RRB NTPC CBT-I Official Paper (Held On: 11 Mar 2021 Shift 2) (Previous Year Paper)

RRB NTPC • 2021 • 100 questions • 90 minutes • Answer key and solutions

Take this paper as a timed mock test

Practise under exam conditions, then review your answers after you submit.

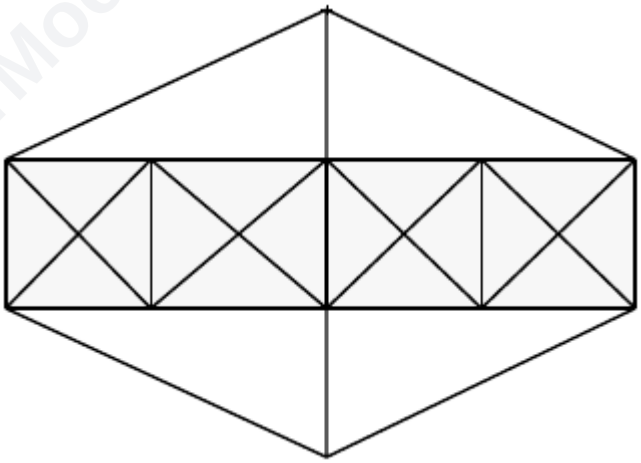
yourmocktest.com/pyq/rrb-ntpc/rrb-ntpc-cbt-i-official-paper-held-on-11-mar-2021-shift-2-previo…

Scan the QR code or click the link to open it.

Q1. In a test series, South Africa defeated England twice, Bangladesh defeated South Africa twice, England defeated Bangladesh twice, South Africa defeated Pakistan twice and Bangladesh defeated Pakistan twice. Which country lost the highest number of times?

(a) England
(b) Pakistan
(c) Bangladesh
(d) South Africa

Q2. Find the number of triangles in the figure given below:



(a) 42 triangles
(b) 44 triangles
(c) 40 triangles
(d) 46 triangles

Q3. The Indian general elections of 2019 were held to constitute which Lok Sabha?

(a) 17^(th)
(b) 15^(th)
(c) 18^(th)
(d) 16^(th)

Q4. From a group of boys and girls, if 12 girls leave the group, then the ratio of boys to girls is 2 : 1. After this, if 30 boys leave the group, then the ratio of girls to boys becomes 3 : 1. Find the initial number of boys and girls in the group.

(a) 38 boys and 25 girls
(b) 40 boys and 20 girls
(c) 36 boys and 30 girls
(d) 34 boys and 35 girls

Q5. Find the value of 564×564×564-246×246×246over564×564+564×246+246×246.

(a) 700
(b) 358
(c) 318
(d) 664

Q6. A generator is a device that converts:

(a) electrical energy to heat energy
(b) mechanical energy to electrical energy
(c) heat energy to mechanical energy
(d) electrical energy to mechanical energy

Q7. In an examination, 28% of the students failed in Hindi and 32% failed in English. If 20% of the students failed in both the subjects then the percentage of students who passed in both the subjects is:

(a) 48%
(b) 60%
(c) 52%
(d) 56%

Q8. Which of the following ancient Indian philosophers deliberated on the smallest particle of matter and named it 'Parmanu'?

(a) Vrahamihira
(b) Kanada
(c) Charak
(d) Baudhayana

Q9. Which country has virtually hosted the 12^(th) BRICS summit in November 2019?

(a) India
(b) Russia
(c) Brazil
(d) China

Q10. If the radius of a sphere is increased by 50%, then the surface area of the new sphere will be _____ of the surface area of the original sphere.

(a) 255.5%
(b) 235%
(c) 225%
(d) 237.5%

Q11. The Causative organism of peptic ulcer is a:

(a) Protozoan
(b) bacterium
(c) helminth
(d) virus

Q12. In a certain code language, if GROUND is written as FPWQTI and STICKER is written as TGMEKVU, then what will STUDENT be written as?

(a) UVWFGPV
(b) VPGHWVY
(c) UVHGPVW
(d) VPGFWVU

YourMockTest.com — Free Study Material

Q13. Find the centroid of a triangle formed by the points (2, 5), (3, 9) and (4,1).

(a) (3, 5)
(b) (9, 15)
(c) (6, 6)
(d) (3, 9)

Q14. Two cyclists start from the same place and go in opposite directions. One goes towards the north at the speed of 14 Km/h and the other goes towards the south at 21 Km/h. How long do they take to be 43.75 Km apart?

(a) 95 min
(b) 85 min
(c) 75 min
(d) 105 min

Q15. If 15% of (x - y)= 9% of (x + y), then y is what percentage of x?

(a) 400%
(b) 150%
(c) 300%
(d) 25%

Q16. A pyramid is placed on a cube of side 10 cm such that the base of the pyramid is completely aligned with the top face of the cube. The altitude of the pyramid is thrice the side of the cube. Find the volume of the entire object.

(a) 1000 cm^3
(b) 1600 cm^3
(c) 2250 cm^3
(d) 2000 cm^3

Q17. For how many years, from the commencement of the Indian Constitution, was English accepted as an associate language of the Union?

(a) 5 years
(b) 20 years
(c) 10 years
(d) 15 years

Q18. What do we call a positively charged ion?

(a) Molecule
(b) A cation
(c) An anion
(d) Changed ion

Q19. What does the letter 's' in the https protocol denote?

(a) Secure
(b) Scale
(c) Save
(d) Software

Q20. What is the name of only lake formed by a meteorite in India?

(a) Dal
(b) Lonar
(c) Wular
(d) Bhimtal

Q21. Sumanth bought a microwave oven at 15% less than its original price. He sold it at a profit of 35% on the price he had bought it for. By what percentage sales price set by Sumanth is more than the original price?

(a) 21.23%
(b) 14.75%

YourMockTest.com — Free Study Material

(c) 12.03%
(d) 19.56%

Q22. who among the following former Prime minister of foreign countries has been awarded Padma Vibhushan in 2021?
(a) Shinzo Abe
(b) Anirudh Jagannath
(c) Maumoon Abdul Gayoom
(d) Navin Ramgoolam

Q23. Which mathematical operator should come in the place of '?' in the equation.
(4?3) - 12 ÷ 4 + 2 = 11.
(a) ÷
(b) -
(c) +
(d) ×

Q24. A hemispherical bowl, with an internal radius of 12 cm, contains a liquid. The liquid is to be filled into cylindrical shaped small bottles with a radius of 3 cm and a height of 4 cm. How many bottles would be required to completely empty the bowl?
(a) 32
(b) 56
(c) 64
(d) 48

Q25. Ina certain code language, MUSIC is coded as LATEB and TORRID as SUSQEF. How will DEBATE be coded?
(a) BADUSI
(b) CICUVI
(c) CICUSI
(d) FIDEVI

Q26. Which organization takes care of Sick or failing industries in India?
(a) Reserve Bank of India
(b) Housing Development and Finance Corporation
(c) The Board of Industrial and Financial Reconstruction
(d) Industrial Development Bank of India

Q27. A alone can finish a task in 20 days, while B alone can finish it in 15 days. They together work for 5 days and stop, then the rest of the work is finished by C alone in 2 days. If they get paid 2,400 for finishing the whole task, then find the difference between the daily wages of C and A.
(a) Rs. 380
(b) Rs. 350
(c) Rs. 440
(d) Rs. 470

Q28. Which sector's demand for and consumption of water is highest in our country?
(a) Domestic
(b) Hotels
(c) Industrial
(d) Agricultural

Q29. Who is associated with Pandavani style of folk singing based on the epic Mahabharat?
(a) Vimalakka
(b) Teejan Bai
(c) Sharda Sinha
(d) Hira Devi Waiba

YourMockTest.com — Free Study Material

Q30. Which public sector company provides helicopter service for the use of tourists in hilly areas?

(a) Air India
(b) Pawan Hans Limited
(c) Global vector Helicorp
(d) Hindustan Aeronautics limited

Q31. Eight persons A to H, not necessarily in same order, are sitting at a round table facing the centre. There are two persons between F and D. H is not an immediate neighbour of A or F. A is third to the right of F. There are three persons between H and G. C sits second to the left of E. Who is third to the right of D?

(a) E
(b) A
(c) H
(d) F

Q32. Find the next two terms of the given number series:

1 2 5 4 9 8 13 16 17 32 21

(a) 27 48
(b) 64 25
(c) 48 27
(d) 25 64

Q33. Select the option that is related to the third term in the same way as the second term is related to the first term.

Cloud : Rain :: Grief : ?

(a) Heart
(b) Sad
(c) Misfortune
(d) Tears

Q34. When notebooks are distributed in a class, each child gets notebooks equivalent to one-eighth of the number of children in the class. If the number of children were halved. then each child would get 16 notebooks. How many note books are distributed in total?

(a) 256
(b) 632
(c) 452
(d) 512

Q35. Which group of monuments consists of the Vitthala Temple?

(a) Group of Monuments at Mahabalipuram
(b) Group of Monuments at Pattadakal
(c) Khajuraho Group of Monuments
(d) Group of Monuments at Hampi

Q36. The price of commodity X increases by 40 paise every year, while the price of commodity Y increases by 25 paise every year. If, in the year 2002, the price of X was Rs. 5.20 and that of Y was Rs. 6.30, then in which year would commodity X cost 40 paise more than commodity Y?

(a) 2012
(b) 2010
(c) 2011
(d) 2013

Q37. Read the given statement and conclusions carefully and decide which of the conclusions logically follow(s) from the statement.

Statement:

Rapid growth in population in many developing countries is depleting the natural resources.

Conclusion:

YourMockTest.com — Free Study Material

I- The population of developing countries will not continue to increase in future

II- Management of natural resources and population growth are major challenges for developing countries.

(a) Only II follows
(b) Only I follows
(c) Both I and II follow
(d) Neither I nor II follows

Q38. Which of the following Indian states has the lowest population density as per Census 2011?

(a) Uttarakhand
(b) Jharkhand
(c) Arunachal Pradesh
(d) Mizoram

Q39. What did the Champaran movement protest against?

(a) Financial atrocities by the British government
(b) Forced cultivation of indigo
(c) Rowlatt Act, 1919
(d) Extra taxation by the land lords

Q40. Which office of the government of India is the governing department of nuclear energy?

(a) Ministry of Power
(b) Office of the Home Minister
(c) Office of the Defence Minister
(d) Office of the Prime Minister

Q41. 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.

Statements:

1. All buildings are rooms.

2. No room is a tower.

3. Some towers are poles.

Conclusions:

A. No building is a tower.

B. No pole is a room.

C. No pole is a building.

(a) Only conclusions A and C follow
(b) All conclusion A, B and C follow
(c) Only conclusions A and B follow
(d) Conclusion A alone follows

Q42. What is a mandamus writ?

(a) Calling for an end to hearings
(b) Making a government body do its duty
(c) Coming to an agreement
(d) Producing the person in court

Q43. Pointing to a woman, a girl named Rita said. "I am the daughter of the daughter-in-law of her mother". What is the relation of that woman to the Rita?

(a) Sister
(b) Maternal aunt
(c) Paternal aunt
(d) Mother-in-law

YourMockTest.com — Free Study Material

Q44. Determine the integer n such that nover160 is less than 1over16 but more than 1over20.

(a) 9
(b) 6
(c) 7
(d) 8

Q45. Who among the following was the Viceroy of India when Gandhiji led the Dandi March?

(a) Lord Wavell
(b) Lord Irwin
(c) Lord Willingdon
(d) Lord Reading

Q46. A man borrows Rs. 2,460 to be paid back with compound interest at the rate of 5% p.a. by the end of 2 years, in equal installments. How much will each installment be?

(a) Rs. 1,323
(b) Rs. 1,275
(c) Rs. 1,283
(d) Rs. 1,377

Q47. According to Article 348(1) of the Constitution, which of the following languages are used for proceedings in the High Courts of India?

(a) Official language of the state (area) in the jurisdiction of the High Count.
(b) Hindi
(c) Regional language
(d) English

Q48. Find the value of 3√2/(√6+√3)-4√3/(√6+√2)-6/(√8-√12).

(a) 5√()2
(b) 5√()3
(c) 6√()3
(d) 4√()2

Q49. 21 women can complete a task in 40 days. 30 men can complete the task in 21 days. What is the ratio of the number of days a man will take to complete the task alone to the number of days a woman will need to do that task?

(a) 3 : 4
(b) 4 : 3
(c) 5 : 3
(d) 2 : 1

Q50. Which ministry is established with a mission of development, education and research in the field of alternative medicine?

(a) The Ministry of Environment, Forests and Climate Change
(b) The Ministry of Health and Family Welfare
(c) The Ministry of Agriculture and Farmers Welfare
(d) The Ministry of AYUSH

Q51. A pole consists of a steel portion, and a wooden portion on top of the steel portion. Point A on the ground, is 100m away from the base of the pole. The angle of elevation from point A to the top S of the wooden portion of the pole, is 60°. The angle of elevation, from A to the top R of the steel portion of the pole, is 45°. What is the height of the wooden potion of the pole? (Take V3 = 1.732)

(a) 114.2m
(b) 141.2m
(c) 98.2m
(d) 73.2m

YourMockTest.com — Free Study Material

Q52. Which of the following devices is used in application such as Computer Aided Design (CAD)?

(a) Scanners
(b) Speaker
(c) Plotters
(d) Pantographs

Q53. Find the greatest possible length that can be used to measure the lengths 4 m 20 cm, 31 m 50 cm and 14 m 70 cm exactly.

(a) 165cm
(b) 210cm
(c) 170cm
(d) 190cm

Q54. Which of the following is INCORRECT about Tata Institute of Fundamental Research?

(a) Aided by the Department of Atomic Energy
(b) A deemed university
(c) A national centre of the Government of India
(d) A private sector institute

Q55. The electricity bill of an establishment is partly fixed and partly varies as per the number of units of electricity consumed. In a certain month, when 480 units were consumed, then the bill was Rs. 1,620. In another month, when 690 units were consumed, then the bill was Rs. 2,250. In the next month, if 500 units are consumed, then the bill for that month will be:

(a) Rs. 1,560
(b) Rs. 1,950
(c) Rs. 1,680
(d) Rs. 1,840

Q56. The simple interest on a certain sum of money at the rate of 6% p.a. for 7 years is Rs. 840. At what rate of interest can the same amount of interest be received on the same sum of money after 5years?

(a) 8.4%
(b) 10.8%
(c) 9.6%
(d) 6.6%

Q57. In a frequency distribution, the frequency of the observations 2, 4, 8, 7 and 5 is 5, 3 2, 6 and 4, respectively. Find the arithmetic mean of this data.

