

AFCAT 1 2025 Practice Paper 01

Q1. A defence contractor sells two batches of night-vision goggles. On Batch-X he gains 25% and on Batch-Y he loses 15%. The cost price of Batch-X is Rs. 1,60,000 and of Batch-Y is Rs. 2,40,000. Find the overall profit or loss percent.

- (A) 1% loss (B) 1% profit
(C) 0.5% loss (D) No profit no loss

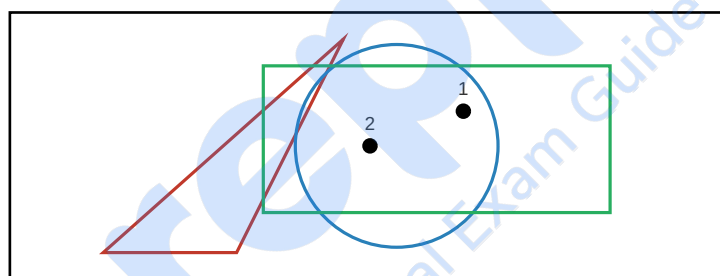
Q2. Choose the most appropriate synonym for the underlined word: 'The strategist's perspicacious assessment averted a costly logistical blunder.'

- (A) Shrewd (B) Cursory
(C) Belligerent (D) Superficial

Q3. Which indigenous Indian air-to-air missile, cleared for series production by DRDO in 2024, is designated as the Beyond-Visual-Range successor to the R-73 on the Su-30MKI fleet?

- (A) Astra Mk-2 (B) Rudram-1
(C) SFDR (D) NASM-SR

Q4. [Dot Situation] In the given figure, Dot-1 lies inside the rectangle and circle but outside the triangle; Dot-2 lies in the region common to all three shapes. Choose the option that maintains the same dot conditions.



Problem figure — replicate dot regions

- (A) Circle inside triangle, rectangle disjoint (B) Triangle, circle and rectangle mutually intersecting with a common region
(C) Rectangle enclosing all shapes with no intersection (D) Circle tangent to triangle, rectangle isolated

Q5. A boat covers 60 km downstream and 36 km upstream in 8 hours. It also covers 48 km downstream and 60 km upstream in 12 hours. Find the speed of the boat in still water (km/h).



Downstream & upstream distances given — find still-water speed

- (A) 10 (B) 12
(C) 14 (D) 15

Q6. Identify the segment containing a grammatical error: 'One of the officers who have been nominated for the exchange programme is expected to depart by tomorrow.'

- (A) One of the officers (B) who have been nominated
(C) for the exchange programme (D) is expected to depart by tomorrow

Q7. The Indian Navy's first indigenously designed and constructed nuclear ballistic-missile submarine, commissioned in 2016, is:

- (A) INS Chakra (B) INS Arihant
(C) INS Vela (D) INS Vagsheer

Q8. In a certain code, 'MISSILE' → '13-9-19-19-9-12-5' and 'RADAR' → '18-1-4-1-18'. How will 'PILOT' be coded?

- (A) 16-9-12-15-20 (B) 16-9-11-15-20
(C) 17-9-12-15-20 (D) 16-9-12-14-20

Q9. A sum lent at compound interest amounts to Rs. 6,655 in 3 years and Rs. 7,320.5 in 4 years at the same rate compounded annually. Find the sum.

- (A) Rs. 4,500 (B) Rs. 5,000
(C) Rs. 5,500 (D) Rs. 5,200

Q10. Which state hosted the 2025 tri-services exercise 'Trishakti Prahar' focused on integrated multi-domain operations near the Chicken's Neck corridor?

- (A) Sikkim / West Bengal (B) Arunachal Pradesh
(C) Assam (D) Meghalaya

Q11. Choose the correct antonym of Ephemeral:

- (A) Transient (B) Perennial
(C) Fleeting (D) Mercurial

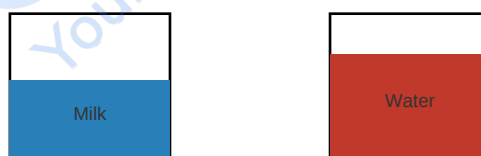
Q12. Statements: (1) All UAVs are aerial platforms. (2) Some aerial platforms are armed. (3) No armed platform is unmanned. Conclusions: I. Some UAVs are armed. II. Some aerial platforms are not unmanned. III. No UAV is armed.

