SSC MTS 2025 Official Paper (Held On: 18 Feb, 2026 Shift 3) (Previous Year Paper)

SSC Multi-Tasking Staff (MTS) • 2025 • 90 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/ssc-mts/ssc-mts-2025-official-paper-held-on-18-feb-2026-shift-3-previou…

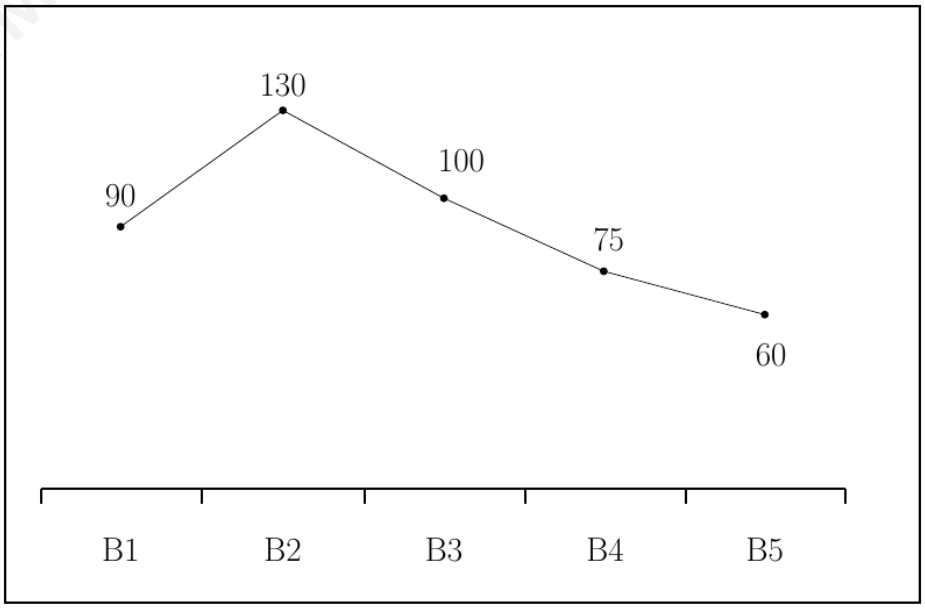
Scan the QR code or click the link to open it.

SESSION 1

Q1. 61 + (16 of 2) - 18 + 36 ÷ 6 + 25 × 2 - 43 = ?

(a) 84
(b) 88
(c) 92
(d) 96

Q2. The line chart given below shows the total loan amount (in Rs. ' 00000) disbursed by 5 different banks B1, B2, B3, B4 and B5 in the year 2024.



The number of loans given by B1 are 1800 and all are of equal value. What is the value (in Rs.) of each loan?

(a) 5250
(b) 4750
(c) 4500
(d) 5000

Q3. Compute the average of Sundar's scores across five subjects—English (99 marks), Mathematics (75 marks), Physics (52 marks), Chemistry (97 marks), and Biology (34 marks)—each evaluated out of a maximum of 100.

(a) 73.4
(b) 71.4
(c) 72.6
(d) 82.3

Q4. Which of the following is smaller than 17/24 ?

(a) 13/18
(b) 5/7
(c) 7/11
(d) 11/15

Q5. The table given below shows the import (R1) and export (R2) of vehicles manufactured by 5 companies A, B, C, D and E.

	R1	R2
A	1000	500
B	2000	1000
C	5000	500
D	3000	1500
E	8000	5000

What are the total imports of the vehicles manufactured by the given 5 companies?

(a) 19000
(b) 20000
(c) 17000
(d) 16000

Q6. If $\sqrt{x} = 80/\sqrt{4900}$, then what is the value of x?

(a) 64/49
(b) 25/49
(c) 36/49
(d) 81/49

Q7. If $(6 + 7\sqrt{2})^2 = 134 + K\sqrt{2}$, then what is the value of K?

(a) 84
(b) 78
(c) 90
(d) 72

Q8. Which least number should be subtracted from 4505 to make it divisible by 8 ?

(a) 1
(b) 2
(c) 6
(d) 4

Q9. $2[(425)^2 + (375)^2] - (425 + 375)^2 = ?$

(a) 2100
(b) 2500
(c) 3000
(d) 3600

YourMockTest.com - Free Study Material

Q10. The average of 7 consecutive even natural numbers is 12. Next 4 consecutive even natural numbers to these 7 even natural numbers are also included. What is the sum of newly added numbers?

(a) 98
(b) 104
(c) 92
(d) 84

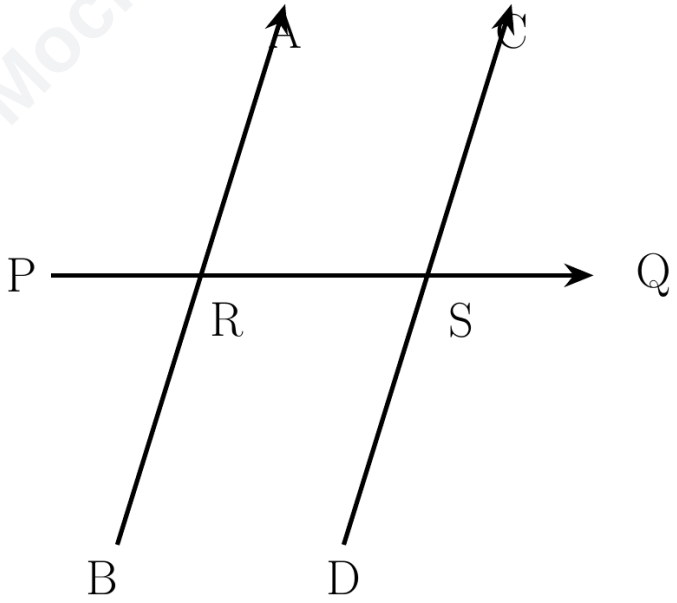
Q11. What is the Highest Common Factor of 9/14, 27/35 and 45/70 ?

(a) 9/35
(b) 9/14
(c) 9/70
(d) 27/35

Q12. 198 chips and 330 toffees are to be distributed among maximum number of boys. Each boy gets the same number of chips. Each boy get the same number of toffees. How many chips does each boy get?

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

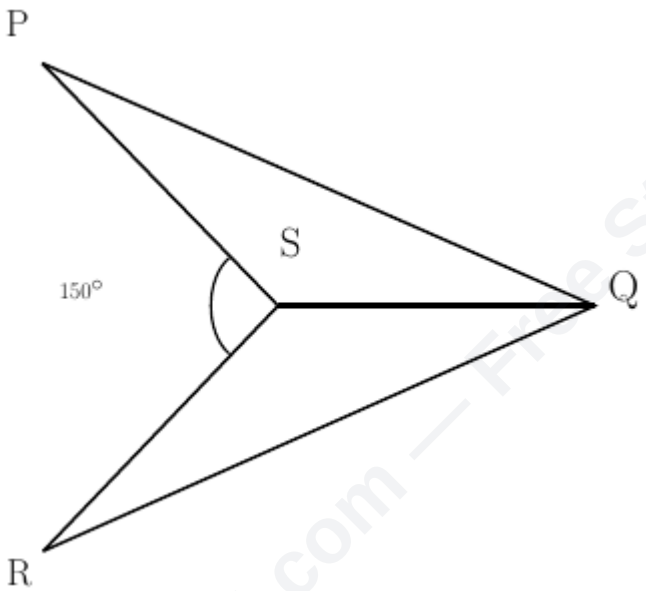
Q13. In the given figure, AB is parallel to CD. Angle ARP = 115 degrees. What is the value (in degrees) of angle DSQ ?



(a) 105
(b) 115
(c) 75
(d) 65

Q14. In the figure, PQ = QR and PS = SR. What is the value (in degrees) of angle RSQ ?