(a) 5
(b) 25
(c) 23
(d) 24

Q58. Read the given statements and conclusions carefully and decide which of the conclusions logically follow(s) from the statement(s).

Statements:

1. Some cotton cloths are silk cloths.
2. All silk cloths are woolen cloths.
3. No woolen cloth is a nylon cloth.
4. Some nylon cloths are polyester.

Conclusions:

I. Some cotton cloths are nylon cloth.
II. No silk cloth is a nylon cloth.
II. Some cotton cloths are woolen cloth.

(a) Only conclusions I and III will follow.

YourMockTest.com — Free Study Material

(b) Only conclusions I and II will follow.
(c) Only conclusions II and III will follow.
(d) All 3 conclusion I, II and III, will follow.

Q59. P, Q, R and S are facing north and A, B, C and D are facing them, not necessarily in the same order. S is sitting second to the right of R. The person who faces Q is not a neighbour of B. D is facing S and sitting next to B. A is sitting on an extreme position. P and C are not facing each other. R is at one end but C is not. Who is facing the person second to the right of Q?
(a) B
(b) D
(c) C
(d) A

Q60. Where was Saint Kabir born?
(a) Varanasi
(b) Allahabad
(c) Magahar
(d) Kushinagar

Q61. Which country did Prime Minister Narendra Modi visit immediately after winning the general elections of 2019?
(a) Bhutan
(b) South Korea
(c) Mauritius
(d) Maldives

Q62. Who started the first Topographical Survey in India?
(a) Major James Rennel
(b) William Lambton
(c) Col. Alexander Read
(d) Nain Singh

Q63. Which of the following is NOT classified as a Central Public Sector Enterprise?
(a) Navaratna
(b) Maharatna
(c) Miniratna
(d) Macroratna

Q64. Find the value of the given series of numbers.
25 + 26 + _____ + 75 = ?
(a) 2750
(b) 2525
(c) 2550
(d) 2755

Q65. Which of the following is a First Generation Computer?
(a) ATLAS
(b) STAR 1000
(c) SEAC
(d) ABACUS

Q66. A tailor makes 6 pieces out of 1 m of cloth. If he has 33.5 m of cloth, then how many pieces can he make out of this cloth?
(a) 95
(b) 201
(c) 5.6

YourMockTest.com — Free Study Material

(d) 196

Q67. Which of the following banks merged with Bank of Baroda in 2019?

(a) Canara Bank
(b) Corporation Bank
(c) United Bank of India
(d) Dena Bank

Q68. Read the given statement and assumptions carefully and decide which assumption(s) is/are implicit from the statement.

Statement:

We should always focus on the present.

Assumptions:

I: People often tend to think about past and future.

II: The present is more important than the past or future.

(a) Only assumption I is implicit
(b) Only assumption II is implicit
(c) Both I and II are implicit.
(d) Neither I nor II is implicit.

Q69. Select the number from among the given options that can replace the question mark(?) in the following series.

6, 30 156,?

(a) 642
(b) 942
(c) 630
(d) 930

Q70. Positive value of √(6+√(5+√(12+√16))) is:

(a) √10
(b) 3
(c) 3 √2
(d) √6

Q71. In rhombus ABCD, the diagonals intersect at point E. If mangle ECB =5a+4 and mangle EBC =4a+5. Find m angle EBC.

(a) 49º
(b) 35º
(c) 45º
(d) 41º

Q72. What term is used to denote intermixing of particles of two different types of matter on their own?

(a) Conversion
(b) Devolution
(c) Diffusion
(d) Confusion

Q73. Which two signs are to be interchanged to make this equation correct?

25 ÷ 5 + 15 - 3 × 5= 45

(a) • and -
(b) ÷ and ×
(c) ÷ and -
(d) • and ÷

YourMockTest.com — Free Study Material

Q74. What is the ozone layer composed of?

(a) Di-oxygen
(b) Tetra-oxygen
(c) Tri-oxygen
(d) Mono-oxygen

Q75. If A : B : C= 2: 4: 6, then Aover B : Bover C : Cover A =?

(a) 3 :4 : 18
(b) 3 : 4: 10
(c) 4 : 3 : 16
(d) 4 : 3 : 8

Q76. In which annual session did the Indian National Congress proclaim commitment to 'Purna Swaraj' (complete independence)?

(a) Madras session of 1927
(b) Karachi session of 1931
(c) Calcutta session of 1929
(d) Lahore session of 1929

Q77. Which is the deepest trench in the Indian Ocean?

(a) Antarctica Trench
(b) Seychelles deep
(c) Java Trench
(d) Diamantina Trench

Q78. Who among the following has attended the Republic day parade 2021 as Chief guest?

(a) Cyril Ramaphosa
(b) Jair Bolsonaro
(c) Boris Johnson
(d) No chief guest

Q79. What is the speed at which the Earth revolves around the Sun?

(a) 55,000 miles per hour
(b) 67,000 miles per hour
(c) 47,000 miles per hour
(d) 20,000 miles per hour

Q80. 10 points are placed uniformly along the perimeter of a circle. Let A and B be two points among these such that they are the end points of a diameter. If a triangle formed using three of these points is chosen at random, what is the probability that it will lie completely on one side of AB, the points A and B being included?

(a) 1over 6
(b) 1over 5
(c) 1over 2
(d) 1over 15

Q81. If the arithmetic mean and geometric mean of two observations are 10 and 5, respectively, then find the sum of the squares of the observations.

(a) 275
(b) 350
(c) 295
(d) 225

YourMockTest.com — Free Study Material

Q82. Which of the following principal organs of the United Nations is NOT situated in New York?

(a) Economic and Social Council
(b) International Court of Justice
(c) Secretariat
(d) Trusteeship Council

Q83. Which Indian lady went to the 2^(nd) Round Table Conference with Gandhiji?

(a) Annie Besant
(b) Vijayalakshmi Pandit
(c) Sarojini Naidu
(d) Sister Nivedita

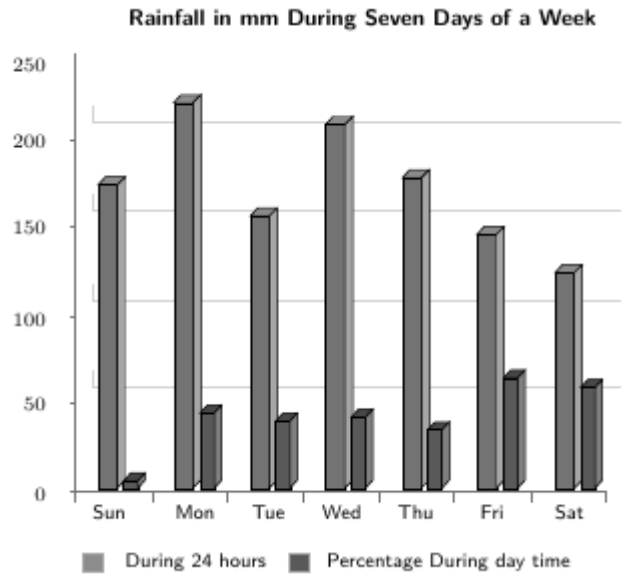
Q84. Which of the following groups is India NOT a member of?

(a) The South Asian Association for Regional Cooperation (SAARC)
(b) The Association of Southeast Asian Nations (ASEAN)
(c) The Shanghai Cooperation Organization (SCO)
(d) The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)

Q85. The historical Grand Trunk road was developed by many rulers. What was it called during the reign of the Mauryas?

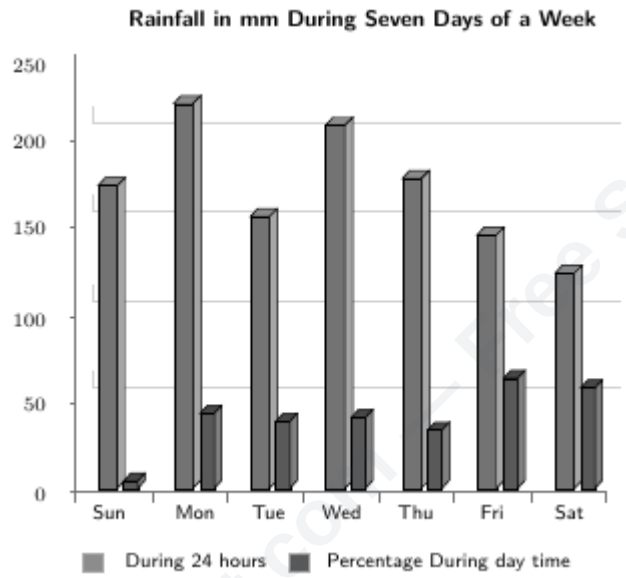
(a) Uttarpath
(b) Badshahi sadak
(c) Rajpath
(d) Poorvipath

Q86. The accompanying graph shows the rainfall (in mm) in a town during seven days of a week and the percentage of rainfall during the daytime. What was the approximate difference between the rainfall during the day when it rained the most and the day when it rained the least?



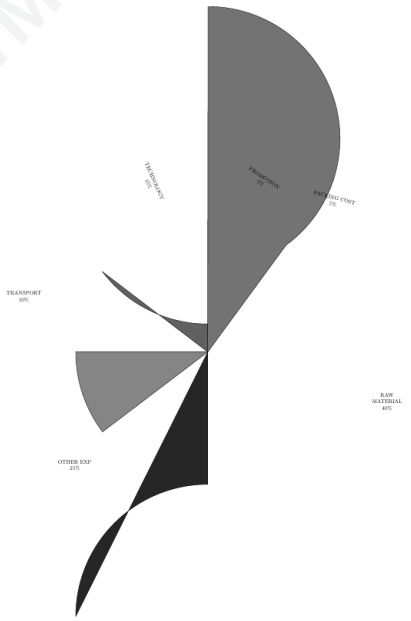
(a) 75 mm
(b) 35 mm
(c) 100 mm
(d) 125 mm

Q87. The accompanying graph shows the rainfall in (in mm) in a town during seven days of a week and the percentage of rainfall during the daytime. On which two days did it rain most (in mm) during the daytime?



(a) Friday and Saturday
(b) Monday and Friday
(c) Tuesday and Thursday
(d) Sunday and Thursday

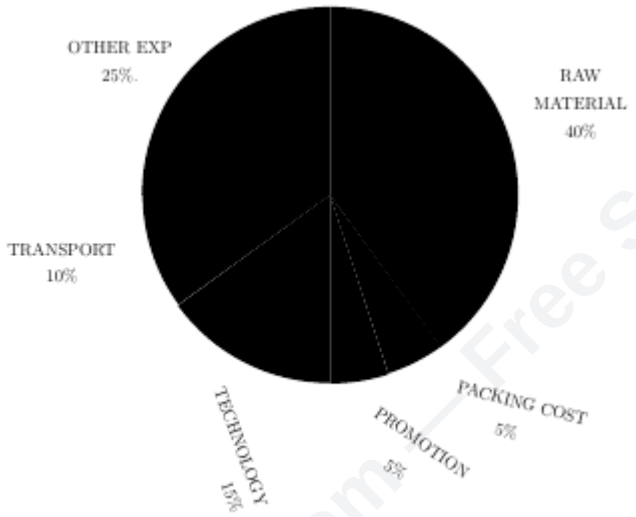
Q88. The pie chart shows the percentages of different kinds of expenditure while making a mobile phone.



If the total cost of making 250 mobile phones is 25 lakh, then what is the cost of transportation on a single phone?

(a) Rs. 1,200
(b) Rs. 1,500
(c) Rs. 1,350
(d) Rs. 1,000

Q89. The pie chart shows the percentage of different kind of expenditure while making a mobile phone.



If the total cost of making 250 mobile phones is Rs. 25 lakh, then by how much will the packaging cost of a single mobile phone be less than its cost on technology?

(a) Rs. 1,250
(b) Rs. 1,350
(c) Rs. 950
(d) Rs. 1,000

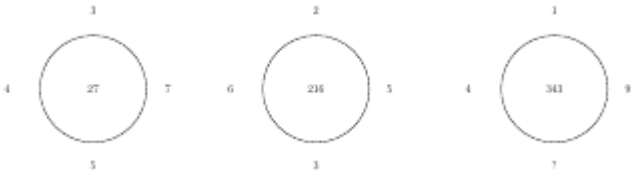
Q90. Three of the four sports given in options are similar in a certain way whereas the fourth is different. Select the option that is different from the rest.

(a) Cricket
(b) Tennis
(c) Football
(d) Field hockey

Q91. Out of the four locations listed, three are alike in some manner and one is different. Select the odd one.

(a) Sabarmati Ashram, Ahmedabad
(b) Rajpath, New Delhi
(c) Rajghat, New Delhi
(d) Mani Bhawan, Mumbai

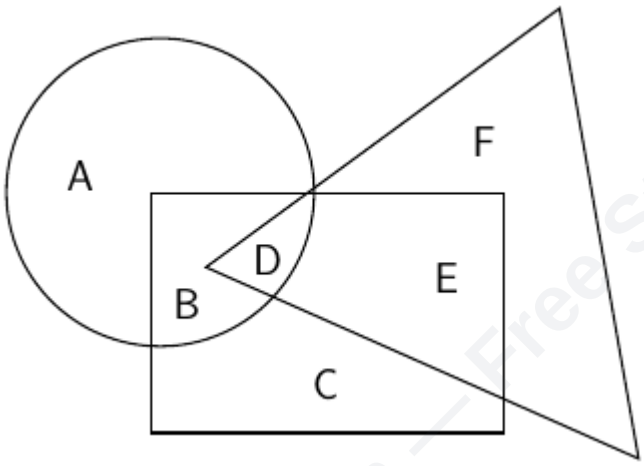
Q92. Select the option that can replace the question mark (?) in the given series.



(a) 1
(b) 6
(c) 5
(d) 7

Q93. In the given diagram, the circle represents parliamentarians from North India, the square represents parliamentarians who have crossed the age of 70 and the triangle represents postgraduates among the parliamentarians. Which area represents postgraduates below 70 from the rest of India?

YourMockTest.com — Free Study Material



(a) D
(b) C
(c) F
(d) E

Q94. Select the number that can replace the question mark (?) in the following series.

294, 180, 100, 48, ?

(a) 22
(b) 15
(c) 20
(d) 18

Q95. Among the following words, which one will come first if they are arranged as per their order in an English dictionary?

(a) Calculation
(b) Calculate
(c) Calf
(d) Calendar

Q96. 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.