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

Q13. Under Article 74 of the Constitution, the President shall act on the aid and advice of the Council of Ministers. The 42nd and 44th Amendments together made this advice:

- (A) Binding without reconsideration (B) Binding, but the President may require reconsideration once
(C) Merely recommendatory (D) Binding only during emergencies

Q14. A jar contains 90 litres of a milk-water mixture in ratio 4:1. Some quantity is drawn and replaced with pure water so that the new ratio becomes 3:2. How much mixture was drawn out?



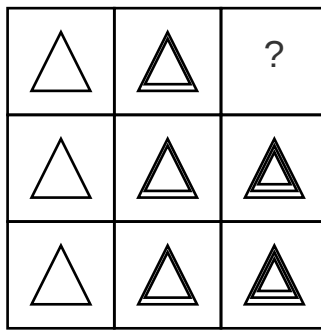
Milk-water 4:1 in 90 L → replace with water → 3:2

- (A) 18 L (B) 22.5 L
(C) 27 L (D) 30 L

Q15. Choose the correct one-word substitute: 'A person who studies the origin and development of words.'

- (A) Philologist (B) Etymologist
(C) Lexicographer (D) Palaeographer

Q16. [Visual Matrix] Study the 3×3 figure matrix. Each row shows a triangle with increasing number of inner strokes. Identify the missing figure.



Replace the '?' in the bottom-right cell

- (A) Triangle with three inner strokes and a dot (B) Triangle with three inner strokes
(C) Triangle with two strokes only (D) Inverted triangle with cross-hatch

Q17. Which of the following IAF airbases is home to the No. 45 Squadron 'Flying Daggers', operating the Tejas Mk1A?

- (A) Sulur (B) Kalaikunda
(C) Bidar (D) Adampur

Q18. A can complete a task in 24 days and B in 36 days. They work together but A leaves 8 days before completion. In how many total days is the work finished?

- (A) 16.8 (B) 18
(C) 17.2 (D) 16

Q19. Convert to indirect speech: The instructor said to the trainee, 'Have you calibrated the altimeter before boarding?'

- (A) The instructor asked the trainee whether he had calibrated the altimeter before boarding. (B) The instructor told the trainee that he calibrated the altimeter.
(C) The instructor said the trainee whether he calibrated altimeter. (D) The instructor asked the trainee that had he calibrated altimeter.

Q20. Pointing to a woman, Ravi said, 'She is the daughter of the only son of my grandmother's husband.' How is Ravi related to that woman?

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

Q21. The world's largest single-site solar power plant, inaugurated in 2024 in India, is located in:

- (A) Bhadla, Rajasthan (B) Khavda, Gujarat
(C) Pavagada, Karnataka (D) Kurnool, Andhra Pradesh

Q22. The average of 11 numbers is 42. The average of the first 6 is 39 and of the last 6 is 45. Find the 6th number.



First 6 avg 39 · Last 6 avg 45 · Overall 11 → find middle

- (A) 44 (B) 42
(C) 46 (D) 48

Q23. Fill in the blank: 'The commander's remarks were construed as a thinly veiled _____ of the joint operations doctrine.'

- (A) Encomium (B) Excoriation
(C) Panegyric (D) Homage

Q24. In a code, 'BRAVO' is written as 'ETDYR' (each letter shifted +3). How is 'ALPHA' written?

- (A) DOSKD (B) DOSKC
(C) DPSKD (D) COSKD

Q25. Which Mughal emperor abolished the pilgrim tax (1563) and jizya (1564), predating Akbar's Din-i-Ilahi?

- (A) Humayun (B) Akbar
(C) Jahangir (D) Shah Jahan

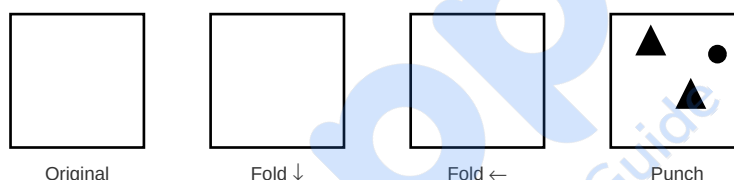
Q26. A shopkeeper marks his goods at 60% above cost and offers two successive discounts of 20% and 12.5%. His net profit percent is:

- (A) 12% (B) 10%
(C) 14% (D) 8%

Q27. Which is the correctly spelt word?

