendment (1992)

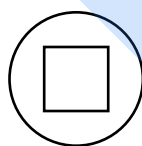
Q55. A candidate needs 45% of maximum marks to pass. He obtains 42% and fails by 30 marks; another candidate obtains 50% and passes with 20 marks to spare. Find the passing marks.



Two-candidate percentage equations

- (A) 281 (B) 300
(C) 450 (D) 480

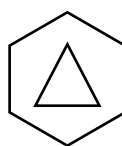
Q56. Choose the correct analogy 'Cockpit : Aircraft :: Bridge : ?' - preserving the 'primary command station : platform' relation.



A



B



C

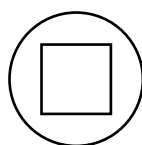


D

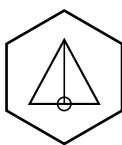
Cockpit : Aircraft :: Bridge : ?

- (A) Highway (B) Ship
(C) Cable (D) Locomotive engine

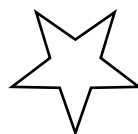
Q57. [Embedded Figure] The TARGET is an equilateral triangle with a circle inscribed in it and a small dot at the centroid. Identify the option in which this exact target appears embedded intact.



A



B



C



D

Find the target embedded intact

(A) Hexagon with rotated triangle

(B) Star polygon containing an upright triangle with inscribed circle and centre dot

(C) Pentagon with cross-hatch

(D) Concentric circles

Q58. The headquarters of the IAF's Central Air Command is located at:

(A) Prayagraj (Bamrauli)

(B) Nagpur

(C) Shillong

(D) Gandhinagar

Q59. The HCF and LCM of two natural numbers are 12 and 336 respectively. If one number is 48, find the other number.



$$HCF \times LCM = a \times b$$

(A) 72

(B) 84

(C) 112

(D) 96

Q60. In diplomatic and military reporting, the idiom 'to steal a march on' most nearly means:

(A) To delay someone deliberately for tactical gain

(B) To gain an unexpected advantage over an opponent

(C) To refuse to comply with lawful orders

(D) To march in silence at night

Q61. Choose the word least like the others among these Indian Navy capital ships:

(A) INS Vikrant

(B) INS Vikramaditya

(C) INS Arihant

(D) INS Vishal (proposed)

Q62. 'BrahMos-NG' (Next-Generation) differs from the baseline BrahMos primarily in that it is:

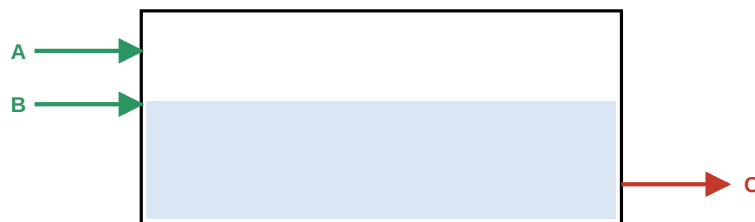
(A) Powered by a solid-fuel scramjet for hypersonic flight

(B) Smaller and lighter (~1.5 t), enabling internal carriage on LCA / Su-30MKI

(C) A land-attack-only cruise missile with no naval role

(D) Subsonic for low-observable ingress

Q63. Pipe A can fill a tank in 10 h, pipe B in 15 h, drain pipe C empties it in 20 h. All three are opened at $t=0$. After 4 h, pipe A is shut. Find total time (from $t=0$) to fill the tank.



A fills 10 h, B 15 h, C drains 20 h

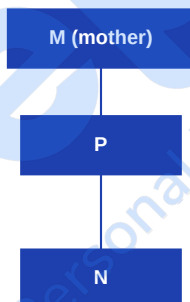
Pipes A, B + drain C

- (A) 7 h (B) 8 h
(C) 9 h (D) 10 h

Q64. Choose the grammatically correct sentence:

- (A) The number of applications have risen sharply this cycle. (B) The number of applications has risen sharply this cycle.
(C) A number of applications has risen sharply this cycle. (D) The number of application have risen sharply this cycle.

Q65. If 'A x B' means 'A is mother of B'; 'A + B' means 'A is father of B'; 'A - B' means 'A is sister of B' - which expression shows M is the MATERNAL grandmother of N?



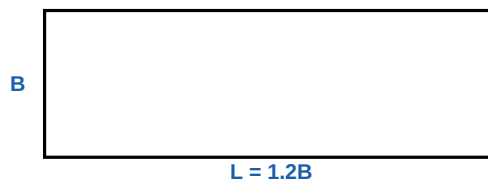
Choose the correct symbolic chain

- (A) $M \times P + N$ (B) $M + P \times N$
(C) $M - P \times N$ (D) $M \times P - N$

Q66. Effective 1 January 2024, BRICS expanded to include a new set of members (Argentina having declined). Which set correctly identifies the newly-joined members at accession?