Statements:

A. Some Cars are buses.

B. All trains are cars.

C. All planes are trains.

Conclusions:

1. All planes are buses.

2. Some cars are planes.

(a) Only conclusion 2 follows
(b) Both 1 and 2 follow
(c) Only conclusion 1 follows
(d) Neither 1 nor 2 follows

Q97. Select the letter that can replace the question mark (?) in the following series.

B : H :: P : V :: N : ?

(a) T
(b) M
(c) K
(d) P

YourMockTest.com — Free Study Material

Q98. Select the term that can replace the question mark (?) in the following series.

JX5, LU4, NR12, ?

(a) FL12
(b) NX8
(c) PO11
(d) GL15

Q99. There are six persons i.e. A, B, C, D, E, F working in different offices i.e. K, L, M, N, O, P not necessarily in same order. There are three males and three females. B is the wife of E and is working in office N. None of the women works in L or P. C is the sister of D and is working in office K. F is working in office M. D is working in L. No man works in O. Who works in office P.

(a) E
(b) F
(c) B
(d) A

Q100. Which of the given options will replace the question mark (?) in the following series:

A30L, J30E, A31T, O31R, ?

(a) M31Y
(b) D31R
(c) N30R
(d) J31Y

ANSWER KEY

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

SOLUTIONS

Q1. Answer: (b) Pakistan

Given:

In a test series:

South Africa defeated England twice.

Bangladesh defeated South Africa twice.

England defeated Bangladesh twice.

South Africa defeated Pakistan twice.

Bangladesh defeated Pakistan twice.

Formula Used:

Total losses for each team = Sum of all matches lost by each team

Calculation:

1. England lost to South Africa twice.

=> Losses of England = 2

2. South Africa lost to Bangladesh twice.

=> Losses of South Africa = 2

3. Bangladesh lost to England twice.

=> Losses of Bangladesh = 2

4. Pakistan lost to South Africa twice and Bangladesh twice.

=> Losses of Pakistan = 2 + 2

=> Losses of Pakistan = 4

Pakistan lost the highest number of times.

Q2. Answer: (b) 44 triangles

The triangles:

Thus, the number of triangles in the figure = 44 triangles

Hence, the correct answer is "44 triangles".

Q3. Answer: (a) 17^(th)

The correct answer is " 17th ".

Key Points

• In 2019, Indians went to the polls to elect a new parliament, the 17th Lok Sabha.

• The Election Commission of India held elections in seven phases across the country beginning on 11 April 2019 and ending on 19 May 2019.

• One-fourth of the members of the current Lok Sabha are women.

• There are 267 first-time representatives.

• 233 people in this group have criminal charges pending against them.

• It's estimated that 39% of members are also active in politics or social work in their professional lives.

Additional Information

• In India's general election of 2014, representatives were chosen to fill the 16th Lok Parliament.

• The Electoral Commission of India held the polls in a series of nine stages, beginning on April 7 and ending on May 12.

• At the general election that took place in India in 2009, members of the 15th Lok Sabha were chosen to serve the country.

• Dissolved by President Pranab Mukherjee on May 18, 2014

Q4. Answer: (c) 36 boys and 30 girls

Given:

From a group of boys and girls, if 12 girls leave the group, then the ratio of boys to girls is 2 : 1. After this, if 30 boys leave the group, then the ratio of girls to boys becomes 3 : 1.

Formula used:

Let the initial number of boys be B and the initial number of girls be G.

After 12 girls leave, the number of girls = G - 12.

After 30 boys leave, the number of boys = B - 30.

Using the given ratios:

B / (G - 12) = 2 / 1

(G - 12) / (B - 30) = 3 / 1

Calculations:

From B / (G - 12) = 2 / 1:

=> B = 2(G - 12)

=> B = 2G - 24

From (G - 12) / (B - 30) = 3 / 1:

=> G - 12 = 3(B - 30)

=> G - 12 = 3B - 90

=> G = 3B - 90 + 12

=> G = 3B - 78

Now we have two equations:

1) B = 2G - 24

2) G = 3B - 78

Substitute B from equation 1 into equation 2:

=> G = 3(2G - 24) - 78

=> G = 6G - 72 - 78

=> G = 6G - 150

=> 5G = 150

=> G = 30

Substitute G = 30 into equation 1:

=> B = 2(30) - 24

=> B = 60 - 24

=> B = 36

Therefore The correct answer is option (3).

Q5. Answer: (c) 318

Given:

Expression to solve: 564×564×564-246×246×246over564×564+564×246+246×246

Formula Used:

Using the identity: $(a^3 - b^3)/(a^2 + ab + b^2) = a - b$

Calculation:

Here, a = 564 and b = 246

So, using the identity:

$(564^3 - 246^3)/(564^2 + 564 \cdot 246 + 246^2)$

=> 564 - 246

=> 318

The correct answer is option 3, which is 318.

Q6. Answer: (b) mechanical energy to electrical energy

The correct answer is mechanical energy to electrical energy

Key Points

• A generator is a device that converts mechanical energy into electrical energy.

• A generator uses mechanical energy from an external source to produce electrical energy.

• The mechanical energy is used to rotate a turbine, which produces electricity

• Generators work based on the principle of electromagnetic induction, which is when a changing magnetic field induces a voltage

• A motor does the opposite of a generator, converting electrical energy into mechanical energy

Additional Information

• Electrical energy to heat energy: This is the function of a heater or resistor, not a generator.

• Heat energy to mechanical energy: This is the principle behind a heat engine, like a steam engine or internal combustion engine, not a generator.

• Electrical energy to mechanical energy: This is the function of a motor, which is the opposite of a generator.

• Motors convert electrical energy into mechanical energy.

Q7. Answer: (b) 60%

Given:

Percentage of students failed in Hindi (H) = 28%

Percentage of students failed in English (E) = 32%

Percentage of students failed in both subjects (H ∩ E) = 20%

Formula used:

Percentage of students passed in both subjects = 100% - (H + E - H ∩ E)

Calculation:

Percentage of students passed in both subjects = 100% - (28% + 32% - 20%)

=> Percentage of students passed in both subjects = 100% - (60% - 20%)

=> Percentage of students passed in both subjects = 100% - 40%

=> Percentage of students passed in both subjects = 60%

YourMockTest.com — Free Study Material

Therefore The correct answer is option 2.

Q8. Answer: (b) Kanada

The correct answer is Kanada

Key Points

• Maharishi Kanad was the ancient Indian philosopher who named the smallest particles of matter "parmanu":

• Kanad believed that all matter is made up of very small particles called paramanu, which are indivisible.

• He also believed that paramanu exists in two states: motion and absolute rest.

• The word "parmanu" is made up of two parts: "param" which means ultimate, and "anu" which means particle

• Kanad believed that paramanu do not exist in a free state, but instead combine with other paramanu to form larger particles called molecules

Additional Information

• There are six schools of philosophy developed in India with the beginning of the Christian era such as-

• Yoga

• Nyaya

• Mimansa

• Vedanta

• Vaishesikha

• Samkhya

• Vaisheshika thinkers believe that all objects of the universe are composed of five elements–earth, water, air, fire and ether.

Q9. Answer: (b) Russia

The correct answer is Russia

Key Points

• Russia has hosted the 12th BRICS summit held virtually on November 17, 2019.

• The theme of this year's BRICS summit was 'BRICS Partnership for Global Stability, Shared Security and Innovative Growth'.

• Global Concerns like Terrorism, UNSC security reforms, and the covid-19 pandemic were the main centres of discussion for the summit.

• The Ufa Declaration, adopted five years ago to deal with the spread of infectious diseases was also highlighted amidst this pandemic situation.

• PM Narendra Modi also discussed the Atmanirbhar Bharat campaign of India and how India has delivered the relevant medicines to different countries of the world.

Additional Information

• About BRICS :

• BRICS refers to a grouping of 5 countries - Brazil, Russia, India, China, and South Africa.

• These countries account for a total of:

• 42% of the population.

• 23% of GDP.

• 30% of the territorial area.

• 18% of Global Trade.

• British Economist Jim O'Neill Goldman Sachs coined the term BRIC in 2001 for the four countries with good growth namely Brazil, Russia, India, and China.

• The first formal summit of BRICS Ministers was held in the year 2006.

• South Africa was invited to join the grouping in 2010 and the grouping was named BRICS.

• The chairmanship of the grouping is rotated to all the member nations and each country heads it for one year.

Important Points

• Russia:

• Russia the largest country in the world is located on both Asian and European continents.

• Its capital Moscow is located in the European part of the country.

• Though 75% area of Russia is part of Asia its 75% population lives in the European part of Russia.

• It came into existence after the disintegration of the former USSR in 1991.

• Vladimir Putin is the incumbent President and Mikhail Mishustin the Prime Minister of Russia.

• It is separated from the North American Continent by Bering Strait.

YourMockTest.com — Free Study Material

Q10. Answer: (c) 225%

Given:

If the radius of a sphere is increased by 50%, then the surface area of the new sphere will be _____ of the surface area of the original sphere.

Formula used:

Surface area of a sphere = $4\pi r^2$

Calculations:

Let the original radius be r.

Original surface area = $4\pi r^2$

New radius = r + 0.5r = 1.5r

New surface area = $4\pi(1.5r)^2$

=> New surface area = $4\pi(2.25r^2)$

=> New surface area = $4\pi \times 2.25r^2$

=> New surface area = $2.25 \times 4\pi r^2$

=> New surface area = 2.25 × Original surface area

=> New surface area = 225% of Original surface area

Therefore The correct answer is option 3.

Q11. Answer: (b) bacterium

The correct answer is a bacterium

Key Points

• The most common cause of peptic ulcers is a bacterial infection from Helicobacter pylori (H. pylori).

• H. pylori damages the mucus that protects the lining of your stomach and duodenum, allowing stomach acids to get through to the lining.

• This can cause pain, inflammation, and sometimes painful sores called peptic ulcers

• Your doctor can test your blood, breath, or stool to see if you have an H. pylori infection.

• They may also look inside your stomach and duodenum with an endoscopy or x-ray.

• Other causes of peptic ulcers include long-term use of nonsteroidal anti-inflammatory medicines (NSAIDs) such as aspirin and ibuprofen

Additional Information

• Protozoan:

• Protozoa are single-celled eukaryotic microorganisms that can be free-living or parasitic.

• They often thrive in moist environments and are known to cause diseases such as malaria (caused by Plasmodium species).

• Helminth:

• Helminths are parasitic worms, including roundworms, flatworms, and flukes.

• They typically inhabit the intestines and can cause diseases like schistosomiasis and ascariasis.

• Virus:

• Viruses are microscopic infectious agents that replicate only inside the living cells of a host.

• They are responsible for a wide range of diseases, from the common cold to more serious conditions like COVID-19 and HIV/AIDS.

Q12. Answer: (d) VPGFWVU

The logic followed here is:

GROUND is written as FPWQTI

STICKER is written as TGMEKVU,

Similarly, STUDENT will be written as:

Hence, the correct answer is "VPGFWVU".

Q13. Answer: (a) (3, 5)

Given:

The points of the triangle are (2, 5), (3, 9), and (4,1).

Formula used:

Centroid (G) of a triangle with vertices (x1, y1), (x2, y2), and (x3, y3):

YourMockTest.com — Free Study Material

G = ((x1 + x2 + x3)/3, (y1 + y2 + y3)/3)

Calculations:

G = ((2 + 3 + 4)/3, (5 + 9 + 1)/3)

=> G = (9/3, 15/3)

=> G = (3, 5)

Therefore The correct answer is option 1.

Q14. Answer: (c) 75 min

Shortcut Trick

Relative Speed in opposite directions = Sum of individual speeds.

Relative Speed = 14 + 21 = 35 km/h.

Time = Distance ÷ Speed = 43.75 ÷ 35 = 1.25 hours.

Convert to minutes: 1.25 × 60 = 75 min.

Therefore The correct answer is 75 min.

Alternate Method

Given:

Speed of Cyclist 1 (North) = 14 km/h

Speed of Cyclist 2 (South) = 21 km/h

Required Distance apart = 43.75 km

Formula Used:

Time = Distance ÷ Relative Speed

Calculations:

=> Relative Speed = 14 + 21 = 35 km/h

=> Time required in hours = 43.75 ÷ 35

=> Time = 1.25 hours

=> Time in minutes = 1.25 × 60

=> Time = 75 minutes

Therefore The correct answer is 75 min.

Additional Information

Relative Speed Concepts

When two objects move in opposite directions, relative speed is the sum of their speeds (u + v). When they move in the same direction, it is the difference (u − v).

Unit Conversion

To convert speed from km/h to m/s, multiply by 5/18. To convert hours to minutes, multiply by 60.

Basic Formula

Distance = Speed × Time | Time = Distance ÷ Speed | Speed = Distance ÷ Time.

Q15. Answer: (d) 25%

Given:

If 15% of (x - y) = 9% of (x + y), then y is what percentage of x?

Formula used:

15% (x - y) = 9% (x + y)

Calculation:

0.15 (x - y) = 0.09 (x + y)

=> 0.15x - 0.15y = 0.09x + 0.09y

=> 0.15x - 0.09x = 0.15y + 0.09y

=> 0.06x = 0.24y

=> y = 0.06x / 0.24

=> y = x / 4

=> y = 25% of x

Therefore The correct answer is option 4.

YourMockTest.com — Free Study Material

Q16. Answer: (d) 2000 cm³

Given:

A pyramid is placed on a cube of side 10 cm such that the base of the pyramid is completely aligned with the top face of the cube.

The altitude of the pyramid is thrice the side of the cube.

Formula used:

Volume of Cube (V_(cube)) = side³

Volume of Pyramid (V_(pyramid)) = (1/3) × base area × height

Calculation:

Side of the cube (s) = 10 cm

Altitude of the pyramid (h) = 3 × 10 = 30 cm

Base area of the pyramid = side² = 10² = 100 cm²

Volume of cube (V_(cube))

=> V_(cube) = 10³

=> V_(cube) = 1000 cm³

Volume of pyramid (V_(pyramid))

=> V_(pyramid) = (1/3) × 100 × 30

=> V_(pyramid) = 1000 cm³

Total volume of the object

=> V_(total) = V_(cube) + V_(pyramid)

=> V_(total) = 1000 + 1000

=> V_(total) = 2000 cm³

Therefore The correct answer is option 4.

Q17. Answer: (d) 15 years

The correct answer is 15 years.

Key Points

• The Constitution of India initially permitted the use of the English language for all official purposes for a period of 15 years from the date of its adoption.