- (A) Manoeuvre (B) Manuever
(C) Maneuvre (D) Manouvre

Q28. [Paper Folding] A square sheet is folded along its horizontal centre, then along its vertical centre. Two triangular punches and one circular punch are made in the folded quadrant. When unfolded, how many total punches appear?



Fold twice, punch, unfold — count

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

Q29. The bilateral exercise 'Garuda Shakti' is conducted between the special forces of India and:

- (A) Singapore (B) Indonesia
(C) Malaysia (D) Thailand

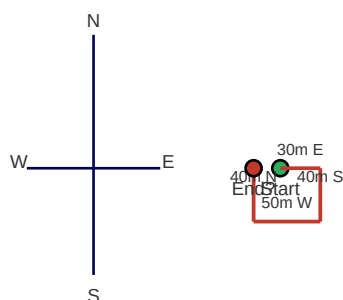
Q30. The ratio of ages of A and B is 5:7. Four years hence, the ratio will be 3:4. What is B's present age?

- (A) 24 (B) 28
(C) 32 (D) 35

Q31. Choose the correct improvement of the underlined portion: 'Scarcely had the fighter jet touched down than the emergency siren went off.'

- (A) when (B) then
(C) before (D) No improvement

Q32. An airman starts at his base, walks 30 m East, turns right and walks 40 m, turns right and walks 50 m, then turns right and walks 40 m. How far is he from the starting point and in which direction?



Trace the path in the compass grid

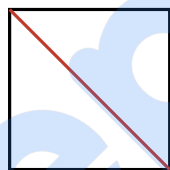
- (A) 20 m West (B) 20 m East
(C) 10 m West (D) Same point

Q33. Which agency operates the 'IRNSS/NavIC' satellite navigation system, whose L1 signals were added on NVS-01 in 2023?

- (A) DRDO (B) ISRO
(C) BSNL (D) IN-SPACe

Q34. The area of a circle equals the area of a square whose side is 22 cm. Find the radius of the circle (take $\pi = 22/7$).

Side = 22 cm; find r such that $\pi r^2 = 484$



- (A) 11 cm (B) 12.4 cm
(C) 14 cm (D) 10.5 cm

Q35. Select the correct one-word substitute: 'A situation that seems paradoxical or impossible to escape from because of contradictory rules.'

- (A) Impasse (B) Catch-22
(C) Cul-de-sac (D) Quagmire

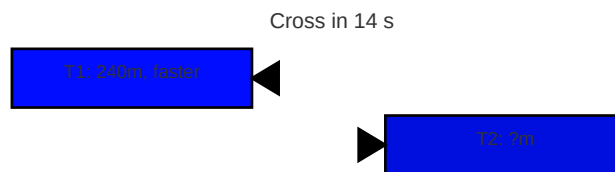
Q36. Find the odd one out:

- (A) Ashoka Chakra (B) Kirti Chakra
(C) Shaurya Chakra (D) Vir Chakra

Q37. Which mountain pass connects Sikkim with the Tibet Autonomous Region and reopened for border trade following the 2006 agreement?

- (A) Nathu La (B) Jelep La
(C) Bomdi La (D) Se La

Q38. Two trains 240 m and 180 m long, moving in opposite directions on parallel tracks, cross each other in 14 seconds. If the slower train travels at 36 km/h, find the speed of the faster train.



Opposite direction crossing

- (A) 54 km/h (B) 72 km/h
(C) 62 km/h (D) 68 km/h

Q39. Choose the sentence with correct idiom usage:

- (A) He passed with flying colours in the SSB. (B) He passed with a flying colour.
(C) He passed with a coloured flight. (D) He passed with a colour flying.

Q40. In a row of 40 cadets, cadet P is 12th from the left and cadet Q is 15th from the right. How many cadets are seated between P and Q?



Row of 40

Row positions

- (A) 12 (B) 13
(C) 14 (D) 11

Q41. The 'Sarhad se Samvidhan tak' initiative launched in 2024 is associated with which ministry?