YourMockTest.com — Free Study Material



(a) 120
(b) 105
(c) 125
(d) 130

Q15. An article is sold for a profit of Rs. 180. Profit percentage is 40 percent. What is the selling price of the article?
(a) Rs. 620
(b) Rs. 630
(c) Rs. 750
(d) Rs. 700

Q16. Which number is 50 percent less than 40 percent of 900 ?
(a) 190
(b) 210
(c) 170
(d) 180

Q17. 10 men can complete a work in 30 days. How many men can complete (1/2) part of the same work in 15 days?
(a) 8
(b) 20
(c) 10
(d) 12

Q18. X alone can do a work in 15 days. Y alone can do the same work in 20 days. Z alone can do the same work in 30 days. All three together completed the work. Wages received by X out of total wages received by X, Y and Z are Rs. 6000. What are total wages (in Rs.) received by Y and Z ?
(a) 7000
(b) 7200
(c) 7500
(d) 7800

Q19. Length of train A and B is 200 metre and 400 metre. They are running in opposite directions. They cross each other in 30 seconds. Speed of train A is 15 m/s. What is the speed (in m/s) of train B?
(a) 15
(b) 5
(c) 25
(d) 10

YourMockTest.com — Free Study Material

Q20. Ratio of downstream speed and upstream speed of a boat is 9 : 4. What is the ratio of speed of the boat in still water and speed of stream?

(a) 10:3
(b) 13:5
(c) 11 : 2
(d) 9 : 7

Q21. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

VV, QP, LJ, GD, BX, ?, RL, MF

(a) ZP
(b) WR
(c) XR
(d) WO

Q22. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

XY, VV, TR, ?, PG, NZ, LR, JI

(a) RJ
(b) RM
(c) UM
(d) SO

Q23. Select the option that is related to the fifth letter cluster in the same way as the second letter cluster is related to the first letter cluster and fourth letter cluster is related to third letter cluster.

PT : LG :: LY : HB :: HA : ?

(a) FC
(b) DZ
(c) BZ
(d) DW

Q24. In the following question, set of letter clusters are given. The letter clusters of each set are related to the letter clusters of the same set by some Logic/Rule/Relation. From the given alternatives, select a group of letter clusters which follows the same Logic/Rule/Relation.

(IP, CJ, VC)

(GR, AL, TE)

(a) (EF, YX, ST)
(b) (KM, EG, XZ)
(c) (SU, MI, GD)
(d) (AF, UU, OO)

Q25. What will be the sum of number of Thursdays, Fridays and Sundays in November 2025?

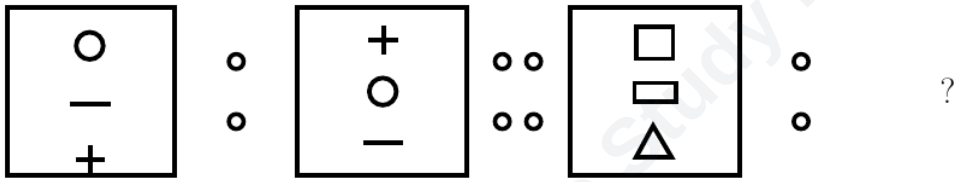
(a) 13
(b) 12
(c) 14
(d) 15

Q26. The calendar for the year 2007 will be the same as which of the following years?

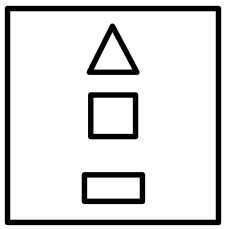
(a) 2013
(b) 2019
(c) 2031
(d) 2018

YourMockTest.com — Free Study Material

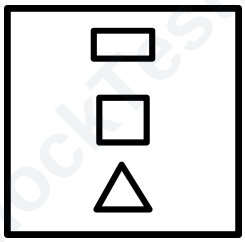
Q27. Two figures given on the left side of (::) are related with some logic/rule/relation. Select the missing figure on the right side of (::) from the given alternatives based on the same logic/rule/relation.



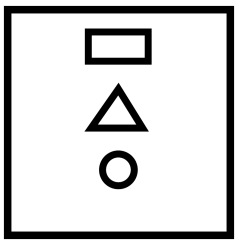
(a)



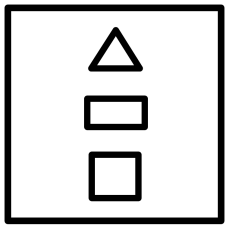
(b)



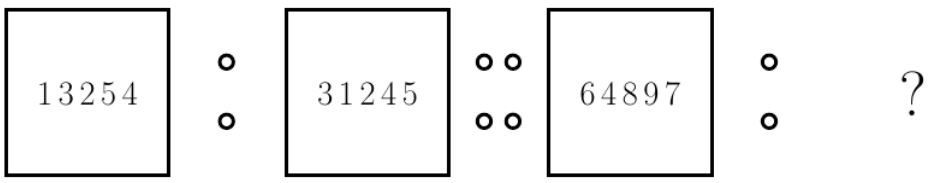
(c)



(d)



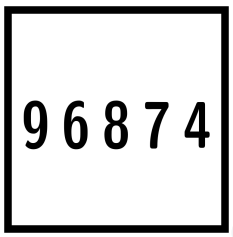
Q28. Two figures given on the left side of (::) are related with some logic/rule/relation. Select the missing figure on the right side of (::) from the given alternatives based on the same logic/rule/relation.



(a)



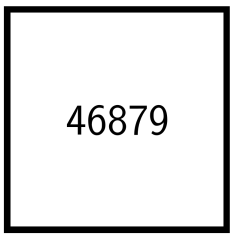
(b)



(c)



(d)



Q29. Select the option that is related to the third letter-number cluster in the same way as the second letter-number cluster is related to the first letter-number cluster and sixth letter-number cluster is related to fifth letter-number cluster.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g.13 - Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

AK160 : CO100 :: BP240 : ? :: CQ180 : EU120

(a) DT180
(b) TC300
(c) DU180
(d) CU320

Q30. Select the option that is related to the fifth letter-number cluster in the same way as the second letter-number cluster is related to the first letter-number cluster and fourth letter-number cluster is related to third letter-number cluster.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g.13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

AMR10 : CPM99 :: BKP13 : DNK168 :: RTW25 : ?

(a) WTR625
(b) TWR624
(c) WRT626
(d) TRW624

YourMockTest.com — Free Study Material

Q31. In a certain coded language 'DUDS' is coded as 'EWCO' and 'SLUM' is coded as 'TNTI'. How will 'MUCH' be coded in the same code language?

(a) LWDC
(b) OYCD
(c) OXCF
(d) NWBD

Q32. In a certain code language, 'create brings girls cares' is coded as 'nlg tmf nkf khk', 'every girls fear above' is coded as 'nmh tmf toj wip' and 'blood fear cover roads' is coded as 'qnd ifl zhd wip'. How will 'girls fear' be coded in that code language?

(a) nlg tmf
(b) wip nlg
(c) qnd wip
(d) tmf wip

Q33. A series is given with one term wrong. Select that wrong term from the given alternatives.

ZR150, WW244, TB338, QG432, NL526, JR621

(a) ZR150
(b) TB338
(c) JR621
(d) QG432

Q34. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

NOT108, STY216, XYD324, ?, HIN540

(a) ECI432
(b) BEI430
(c) CDI432
(d) DFI430

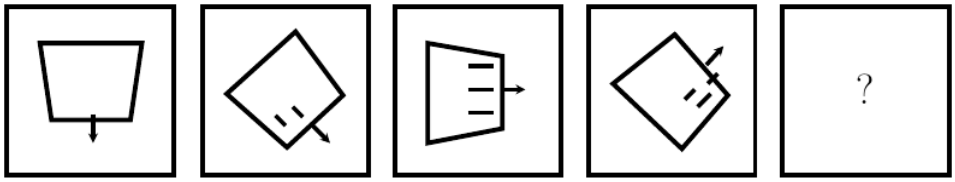
Q35. At what time (approximately) (in PM) between 5 PM and 6 PM will the angle between the hour and the minute hand of a clock be 130° ?

(a) 5:01
(b) 5:04
(c) 5:08
(d) 05:09

Q36. A clock is 5 minutes fast at 11:30 AM and 11 minutes fast at 11:30 PM. At what time (in AM) will it show the correct time?

(a) 1:30
(b) 2:30
(c) 2:00
(d) 3:00

Q37. In the following figure series, select the figure which can be placed at the sign of question mark (?) from the given alternatives.