- (A) Egypt, Ethiopia, Iran, Saudi Arabia (deferred), UAE (B) Nigeria, Kenya, Vietnam, Indonesia
(C) Turkey, Pakistan, Bangladesh, Sri Lanka (D) Mexico, Chile, Colombia, Peru

Q67. A rectangular runway strip has perimeter 900 m and length exceeds width by 150 m. Determine the total cost of strip-marking its entire perimeter at Rs. 15 per running metre.



Perimeter 900 m, cost @ Rs.15/m

Rectangular runway strip

- (A) Rs. 13,500 (B) Rs. 12,750
(C) Rs. 14,000 (D) Rs. 13,000

Q68. Fill in the blank with the most precise word: 'The Air Vice-Marshall's _____ command style - decisive but never overbearing, personally engaged but never micromanaging - became the working template for successive station commanders.'

- (A) Truculent (B) Magisterial
(C) Vacillating (D) Diffident

Q69. In a certain code 'DECODE' is written as 'FCEMFC' - odd-position letters shifted +2 and even-position letters shifted -2. Applying the same rule, how will 'SIGNAL' be encoded?



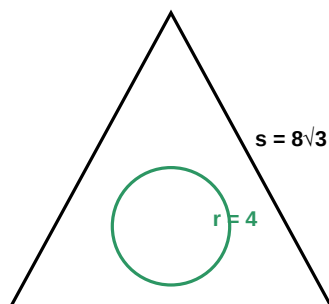
Alternating +2 / -2 Caesar

- (A) UGIYCJ (B) UGILCJ
(C) UGILCK (D) UGIICJ

Q70. The Corps of Engineers of the Indian Army traditionally comprises three main sapper groups - the Madras Sappers, the Bengal Sappers, and:

- (A) Bombay Sappers (B) Delhi Sappers
(C) Sikh Sappers (D) Kumaon Sappers

Q71. Find the area of an equilateral triangle circumscribed about a circle of radius 4 cm (i.e. the circle is inscribed in the triangle, touching all three sides).



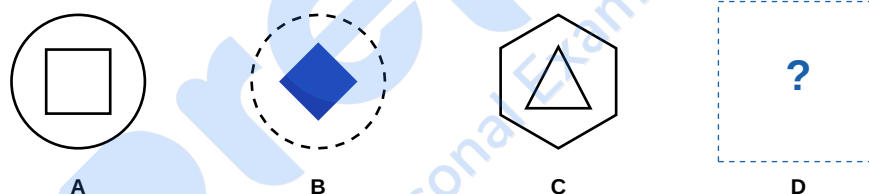
Equilateral triangle circumscribing $r = 4$ circle

- (A) $48\sqrt{3}$ sq cm (B) $36\sqrt{3}$ sq cm
(C) $16\sqrt{3}$ sq cm (D) $24\sqrt{3}$ sq cm

Q72. Select the correct antonym of the underlined word: 'The ostentatious display of decorations on the dais felt jarringly out of place at the sombre wreath-laying ceremony.'

- (A) Flamboyant (B) Unpretentious
(C) Grandiose (D) Showy

Q73. [Figure Analogy] Study the analogy A:B :: C:D. Each pair has an outer regular polygon of increasing side-count containing an inscribed regular figure of decreasing complexity. Identify D.



Complete the figure analogy

- (A) Triangle with inscribed line-segment (B) Circle with inscribed square
(C) Two overlapping ellipses (D) Concentric squares

Q74. Under Article 143 of the Constitution, the President may refer a question of law/fact of public importance to the Supreme Court for its advisory opinion. Any such opinion rendered by the Court is:

- (A) Binding on the President and all subordinate courts (B) Advisory in nature and not binding on the President
(C) Binding only during a proclamation of emergency (D) Binding on Parliament and State legislatures

Q75. A shopkeeper allows a discount of 12.5% on the marked price of a product and yet gains 20% on his cost. If the cost price is Rs. 3,500, find the marked price.