- (A) Ministry of Defence (B) Ministry of Home Affairs
(C) Ministry of Law and Justice (D) Ministry of Culture

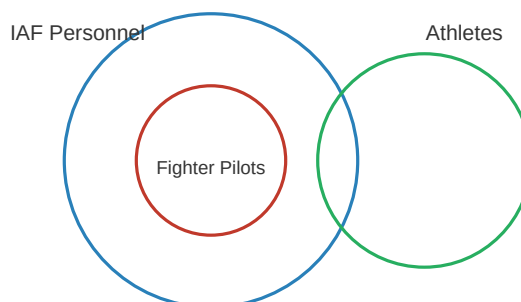
Q42. By selling an article at $\frac{5}{6}$ of the selling price, a trader loses 10%. What is the gain percent when sold at the actual selling price?

- (A) 12% (B) 10%
(C) 8% (D) 15%

Q43. Identify the segment with an error: 'Not only did the squadron reach the objective / but they also had destroyed / three enemy bunkers before dawn / with minimum casualties.'

- (A) Not only did the squadron reach the objective (B) but they also had destroyed
(C) three enemy bunkers before dawn (D) with minimum casualties

Q44. [Venn Diagram] Which diagram best represents: Officers, Instructors, Pilots (some officers are instructors; some pilots are instructors; some officers are pilots)?



Set relationship among three groups

- (A) Three mutually disjoint circles (B) Three mutually intersecting circles
(C) One large circle enclosing two disjoint circles (D) Three concentric circles

Q45. The 2025 Union Budget introduced a new capital allocation head for the 'Bharat Small Reactors (BSR)' scheme. This scheme falls under which ministry?

- (A) Power (B) Atomic Energy (PMO)
(C) New & Renewable Energy (D) Science & Technology

Q46. A sum triples in 20 years at simple interest. In how many years will it become 5 times at the same rate?

- (A) 30 (B) 36
(C) 40 (D) 45

Q47. Directions (Q47–Q50): Read the passage and answer.

The 21st-century battlefield is characterised by the shrinking of the OODA loop — the observe-orient-decide-act cycle. Data fusion from disparate sensors, AI-assisted target recognition, and low-latency communications collapse decision cycles from minutes to seconds. However, this compression amplifies the cost of erroneous data: a single spoofed sensor feed can propagate through the entire kill chain, converting speed into vulnerability.

According to the passage, what is the principal consequence of a shrinking OODA loop?

- (A) Human commanders become redundant (B) Decision cycles compress from minutes to seconds
(C) Sensors become more expensive (D) Kinetic weapons lose relevance

Q48. As per the passage, spoofed sensor data is particularly dangerous because it:

- (A) Cannot be detected by any means (B) Propagates through the entire kill chain
(C) Slows down every decision (D) Requires manual override

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

- (A) Cautionary and analytical (B) Nostalgic
(C) Overtly satirical (D) Purely celebratory

Q50. 'Converting speed into vulnerability' in the passage implies:

- (A) Faster missiles are more vulnerable (B) Rapid decisions built on bad data can be catastrophic
(C) Slower systems are safer in all cases (D) Speed is unrelated to security

Q51. The 'Great Nicobar Holistic Development Project', cleared for phased implementation in 2024-25, is centred on:

- (A) Galathea Bay (B) Campbell Bay
(C) Katchal Island (D) Little Nicobar

Q52. If 12 workers can build a 300-m wall in 15 days working 8 h/day, how many days will 18 workers take to build a 450-m wall working 10 h/day?

- (A) 12 (B) 13.5
(C) 15 (D) 10

Q53. Find the missing term: 5, 11, 23, 47, 95, ?

- (A) 191 (B) 190
(C) 189 (D) 193

Q54. Which committee's recommendations formed the basis of the Panchayati Raj system introduced by the 73rd Amendment?

- (A) Balwant Rai Mehta Committee (B) Ashok Mehta Committee
(C) L.M. Singhvi Committee (D) G.V.K. Rao Committee

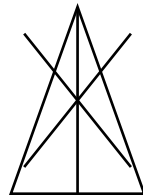
Q55. A candidate secures 42% of maximum marks and fails by 25; another secures 55% and gets 45 marks more than passing. Find the passing marks.

- (A) 195 (B) 220
(C) 205 (D) 215

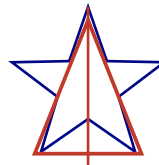
Q56. Choose the correct analogy: Squadron : Aircraft :: Battalion : ?

- (A) Rifle (B) Soldiers
(C) Tanks (D) Uniform

Q57. [Embedded Figure] Identify the option in which the target shape (a triangle with a vertical bisector and diagonal cross) is embedded intact.