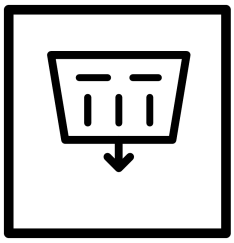


YourMockTest.com — Free Study Material

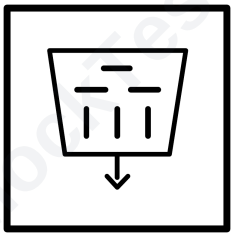
(a)



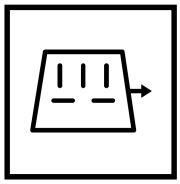
(b)



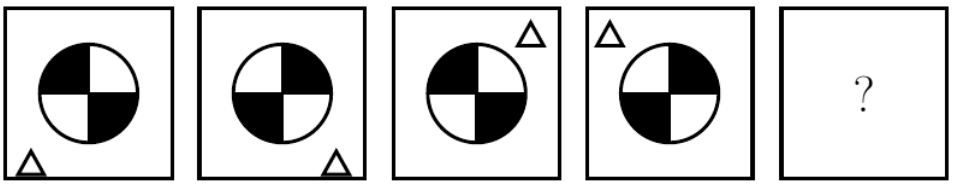
(c)



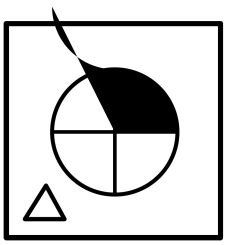
(d)



Q38. In the following figure series, select the figure which can be placed at the sign of question mark (?) from the given alternatives.

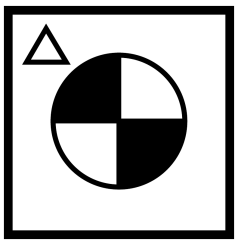


(a)

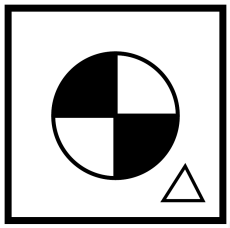


YourMockTest.com — Free Study Material

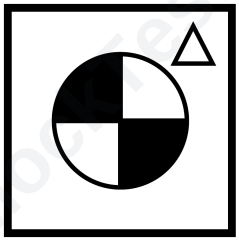
(b)



(c)



(d)



Q39. Difference between the present ages of A and B is 10 years. 3 years ago from present, the ratio of ages of A and B is 22 : 17. What is the present age of B?

(a) 15 years
(b) 20 years
(c) 37 years
(d) 40 years

Q40. Father's age 10 years ago from present was 2 times of the age of his son 8 years ago from present. Son's age after 3 years from present is 32 years. What is the sum of present ages of father and son?

(a) 81 years
(b) 76 years
(c) 70 years
(d) 74 years

SESSION 2

Q41. Which five year plan of India came after the annual plans between 1966-1969?

(a) Second
(b) Fourth
(c) Sixth
(d) Seventh

Q42. Which of the following was a major issue at the beginning of the first five year plan of India?

I. Influx of refugees
II. Severe food shortage

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

YourMockTest.com — Free Study Material

Q43. What is the name of the devotional philosophy promoted by Shankardeva?

(a) Dvaita Vedanta
(b) Advaita Vedanta
(c) Achintya Bheda Abheda
(d) Eka Sarana Nama Dharma

Q44. What role do teeth play in the digestion of food?

(a) They secrete enzymes
(b) They crush and grind the food into smaller particles
(c) They produce saliva
(d) They absorb nutrients from the food

Q45. Breakdown of pyruvate using oxygen takes place in the _____ in a cell.

(a) cytoplasm
(b) lysosome
(c) mitochondria
(d) cell membrane

Q46. In which Veda is river Sarasvatī mentioned for the first time?

(a) Sam Veda
(b) Yajur Veda
(c) Atharva Veda
(d) Rig Veda

Q47. Khupielilie' is a folk dance of which of the following Indian state?

(a) Karnataka
(b) Kerala
(c) Nagaland
(d) Himachal Pradesh

Q48. The 'Lava' dance, performed only by males, is a popular folk dance of which Indian union territory?

(a) Chandigarh
(b) Ladakh
(c) Lakshadweep
(d) Andaman and Nicobar

Q49. The Namdapha National Park is in _____.

(a) Assam
(b) Arunachal Pradesh
(c) Karnataka
(d) Kerala

Q50. Madai festival' is celebrated in which of the following Indian state?

(a) Haryana
(b) Goa
(c) Chhattisgarh
(d) Gujarat

Q51. Which festival is a major religious celebration of the Jaintia community in Meghalaya?

(a) Kang
(b) Bumchu
(c) Chaitrual
(d) Behdienkhlam

YourMockTest.com — Free Study Material

Q52. In which of the following years Maharaja Ranjit Singh died?

(a) 1839
(b) 1842
(c) 1845
(d) 1851

Q53. A geo-stationary satellite completes one revolution around the Earth in approximately ____ hours.

(a) 6
(b) 12
(c) 24
(d) 48

Q54. What is the first law of motion also known as?

(a) Law of acceleration
(b) Law of action and reaction
(c) Law of momentum
(d) Law of inertia

Q55. Which of the following space mission of India was credited for reviving interest about presence of water on Moon?

(a) Chandrayaan-I
(b) Chandrayaan-II
(c) Chandrayaan-III
(d) Aditya L-1

Q56. In the context of 'Rasiya' folk songs of Uttar Pradesh, what does the word 'bumb' refer to?

(a) Mini guitars
(b) Soft flutes
(c) Heavy cymbals
(d) Large drums

Q57. What is the amount of solute present in a given amount of solution known as?

(a) Dilution
(b) Saturation
(c) Concentration
(d) Diffusion

Q58. The Tuticorin port is in _____.

(a) Tamil Nadu
(b) Kerala
(c) Goa
(d) Maharashtra

Q59. When the fruit or vegetable vendors sell the farm produce to household consumers, this type of economic activity is included in _____ sector of the economy.

(a) Primary
(b) Secondary
(c) Tertiary
(d) Quinary

Q60. Which of the following Institution is the custodian of the foreign exchange reserve in India?

(a) Ministry of Foreign Affairs
(b) Ministry of Finance
(c) Ministry of Corporate Affairs
(d) Reserve Bank of India

YourMockTest.com — Free Study Material

Q61. Which among the following is a book authored by Amitav Ghosh?

(a) War Talk
(b) Selection Day
(c) Gun Island
(d) Midnight's Children

Q62. Who wrote the book 'Unhappy India' as a reply to the biased views of journalist Katherine Mayo?

(a) Lala Lajpat Rai
(b) Rajendra Prasad
(c) Bipin Chandra Pal
(d) Bal Gangadhar Tilak

Q63. Which of the following is a UNESCO World Heritage Site?

(a) Kamakhya Temple
(b) Meenakshi Temple
(c) Kashi Vishwanath Temple
(d) Gangaikonda Cholapuram Temple

Q64. The Chhatrapati Shivaji Maharaj Terminus is located in which of the following city?

(a) Mumbai
(b) Kolkata
(c) Delhi
(d) Ahmadabad

Q65. Which of the following is a correct use of electromagnets?

I. In separating magnetic material from junk

II. In sharpening pencils

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

Q66. Which of the following idioms given in the alternatives has the meaning?

To take advantage of a set of rules, procedures, or structures to achieve a personal or institutional goal, often in a way that is clever, slightly dishonest, or exploits loopholes.

(a) Buck the system
(b) Get something out of one's system
(c) Get something out of your system
(d) Work the system

Q67. Which of the following idiom given in the alternatives has the meaning?

Describing the shortest, most direct path between two points, measured in a straight line and disregarding any obstacles like roads, rivers, or mountains.

(a) Pull a crow with one
(b) As the crow flies
(c) Stone the crows
(d) Crow about something

Q68. From the alternatives given below, select the correct meaning of the idiom.

A bigger bang for one's buck.

(a) To begin to put forth more effort in some area
(b) To be very healthy
(c) To make money quickly and/or without effort, often through dishonest, unscrupulous, or ethically dubious means
(d) Greater value for the amount of money one is spending

YourMockTest.com — Free Study Material

Q69. Choose the correctly spelt word from the given options.