• The provision regarding the use of English as an official language can be found in Article 343 of the Indian Constitution.

• According to Article 343,

• English was to continue as the associate official language of the Indian government alongside Hindi for a transitional period of 15 years.

• This provision was included to provide a gradual shift from English to Hindi as the sole official language of the Indian government.

• The intention behind the provision was to give sufficient time for the transition and promote the use of Hindi as the official language of communication and administration in India.

• During this period, both English and Hindi were used for official purposes, ensuring continuity and facilitating effective governance.

• Subsequently, in 1965, the Official Languages Act was enacted to further regulate the use of languages for official purposes. It provided for the continued use of English alongside Hindi for official functions of the central government, even after the initial 15-year period.

• Since then, the use of English as an associate official language has been extended through subsequent resolutions and acts, ensuring its continued usage for official purposes at the central government level.

• It's important to note that while Hindi and English are the two official languages of the central government, the Constitution also recognizes the use of regional languages in different states and Union territories of India, respecting the linguistic diversity and cultural heritage of the country.

Q18. Answer: (b) A cation

The correct answer is a cation

Key Points

• A positively charged ion is called a cation.

• An ion is an atom or molecule with a net electrical charge.

• A cation has more protons than electrons, giving it a positive charge

• A hydrogen atom that has lost its electron is a cation with a positive charge, represented as H+.

• A calcium ion has a net charge of +2, which represents the relationship between the number of protons in calcium and the number of electrons in its most stable form

Additional Information

• Anions

• Anions are negatively charged ions that are formed when an atom or molecule gains one or more electrons.

• Examples: Chloride ion (Cl^-), Sulfate ion ($SO4^{2}$^-), Nitrate ion (NO3^-)

• It is Commonly found in ionic compounds like salts.

• Molecule

• A molecule is a group of two or more atoms bonded together chemically, representing the smallest unit of a chemical compound that can exist independently while retaining the compound's chemical properties.

• It can be either polar (unequal sharing of electrons, e.g., H2O) or non-polar (equal sharing of electrons, e.g., N2).

• Examples: Water (H2O), Oxygen (O2), Carbon dioxide (CO2)

Q19. Answer: (a) Secure

The correct answer is Secure

Key Points

• The letter "S" in HTTPS stands for "secure"

• HTTPS stands for "Hypertext Transfer Protocol Secure".

• It's the secure version of HTTP, the protocol that sends data between a web browser and a website.

• The "S" in HTTPS indicates that the communication between the browser and the website is encrypted.

• This is done using the Secure Socket Layer (SSL) or Transport Layer Security (TLS) protocols.

• HTTPS is often used to protect confidential online transactions, like online banking and shopping.

Q20. Answer: (b) Lonar

The correct answer is Lonar

Key Points

• Lonar Lake is a saline lake located in Buldhana district, Maharashtra.

• It is formed after a meteorite impact led to crater formation.

• It has been designated as a Ramsar site by Wetland International in the year 2020.

• The colour of the lake is pink due to the presence of Haloarchaea microbes.

• It is a notified National Geo-heritage Monument due to its cultural significance offering insight into Earth’s evolution.

Additional Information

• Wular Lake:

• Wular Lake is the largest freshwater lake in India.

• In 1990, Wular lake was designated as a Wetland of International Importance under the Ramsar Convention.

• Wular Lake is the 2nd largest fresh-water lake of Asia, situated on the foothills of Harmukh Mountain in Jammu and Kashmir.

• It is spread in a total area of 200 square km covering almost 24 km in length while its breadth is 10 km.

• Dal Lake:

• Dal is a lake in Srinagar, the summer capital of Jammu and Kashmir.

• The urban lake is integral to tourism and recreation in Kashmir and is named the “Jewel in the crown of Kashmir” or “Srinagar’s Jewel”.

• Dal Lake lies between the Great Himalayas and the Pir Panjal range.

• It is an important freshwater lake.

• Bhimtal Lake:

• Located in Uttarakhand, Bhimtal Lake is a natural freshwater lake with a small island in the middle.

• It is named after Bhima from the Mahabharata and is popular for boating and scenic views.

Q21. Answer: (b) 14.75%

Given:

Sumanth bought a microwave oven at 15% less than its original price

He sold at 35% profit on the buying price.

Calculation:

Let the original price = Rs. 100

Sumanth bought at 15% less = Rs. 85

He sold at 35% profit on buying price.

Selling price = Rs. 85 + 35% of Rs. 85 = Rs. 114.75

Difference between selling and original price = Rs. 114.75 - Rs. 100 = Rs. 14.75

Percentage increase = (Rs. 14.75 / Rs. 100) × 100 = 14.75%

Therefore The selling price is 14.75% more than the original price.

Q22. Answer: (a) Shinzo Abe

The correct answer is Shinzo Abe

Key Points

• The former Prime Minister who was awarded the Padma Vibhushan in 2021 is Shinzo Abe of Japan.

• He was recognized for his significant contributions to strengthening India-Japan relations,

• including promoting cooperation in areas like trade, defence, and infrastructure.

• Under his leadership, India and Japan deepened their strategic partnership,

• leading to important agreements such as high-speed rail projects and collaborations in various sectors.

Additional Information

• Anirudh Jagannath:

• He was the former Prime Minister and President of Mauritius. While he has received various awards for his service to Mauritius, he was not awarded the Padma Vibhushan in 2021.

• However, he was earlier honoured with the Padma Vibhushan in 2020 for his role in promoting strong relations between India and Mauritius and his significant contributions to the Mauritian economy.

• Maumoon Abdul Gayoom:

• The former President of the Maldives, Gayoom has played a key role in enhancing Maldives-India relations.

• Navin Ramgoolam:

• The former Prime Minister of Mauritius, Ramgoolam has served multiple terms and played a pivotal role in the politics of Mauritius.

Q23. Answer: (d) ×

Given:

The equation is: (4 ? 3) - 12 ÷ 4 + 2 = 11

Formula Used:

We need to determine the correct mathematical operator (?) that satisfies the equation.

Calculation:

Let's test each operator:

Option 1: ? = ÷

=> (4 ÷ 3) - 12 ÷ 4 + 2

=> 1.33 - 3 + 2

=> 0.33 (Incorrect)

Option 2: ? = -

=> (4 - 3) - 12 ÷ 4 + 2

=> 1 - 3 + 2

=> 0 (Incorrect)

Option 3: ? = +

=> (4 + 3) - 12 ÷ 4 + 2

=> 7 - 3 + 2

=> 6 (Incorrect)

Option 4: ? = ×

=> (4 × 3) - 12 ÷ 4 + 2

=> 12 - 3 + 2

=> 11 (Correct)

The correct answer is option 4.

YourMockTest.com — Free Study Material

Q24. Answer: (a) 32

Given:

Internal radius of the hemispherical bowl (r) = 12 cm

Radius of the cylindrical bottle (R) = 3 cm

Height of the cylindrical bottle (h) = 4 cm

Formula Used:

Volume of the hemispherical bowl = 2/3 π r^3

Volume of one cylindrical bottle = π R^2 h

Number of bottles required = Volume of the hemispherical bowl / Volume of one cylindrical bottle

Calculation:

Volume of the hemispherical bowl = 2/3 π $(12)^3$

=> Volume of the hemispherical bowl = 2/3 π (1728)

=> Volume of the hemispherical bowl = 3456/3 π

=> Volume of the hemispherical bowl = 1152 π cm^3

Volume of one cylindrical bottle = π $(3)^2$(4)

=> Volume of one cylindrical bottle = π (9) (4)

=> Volume of one cylindrical bottle = 36 π cm^3

Number of bottles required = 1152 π / 36 π

=> Number of bottles required = 1152 / 36

=> Number of bottles required = 32

The number of bottles required to completely empty the bowl is 32.

Q25. Answer: (c) CICUSI

The logic followed here is:

MUSIC is coded as LATEB

TORRID as SUSQEF.

Thus, 1st letter - 1; I <=> E; B <=> C; U <=> A; S <=> T

Similarly, DEBATE will be coded:

Hence, the correct answer is "CICUSI".

Q26. Answer: (c) The Board of Industrial and Financial Reconstruction

The correct answer is the Board of Industrial and Financial Reconstruction

Key Points

• In India, the organization responsible for taking care of sick or failing industries is the Board for Industrial and Financial Reconstruction (BIFR).

• It was established under the Sick Industrial Companies Act of 1985 and is a department of the Ministry of Finance's Department of Financial Services.

• Its goal was to revamp and salvage troubled projects and to prevent or end the long-term growth and occurrence of troubled performances.

• Goals of the BIFR:

• A chairperson and two to fourteen other representatives made up the BIFR.

• The requirements for membership were being elected High Court judges or having at least 15 years of professional experience.

Additional Information

• In the years before independence, industrial illness first appeared in India.

• In the beginning, the Indian government made an effort to stop it by using ad-hock processes that involved nationalising banks to offer temporary support.

• In 1981, the Tiwari Committee was established, and it put out comprehensive legislation to address industrial illness.

• As a result, SICA was established in 1985, and BIFR was established as part of SICA in January 1987.

• In April 1987, the Appellate Authority for Industrial and Financial Reconstruction (AAIFR) was established.

• Government companies were adopted in 1991, with the help of SICA.

• Following that, cases of occupational illness in both public and private organisations were covered.

YourMockTest.com - Free Study Material

Q27. Answer: (a) Rs. 380

Shortcut Trick

Total work = LCM(20, 15) = 60 units. Efficiency of A = 3, B = 4.

Work done by (A + B) in 5 days = (3 + 4) × 5 = 35 units.

Remaining work done by C = 60 − 35 = 25 units. Efficiency of C = 25 ÷ 2 = 12.5 units/day.

Total wage Rs. 2400 for 60 units => 1 unit = Rs. 40.

Difference in daily wages of C and A = (12.5 − 3) × 40 = 9.5 × 40 = Rs. 380.

Therefore The correct answer is Rs. 380.

Alternate Method

Given: A alone takes 20 days, B alone takes 15 days, C finishes rest in 2 days, total pay = Rs. 2,400.

Formula Used: Efficiency = Total Work ÷ Time; Wage prop. to Work Done; Daily Wage = Efficiency × (Total Wage ÷ Total Work).

Person	Days	Total Work	Efficiency
A	20	60 (LCM)	3
B	15	4	

=> Work done by A and B in 5 days = 5 × (3 + 4) = 35 units.

=> Remaining work = 60 − 35 = 25 units.

=> Efficiency of C = 25 units ÷ 2 days = 12.5 units/day.

=> Wage per unit of work = 2400 ÷ 60 = Rs. 40.

=> Daily wage of C = Efficiency of C × Wage per unit = 12.5 × 40 = Rs. 500.

=> Daily wage of A = Efficiency of A × Wage per unit = 3 × 40 = Rs. 120.

=> Difference = 500 − 120 = Rs. 380.

Therefore The correct answer is Rs. 380.

Additional Information

Work and Wages Principle

Wages are distributed in the ratio of total work done by each person. If people work for the same duration, wages are distributed in the ratio of their efficiencies.

Daily Wage Formula

Daily Wage = Total Wage earned by a person ÷ Number of days worked by that person. Alternatively, Daily Wage = Efficiency (work per day) × Rate per unit of work.

Efficiency Relationship

Efficiency is inversely proportional to the time taken to complete the task: Efficiency = 1 ÷ Time. Total Work = Efficiency × Time.

Q28. Answer: (d) Agricultural

The correct answer is the Agricultural Sector.

Key Points

• Agricultural Sector has a greater consumption share of water in India.

• It accounts for approximately 90% of 761,000 billion litres of annual freshwater withdrawals in the country.

• Per capita consumption of water in the agriculture sector ranges from 4,913 to 5,800 kilolitres per capita per year.

• The inequity in irrigation water allocation among crops, with more than 60% being diverted for the cultivation of two crops- sugar cane and paddy adds to the distress.

• Under Pradhan Mantri Krishi Sinchai Yojana, financial assistance of up to 55% is available for small and marginal farmers and 45% for other farmers for the adoption of micro-irrigation systems.

Additional Information

• As per the Central Water Commission, 85.3% of the total water consumed was for agriculture in the year 2000.

• This is likely to decrease to 83.3% by 2025.

• India does not spend any money in conserving water consumed in agriculture. Surprisingly, water conservation takes place in the industry and utility sectors, both of which consume less than 5% of the nation’s water.

Q29. Answer: (b) Teejan Bai

The correct answer is Teejan Bai

Key Points

• Teejan Bai is the most famous singer of the Pandavani style of folk singing:

YourMockTest.com — Free Study Material

• Teejan Bai:

• A renowned Indian folk singer and performer from Chhattisgarh who is known for her powerful and emotive renditions of Pandavani.

• She has received many awards for her work, including the Padma Shri in 1987, Padma Bhushan in 2003, and Padma Vibhushan in 2019

• Pandavani is a folk singing style that tells the story of the Pandavas from the Indian epic Mahabharata.

• It's popular in Chhattisgarh and the neighbouring states of Madhya Pradesh, Odisha, and Andhra Pradesh.

Additional Information

• Vimalakka:

• A popular Telugu folk singer and activist from Telangana,

• Vimalakka is known for using her music to raise awareness on social issues such as farmers' rights, caste discrimination, and women's empowerment.

• She is a prominent figure in cultural activism and leads the Arunodaya Cultural Federation.

• Sharda Sinha:

• A renowned Maithili and Bhojpuri folk singer from Bihar, Sharda Sinha is celebrated for her contributions to Indian folk music.

• She has received several awards, including the Padma Bhushan in 2018, and is known for her traditional songs sung during festivals like Chhath Puja.

• Hira Devi Waiba:

• Considered the pioneer of Nepali folk music,

• Hira Devi Waiba was a singer from Darjeeling who devoted her career to preserving and popularizing traditional Nepali folk songs.

• She is best known for her song "Chura ta Hoina Astura," and her work laid the foundation for the genre of authentic Nepali folk music.

Q30. Answer: (b) Pawan Hans Limited

The correct answer is Pawan Hans Limited

Key Points

• Pawan Hans Limited is the public sector company that provides helicopter services for tourists in hilly areas.

• Pawan Hans is India's largest helicopter company and offers a variety of services, including chartered tourist services, oil and gas exploration, and remote area support.

• Pawan Hans is under the administrative control of the Ministry of Civil Aviation, Government of India

• Pawan Hans' corporate headquarters are located in Sector-1, Noida, with regional offices in New Delhi, Mumbai, and Guwahati. Operations are based at the Juhu Aerodrome in Vile Parle (West), Mumbai.