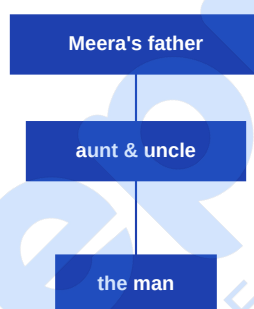
MP from SP after 12.5% discount

- (A) Rs. 4,800 (B) Rs. 4,571.43
(C) Rs. 4,900 (D) Rs. 4,750

Q76. Choose the option that best captures the meaning of the phrase 'Prima facie', as used in legal and investigative contexts:

- (A) Beyond a shadow of doubt (B) At first appearance, based on the initial evidence
(C) As a last resort after everything else has failed (D) Behind closed doors, in confidence

Q77. Pointing to a young man in a photograph, Meera said, 'He is the son of my father's only sister's husband.' How is the young man related to Meera?



Kinship trace

- (A) Brother (B) Cousin
(C) Uncle (D) Nephew

Q78. Which of the following countries does NOT share a land border with China?

- (A) Kyrgyzstan (B) Tajikistan
(C) Uzbekistan (D) Bhutan

Q79. A number is first increased by 30% and then decreased by 20%. Determine the net percentage change.



Two-step multiplicative % change

- (A) 10% increase (B) 6% increase
(C) 4% increase (D) No change

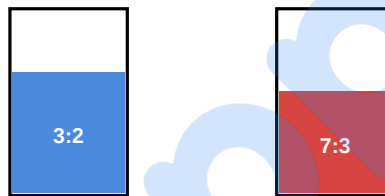
Q80. Complete the alphanumeric sequence: B3E, D8H, F17K, H32N, ?



Alphanumeric compound pattern

- (A) J55Q (B) J54Q
(C) J53Q (D) I55Q
- Q81.** The IAF rank equivalent to an Army Lieutenant-General (three-star General Officer) is:
- (A) Air Vice-Marshal (B) Air Marshal
(C) Air Chief Marshal (D) Air Commodore

Q82. Two beakers contain acid-water mixtures in ratios 3:2 and 7:3 respectively. In what ratio must they be mixed to yield a mixture with an acid-water ratio of 2:1?

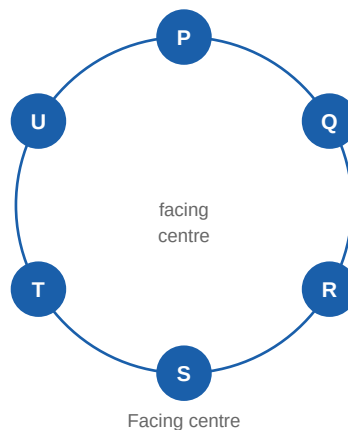


mix to get target ratio

Alligation for two acid-water beakers

- (A) 1 : 2 (B) 2 : 1
(C) 3 : 1 (D) 1 : 3
- Q83.** Select the synonym of the underlined word: 'The captured intelligence file described a perfidious plan to compromise the mid-air refuelling schedule.'
- (A) Loyal (B) Treacherous
(C) Steadfast (D) Reticent

Q84. [Circular Seating] Six officers P, Q, R, S, T, U sit around a round table facing centre. (i) P is second to the left of Q; (ii) R is exactly opposite Q; (iii) S is between T and P and adjacent to both. Who sits immediately to the right of R?



Facing centre

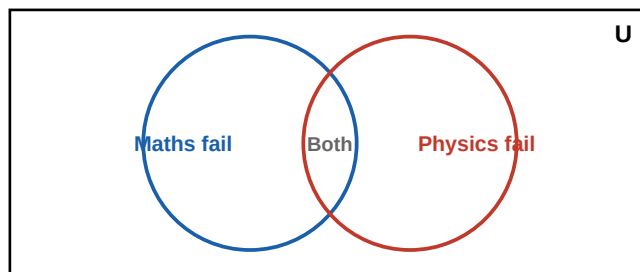
Deduce the seating

- (A) T (B) U
(C) S (D) P

Q85. The river Indus originates from a spring in Tibet, near which of the following?

- (A) Verinag Spring (Kashmir) (B) Lake Mansarovar region (near Bokhar Chu)
(C) Gangotri glacier (D) Mana Pass

Q86. In an examination, 35% of students failed in Mathematics, 25% failed in Physics, and 10% failed in BOTH subjects. What percent of the students passed in BOTH subjects?