Target



Option (B)

Find the target embedded without rotation

- (A) Hexagon with rotated triangle (B) Star polygon with an internal triangle and vertical bisector
(C) Pentagon with cross-hatch (D) Concentric squares

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

- (A) Bengaluru (B) Nagpur
(C) Prayagraj (D) Shillong

Q59. HCF and LCM of two numbers are 8 and 96 respectively. If one number is 32, find the other.

- (A) 12 (B) 24
(C) 48 (D) 16

Q60. The idiom 'to bite the bullet' means:

- (A) Accept a difficult situation with courage (B) Refuse to comply
(C) Delay a decision (D) Speak harshly

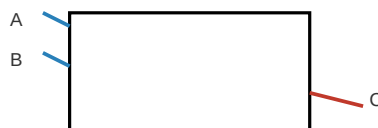
Q61. Choose the word least like the others:

- (A) Rustom-II (B) Ghatak
(C) TAPAS (D) Nag

Q62. Which element is the primary constituent of ceramic armour used in modern bulletproof vests?

- (A) Silicon carbide (B) Boron carbide
(C) Aluminium oxide (D) Tungsten carbide

Q63. Pipe A fills a tank in 12 h, pipe B in 20 h; pipe C empties it in 30 h. If all are opened together, in how many hours is the tank filled?



A fills 12h, B fills 20h, C empties 30h

- (A) 10 (B) 9
(C) 8 (D) 12

Q64. Choose the correct sentence:

- (A) Each of the cadets have submitted their assignments.
(C) Each of the cadets have submitted his assignment.

- (B) Each of the cadets has submitted his assignment.
(D) Each of the cadets has submitted their assignments.

Q65. If 'P + Q' means P is son of Q; 'P × Q' means P is wife of Q; 'P – Q' means P is brother of Q; which of the following shows that A is aunt of D?

- (A) $A \times B - C + D$
(C) $A \times B + C - D$

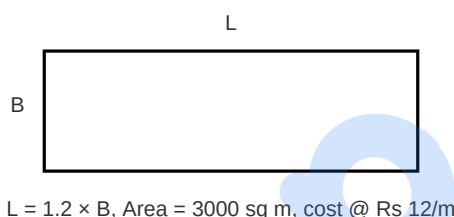
- (B) $A - B \times C + D$
(D) $A - B + C \times D$

Q66. Which African nation joined BRICS on 1 January 2024 (along with UAE, Iran, Egypt, Ethiopia)?

- (A) Nigeria
(C) Argentina

- (B) Saudi Arabia
(D) None of these joined from Africa in that batch

Q67. A rectangular field has length 20% more than its width and area 3,000 sq. m. Find the cost of fencing at Rs. 12/m.



- (A) Rs. 2,640
(C) Rs. 2,750

- (B) Rs. 2,860
(D) Rs. 2,720

Q68. Fill in the blank: 'The regiment marched _____ discipline that even veterans were impressed.'

- (A) with such
(C) by so much

- (B) in so
(D) of such

Q69. In a code, 'GENERAL' → 'HDNFQBK' (each letter alternately +1 and -1). How is 'MAJOR' coded?

- (A) NBIPQ
(C) NAJPS

- (B) NZKNQ
(D) NAKPQ

Q70. The Bengal Sappers, one of the oldest engineering regiments of the Indian Army, are headquartered at:

- (A) Roorkee
(C) Bengaluru

- (B) Kirkee (Pune)
(D) Jabalpur

Q71. The area of an equilateral triangle inscribed in a circle of radius 6 cm is (approx.):

- (A) $27\sqrt{3}$ sq cm
(C) $18\sqrt{3}$ sq cm

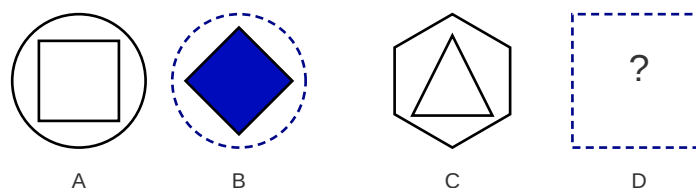
- (B) $36\sqrt{3}$ sq cm
(D) $12\sqrt{3}$ sq cm

Q72. Select the antonym of Prodigal:

- (A) Frugal
(C) Wasteful

- (B) Lavish
(D) Extravagant

Q73. [Figure Analogy] A : square inside circle :: B : dashed circle with rotated shaded diamond :: C : triangle inside hexagon :: D : ?