(a) Ocasional
(b) Ocassional
(c) Occasional
(d) Ocasionnal

Q70. Select the option with the correct spelling that can replace the underlined word in the given sentence. If the spelling in the given sentence is already correct, choose Option “No replacement required”.

His actions were considered an anathima to the entire community, leading to his exile.

(a) anethema
(b) anathama
(c) anathema
(d) No replacement required

Q71. Match the word with its closest synonym.

Word: Solace

(a) Comfort
(b) Sorrow
(c) Anger
(d) Distress

Q72. Which of the following words is the closest synonym of the word "special"?

(a) Common
(b) Ordinary
(c) Unique
(d) Usual

Q73. There are four underlined words in the sentence given below. One of them is misspelt. Choose the option with the misspelt word.

The minister described the reforms as indispensible, transformative, and strategic, though some critics called them premature.

(a) indispensible
(b) transformative
(c) strategic
(d) premature

Q74. Choose the word that is most opposite in meaning to "accompany".

(a) Escort
(b) Follow
(c) Abandon
(d) Attend

Q75. Choose the word that is the antonym of Pleasure.

(a) Enjoyment
(b) Delight
(c) Happiness
(d) Pain

Q76. Choose the most suitable one-word substitution for the following.

A person who studies plants.

(a) Zoologist
(b) Botanist
(c) Biologist
(d) Horticulturist

YourMockTest.com — Free Study Material

Q77. Choose the most suitable one-word substitution for the following.

One who tells anecdotes in a skilful and amusing way.

(a) Raconteur
(b) Sybarite
(c) Martinet
(d) Epicurean

Q78. Select the correct alternative to fill in the blank with the correct preposition in the following sentence.

Nobody wants to part _____ their money.

(a) with
(b) from
(c) on
(d) away

Q79. Select the correct alternative to fill in the blank with the correct preposition in the following sentence.

The children ate pancakes _____ burgers for breakfast today.

(a) instead of
(b) because of
(c) owing to
(d) again

Q80. Select the correct alternative to fill in the blank with the correct preposition in the following sentence.

The poor and the downtrodden were deprived _____ their basic necessities.

(a) of
(b) up
(c) for
(d) about

Q81. A part of the following sentence is underlined. Choose the option which can replace the underlined part to improve the sentence. In case Options A, B and C are not found suitable, choose Option D: “No Improvement Required.”

The witness was unable to provide a statement consistent to the facts presented earlier in the court.

(a) consistent with the facts presented earlier
(b) consistent on the facts presented earlier
(c) consistent of the facts presented earlier
(d) No improvement required

Q82. Given below are six sentences taken from a paragraph. The first and the last sentences are numbered S1 and S2 and are placed in the first and last positions respectively and are fixed in their positions. The other four sentences between the first and last sentences are jumbled up and are numbered A, B, C, and D. Rearrange the jumbled sentences in a logical sequence keeping the unity and coherence of the paragraph intact. Choose the correct alternative that best describes the sequence.

S1. Flaw Number Two is that deterrence is premised on fear.

A. On the contrary, it is the endless, tireless, confrontational work of people who have had the courage to openly denounce them, the marches, the demonstrations, the films, the outrage-that is what has averted, or perhaps only postponed, nuclear war.

B. It is not some inherent, mystical attribute of nuclear bombs that they automatically inspire thoughts of peace.

C. But fear is premised on knowledge.

D. On an understanding of the true extent and scale of the devastation that nuclear war will wreak.

S2. Deterrence will not and cannot work given the levels of ignorance and illiteracy that hang over our two countries like dense, impenetrable veils.

(a) ADBC
(b) BDAC
(c) CDBA
(d) BACD

YourMockTest.com — Free Study Material

Q83. Given below are six sentences taken from a paragraph. The first and the last sentences are numbered S1 and S2 and are placed in the first and last positions respectively and are fixed in their positions. The other four sentences between the first and last sentences are jumbled up and are numbered A, B, C, and D. Rearrange the jumbled sentences in a logical sequence keeping the unity and coherence of the paragraph intact. Choose the correct alternative that best describes the sequence.

S1. As temperatures climbed, the trees proliferated and came into competition with each other.

A. Each banyan spread out farther, sometimes doubling back on itself for safety.

B. Under pressure, it evolved and adapted.

C. Always it grew higher and crept wider, protecting its parent stem as its rivals multiplied, dropping down trunk after trunk, throwing out branch after branch, until at last it learnt the trick of growing into its neighbour banyan, forming a thicket against which no other tree could strive.

D. On this continent, the banyan, thriving in the heat and using its complex system of self-rooting branches, gradually established ascendancy over the other species.

S2. Their complexity became unrivalled, their immortality established.

(a) BADC
(b) DBAC
(c) BDCA
(d) ABDC

Q84. Given below are six sentences taken from a paragraph. The first and the last sentences are numbered S1 and S2 and are placed in the first and last positions respectively and are fixed in their positions. The other four sentences between the first and last sentences are jumbled up and are numbered A, B, C, and D. Rearrange the jumbled sentences in a logical sequence keeping the unity and coherence of the paragraph intact. Choose the correct alternative that best describes the sequence.

S1. In the village of Sittendorf in Germany there dwelt, a long time ago, a poor but worthy man whose name was Peter Klaus.

A. He could not have been persuaded for all the money in the world to spend his days in a shop tinkering at a trade.

B. He liked to be out of doors.

C. All the people for miles around knew Peter.

D. He was not fond of hard work.

S2. He liked to wander at his ease in the fields and the woods, enjoying the sunlight and the flowers and the songs of the birds.

(a) DBAC
(b) CDAB
(c) BCDA
(d) CABD

Q85. A part of the following sentence is underlined. Choose the option that can replace the underlined part to improve the sentence. If you feel Options A, B, or C do not improve the sentence, then choose Option D: "No improvement required."

We must ensure that all the stakeholders are in the same page before beginning the negotiations.

(a) on the same page
(b) on the same plate
(c) in the same boat
(d) No improvement required

Q86. Read the following passage carefully and answer the questions based on the passage:

The growing number of young people who are unable to find a job has become one of our society's most pressing issues. Young people, despite having access to higher education than ever before, commonly remain outside the workforce in areas of stable and meaningful employment as a result of mismatches between labour market skills and the education level, the role of automation, and the lack of job creation. The inability of youth to obtain jobs creates lost productivity, contributes to psychological distress, and creates a sense of alienation from society. Long-term unemployment will result in delays in financial independence and limit upward mobility. Addressing this issue requires a systematic and structured approach that links educational institutions with the demands of the labour

market, increases access to vocational and digital training, and provides access to inclusive economic opportunities. Any successful policy intervention must therefore combine education, business, and government in order to produce young people who possess the academic knowledge to work as well as the skills necessary for sustained social and economic growth.

Which factor contributes to youth unemployment?

(a) Over-supply of jobs
(b) Decline in higher education access
(c) Mismatch between skills and market needs
(d) Excessive vocational training

Q87. Read the following passage carefully and answer the questions based on the passage:

The growing number of young people who are unable to find a job has become one of our society's most pressing issues. Young people, despite having access to higher education than ever before, commonly remain outside the workforce in areas of stable and meaningful employment as a result of mismatches between labour market skills and the education level, the role of automation, and the lack of job creation. The inability of youth to obtain jobs creates lost productivity, contributes to psychological distress, and creates a sense of alienation from society. Long-term unemployment will result in delays in financial independence and limit upward mobility. Addressing this issue requires a systematic and structured approach that links educational institutions with the demands of the labour market, increases access to vocational and digital training, and provides access to inclusive economic opportunities. Any successful policy intervention must therefore combine education, business, and government in order to produce young people who possess the academic knowledge to work as well as the skills necessary for sustained social and economic growth.

How does long-term unemployment affect young people?