Additional Information

• Air India:

• Founded in 1932, Air India is the national carrier of India and is headquartered in New Delhi.

• It operates domestic and international flights, known for its extensive network and services, including its distinctive Maharaja mascot and commitment to showcasing Indian culture through its hospitality.

• Hindustan Aeronautics Limited (HAL):

• Established in 1940, HAL is a state-owned aerospace and defence company based in Bangalore. It plays a crucial role in the design, manufacture, and maintenance of aircraft, helicopters, and associated systems, significantly contributing to India’s self-reliance in defence aviation.

• Global Vectra Helicorp:

• Founded in 1998, Global Vectra Helicorp is India's largest private helicopter service provider. Based in Mumbai, it offers services for offshore oil and gas operations, air ambulance, and charter services, playing a vital role in the aviation sector with a focus on safety and customer satisfaction.

Q31. Answer: (d) F

Given: Eight persons A to H, not necessarily in same order, are sitting at a round table facing the centre.

1) There are two persons between F and D.

2) H is not an immediate neighbour of A or F.

3) A is third to the right of F.

4) There are three persons between H and G.

5) C sits second to the left of E.

Final arrangement:

So, F is third to the right of D.

Hence, the correct answer is "F".

Q32. Answer: (b) 64 25

The logic followed here is:

Hence, the correct answer is "64 25".

Q33. Answer: (d) Tears

The logic followed here is:

Logic: Cause and Effect.

Here,

Cloud : Rain → Cloud is the cause of Rain.

Similarly,

Grief : Tears → Grief is the cause of Tears.

Hence, the correct answer is "Option 4".

Q34. Answer: (d) 512

Given:

Each child gets notebooks equivalent to one-eighth of the number of children in the class.

When the number of children is halved, each child gets 16 notebooks.

Calculation:

Let the number of children be x.

Notebooks per child = x/8

Total notebooks = $x \times x/8 = x^2/8$

When children are halved, notebooks per child = 16.

Total notebooks = $(x/2) \times 16 = 8x$

Set the equations equal:

=> $x^2/8 = 8x$

=> $x = 64$

Total notebooks = $x2/8 = 64^2/8 = 512$

Therefore The total number of notebooks is 512.

Q35. Answer: (d) Group of Monuments at Hampi

The correct answer is Group of Monuments at Hampi

Key Points

• The Vitthala Temple is part of the Group of Monuments at Hampi.

• Hampi, a UNESCO World Heritage Site in Karnataka, is renowned for its rich history and impressive ruins of temples, palaces, and market streets from the Vijayanagara Empire, with the Vitthala Temple being one of its most iconic structures, famous for its intricate carvings and stone chariot.

Additional Information

• Group of Monuments at Mahabalipuram:

• Located in Tamil Nadu, this UNESCO World Heritage Site is famous for its rock-cut temples and intricately carved sculptures dating back to the Pallava dynasty.

• Notable monuments include the Shore Temple and the Pancha Rathas, showcasing exceptional Dravidian architecture.

• Group of Monuments at Pattadakal:

• Situated in Karnataka, this UNESCO World Heritage Site features a mix of Hindu and Jain temples built during the Chalukya dynasty.

• It is known for its architectural brilliance, including the famous Virupaksha Temple and its contributions to early South Indian temple design.

• Khajuraho Group of Monuments:

• Located in Madhya Pradesh, this UNESCO World Heritage Site is renowned for its stunning temples adorned with intricate erotic sculptures and carvings.

• Built between 950 and 1050 AD by the Chandela dynasty, the temples are a significant example of Indian medieval architecture and art.

YourMockTest.com — Free Study Material

Q36. Answer: (a) 2012

Given:

Price of X in 2002 = Rs. 5.20

Price of Y in 2002 = Rs. 6.30

Price increase of X per year = 40 paise = Rs. 0.40

Price increase of Y per year = 25 paise = Rs. 0.25

Formula used:

Price of X in year n = Price of X in 2002 + (n - 2002) × 0.40

Price of Y in year n = Price of Y in 2002 + (n - 2002) × 0.25

Calculation:

We need to find the year when the price of X is 40 paise more than the price of Y:

Price of X in year n = Price of Y in year n + 0.40

=> 5.20 + (n - 2002) × 0.40 = 6.30 + (n - 2002) × 0.25 + 0.40

=> 5.20 + 0.40n - 0.40 × 2002 = 6.30 + 0.25n - 0.25 × 2002 + 0.40

=> 5.20 + 0.40n - 800.8 = 6.30 + 0.25n - 500.5 + 0.40

=> 5.20 + 0.40n - 800.8 = 6.70 + 0.25n - 500.5

=> 0.40n - 0.25n = 6.70 - 5.20 - 500.5 + 800.8

=> 0.15n = 1.50 + 300.3

=> 0.15n = 301.8

=> n = 301.8 / 0.15

=> n = 2012

Therefore The correct answer is option 1 (2012).

Q37. Answer: (a) Only II follows

Given,

Statement:

The findings according to a recent study on marine life stated that plastic and other non-biodegradable waste material disposed in water bodies is one of the leading causes of harm to sea creatures.

Conclusions:

I. Non-biodegradable materials should not be disposed of in water bodies - True (Because, the statement mentions that plastic and other non-biodegradable waste material disposed in water bodies is one of the leading causes of harm to sea creatures, which suggests that disposing of non-biodegradable materials in water bodies is harmful).

II. More research is being conducted on marine life to better understand sea creatures - False (Because, it does not provide any evidence to support the claim that more research is being conducted on marine life).

So, Only conclusion I follows.

Hence, the correct answer is "Option 4".

Q38. Answer: (c) Arunachal Pradesh

The correct answer is Arunachal Pradesh

Key Points

• As per the Census 2011, Arunachal Pradesh has the lowest population density among all the Indian states.

• The population density of Arunachal Pradesh is 17 people per square kilometer.

• Sikkim, Nagaland, and Mizoram have population densities of 86, 119, and 52 people per square kilometer respectively.

• Arunachal Pradesh is located in the northeastern part of India and shares its borders with Bhutan, China, and Myanmar.

• The state is known for its diverse tribal culture, scenic beauty, and rich biodiversity.

Additional Information on population data from the 2011 Census of India for the states

1. Uttarakhand: 10,086,292

2. Jharkhand: 32,988,134

3. Mizoram: 1,097,206

Q39. Answer: (b) Forced cultivation of indigo

The correct answer is Forced cultivation of indigo

Key Points

• The Champaran movement protested against the forced cultivation of indigo

• It began in 1917 in the Champaran district of Bihar, where farmers were being compelled by British planters to grow indigo on a portion of their land under the Tinkathia system.

• This system was highly exploitative, as the indigo crop was sold at very low prices, leaving the farmers in poverty.

• The movement, led by Mahatma Gandhi, aimed to end this oppressive practice and marked his first major involvement in India's freedom struggle.

Additional Information

• Financial atrocities by the British government:

• This refers to the various exploitative financial policies imposed by the British, such as heavy land revenue systems and excessive taxes.

• These policies placed severe economic pressure on Indian farmers and common people, leading to widespread poverty and discontent.

• Rowlatt Act, 1919:

• This draconian law allowed the British government to arrest and imprison Indians without trial, suppressing civil liberties.

• It led to widespread protests across India, culminating in events like the Jallianwala Bagh Massacre

• Extra taxation by landlords:

• This refers to the exploitative practices by zamindars (landlords) who imposed heavy taxes and rents on farmers.

• While this was a common issue in many parts of India, the Champaran movement specifically addressed the forced cultivation of indigo rather than extra taxation.

Q40. Answer: (d) Office of the Prime Minister

The correct answer is the Office of the Prime Minister

Key Points

• The governing department of nuclear energy in India is the Department of Atomic Energy (DAE), which functions directly under the Office of the Prime Minister.

• The DAE is responsible for the development of nuclear energy for peaceful purposes, including power generation and research.

• Established in 1954, the DAE manages the development, research, and application of nuclear technology, focusing on energy generation, healthcare, agriculture, and industry.

• Key responsibilities of the DAE include:

• Development of nuclear power plants for generating electricity.

• Research and development of nuclear technologies, including in medicine (radiation therapy), agriculture (improving crop varieties), and industry.

• Ensuring the safety, regulation, and proper use of nuclear resources in line with international standards and agreements.

• Operating nuclear research institutions such as the Bhabha Atomic Research Centre (BARC) and the Nuclear Power Corporation of India Limited (NPCIL).

Additional Information

• Ministry of Power:

• The Ministry of Power is responsible for overseeing the development and regulation of India's power sector

• It formulates policies for power generation, transmission, and distribution, and works to ensure affordable and reliable electricity across the country.

• The ministry also promotes renewable energy sources and energy efficiency initiatives.

• Office of the Home Minister:

• This office oversees internal security, law and order, and domestic policy matters.

• It manages national security agencies, border management, and disaster response.

• The Home Ministry also handles issues related to citizenship, immigration, and criminal justice in India.

• Office of the Defence Minister:

• The Office of the Defence Minister is responsible for the defence and security of India.

• It oversees the Indian Armed Forces (Army, Navy, and Air Force) and handles defense procurement, military policy, and national defence strategies.

• The office ensures the country's defense preparedness and manages relations with other nations on defense matters.

Q41. Answer: (d) Conclusion A alone follows

Given Statements:

1. All buildings are rooms.

2. No room is a tower.

3. Some towers are poles.

The least possible Venn diagram:

Conclusions:

A. No building is a tower. - True (Because, All buildings are rooms and No room is a tower, so, No building is a tower)

B. No pole is a room. - False (Because, there is no relation between pole and room, so it can be possible but not definite)

C. No pole is a building. - False (Because, there is no relation between pole and building, so it can be possible but not definite)

So, Conclusion A alone follows.

Hence, the correct answer is "Conclusion A alone follows".

Q42. Answer: (b) Making a government body do its duty

The correct answer is Making a government body do its duty

Key Points

• A writ of mandamus is a court order that directs a government official, public body, or lower court to perform a duty they are legally obligated to carry out.

• It ensures that public authorities fulfil their statutory duties.

• This writ is typically used when a public official or body has failed to perform their duties or has refused to act, leading to an unjust situation.

• Key points about mandamus:

• It can be issued to enforce the performance of public duties by public authorities.

• It cannot be issued to compel an authority to act in a particular way if discretion is involved.

• Mandamus cannot be used if there is an alternative remedy available, or if the duty is not clearly defined by law.

• For example, if a government agency refuses to issue a license or certificate that someone is legally entitled to, the court can issue a writ of mandamus ordering the agency to issue it.

• However, it cannot compel the official to act in a way that involves personal judgment or discretion.

• This writ ensures the legal accountability of public bodies and is an important tool for upholding the rule of law.

Q43. Answer: (c) Paternal aunt

Family Chart:

Given: Pointing to a woman, a girl named Rita said. "I am the daughter of the daughter-in-law of her mother".

So, that woman is 'Paternal aunt' of Rita.

Hence, the correct answer is "Paternal aunt".

Q44. Answer: (a) 9

Given:

n/160 is less than 1over16 but more than 1over20.

Formula Used:

n/160 < 1over16

n/160 > 1over20

Calculation:

n/160 < 1over16

=> n < 160 × 1over16

=> n < 10

n/160 > 1over20

=> n > 160 × 1over20

=> n > 8

Combining both conditions:

8 < n < 10

Therefore, the integer n is 9.

The correct answer is option 1.

Q45. Answer: (b) Lord Irwin

The correct answer is Lord Irwin

Key Points

• Lord Irwin was the Viceroy of India when Mahatma Gandhi led the Dandi March in 1930.

• Dandi March

• Gandhi began the Dandi March on March 12, 1930, from Sabarmati Ashram to Dandi, Gujarat, to break the British salt law.

• He reached Dandi on April 5, 1930, and publicly violated the salt law

• Lord Irwin

• Lord Irwin was the Viceroy of India from 1926–1931.

• He was not perturbed by the threat of a salt protest and the government did nothing to prevent the march.

• Gandhi-Irwin Pact

• The Gandhi-Irwin Pact was signed on March 5, 1931, between Gandhi and Lord Irwin.

• The pact marked the end of the period of civil disobedience in India against British rule.

Additional Information

• Lord Wavell (1943–1947):

• Lord Wavell served as the Viceroy of India during a critical period of World War II and the subsequent Indian independence movement.

• His tenure saw the Bengal Famine of 1943 and the Quit India Movement.

• He also proposed the Wavell Plan in 1945, which aimed to ease tensions between Indian political factions, but it failed to gain traction.

• Lord Willingdon (1931–1936):

• Lord Willingdon was the Viceroy of India during the early 1930s, a time marked by the Civil Disobedience Movement led by Mahatma Gandhi.

• He adopted a repressive approach to suppress the movement, including the arrest of many Congress leaders.

• His tenure also saw the passage of the Government of India Act, 1935, which laid the foundation for more self-governance in India.

• Lord Reading (1921–1926):

• Lord Reading, as Viceroy of India, dealt with post-World War I unrest, including the aftermath of the Jallianwala Bagh massacre.

• His tenure was marked by increasing nationalist activities, and he faced challenges like the Non-Cooperation Movement and the Moplah Rebellion.

• Despite the turmoil, he worked toward constitutional reforms, including the passage of the Montagu-Chelmsford Reforms.

Q46. Answer: (a) Rs. 1,323

Given:

Principal (P) = Rs. 2,460

Rate (r) = 5% p.a.

Time (t) = 2 years

Formula used:

EMI Formula for Compound Interest: $(P \times r \times (1 + r)^n)/((1 + r)^n - 1)$

Where, n = number of installments

Calculations:

r = 5% = 0.05

n = 2

$EMI = (2460 \times 0.05 \times (1 + 0.05)^2)/((1 + 0.05)^2 - 1)$

=> $EMI = (2460 \times 0.05 \times (1.1025))/(1.1025 - 1)$

=> $EMI = (2460 \times 0.05 \times 1.1025)/0.1025$

=> EMI = 135.1125/0.1025

=> EMI = Rs. 1,318.67

Therefore The correct answer is option (1) Rs. 1,323.

Q47. Answer: (d) English

The correct answer is English

Key Points

• According to Article 348(1) of the Constitution of India, English is the primary language used in the High Courts of India, unless Parliament decides otherwise

• However, there are some exceptions:

• State Governor's authorisation

• The Governor of a state can authorise the use of Hindi or the state's official language in addition to English.

• This is done with the prior consent of the President.