Complete the analogy

- (A) Solid hexagon with dashed triangle (B) Dashed hexagon with rotated shaded triangle
(C) Circle inside rotated triangle (D) Two overlapping hexagons

Q74. Under Article 356, the maximum duration for which President's Rule can continue in a state without periodic Parliamentary approval and Election Commission certification is:

- (A) 6 months (B) 1 year
(C) 2 years (D) 3 years

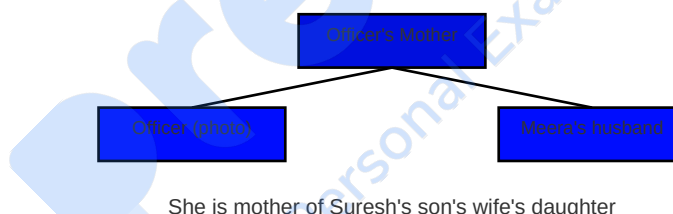
Q75. A shopkeeper allows a discount of 10% on the marked price and still gains 12%. If cost price is Rs. 4,000, find the marked price.

- (A) Rs. 4,977.78 (B) Rs. 4,800
(C) Rs. 5,000 (D) Rs. 4,900

Q76. Choose the option matching the meaning: 'Sub rosa'

- (A) In secret (B) Publicly known
(C) In writing (D) By force

Q77. Pointing to a photograph, Suresh said, 'She is the mother of my son's wife's daughter.' How is the woman related to Suresh?



- (A) Sister-in-law (B) Daughter-in-law
(C) Granddaughter (D) Wife

Q78. Which of these is NOT a landlocked country in Central Asia?

- (A) Kazakhstan (B) Uzbekistan
(C) Turkmenistan (D) None — all are landlocked

Q79. A number is decreased by 20% then increased by 25%. The net change is:

- (A) No change (B) 5% increase
(C) 5% decrease (D) 10% decrease

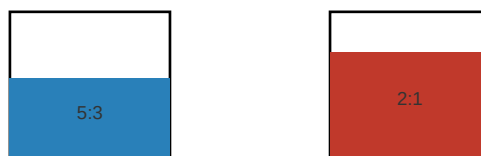
Q80. Choose the correct sequence: A5T, C10R, E17P, G26N, ?

- (A) I37L (B) I36K
(C) I35L (D) H37M

Q81. The IAF equivalent rank of an Army Colonel is:

- (A) Wing Commander (B) Group Captain
(C) Air Commodore (D) Squadron Leader

Q82. Two vessels contain milk-water in ratios 5:3 and 2:1. In what ratio must they be mixed to obtain a 3:1 milk-water mixture?



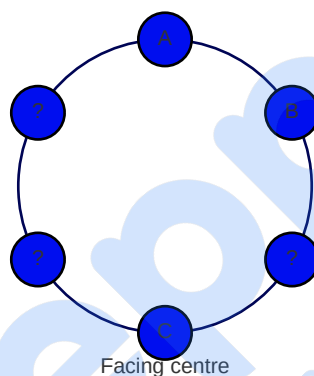
Vessel A 5:3 · Vessel B 2:1 → mix to get 3:1

- (A) 1:2 (B) 2:1
(C) 3:1 (D) 1:3

Q83. Select the synonym of Obsequious:

- (A) Sycophantic (B) Defiant
(C) Independent (D) Reticent

Q84. [Circular Seating] Six officers A, B, C, D, E, F sit around a circular table facing the centre. B is second to the right of A; C is opposite A; E is between D and F. Who sits to the immediate left of C?



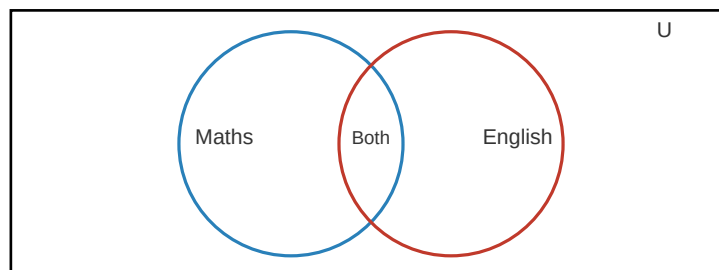
Deduce the seating

- (A) D (B) E
(C) F (D) B

Q85. Which river forms the traditional boundary between the Deccan and North Indian plains and is also known as 'Dakshina Ganga'?