(a) Prolonged unemployment results in delays in financial independence and limits upward mobility
(b) Prolonged unemployment encourages young individuals to continue on to college or graduate school
(c) Prolonged unemployment builds resiliency and flexibility when entering the highly competitive job market
(d) Prolonged unemployment provides opportunities for young individuals to start their own businesses

Q88. Read the following passage carefully and answer the questions based on the passage:

The growing number of young people who are unable to find a job has become one of our society's most pressing issues. Young people, despite having access to higher education than ever before, commonly remain outside the workforce in areas of stable and meaningful employment as a result of mismatches between labour market skills and the education level, the role of automation, and the lack of job creation. The inability of youth to obtain jobs creates lost productivity, contributes to psychological distress, and creates a sense of alienation from society. Long-term unemployment will result in delays in financial independence and limit upward mobility. Addressing this issue requires a systematic and structured approach that links educational institutions with the demands of the labour market, increases access to vocational and digital training, and provides access to inclusive economic opportunities. Any successful policy intervention must therefore combine education, business, and government in order to produce young people who possess the academic knowledge to work as well as the skills necessary for sustained social and economic growth.

What systematic approach does the passage recommend to address youth unemployment?

(a) To align education with labour market demands and provide vocational and digital training
(b) To add more theory courses in college, but reduce the number of practical courses
(c) To encourage students to do well in school, but not help them gain other skills
(d) To limit collaboration between educational institutions, businesses, and government agencies

Q89. Read the following passage carefully and answer the questions based on the passage:

The growing number of young people who are unable to find a job has become one of our society's most pressing issues. Young people, despite having access to higher education than ever before, commonly remain outside the workforce in areas of stable and meaningful employment as a result of mismatches between labour market skills and the education level, the role of automation, and the lack of job creation. The inability of youth to obtain jobs creates lost productivity, contributes to psychological distress, and creates a sense of alienation from society. Long-term unemployment will result in delays in financial independence and limit upward mobility. Addressing this issue requires a systematic and structured approach that links educational institutions with the demands of the labour market, increases access to vocational and digital training, and provides access to inclusive economic opportunities. Any successful policy intervention must therefore combine education, business, and government in order to produce

young people who possess the academic knowledge to work as well as the skills necessary for sustained social and economic growth.

What are the primary reasons for the essential collaboration among educational institutions, businesses, and government entities?

(a) Students are often required to participate in learning activities that require them to memorize large amounts of theoretical information

(b) It produces graduates who have both academic knowledge and practical skills for sustained growth

(c) Private businesses can create job opportunities for young people.

(d) The government does not work with other partners, but instead provides funding and support to industries by itself.

Q90. Read the following passage carefully and answer the questions based on the passage:

The growing number of young people who are unable to find a job has become one of our society's most pressing issues. Young people, despite having access to higher education than ever before, commonly remain outside the workforce in areas of stable and meaningful employment as a result of mismatches between labour market skills and the education level, the role of automation, and the lack of job creation. The inability of youth to obtain jobs creates lost productivity, contributes to psychological distress, and creates a sense of alienation from society. Long-term unemployment will result in delays in financial independence and limit upward mobility. Addressing this issue requires a systematic and structured approach that links educational institutions with the demands of the labour market, increases access to vocational and digital training, and provides access to inclusive economic opportunities. Any successful policy intervention must therefore combine education, business, and government in order to produce young people who possess the academic knowledge to work as well as the skills necessary for sustained social and economic growth.

What underlying principle guides the proposed solutions to youth unemployment?

(a) New jobs should be created only through automation and new technology.

(b) Colleges and universities should not connect with job training or skills programs.

(c) Government rules should focus more on theory than on teaching practical skills.

(d) Education should adapt to market needs while promoting inclusive economic opportunities.

ANSWER KEY

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

SOLUTIONS

Q1. Answer: (b) 88

Shortcut Trick

Apply VBODMAS priority: 'of' → division → multiplication → addition/subtraction.

Calculate: 16 of 2 = 32, 36 ÷ 6 = 6, and 25 × 2 = 50.

Simplified expression: 61 + 32 − 18 + 6 + 50 − 43.

Net result: (61 + 32 + 6 + 50) − (18 + 43) = 149 − 61 = 88.

Therefore The correct answer is 88.

Alternate Method

Given: 61 + (16 of 2) − 18 + 36 ÷ 6 + 25 × 2 − 43

Formula Used: VBODMAS rule (Vinculum, Bracket, Of, Division, Multiplication, Addition, Subtraction)

=> 61 + 32 − 18 + 36 ÷ 6 + 25 × 2 − 43

=> 61 + 32 − 18 + 6 + 25 × 2 − 43

=> 61 + 32 − 18 + 6 + 50 − 43

=> 93 − 18 + 6 + 50 − 43

=> 75 + 6 + 50 − 43

=> 81 + 50 − 43

=> 131 − 43

=> 88

Therefore The correct answer is 88.

Additional Information

VBODMAS Rule

The rule defines the order of operations: Vinculum, Bracket, Of, Division, Multiplication, Addition, and Subtraction.

Priority of 'Of'

The 'of' operation is a type of multiplication that must be solved before division and standard multiplication.

Grouping Terms

To avoid errors in addition and subtraction, group all positive terms together and all negative terms together before the final calculation.

Q2. Answer: (d) 5000

Given:

Bank	Total Loan Amount (in Rs. 00000)
B1	90
B2	120
B3	150
B4	100
B5	80

Total number of loans given by Bank B1 = 1800

All loans are of equal value.

Calculation:

According to the question,

Total loan amount disbursed by Bank B1 = 90 × 1,00,000

=> Total loan amount = Rs. 90,00,000

Value of each loan = Total loan amount ÷ Number of loans

=> Value of each loan = 90,00,000 ÷ 1800

=> Value of each loan = 90,000 ÷ 18

=> Value of each loan = 5000

Therefore The correct answer is 5000.

Q3. Answer: (b) 71.4

Shortcut Trick

Assume a base average of 70 and calculate deviations.

Deviations: (99−70) + (75−70) + (52−70) + (97−70) + (34−70)

Net Deviation = 29 + 5 − 18 + 27 − 36 = 7

Average Deviation = 7 ÷ 5 = 1.4

Actual Average = 70 + 1.4 = 71.4

Therefore The correct answer is 71.4.

Alternate Method

Given:

Marks in five subjects: 99, 75, 52, 97, 34.

YourMockTest.com — Free Study Material

Total number of subjects = 5.
Formula Used:
Average = (Sum of all observations) ÷ (Total number of observations)
Calculations:
=> Sum of marks = 99 + 75 + 52 + 97 + 34
=> Sum of marks = 357
=> Average = 357 ÷ 5
=> Average = 71.4
Therefore The correct answer is 71.4.
Additional Information
Weighted Average
Used when different observations have different weights. Formula: Average = (w1x1 + w2x2 + ...) ÷ (w1 + w2 + ...)
Average of Arithmetic Progression
For a series with a constant common difference, the average is simply (First term + Last term) ÷ 2.
Change in Average
If every observation is increased or decreased by a constant value k, the new average also increases or decreases by k.

Q4. Answer: (c) 7/11

Shortcut Trick
Convert the fractions into decimal values for quick comparison:
17 ÷ 24 ≈ 0.708
(1) 13 ÷ 18 ≈ 0.722
(2) 5 ÷ 7 ≈ 0.714
(3) 7 ÷ 11 ≈ 0.636
(4) 11 ÷ 15 ≈ 0.733
Therefore The correct answer is 7/11.
Alternate Method
Given: Reference fraction = 17/24
Compare using Cross-Multiplication Method (a/b < c/d if ad < bc):
=> Compare 17/24 and 13/18: 17 × 18 = 306 and 24 × 13 = 312. Since 306 < 312, 17/24 < 13/18.
=> Compare 17/24 and 5/7: 17 × 7 = 119 and 24 × 5 = 120. Since 119 < 120, 17/24 < 5/7.
=> Compare 17/24 and 7/11: 17 × 11 = 187 and 24 × 7 = 168. Since 187 > 168, 17/24 > 7/11.
=> Compare 17/24 and 11/15: 17 × 15 = 255 and 24 × 11 = 264. Since 255 < 264, 17/24 < 11/15.
Therefore The correct answer is 7/11.
Additional Information
Cross Multiplication Rule
For two fractions a/b and c/d, if (a × d) < (b × c), then a/b < c/d. If (a × d) > (b × c), then a/b > c/d.
Decimal Method
Convert fractions to decimals by dividing the numerator by the denominator to compare their values directly.
Common Denominator Method
Find the LCM of denominators and convert all fractions to have this common denominator; the fraction with the smaller numerator is smaller.