• Translation

• If a judgment, decree, or order is passed in a language other than English, it must be accompanied by an English translation

Additional Information

• The official language of a state or area under the jurisdiction of a High Court in India is typically the regional language of that state, along with English.

• The use of English as a legal and judicial language is mandated under Article 348 of the Indian Constitution for proceedings in the High Courts and Supreme Court,

• though the Constitution allows state legislatures to authorize the use of regional languages in High Courts with the President's consent.

• For example:

• Delhi High Court uses Hindi and English.

• Tamil Nadu (Madras High Court) uses Tamil and English.

• Karnataka High Court uses Kannada and English.

Q48. Answer: (b) 5√()3

Given:

Find the value of: (3√2 / (√6 + √3)) - (4√3 / (√6 + √2)) - (6 / (√8 - √12)).

Formula used:

Rationalize the denominator using the formula: a / (b + c) = a(b - c) / (b^2 - c^2).

Calculation:

First term: (3√2 / (√6 + √3))

=> Rationalize: (3√2 × (√6 - √3)) / ((√6 + √3)(√6 - √3))

=> (3√2(√6 - √3)) / (6 - 3) = √2(√6 - √3)

=> √12 - √6 = 2√3 - √6

Second term: (4√3 / (√6 + √2))

=> Rationalize: (4√3 × (√6 - √2)) / ((√6 + √2)(√6 - √2))

=> (4√3(√6 - √2)) / (6 - 2) = √3(√6 - √2)

=> √18 - √6 = 3√2 - √6

Third term: (6 / (√8 - √12))

=> Rationalize: (6 × (√8 + √12)) / ((√8 - √12)(√8 + √12))

=> (6(√8 + √12)) / (8 - 12) = -(6(√8 + √12)) / 4 = -(3/2)(√8 + √12)

=> -(3/2)(2√2 + 2√3) = -3(√2 + √3)

Final Calculation:

[2√3 - √6] - [3√2 - √6] - [-3(√2 + √3)]

=> 2√3 - √6 - 3√2 + √6 + 3√2 + 3√3

=> 5√3 + 0 + 0

Therefore The correct answer is 5√3.

Q49. Answer: (a) 3 : 4

Given:

21 women can complete a task in 40 days.

30 men can complete the task in 21 days.

Formula used:

Work done = Number of people × Number of days

Let W = work done by a woman in 1 day

Let M = work done by a man in 1 day

Calculation:

21W × 40 = 30M × 21

=> 21W × 40 = 30M × 21

=> 840W = 630M

=> W = 3/4 M

For 1 man days = D_M

30M × 21 = 1M × D_M

=> D_m = 30 × 21

For 1 Women days = DW

21W × 40 = 1W × DW

=> DW = 40 × 21

The ratio of the number of days a man will take to complete the task alone to the number of days a woman will need to do that task is:

=> D_m/D_w = (21 × 30)/(21 × 40) = 3/4 = 3 : 4

Therefore The correct answer is option (1).

Q50. Answer: (d) The Ministry of AYUSH

The correct answer is The Ministry of AYUSH

Key Points

• The Ministry of Ayush is responsible for the development, education, and research of alternative medicine in India.

• The Ministry of Ayush has conducted research and has signed agreements with the World Health Organization (WHO) to strengthen traditional medicine systems.

• The Ministry has made efforts to ensure that new medical colleges comply with guidelines and to reduce the number of substandard colleges.

• The Ministry has worked to develop healthcare infrastructure, promote exports, and reform education.

• The Ministry has initiated efforts to collect morbidity statistics for various systems of medicine, including Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy.

Additional Information

• The Ministry of Environment, Forests and Climate Change:

• This ministry is responsible for the planning, promotion, and coordination of environmental and forestry policies, including climate change adaptation.

• It oversees the protection of wildlife, forests, and biodiversity in India.

• The Ministry of Health and Family Welfare:

• This ministry manages national health policies and oversees public health, medical services, and family welfare programs.

• It is focused on improving healthcare infrastructure, disease control, and maternal and child health in India.

• The Ministry of Agriculture and Farmers Welfare:

• This ministry formulates agricultural policies to improve farmer livelihoods, enhance productivity, and ensure food security.

• It provides support for agricultural development, research, and the promotion of sustainable farming practices.

Q51. Answer: (d) 73.2m

Given:

Distance from point A to the base of the pole = 100m

Angle of elevation to the top S of the wooden portion = 60º

Angle of elevation to the top R of the steel portion = 45º

Formula used:

tan(θ) = Opposite / Adjacent

Calculation:

Let the height of the steel portion be h_(steel)

Using tan(45º) for the steel portion:

tan(45º) = h_(steel) / 100

=> 1 = h_(steel) / 100

=> h_(steel) = 100m

Let the total height of the pole (steel + wooden) be h_(total)

Using tan(60º) for the total height:

tan(60º) = h_(total) / 100

=> √3 = h_(total) / 100

=> h_(total) = 100 × √3

=> h_(total) = 100 × 1.732

=> h_(total) = 173.2m

The height of the wooden portion (h_(wood)) is:

h_(wood) = h_(total) - h_(steel)

=> h_(wood) = 173.2m - 100m

=> h_(wood) = 73.2m

Therefore The correct answer is option (4).

Q52. Answer: (c) Plotters

The correct answer is Plotters

Key Points

• The device used in applications such as Computer Aided Design (CAD) is the plotter.

• Plotters are specialized printers that create high-quality, precise drawings and graphics on large sheets of paper,

• making them ideal for architectural plans, engineering designs, and other CAD applications.

Additional Information

• Scanners:

• A scanner is a device used to convert physical documents, images, or objects into digital form.

• It is commonly used for digitizing photographs, printed documents, and artwork.

• While useful in many fields, scanners are not typically used for CAD applications, which involve creating designs rather than digitizing them.

• Speakers:

• Speakers are devices that convert electrical signals into sound.

• They are primarily used for audio output in multimedia applications, including playing music, sounds, or alerts.

• Speakers are not relevant to CAD applications, which focus on visual design rather than audio output.

• Pantographs:

• A pantograph is a mechanical device used to copy and scale drawings or images.

• It consists of linkages that allow a user to trace an image while simultaneously creating a larger or smaller copy.

Q53. Answer: (b) 210cm

Given:

Lengths: 4 m 20 cm, 31 m 50 cm, 14 m 70 cm

Formula used:

Greatest common divisor (GCD)

Calculation:

Convert lengths to cm:

4 m 20 cm = 420 cm

31 m 50 cm = 3150 cm

14 m 70 cm = 1470 cm

Find GCD of 420, 3150, and 1470:

Prime factorization:

$420 = 2^2 \times 3 \times 5 \times 7$

$3150 = 2 \times 3^2 \times 5^2 \times 7$

$1470 = 2 \times 3 \times 5 \times 7^2$

Common factors: 2, 3, 5, 7

GCD = 2 × 3 × 5 × 7 = 210

Therefore The correct answer is option 2 (210 cm).

Q54. Answer: (d) A private sector institute

The correct answer is a private-sector institute

Key Points

• TIFR is not a private-sector institute; it is a public research institution.

• It is aided by the Department of Atomic Energy (DAE) and is a national centre of the Government of India.

• It has the status of a deemed university and is renowned for research in science and mathematics.

YourMockTest.com — Free Study Material

• It was originally founded with the support of the Tata Trust in 1945, but its operations are now primarily sustained by the Indian government, particularly through the DAE.

• TIFR's headquarters is in Mumbai, and it has additional research centres across India.

• It plays a key role in India's scientific research, contributing to major projects, including the development of India's nuclear program, space research, and various international scientific collaborations.

Q55. Answer: (c) Rs. 1,680

Given:

The electricity bill of an establishment is partly fixed and partly varies as per the number of units of electricity consumed.

In a certain month, when 480 units were consumed, then the bill was Rs. 1,620.

In another month, when 690 units were consumed, then the bill was Rs. 2,250.

Formula used:

Bill = Fixed Charge + (Variable Charge × Number of Units)

Calculations:

Let F be the fixed charge and V be the variable charge per unit.

From the given data:

1620 = F + 480V

2250 = F + 690V

Subtract the first equation from the second:

=> 2250 - 1620 = (F + 690V) - (F + 480V)

=> 630 = 210V

=> V = 3

Substitute V = 3 into the first equation:

=> 1620 = F + 480 × 3

=> 1620 = F + 1440

=> F = 180

Now, for 500 units:

=> Bill = 180 + 500 × 3

=> Bill = 180 + 1500

=> Bill = 1680

Therefore The correct answer is option 3.

Q56. Answer: (a) 8.4%

Given:

Simple Interest (SI) = Rs. 840

Rate (R) = 6% p.a.

Time (T) = 7 years

Formula used:

SI = (P × R × T)/100

Where, P = Principal

Calculations:

840 = (P × 6 × 7)/100

=> 840 = (P × 42)/100

=> P = (840 × 100)/42

=> P = Rs. 2000

Now, we need to find the rate of interest for the same interest over 5 years.

SI = (P × r × 5)/100

840 = (2000 × r × 5)/100

=> 840 = 10000r/100

=> 840 = 100r

=> r = 840/100

=> r = 8.4%

Therefore The correct answer is option 1.

Q57. Answer: (a) 5

Given:

The observations are 2, 4, 8, 7, and 5 with frequencies 5, 3, 2, 6, and 4, respectively.

Formula used:

Arithmetic Mean = $(\sum(f \cdot x))/(\sum f)$

Calculation:

Sum of the product of observations and their frequencies:

2×5 + 4×3 + 8×2 + 7×6 + 5×4

=> 10 + 12 + 16 + 42 + 20 = 100

Sum of frequencies:

5 + 3 + 2 + 6 + 4 = 20

Arithmetic Mean = 100/20 = 5

Therefore The correct answer is option (1).

Q58. Answer: (c) Only conclusions II and III will follow.

Given Statements:

1. Some cotton cloths are silk cloths.
2. All silk cloths are woolen cloths.
3. No woolen cloth is a nylon cloth.
4. Some nylon cloths are polyester.

The least possible Venn diagram:

Conclusions:

I. Some cotton cloths are nylon cloth. - False (Because, there is no direct relation given between cotton cloths and nylon cloth)

II. No silk cloth is a nylon cloth. - True (Because, All silk cloths are woolen cloths and No woolen cloth is a nylon cloth so, No silk cloth is a nylon cloth).

II. Some cotton cloths are woolen cloth. - True (Because, Some cotton cloths are silk cloths and All silk cloths are woolen cloths, so Some cotton cloths are woolen cloth).

So, Only conclusions II and III will follow.

Hence, the correct answer is "Only conclusions II and III will follow.".

Q59. Answer: (a) B

Given: P, Q, R and S are facing north and A, B, C and D are facing them..

1) S is sitting second to the right of R.

2) The person who faces Q is not a neighbour of B.

3) D is facing S and sitting next to B.

4) A is sitting on an extreme position.

5) P and C are not facing each other.

6) R is at one end but C is not.

Final arrangement:

So, B is facing the person second to the right of Q.

Hence, the correct answer is "B".

Q60. Answer: (a) Varanasi

The correct answer is Varanasi

Key Points

• Saint Kabir Das was a famous Hindi poet of the 15th century, who was born in Varanasi in Uttar Pradesh.

• He was born in the 1425A.D in Varanasi.

• His early life was in a Muslim family, but he was strongly influenced by his teacher, the Hindu bhakti leader Ramananda.

• Kabir's legacy survives and continues through the Kabir Panth, a religious community that recognizes him as its founder and is one of the Sant Mat sects.

• Kabir's main composition was Sakhi, Sbad, Ramani.

• Kabir's verses were found in Sikhism's scripture Guru Granth Sahib.

About Uttar Pradesh

YourMockTest.com — Free Study Material

Area	240928 square km
No. of districts	75
Sex ratio	912:1000
1st Governor after Indian Independence	Smt. Sarojini Naidu
1st chief minister after independence	Shri Govind Ballabh Pant
Capital	Lucknow
The density of population (per sq. km)	829
Major rivers	Ganga, Yamuna, Ramganga, Gomti, Ghaghra, Betwa, and Ken
Bordering states/UTs	Uttarakhand, Haryana, Delhi, Rajasthan, Madhya Pradesh, Jharkhand, chattisgarh, Himachal Pradesh, and Bihar.
Lok Sabha seats	80
Rajya Sabha seats	31
Legislative Assembly members	403 members
Legislative Council members	100 members

Q61. Answer: (d) Maldives

The correct answer is Maldives

Key Points

• After winning the general elections in 2019, Prime Minister Narendra Modi visited Maldives on June 8, 2019.

• This visit marked his first overseas trip after securing a second term in office.

• Modi's visit aimed to strengthen the diplomatic ties between India and Maldives.

• The Maldives is strategically located in the Indian Ocean, and India has been keen to maintain good relations with its island neighbour.

• During his visit, Modi and Solih signed several agreements to enhance cooperation in various areas, including defence, tourism, and economic development.

• The two leaders also discussed ways to bolster security cooperation to address issues such as terrorism and piracy in the Indian Ocean.

Q62. Answer: (a) Major James Rennel

The correct answer is Major James Rennel

Key Points

• Major James Rennell is known as the "Father of the Indian Survey" and is credited with starting the first topographical survey in India.

• He was an English geographer, historian, and oceanography pioneer. He was appointed as the first Surveyor General of India in 1767.

• Rennell's cartographic surveys were a turning point in the scale and importance of cartography in India.

• His work included accurate maps of Bengal and outlines of India.

• His work inspired a generation of surveyors and cartographers for the Company.

• His surveys were the foundation for the Survey of India, which eventually employed nearly 150 Europeans and a large number of native surveyors.

Additional Information

• William Lambton:

• William Lambton was a British geographer and surveyor who initiated the Great Trigonometrical Survey of India in 1802.

• His work laid the foundation for the precise mapping of the Indian subcontinent, including the measurement of the meridian arc from the southern tip of India to the Himalayas.

• Col. Alexander Read:

• Col. Alexander Read was a British military officer and administrator known for his role in developing the Ryotwari system in parts of southern India.

• This system allowed direct collection of land revenue from the peasants (ryots), and it influenced the subsequent revenue

YourMockTest.com — Free Study Material

models adopted in British India.

• Nain Singh:

• Nain Singh was a renowned Indian explorer and surveyor who worked for the British Survey of India in the 19th century.

• He is famous for his pioneering explorations of Tibet and Central Asia, mapping the previously uncharted regions and determining the location and altitude of Lhasa, Tibet's capital.