- (A) Krishna (B) Godavari
(C) Mahanadi (D) Tapti

Q86. In an examination, 40% failed in Maths, 30% failed in English and 15% failed in both. What percent passed in both subjects?

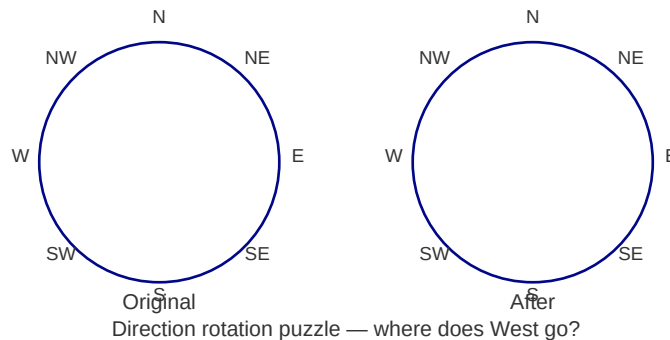


- (A) 30% (B) 40%
(C) 45% (D) 50%

Q87. Fill in the blank: 'The senior officer's _____ manner during the debriefing put the entire crew at ease.'

- (A) avuncular (B) acrimonious
(C) supercilious (D) truculent

Q88. If South becomes North-East, and North becomes South-West, then what does West become?

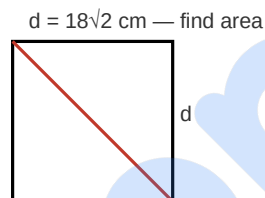


- (A) North-West (B) South-East
(C) North (D) South

Q89. The Ramsar Convention, to which India is a party, is associated with the protection of:

- (A) Coral reefs (B) Wetlands of international importance
(C) Endangered mammals (D) Migratory birds only

Q90. Find the area of a square whose diagonal is $18\sqrt{2}$ cm.



- (A) 324 sq cm (B) 162 sq cm
(C) 648 sq cm (D) 288 sq cm

Q91. Choose the correct antonym of Laconic:

- (A) Verbose (B) Terse
(C) Brusque (D) Curt

Q92. Find the odd pair:

- (A) 27 – 3 (B) 125 – 5
(C) 64 – 4 (D) 343 – 8

Q93. The motto 'Yudhaya Krit Nishchayah' (Determined to Fight) belongs to which formation of the Indian Army?

- (A) Southern Command (B) The Parachute Regiment
(C) The Rajputana Rifles (D) The Sikh Regiment

Q94. A jet flies at an average speed of 900 km/h without headwind and 750 km/h with headwind. If a 3,000 km flight was completed in 3 h 40 min, for how long did the jet face the headwind?

- (A) 2 h (B) 2 h 30 min
(C) 1 h 30 min (D) 2 h 20 min

Q95. Choose the correct idiom meaning: 'To let the cat out of the bag'

- (A) Reveal a secret unintentionally (B) Release a captive animal
(C) Make an aggressive move (D) Announce a surprise victory

Q96. Which of these Central Sector Schemes was expanded in 2025 to include vocational training for defence-veteran spouses?

- (A) PMKVY 4.0 (B) Skill India Digital
(C) DDU-GKY (D) PM Vishwakarma

Q97. Complete the series: 4, 9, 20, 43, 90, ?

- | | |
|---------|---------|
| (A) 185 | (B) 181 |
| (C) 183 | (D) 187 |

Q98. The motto of the National Defence Academy is:

- | | |
|---------------------------|-------------------------------|
| (A) 'Service Before Self' | (B) 'Nabhah Sparsham Deeptam' |
| (C) 'Sarvatra Vijay' | (D) 'Balidan Param Dharma' |

Q99. A shopkeeper uses a false balance and cheats by 10% while buying and 10% while selling, quoting cost price. His actual profit percent is:

- | | |
|------------|---------|
| (A) 20% | (B) 21% |
| (C) 22.22% | (D) 10% |

Q100. The 2024 Nobel Prize in Physics was awarded for foundational discoveries and inventions enabling machine learning with:

- | | |
|----------------------|--------------------------------|
| (A) Quantum circuits | (B) Artificial neural networks |
| (C) Symbolic AI | (D) Genetic algorithms |