Q5. Answer: (a) 19000

Given:
The table shows the import (R1) and export (R2) of vehicles for five companies A, B, C, D, and E:

Company	Import (R1)	Export (R2)
A	1000	500
B	2000	1000
C	5000	500
D	3000	1500

YourMockTest.com — Free Study Material

E	8000	5000

Formula Used:

Total Imports = Sum of imports (R1) of all companies

Total Imports = R1_A + R1_B + R1_C + R1_D + R1_E

Calculation:

According to the data provided in the table for imports (R1):

=> Import of Company A = 1000

=> Import of Company B = 2000

=> Import of Company C = 5000

=> Import of Company D = 3000

=> Import of Company E = 8000

Now, calculating the total imports:

=> Total Imports = 1000 + 2000 + 5000 + 3000 + 8000

=> Total Imports = 19000

Therefore The correct answer is 19000.

Q6. Answer: (a) 64/49

Shortcut Trick

Simplify the denominator on the right side: √4900 = 70.

The equation becomes √x = 80 / 70 = 8 / 7.

Square both sides to find x: x = (8 / 7)² = 64 / 49.

Therefore The correct answer is 64/49.

Alternate Method

Given: √x = 80 / √4900

Formula Used: (√a)² = a

=> √x = 80 / √(49 × 100)

=> √x = 80 / (7 × 10)

=> √x = 80 / 70

=> √x = 8 / 7

=> (√x)² = (8 / 7)²

=> x = 64 / 49

Therefore The correct answer is 64/49.

Additional Information

Square Root of Large Numbers

To find √4900, simplify it as √(49 × 100) = 7 × 10 = 70. For numbers ending in double zeros, the square root ends in a single zero.

Squaring Property

If √x = k, then x = k². Squaring both sides is the standard algebraic method to remove a square root and isolate the variable.

Q7. Answer: (a) 84

Shortcut Trick

Identify the irrational part of the expansion (a + b)².

The term K√2 corresponds to the 2ab term in the identity (a + b)² = a² + b² + 2ab.

Here, a = 6 and b = 7√2.

K√2 = 2 × 6 × 7√2 = 84√2.

Comparing the coefficients, we get K = 84.

Therefore The correct answer is 84.

Alternate Method

Given: (6 + 7√2)² = 134 + K√2

Formula Used: (a + b)² = a² + b² + 2ab

=> (6 + 7√2)² = (6)² + (7√2)² + 2 × 6 × 7√2

=> (6 + 7√2)² = 36 + (49 × 2) + 84√2

YourMockTest.com — Free Study Material

=> $(6 + 7\sqrt{2})^2 = 36 + 98 + 84\sqrt{2}$

=> $(6 + 7\sqrt{2})^2 = 134 + 84\sqrt{2}$

=> Comparing the result with the given expression: $134 + 84\sqrt{2} = 134 + K\sqrt{2}$

=> $84\sqrt{2} = K\sqrt{2}$

=> $K = 84$

Therefore The correct answer is 84.

Additional Information

Square of a Binomial with Surds

When squaring an expression like $(x + \sqrt{y})$, the result is $x^2 + y + 2x\sqrt{y}$, where $x^2 + y$ is the rational part and $2x\sqrt{y}$ is the irrational part.

Comparison of Coefficients

If $a + b\sqrt{n} = c + d\sqrt{n}$ (where a, b, c, d are rational), then the rational parts must be equal ($a = c$) and the coefficients of the irrational parts must be equal ($b = d$).

Conjugate of a Surd

The conjugate of $(a + \sqrt{b})$ is $(a - \sqrt{b})$. Their product $(a + \sqrt{b})(a - \sqrt{b}) = a^2 - b$ is always a rational number.

Q8. Answer: (a) 1

Shortcut Trick

Divisibility rule for 8: Check only the last three digits of the number.

Last three digits of 4505 are 505.

Divide 505 by 8: $505 \div 8 = 63$ with a remainder of 1.

The least number to be subtracted is the remainder itself.

Therefore The correct answer is 1.

Alternate Method

Given: Number = 4505, Divisor = 8

Formula Used: Remainder = Dividend − (Divisor × Quotient)

=> Perform division of 4505 by 8:

=> $4505 \div 8 = 563$ with a remainder.

=> $8 \times 563 = 4504$

=> Remainder = $4505 - 4504 = 1$

=> To make the number divisible by 8, we must subtract the remainder from the original number.

Therefore The correct answer is 1.

Additional Information

Divisibility by 8

A number is divisible by 8 if the number formed by its last three digits is divisible by 8 or if the last three digits are 000.

Divisibility by 4

A number is divisible by 4 if the number formed by its last two digits is divisible by 4.

Least Number to be Added

To find the least number to be added to make a number divisible, use the formula: (Divisor − Remainder).

Q9. Answer: (b) 2500

Shortcut Trick

Apply the algebraic identity: $2(a^2 + b^2) - (a + b)^2 = (a - b)^2$.

Here, $a = 425$ and $b = 375$.

Result = $(425 - 375)^2 = 50^2$.

Result = 2500.

Therefore The correct answer is 2500.

Alternate Method

Given: $a = 425$, $b = 375$

Formula Used: $(a + b)^2 = a^2 + b^2 + 2ab$

=> $2(a^2 + b^2) - (a + b)^2$

=> $2a^2 + 2b^2 - (a^2 + b^2 + 2ab)$

=> $2a^2 + 2b^2 - a^2 - b^2 - 2ab$

=> $a^2 + b^2 - 2ab$

=> $(a - b)^2$

=> $(425 - 375)^2$

=> $50^2 = 2500$

Therefore The correct answer is 2500.

Additional Information

Sum of Squares Identity

The expression $2(a^2 + b^2)$ can be written as the sum of two squares: $(a + b)^2 + (a - b)^2$.

Difference of Squares

The identity $a^2 - b^2 = (a - b)(a + b)$ is used to simplify products of sums and differences.

Square of a Binomial

$(a + b)^2 = a^2 + 2ab + b^2$ and $(a - b)^2 = a^2 - 2ab + b^2$ are fundamental algebraic expansions.

Q10. Answer: (c) 92

Shortcut Trick

For consecutive even numbers, the average is the middle term.

Average of 7 numbers = 4^(th) number = 12.

7^(th) number = 12 + (3 × 2) = 18.

The next 4 consecutive even numbers are 20, 22, 24, and 26.

Sum of new numbers = 20 + 22 + 24 + 26 = 92.

Therefore The correct answer is 92.

Alternate Method

Given: Average of 7 consecutive even natural numbers = 12.

Formula: Sum = Average × Number of terms.

=> Let the 7 consecutive even numbers be n−6, n−4, n−2, n, n+2, n+4, n+6.

=> Sum = (n−6) + (n−4) + (n−2) + n + (n+2) + (n+4) + (n+6) = 7n.

=> Average = 7n ÷ 7 = n.

=> Since Average = 12, then n = 12.

=> The 7^(th) (largest) number in the original set = n + 6 = 12 + 6 = 18.

=> The next 4 consecutive even numbers are 20, 22, 24, and 26.

=> Sum of newly added numbers = 20 + 22 + 24 + 26 = 92.

Therefore The correct answer is 92.

Additional Information

Average of Arithmetic Progression

For any series in Arithmetic Progression (like consecutive even/odd numbers), the average is (First term + Last term) ÷ 2.

Sum of First n Even Numbers

The sum of the first n even natural numbers is calculated using the formula n(n + 1).

Effect of Adding Consecutive Terms

If the next k consecutive even or odd numbers are added to a series, the new average of the entire set increases by k.

Q11. Answer: (c) 9/70

Shortcut Trick

Simplify 45/70 to 9/14 by dividing both by 5.

HCF of fractions = HCF of Numerators ÷ LCM of Denominators.