Q63. Answer: (d) Macroratna

The correct answer is Macroratna

Key Points

• The term "Macroratna" is not an officially recognized classification of Central Public Sector Enterprises (CPSEs) in India.

• The classifications for CPSEs that are commonly recognized include Navaratna, Maharatna, and Miniratna.

• Common Classifications of CPSEs:

• Navaratna: A designation for certain CPSEs that have demonstrated good financial performance and are granted enhanced autonomy to promote efficiency.

• Maharatna: This is the highest status given to CPSEs, allowing them significant financial and operational autonomy.

• These companies can invest substantial amounts without prior government approval.

• Miniratna: These are smaller public sector enterprises with some level of autonomy, but their financial capabilities and operational scope are more limited than those of Navaratna and Maharatna companies.

Q64. Answer: (c) 2550

Given:

25 + 26 + _____ + 75 = ?

Formula used:

Sum of an arithmetic series: S = n/2 (a + l)

Where,

a = first term = 25

l = last term = 75

n = number of terms

Calculation:

Let's find the number of terms (n) in the series from 25 to 75:

=> n = 75 - 25 + 1

=> n = 51

Now, using the sum formula:

=> S = 51/2 × (25 + 75)

=> S = 51/2 × 100

=> S = 51 × 50

=> S = 2550

Therefore The correct answer is option 3.

Q65. Answer: (c) SEAC

The correct answer is SEAC

Key Points

• The SEAC (Standards Eastern Automatic Computer) is a First Generation computer.

• First-generation computers used vacuum tubes for circuitry and were operational in the 1940s and early 1950s.

• SEAC was designed for performing scientific calculations and was also used in various early applications, including weather forecasting and research.

• It was the first fully operational stored-program electronic computer in the United States, capable of executing instructions from a memory device.

Additional Information

• ATLAS: This was a second-generation computer, built in the 1960s using transistors instead of vacuum tubes, making it much faster and more efficient than first-generation computers.

• STAR 1000: This was a supercomputer, considered part of the third generation or later, developed with integrated circuits.

• ABACUS: The abacus is not a computer but an ancient counting tool used for arithmetic calculations, predating modern computing by thousands of years.

YourMockTest.com — Free Study Material

Q66. Answer: (b) 201

Given:

A tailor makes 6 pieces out of 1 m of cloth. If he has 33.5 m of cloth

Formula used:

Number of pieces = Total cloth (in meters) × Pieces per meter

Calculation:

Number of pieces = 33.5 × 6

=> Number of pieces = 201

Therefore The correct answer is option 2.

Q67. Answer: (d) Dena Bank

The correct answer is Dena Bank

Key Points

• Vijaya Bank and Dena Bank were merged with Bank of Baroda with effect from April 1, 2019.

• This is the first-ever three-way merger in Indian banking.

• After amalgamation, BOB became India's third-largest bank.

• Dena Bank said that its shareholders will receive 110 equity shares of Bank of Baroda of the face value of Rs. 2 for every 1,000 shares they held.

• Vijaya Bank shareholders will get 402 equity shares of Bank of Baroda for every 1,000 shares they held.

• Bank of Baroda (BOB) was established on July 20, 1908.

• Headquarters: Vadodara

Additional Information

• Canara Bank:

• Established in 1906, Canara Bank is one of the largest public sector banks in India, offering a wide range of financial services including retail banking, corporate banking, and asset management. 4

• In 2020, it was merged with Syndicate Bank to strengthen its financial position and expand its reach.

• Corporation Bank:

• Founded in 1906, Corporation Bank was a well-established public sector bank in India, known for providing various banking and financial services.

• In 2020, it merged with Union Bank of India as part of the Indian government's banking consolidation initiative to enhance operational efficiency and financial stability.

• United Bank of India:

• Established in 1950, the United Bank of India played a key role in expanding banking services in the eastern and northeastern regions of India.

• In 2020, it merged with Punjab National Bank as part of a broader consolidation strategy in the Indian banking sector, aimed at creating larger, more robust institutions.

Q68. Answer: (c) Both I and II are implicit.

html

Given Statement: We should always focus on the present.

Now,

Assumptions:

1. People often tend to think about past and future - Implicit (Focus on the present implies that people tend to think about the past and future)

2. The present is more important than the past or future - Implicit (The statement suggests that focusing on the present is of higher importance)

Here, Both assumption I and II are implicit.

Hence, the correct answer is "Option 3".

Q69. Answer: (b) 942

The logic followed here is:

Hence, the correct answer is "942".

YourMockTest.com — Free Study Material

Q70. Answer: (b) 3

Given:

Expression: √(6+√(5+√(12+√16)))

Formula Used:

Nested radicals simplification

Calculation:

First, simplify the innermost square root:

√16 = 4

Next, substitute back into the expression:

√{12 + 4} = √{16} = 4

Then, substitute back into the next level:

√{5 + 4} = √{9} = 3

Finally, substitute back into the outermost expression:

√{6 + 3} = √{9} = 3

The positive value of √(6+√(5+√(12+√16))) is 3.

Q71. Answer: (d) 41º

Given:

In rhombus ABCD, the diagonals intersect at point E.

mangle ECB = 5a + 4

mangle EBC = 4a + 5

Formula used:

In rhombus, diagonals bisect each other at right angles.

mangle ECB + mangle EBC = 90º

Calculation:

5a + 4 + 4a + 5 = 90º

=> 9a + 9 = 90

=> 9a = 81

=> a = 9

mangle EBC = 4a + 5

=> mangle EBC = 4×9 + 5

=> mangle EBC = 36 + 5

=> mangle EBC = 41º

Therefore The correct answer is option (4).

Q72. Answer: (c) Diffusion

The correct answer is Diffusion

Key Points

• The term for the intermixing of particles of two different types of matter on their own is diffusion

• Diffusion is a process that occurs when molecules intermingle due to their kinetic energy and random continuous motion.

• It happens when particles move from a region of higher concentration to a region of lower concentration

• Mixing ink in water is an example of diffusion.

• Other examples include how smells spread out through the air and how concentrated liquids spread out when placed in water

Additional Information

• Conversion: Conversion refers to the process of changing something from one form, state, or system to another.

• Devolution refers to the delegation of powers from a central authority to local or regional governments.

• Confusion involves a state of disorder or misunderstanding, where clarity is lacking.

Q73. Answer: (c) ÷ and -

Given equation: 25 ÷ 5 + 15 - 3 × 5 = 45

Option 1) + and -

After interchanging the signs we get:

=> 25 ÷ 5 - 15 + 3 × 5 = 45

YourMockTest.com — Free Study Material

=> 5 - 15 + 3 × 5 = 45

=> 5 - 15 + 15 = 45

=> 20 - 15 = 45

=> 5 = 45

Option 2) ÷ and ×

After interchanging the signs we get:

=> 25 × 5 + 15 - 3 ÷ 5 = 45

=> 25 × 5 + 15 - 0.6 = 45

=> 125 + 15 - 0.6 = 45

=> 139.4 = 45

Option 3) ÷ and -

After interchanging the signs we get:

=> 25 - 5 + 15 ÷ 3 × 5 = 45

=> 25 - 5 + 25 = 45

=> 50 - 5 = 45

=> 45 = 45

Option 4) + and ÷

After interchanging the signs we get:

=> 25 + 5 ÷ 15 - 3 × 5 = 45

=> 25 + 0.3 - 3 × 5 = 45

=> 25 + 0.3 - 15 = 45

=> 10.3 = 45

Hence, the correct answer is "÷ and -".

Q74. Answer: (c) Tri-oxygen

The correct answer is Tri-Oxygen

Key Points

• Tri-oxygen refers to ozone, a molecule made up of three oxygen atoms (O3).

• Ozone forms a layer in the Earth’s stratosphere known as the ozone layer,

• which absorbs most of the sun's harmful ultraviolet (UV) radiation, protecting living organisms from potential damage.

Additional Information

• Di-oxygen (O2):

• Di-oxygen refers to the common oxygen molecule consisting of two oxygen atoms (O2).

• This is the most stable and abundant form of oxygen in Earth's atmosphere, making up about 21% of the air we breathe.

• Di-oxygen is essential for respiration in most living organisms.

• Tetra-oxygen (O4):

• Tetra-oxygen refers to a hypothetical or extremely rare form of oxygen that consists of four oxygen atoms.

• It is not stable under normal atmospheric conditions and doesn't naturally exist in the environment.

• Some studies have predicted it might exist under extreme conditions

• Mono-oxygen (O):

• Mono-oxygen refers to single oxygen atoms (O), which are highly reactive and unstable on their own.

• Free oxygen atoms typically do not exist independently for long, as they tend to combine with other atoms or molecules to form di-oxygen (O2) or ozone (O3).

Q75. Answer: (a) 3 :4 : 18

Given:

A : B : C = 2 : 4 : 6

Formula Used:

A/B : B/C : C/A = (A/B) : (B/C) : (C/A)

Calculation:

A/B = 2/4 = 1/2

B/C = 4/6 = 2/3

YourMockTest.com — Free Study Material

C/A = 6/2 = 3

=> A/B : B/C : C/A = 1/2 : 2/3 : 3

To eliminate the fractions, find a common multiple for the denominators 2 and 3. The least common multiple of 2 and 3 is 6.

=> 1/2 × 6 : 2/3 × 6 : 3 × 6

=> 3 : 4 : 18

The correct answer is option 1.

Q76. Answer: (d) Lahore session of 1929

The correct answer is Lahore session of 1929.

Key Points

• Lahore session of 1929

• The Indian National Congress, on 19 December 1929, passed the historic 'Purna Swaraj' (total independence) resolution – at its Lahore session.

• A public declaration was made on 26 January 1930 – a day which the Congress Party urged Indians to celebrate as 'Independence Day.

• Jawaharlal Nehru was elected as President of the Indian National Congress in December 1929 at its annual session in the city of Lahore.

• In 1929, Lord Irwin, the then Viceroy of India, made a vaguely announced – referred to as the Irwin Declaration - that India would be granted dominion status in the future.

Additional Information

• The Indian National Congress (INC) was formed by Allan Octavian Hume in 1885.

• The first session of INC was held in Bombay from 28–31 December 1885 under the chairmanship of W.C. Bannerjee.

• Sessions of Indian National Congress

Year	Place	President and fact
1885, 1882	Bombay, Allahabad	Womesh Chandra Bannerjee
1886	Calcutta	Dadabhai Naoroji was the president. National Congress and National Conference.
1894	Madras	Alfred Webb
1896	Calcutta	Rahimtullah M. Sayani was the president. The national song ‘Vande Mataram’ was sung for the first time.
1906	Calcutta	Dadabhai Naoroji was the president. The word ‘Swaraj’ was mentioned for the first time.
1916	Lucknow	A.C Majumdar (Re-union of the Congress)
1917	Calcutta	Annie Besant was the first woman president of the INC.
1919	Amritsar	Motilal Nehru
1922	Gaya	C R Das
1939	Tripura	S.C.Bose was re-elected but had to resign due to protests by Gandhiji (as Gandhiji supported Dr. Pattabhi Sitaramayya). Rajendra Prasad was appointed in his place.
1948	Jaipur	Dr. Pattabhi Sitaramayya (Last session)

Q77. Answer: (c) Java Trench

The correct answer is Java Trench.

Key Points

• Java Trench

YourMockTest.com — Free Study Material

• It is also called Sunda Double Trench, the deepest point of the Indian Ocean.

• The trench is considered to be part of the Pacific Ring of fire as well as one of a ring of oceanic trenches around the northern edges of the Australian Plate.

• Indian Ocean

• It is the third biggest ocean in the world.

• It is bounded by Asia to the North, Africa to the west, and Australia to the east.

• The deepest point in the Indian Ocean is the Java Trench.

• The majority of the Indian Ocean is in the Southern Hemisphere.

Additional Information

• Pacific Ocean

• It is the largest ocean among all the oceans.

• It is bounded by the continents of Asia in the West and America in the East.

• The Mariana Trench, in the Pacific Ocean, is the deepest location on Earth.

• In the pacific ocean, El Nino affects the weather conditions.

• It was named after Portuguese explorer Ferdinand Magellan.

• Atlantic Ocean

• It is the second-largest ocean.

• Its deepest point is Milwaukee Trench.

• It has the largest coastline.

• It is the busiest route for trade and commerce in the world.

• Southern Ocean

• The Southern Ocean is also known as the Antarctic Ocean comprises the southernmost waters of the World Ocean.

• It is the second smallest ocean among all the oceans.

• The South Sandwich Trench is the deepest point of this ocean.

Q78. Answer: (d) No chief guest

The correct answer is No chief guest.

Key Points

• The inaugural Republic Day parade in India was a small gathering. The solemn ceremony took place in the nation's capital at the Major Dhyan Chand National Stadium, formerly known as the Irwin Amphitheatre.

• Dr Rajendra Prasad, India's first President, oversaw a ceremony to raise the flag.

• As the day the Indian National Congress (INC) issued the Declaration of Indian Independence in 1930, January 26 was chosen as India's Republic Day. The day was chosen since it was the day that the Poorna Swaraj resolution of the Congress was adopted.

• Republic Day is observed nationwide on January 26, 1950, the day the Constitution became operative. This day marked the beginning of India's ancient civilization, a mashup of several cultures and kingdoms.

Additional Information

• The Irwin Amphitheatre was the original name of the multipurpose stadium when it was first built in 1933. Before the Asian Games in 1951, it was renamed National Stadium; Dhyan Chand's name was added in 2002. The Dhyan Chand Stadium hosted the 2010 Hockey World Cup.

• In 1950, President Rajendra Prasad, riding in a horse-drawn carriage, gets ready to march on the first Republic Day parade on New Delhi's Irwin Amphitheater. Republic Day commemorates the adoption of India's constitution and the country's conversion to a republic on January 26, 1950.

• On November 26, 1949, the Constituent Assembly finished drafting the Constitution. However, it was imposed on January 26th, 1950 to give the date, January 26th, the respect it deserved. Every year, we commemorate this day by celebrating Republic Day.

Q79. Answer: (b) 67,000 miles per hour

The correct answer is 67,000 miles per hour.

Key Points

• The interior structure of the Earth is made up of three main shells the very thin and brittle crust the mantle and the core.

• The earth s radius is 6,370 km.

• Earth is moving about our sun in a very nearly circular orbit. It covers this route at a speed of nearly 30 kilometres per second or 67,000 miles per hour.

• The circumference of a circle is equal to 2 x π x r. So in one year, Earth travels about 584 million miles.