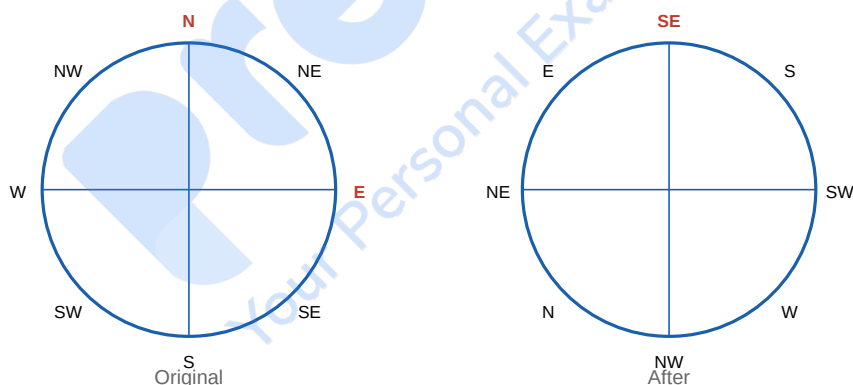
35% M-fail, 25% P-fail, 10% both

- (A) 50% (B) 45%
(C) 40% (D) 55%

Q87. Fill in the blank with the most fitting word: 'Her _____ mentorship, quiet but unwavering across three postings, shaped an entire generation of test pilots at ASTE.'

- (A) Peremptory (B) Solicitous
(C) Cavalier (D) Dilatory

Q88. In a rotated compass, East now points to North-West and North now points to South-West. Determine the direction that the ORIGINAL South-East now points to.



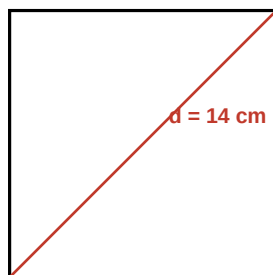
$E \rightarrow NW, N \rightarrow SW$ — apply rotation to SE

- (A) North (B) West
(C) South-West (D) North-East

Q89. The 'Cartagena Protocol on Biosafety', to which India is a party (a supplementary agreement to the CBD), primarily addresses:

- (A) International trade in endangered species of wild fauna and flora (B) Transboundary movement, handling and use of living modified organisms (LMOs)
(C) Protection of the stratospheric ozone layer (D) Conservation of wetlands of international importance

Q90. The diagonal of a square equals the DIAMETER of a certain circle. If the circle's area is 154 sq cm ($\pi = 22/7$), find the area of the square.



Diagonal = diameter of circle (area 154)

- (A) 98 sq cm (B) 100 sq cm
(C) 88 sq cm (D) 112 sq cm

Q91. Choose the correct antonym of the underlined word: 'The commander's sanguine assessment of the coming week's sortie schedule surprised the exhausted maintenance staff.'

- (A) Optimistic (B) Buoyant
(C) Despondent (D) Roseate

Q92. From the following four number-pairs (of form 'value - its cube root'), identify the one that does NOT follow the same rule as the others.



Fourth-power vs cube find odd

- (A) 81 - 3 (B) 256 - 4
(C) 625 - 5 (D) 216 - 6

Q93. The motto 'Sarvatra Vijay' (Victory Everywhere) is associated with which Corps of the Indian Army?

- (A) Corps of Engineers (B) Corps of Signals
(C) Corps of Army Air Defence (D) Corps of EME

Q94. A jet completes 60% of a 2000 km sortie at 800 km/h and the remaining 40% at 600 km/h. Determine the average speed for the entire leg (km/h).



Weighted average of two segments

- (A) 720 (B) 705.88
(C) 700 (D) 714.29

Q95. Choose the correct meaning of the idiom 'to burn the midnight oil':

- (A) To work or study very late into the night (B) To waste household resources needlessly
(C) To make a completely fresh start (D) To ignite a fire during a blackout

Q96. The 'PM Surya Ghar: Muft Bijli Yojana', launched February 2024, provides subsidised rooftop solar and free electricity up to 300 units/month. The scheme's headline target is to cover how many crore households?

- (A) 0.5 crore (B) 1 crore
(C) 2 crore (D) 3 crore

Q97. Find the next term of the series 3, 8, 22, 63, 185, ?



Pattern: $3 \cdot \text{prev} - k$

Find missing term

- (A) 550 (B) 552
(C) 548 (D) 546

Q98. The motto of the Indian Air Force 'Nabhah Sparsham Deeptam' (Touch the Sky with Glory) is drawn from which classical text?

- (A) Rig Veda (B) Bhagavad Gita, Chapter 11, Verse 24
(C) Manusmriti (D) Arthashastra of Kautilya

Q99. A dishonest shopkeeper uses a weight of 950 g in place of 1 kg while selling, and also loads an over-charge of 5% on the price. His overall profit percent is closest to:



Compound cheating

- (A) 10.53% (B) 9.47%
(C) 10.00% (D) 11.05%

Q100. The 2024 Nobel Prize in Chemistry was awarded jointly (in part) for computational protein design and structure prediction. One of the three laureates that year was:

- (A) Katalin Kariko (B) David Baker
(C) Emmanuelle Charpentier (D) Frances Arnold