HCF of numerators (9, 27, 9) = 9.

LCM of denominators (14, 35, 14) = 70.

Result = 9/70.

Therefore The correct answer is 9/70.

Alternate Method

Given: Fractions 9/14, 27/35, and 45/70.

Formula Used: HCF of Fractions = HCF(Numerators) ÷ LCM(Denominators).

=> Step 1: Simplify the given fractions to their lowest terms.

=> 45/70 = (45 ÷ 5) / (70 ÷ 5) = 9/14.
=> Step 2: Find the Highest Common Factor (HCF) of the numerators (9, 27, 9).
=> 9 = 3^2 | 27 = 3^3 | 9 = 3^2.
=> HCF(9, 27, 9) = 3^2 = 9.
=> Step 3: Find the Least Common Multiple (LCM) of the denominators (14, 35, 14).
=> 14 = 2 × 7 | 35 = 5 × 7.
=> LCM(14, 35) = 2 × 5 × 7 = 70.
=> Step 4: Apply the formula.
=> HCF of fractions = 9/70.
Therefore The correct answer is 9/70.
Additional Information
LCM of Fractions
To find the Least Common Multiple of fractions, use the formula: LCM = LCM of Numerators ÷ HCF of Denominators.
Simplest Form Requirement
Always convert fractions to their lowest terms (simplest form) before calculating HCF or LCM to ensure accuracy.
HCF and LCM Relation
For any two numbers a and b, the product of the numbers is equal to the product of their HCF and LCM: a × b = HCF × LCM.

Q12. Answer: (c) 3

Shortcut Trick
To find the maximum number of boys, calculate the HCF of 198 and 330.
HCF(198, 330) = 66 (since 198 = 66 × 3 and 330 = 66 × 5).
Number of chips each boy gets = Total chips ÷ HCF.
Chips per boy = 198 ÷ 66 = 3.
Therefore The correct answer is 3.
Alternate Method
Given:
Total number of chips = 198
Total number of toffees = 330
Formula:
Maximum number of boys = HCF(Total Chips, Total Toffees)
Chips per boy = Total Chips ÷ Number of boys
Calculations:
=> Prime factorization of 198 = 2 × 3^2 × 11
=> Prime factorization of 330 = 2 × 3 × 5 × 11
=> HCF(198, 330) = 2 × 3 × 11 = 66
=> Maximum number of boys = 66
=> Number of chips each boy gets = 198 ÷ 66
=> Number of chips each boy gets = 3
Therefore The correct answer is 3.
Additional Information
Highest Common Factor (HCF)
The HCF of two or more numbers is the largest number that divides each of them exactly without leaving a remainder.
Least Common Multiple (LCM)
The smallest positive integer that is a multiple of two or more numbers.
HCF and LCM Relation
For any two numbers a and b, the product of the numbers is equal to the product of their HCF and LCM: a × b = HCF(a, b) × LCM(a, b).

Q13. Answer: (b) 115

Shortcut Trick
Identify the geometric relationship: angle ARP and angle DSQ are Exterior Alternate Angles.

When two lines are parallel (AB || CD), their exterior alternate angles are always equal.
Therefore angle DSQ = angle ARP = 115°.
Therefore The correct answer is 115.
Alternate Method
Given: AB || CD and transversal PQ intersects them at R and S. angle ARP = 115°.
=> angle BRS = angle ARP (Vertically opposite angles are equal)
=> angle BRS = 115°
=> angle DSQ = angle BRS (Corresponding angles are equal for AB || CD)
=> angle DSQ = 115°
Therefore The correct answer is 115.
Additional Information
Corresponding Angles
Angles in the same relative position at each intersection where a straight line crosses two parallel lines are equal.
Alternate Interior Angles
The pairs of angles on opposite sides of the transversal and between the two parallel lines are always equal.
Consecutive Interior Angles
The pairs of angles on one side of the transversal line and between the two parallel lines are supplementary (sum = 180°).

Q14. Answer: (b) 105

Given:
PQ = QR, PS = SR, angle PSR = 150°.
Calculation:
=> In ΔPSQ and ΔRSQ:
=> PQ = QR (Given)
=> PS = SR (Given)
=> QS = QS (Common side)
=> Therefore ΔPSQ ~= ΔRSQ (By SSS congruence criterion)
=> Since triangles are congruent, their corresponding parts are equal (CPCT).
=> angle PSQ = angle RSQ
Let angle RSQ = angle PSQ = x.
=> The angles around point S add up to 360°.
=> angle PSR + angle PSQ + angle RSQ = 360°
=> 150° + x + x = 360°
=> 2x = 360° − 150°
=> 2x = 210°
=> x = 105°
=> angle RSQ = 105°
Therefore The correct answer is 105°.

Q15. Answer: (b) Rs. 630

Shortcut Trick
Profit % = 40% = 2/5 (where 2 units = Profit and 5 units = CP)
Given: 2 units = Rs. 180
=> 1 unit = Rs. 90
Selling Price (SP) = CP + Profit = 5 + 2 = 7 units
=> SP = 7 × 90 = Rs. 630
Therefore The correct answer is Rs. 630.
Alternate Method
Given: Profit = Rs. 180, Profit % = 40%
Formula Used: Profit % = (Profit / CP) × 100 | Selling Price (SP) = CP + Profit
=> Profit % = (Profit / CP) × 100
=> 40 = (180 / CP) × 100

=> CP = (180 × 100) / 40
=> CP = 18000 / 40 = Rs. 450
=> SP = CP + Profit
=> SP = 450 + 180 = Rs. 630
Therefore The correct answer is Rs. 630.
Additional Information
Profit and Loss Basics
Profit occurs when SP > CP, and Loss occurs when CP > SP. Profit = SP − CP and Loss = CP − SP.
Direct SP Formula
SP = CP × (100 + Profit%)/100. In this case, SP = CP × 140/100.
Marked Price and Discount
Discount is always calculated on the Marked Price (MP). SP = MP − Discount.

Q16. Answer: (d) 180

Shortcut Trick
40% of 900 = 0.4 × 900 = 360
50% less than 360 means half of 360.
Required number = 360 ÷ 2 = 180
Therefore The correct answer is 180.
Alternate Method
Given:
Base number = 900
First percentage = 40%
Second percentage reduction = 50%
Formula Used:
Final Value = [Base × (P1/100)] × [1 − (P2/100)]
=> Step 1: Calculate 40% of 900
=> (40/100) × 900 = 360
=> Step 2: Calculate 50% less than 360
=> 360 − (50% of 360)
=> 360 − 180 = 180
Therefore The correct answer is 180.
Additional Information
Percentage Decrease Formula
To find a value after x% decrease, multiply the original value by (100 − x)/100.
Successive Percentages
If a value is changed by a% and then by b%, the net effective change is [a + b + (ab/100)]%.
Fraction Equivalents
Common percentages: 50% = 1/2, 40% = 2/5, 25% = 1/4, 20% = 1/5.

Q17. Answer: (c) 10

Shortcut Trick
Total work capacity = 10 men × 30 days = 300 units.
Required work = 1/2 of 300 = 150 units.
Number of men = Required work ÷ Days = 150 ÷ 15 = 10 men.
Therefore The correct answer is 10.
Alternate Method
Given:
M1 = 10 men
D1 = 30 days
W1 = 1 (Full work)
D2 = 15 days

W2 = 1/2 (Half work)

Formula Used:

(M1 × D1) ÷ W1 = (M2 × D2) ÷ W2

Case	Time (D)	Work (W)	Men (M)
Initial	30	1	10
Final	15	0.5	M2

Calculations:

=> (10 × 30) ÷ 1 = (M2 × 15) ÷ (1/2)

=> 300 = M2 × 15 × 2

=> 300 = M2 × 30

=> M2 = 300 ÷ 30

=> M2 = 10

Therefore The correct answer is 10.

Additional Information

Chain Rule Concept

The relationship between men, days, hours, and work is given by (M1D1H1)/W1 = (M2D2H2)/W2.

Direct and Inverse Proportion

Men and Days are inversely proportional (more men, fewer days), while Men and Work are directly proportional (more men, more work).