YourMockTest.com — Free Study Material

• Earth travels about 1.6 million miles a day.

Additional Information

• Structure of the Earth.

Q80. Answer: (d) 1over 15

Shortcut Trick

Total ways to choose 3 points out of 10 = ^(10)C3 = 120.

Since A and B are diametrically opposite, there are (10 − 2) ÷ 2 = 4 points on each side of AB.

A triangle lies on one side including A and B if it uses A, B, and 1 point from either side.

Favorable cases = 1 point from side 1 OR 1 point from side 2 = 4 + 4 = 8.

Probability = 8 ÷ 120 = 1 ÷ 15.

Therefore The correct answer is 1/15.

Alternate Method

Given: Total points n = 10. A and B are diametrically opposite points.

Step 1: Calculate Total Outcomes

=> Total ways to form a triangle using 3 points out of 10 = ^(10)C3

=> ^(10)C3 = (10 × 9 × 8) ÷ (3 × 2 × 1) = 120

Step 2: Calculate Favorable Outcomes

=> For a triangle to lie completely on one side of AB while including points A and B, the third point must be chosen from the remaining points on either side.

=> Number of points excluding A and B = 10 − 2 = 8 points.

=> Since points are uniform and AB is a diameter, there are 8 ÷ 2 = 4 points on each side of the line AB.

=> A triangle including A and B must take the form {A, B, P_i}.

=> Favorable points = 4 (on side 1) + 4 (on side 2) = 8.

Step 3: Calculate Probability

=> Probability P(E) = Favorable Outcomes ÷ Total Outcomes

=> P(E) = 8 ÷ 120 = 1 ÷ 15

Therefore The correct answer is 1/15.

Additional Information

Combinations Formula

The number of ways to choose r items from n is ${}^{n}C_r = n! \div [r!(n - r)!]$.

Right-Angled Triangle Property

Any triangle formed by the endpoints of a diameter and any other point on the circle is a right-angled triangle.

Probability Definition

Probability of an event is the ratio of the number of favorable outcomes to the total number of equally likely outcomes.

Q81. Answer: (b) 350

Given:

The arithmetic mean of two observations = 10

The geometric mean of two observations = 5

Formula used:

Arithmetic Mean (AM) = (a + b)/2

Geometric Mean (GM) = √ab

Sum of squares of observations = $a^2 + b^2$

Calculation:

Given AM = 10

=> (a + b)/2 = 10

=> a + b = 20

Given GM = 5

=> √ab = 5

=> ab = 25

We need to find $a^2 + b^2$

Using the identity: $a^2 + b^2 = (a + b)^2 - 2ab$

=> a2 + b2 = 202 - 2 × 25

=> a2 + b2 = 400 - 50

=> a2 + b2 = 350

Therefore The correct answer is option 2.

Q82. Answer: (b) International Court of Justice

The correct answer is International Court of Justice.

Key Points

• One of the six main organs of the United Nations is the International Court of Justice(ICJ).

• In accordance with international law, it resolves disputes between states and provides advisory opinions on international legal issues. The ICJ, with its judgments and opinions acting as primary sources of international law, is the only international court adjudicating general disputes between countries.

• The ICJ is the successor to the Permanent Court of International Justice (PCIJ), which was established by the League of Nations in 1920.

• The ICJ is a body of 15 judges elected to a nine-year term by the General Assembly and Security Council.

• The ICJ, which is housed in the Peace Palace in The Hague, Netherlands, is the only major UN body not located in New York City. English and French are his official working languages.

• Judges qualify for re-election. A special election is held as soon as possible to select a judge to fill the unexpired portion of the term if a judge dies or resigns during his or her term of office.

Additional Information

• United Nations:

• The UNO was formed on 24 October 1945.

• It was founded in San Francisco, USA.

• The headquarters were shifted to New York in 1946.

• At present, 193 countries are members of the UN.

• South Sudan is the latest and the 193rd member to join the UN in 2011.

• The UN Charter came into force on October 24, 1945, when the Governments of China, France, the UK, the Soviet Union, and the USA, and a majority of other counties had ratified it.

Q83. Answer: (c) Sarojini Naidu

The correct answer is Sarojini Naidu.

Key Points

• The Second Round Table Conference was held in London from 7 September 1931 to 1 December 1931.

• Mahatma Gandhi represented the Indian National Congress and Sarojini Naidu represented Indian women in the second round table conferences.

• Some important participants of the Second Round table conference:

• Indian National Congress (INC) – Mahatma Gandhi, Rangaswami Iyengar, Madan Mohan Malaviya

• Muslims League – Md. Ali Jinnah, Aga Khan III, Muhammad Iqbal

• Hindus – M R Jayakar

• Depressed classes – Dr. B R Ambedkar

• The Second Round Table Conference was one of the results of the Gandhi-Irwin Pact.

• The British decided to grant a communal award for representing minorities in India by providing separate electorates for minority communities and Gandhiji was against this.

Additional Information

• The First Round Table Conference was conducted from 12 November 1930 to 19 January 1931 in London.

• The Third Round Table Conference took place between 17 November 1932 and 24 December 1932 in London.

Q84. Answer: (b) The Association of Southeast Asian Nations (ASEAN)

The correct answer is The Association of Southeast Asian Nations (ASEAN).

Key Points

• ASEAN is a political and economic union of 10 member states in Southeast Asia.

• It promotes intergovernmental cooperation and facilitates economic, political, military & educational integration between its members.

• Member Countries (10): Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand & Vietnam.

• Headquarters: Jakarta

• Secretary-General: Lim Jock Hoi

Additional Information

• SAARC

• South Asian Association for Regional Cooperation (SAARC) is an organization of South Asian nations.

• SAARC was established on 8th December 1985 with the signing of the SAARC Charter in Dhaka, Bangladesh.

• The founding members of SAARC are Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

• Afghanistan joined SAARC as its eighth member state in 2007.

• The primary goal of SAARC is to promote regional cooperation and development in South Asia.

• SAARC covers various sectors including agriculture, rural development, science and technology, culture, health, population activities, and others.

• The SAARC Secretariat is located in Kathmandu, Nepal.

• SCO

• Members: The SCO currently has eight member states: China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, India, and Pakistan.

• Observers: There are four observer states: Belarus, Mongolia, Iran, and Afghanistan.

• Dialogue Partners: There are six dialogue partners: Armenia, Azerbaijan, Nepal, Turkey, Sri Lanka, and Myanmar.

• Formation: The SCO was founded in 2001 by the leaders of China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan.

• BIMSTEC

• BIMSTEC was formed on June 6, 1997.

• Given below is the list of all members of BIMSTEC:

• Bangladesh

• Bhutan

• India

• Myanmar

• Nepal

• Sri Lanka

• Thailand

Q85. Answer: (a) Uttarpath

The correct answer is Uttarpath.

Key Points

• Sher Shah Suri reconstructed the great Trunk Road. Sher Shah Suri was a ruler of the Indian subcontinent in 16th century AD. The Grand Trunk Road formerly known as Uttarapath, Sarak-e-Azam, Badshahi Sarak, Sarak-e-Sher Shah.

• The Grand Trunk Road formerly known as Uttarapath was constructed by Chandragupta Maurya of the Maurya Empire in ancient India in 333BC.

• It is one of Asia's oldest and longest major roads.

• The great Trunk Road runs through parts of Bangladesh, India, Pakistan and Afghanistan. The length of Grand Trunk Road is 3710 km. It was made to reduce the distance between India and Pakistan.

Additional Information

• Ashoka also known as the Ashoka The Great. He was Indian Emperor of the Maurya dynasty who ruled over almost all of the Indian subcontinent. Sarnath pillar in Varanasi and Lauria Nandangarh pillar in Champaran are the great examples of of Maurya architectures and art. The famous one being Sanchi Stupa in Madhya Pradesh.

• The full name of the Shivaji is Chhatrapati Shivaji Maharaj who was an Indian Warrior king and member of the Bhonsle Maratha Clan. Chhatrapati Shivaji was one of the bravest most progressive and sensible rulers of India who is known as the father of Indian Navy. Shivaji was the first to release the importance of having our Naval force and he established a navy force at the coastline to defend the Konkan side of Maharashtra. Shivaji was born on 19 February 1630 and died on 3 April 1680 at Raigad Fort.

• The full name of Akbar was Abdul Fath Jalaluddin Mohammed Akbar who was the third Emperor of Mughal. Akbar success his father Humayun. He created a powerful military system and instituted effective political and social reforms. Akbar was born on 15 October 1542 and died on 27 October 1605 in Fatehpur Sikri.

Q86. Answer: (c) 100 mm

Given:

Day with the most daytime rainfall = Monday

Total rainfall = 230 mm, Percentage during daytime = 40%

Day with the least daytime rainfall = Sunday

Total rainfall = 170 mm, Percentage during daytime = 0%

Formula used:

Rainfall during daytime = (Total rainfall) × (Percentage during daytime) / 100

Calculation:

=> Rainfall during daytime on Monday = 230 × 40 / 100 = 92 mm

=> Rainfall during daytime on Sunday = 170 × 0 / 100 = 0 mm

Difference = 92 mm - 0 mm = 92 mm

Therefore The approximate difference is 100 mm.

Q87. Answer: (b) Monday and Friday

Given:

Rainfall during seven days and daytime percentage is provided.

Calculation:

Daytime Rainfall

Sunday: 170 mm × 0% = 0 mm

Monday: 230 mm × 40% = 92 mm

Tuesday: 150 mm × 35% = 52.5 mm

Wednesday: 200 mm × 35% = 70 mm

Thursday: 170 mm × 30% = 51 mm

Friday: 140 mm × 60% = 84 mm

Saturday: 120 mm × 50% = 60 mm

The top two days: Monday and Friday.

Therefore The two days with the most rainfall during the daytime are Monday and Friday.

Q88. Answer: (d) Rs. 1,000

Given:

Total cost for 250 phones = Rs. 25 lakh

Transportation cost percentage = 10%

Calculation:

The cost of a single phone = Rs. 25 lakh / 250 = Rs. 10,000

The transportation cost (10% of Rs. 10,000) = Rs. 10,000 × 10% = Rs. 1,000

Therefore The transportation cost on a single phone is Rs. 1,000.

Q89. Answer: (d) Rs. 1,000

Given:

Total cost for 250 phones = Rs. 25 lakh

Packaging cost percentage = 5%

Technology cost percentage = 15%

Calculation:

The cost of a single phone = Rs. 25 lakh / 250 = Rs. 10,000

The packaging cost (5% of Rs. 10,000) = Rs. 10,000 × 5% = Rs. 500

The technology cost (15% of Rs. 10,000) = Rs. 10,000 × 15% = Rs. 1,500

Difference = Rs. 1,500 - Rs. 500 = Rs. 1,000

Therefore The packaging cost is Rs. 1,000 less than the technology cost.

Q90. Answer: (b) Tennis

The logic followed here is:

Cricket	Team sport

YourMockTest.com — Free Study Material

Tennis	Individual or doubles sport
Football	Team sport
Field hockey	Team sport

Cricket, Football, Field hockey are all Team sports,
Whereas,
Tennis can be played as an Individual or doubles sport.
Hence, the correct answer is "Tennis".

Q91. Answer: (b) Rajpath, New Delhi

The logic followed here is:

Sabarmati Ashram	**Ahmedabad**
Rajpath	New Delhi
Rajghat	New Delhi
Mani Bhawan	Mumbai

Sabarmati Ashram, Rajghat, Mani Bhawan are all related to Mahatma Gandhi,
Whereas,
Rajpath is not directly related to Mahatma Gandhi.
Hence, the correct answer is "Rajpath".

Q92. Answer: (c) 5

The logic followed here is:
Figure 1: $[(4 + 7) - (3 + 5)]^3 = (11 - 8)^3 = 3^3 = 27$
Figure 2: $[(6 + 5) - (3 + 2)]3 = (11 - 5)3 = 63 = 216$
Figure 3: $[(4 + 9) - (1 + 5)]3 = (13 - 6)3 = 73 = 243$
Hence, the correct answer is "5".

Q93. Answer: (c) F

According to the given information:
So, area F represents postgraduates below 70 from the rest of India.
Hence, the correct answer is "F".

Q94. Answer: (d) 18

The logic followed here is:
Hence, the correct answer is "18".

Q95. Answer: (b) Calculate

The logic followed here is:
1. Calculate
2. Calculation
3. Calendar
4. Calf

So, The word 'Calculate' come first if they are arranged as per their order in an English dictionary.
Hence, the correct answer is Calculate.

Q96. Answer: (a) Only conclusion 2 follows

Statements:
A. Some Cars are buses.
B. All trains are cars.
C. All planes are trains.
The least possible Venn diagram;
Conclusions:

YourMockTest.com — Free Study Material

1. All planes are buses. - False (Because, All planes are trains, All trains are cars and Some Cars are buses, So, all planes ca never be buses.)

2. Some cars are planes. - True (Because, All planes are trains, and All trains are cars, so Some cars are also planes)

So, Only conclusion 2 follows.

Hence, the correct answer is "Only conclusion 2 follows".

Q97. Answer: (a) T

The logic followed here is: 2nd letter - 6 = 1st letter

B : H => 8 (H) - 6 = B

P : V => 22 (V) - 6 = P

Similarly, N : ? => 14 (N) + 6 = T

Hence, the correct answer is "T".

Q98. Answer: (c) PO11

The logic followed here is:

Hence, the correct answer is "PO11".

Q99. Answer: (a) E

According to the given information:

1) B is the wife of E and is working in office N.

• B (female) works in N.

2) None of the women works in L or P.

• Therefore, since B is a woman, she cannot work in L or P.

• Since C is also a female (sister of D), she cannot work in L or P either.

3) C is the sister of D and is working in office K.

• C (female) works in K.

4) F is working in office M.

• We don't yet know F's gender.

5) D is working in L.

• D (male) works in L.

6) No man works in O.

• Since D is male and works in L, the other males (E and F) must work in either M or P.

Now we have:

we have:

• B (female) - N

• C (female) - K

• D (male) - L

• F - M

• E - either O or P (since he’s the husband of B)

• O cannot have males, so E must work in P.

Thus, F works in M and E works in P.

Now, since no man works in O, the only option left is for F to work in M and E to work in P.

So, the person who works in office P is E.

Hence, the correct answer is "E".

Q100. Answer: (b) D31R

The logic followed here is:

Hence, "Option 2" is the correct answer.

More previous year papers and mock tests: **www.yourmocktest.com/pyq**

YourMockTest.com — Free Study Material