Efficiency Factor

If the efficiency (E) of workers is different, the formula becomes (M1D1E1)/W1 = (M2D2E2)/W2.

Q18. Answer: (c) 7500

Shortcut Trick

Efficiency ratio of X : Y : Z = 1/15 : 1/20 : 1/30 = 4 : 3 : 2

Wages are shared in efficiency ratio: X (4 units) = 6000

1 unit = 1500

Total wages of Y and Z = (3 + 2) = 5 units

Total wages = 5 × 1500 = 7500

Therefore The correct answer is 7500.

Alternate Method

Given:

Time taken by X = 15 days

Time taken by Y = 20 days

Time taken by Z = 30 days

Wage of X = 6000

Formula Used:

Efficiency = Total Work ÷ Time

Wage prop. to Efficiency (when time worked is same for all)

Person	Time	Work (LCM)	Efficiency
X	15	60	4
Y	20	3	
Z	30	2	

Calculations:

=> Total Work = LCM of 15, 20, 30 = 60 units

=> Efficiency of X = 60 ÷ 15 = 4 units/day

=> Efficiency of Y = 60 ÷ 20 = 3 units/day

=> Efficiency of Z = 60 ÷ 30 = 2 units/day

=> Ratio of wages = Efficiency ratio = 4 : 3 : 2

YourMockTest.com — Free Study Material

=> Let wages of X, Y, Z be 4k, 3k, and 2k respectively.

=> Given, 4k = 6000

=> k = 6000 ÷ 4 = 1500

=> Total wages of Y and Z = 3k + 2k = 5k

=> Total wages of Y and Z = 5 × 1500 = 7500

Therefore The correct answer is 7500.

Additional Information

Work and Wages Rule

Wages are always distributed in the ratio of the work done by each person. If they work for the same duration, the wage ratio is equal to the efficiency ratio.

Efficiency and Time

Efficiency is inversely proportional to the time taken to complete a task. Efficiency = 1 ÷ Time.

Pipes and Cisterns Analogy

This concept is identical to pipes filling a tank, where the rate of filling (efficiency) determines the contribution of each pipe to the total volume.

Q19. Answer: (b) 5

Shortcut Trick

Relative Speed in opposite direction = (Sum of Lengths) ÷ Time

Relative Speed = (200 + 400) ÷ 30 = 600 ÷ 30 = 20 m/s

Speed of Train B = Relative Speed − Speed of Train A

Speed of Train B = 20 − 15 = 5 m/s

Therefore The correct answer is 5 m/s.

Alternate Method

Given:

Length of Train A (L_A) = 200 m

Length of Train B (L_B) = 400 m

Speed of Train A (S_A) = 15 m/s

Time taken to cross each other (t) = 30 s

Formula Used:

Relative Speed (Opposite Direction) = (L_A + L_B) ÷ Time

=> Total distance to be covered = L_A + L_B

=> Total distance = 200 + 400 = 600 m

=> Relative Speed = S_A + S_B (since they move in opposite directions)

=> S_A + S_B = Total Distance ÷ Time

=> 15 + S_B = 600 ÷ 30

=> 15 + S_B = 20

=> S_B = 20 − 15

=> S_B = 5 m/s

Therefore The correct answer is 5 m/s.

Additional Information

Relative Speed in Same Direction

When two objects move in the same direction, their relative speed is the difference of their speeds: S_(rel) = S1 − S2.

Crossing a Stationary Object

When a train crosses a pole or a person, the distance covered is equal to the length of the train. If it crosses a platform, distance = length of train + length of platform.

Unit Conversion

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

Q20. Answer: (b) 13:5

Shortcut Trick

Ratio of Boat Speed (B) to Stream Speed (S) = (Downstream + Upstream) : (Downstream − Upstream)

Given Downstream (D) = 9 and Upstream (U) = 4

B : S = (9 + 4) : (9 − 4)

B : S = 13 : 5

Therefore The correct answer is 13:5.

Alternate Method

Given:

Ratio of Downstream Speed (D) : Upstream Speed (U) = 9 : 4

Formula Used:

Speed of boat in still water (B) = (D + U) ÷ 2

Speed of stream (S) = (D − U) ÷ 2

=> Let Downstream speed = 9x and Upstream speed = 4x => Speed of boat in still water (B) = (9x + 4x) ÷ 2 = 13x ÷ 2 => Speed of stream (S) = (9x − 4x) ÷ 2 = 5x ÷ 2 => Ratio of B : S = (13x ÷ 2) : (5x ÷ 2) => B : S = 13 : 5

Therefore The correct answer is 13:5.

Additional Information

Downstream and Upstream Speed

Downstream speed is the sum of boat speed and stream speed (B + S), while upstream speed is the difference (B − S).

Still Water Speed Calculation

The speed of the boat in still water is the arithmetic mean of the downstream and upstream speeds: B = (D + U) ÷ 2.

Stream Speed Calculation

The speed of the stream is half the difference between the downstream and upstream speeds: S = (D − U) ÷ 2.

Q21. Answer: (b) WR

Logic followed here is: The positional value of 1st letter of every word is decreased by -5 and 2nd letter is decreased by -6 to get the next term.

Therefore According the logic followed WR will replace the (?) mark.

Hence, the correct answer is "Option 2".

Q22. Answer: (b) RM

The logic followed here is: The positional value of 1st letter of every word is decreased by (-2) and 2nd letter is decreased by in series (3,4,5,6,7,8,9).

Therefore According to the logic followed here RM will replace the (?) mark.

Hence, the correct answer is "Option 2".

Q23. Answer: (b) DZ

Logic followed here is: 1st letter in the cluster is decreased by (-4) and 2nd letter is shifted to the opposite letter in the alphabetical series.

For

PT : LG:

LY : HB :

Similarly, HA is related to :

Therefore, the missing letter cluster is DZ.

Hence, the correct answer is "Option 2".

Q24. Answer: (b) (KM, EG, XZ)

Logic followed here is:

The positional values of the first letters in each pair follow:

First pair → -6, +19

Second pair → -2, +13

For

(IP, CJ, VC) →

For the first letters (I, C, V):

I	C	V
9	3	22

Pattern: 9 - 6 = 3 (C); 3 + 19 = 22 (V)

For the second letters (P, J, C):

P	J	C
16	10	3

Pattern: 16 - 6 = 10 (J); 10 - 7 = 3 (C)

(GR, AL, TE) →

For the first letters (G, A, T):

G	A	T
7	1	20

Pattern: 7 - 6 = 1 (A); 1 + 19 = 20 (T)

For the second letters (R, L, E):

R	L	E
18	12	5

Pattern: 18 - 6 = 12 (L); 12 - 7 = 5 (E)

Similarly, check (KM, EG, XZ):

For the first letters (K, E, X):

K	E	X
11	5	24

Pattern: 11 - 6 = 5 (E); 5 + 19 = 24 (X)

For the second letters (M, G, Z):

M	G	Z
13	7	26

Pattern: 13 - 6 = 7 (G); 7 + 19 = 26 (Z)

Therefore, the group that follows the same pattern is (KM, EG, XZ).

Hence, the correct answer is "Option 2".

Q25. Answer: (a) 13

November has 30 days.

1 November 2025 is a Saturday.

So, the calendar will be:

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

Number of Thursdays = 4

Number of Fridays = 4

Number of Sundays = 5

Sum = 4 + 4 + 5 = 13

Hence, the correct answer is Option 1.

Q26. Answer: (d) 2018

For two years to have the same calendar:

Both years must be either leap years or non-leap years.

YourMockTest.com — Free Study Material

The total odd days between them must be 0.

2007 is a non-leap year.

Now count odd days from 2007 onward:

Year	Type	Odd Days	Total
2008	Leap	2	2
2009	Normal	1	3
2010	Normal	1	4
2011	Normal	1	5
2012	Leap	2	7 = 0 odd days

After 2012, the calendar repeats for the next non-leap year.

So,

2007 + 11 years = 2018

Therefore, the calendar of 2018 is the same as 2007.

Hence, the correct answer is Option 4 (2018).

Q27. Answer: (a) [figure]

The logic followed here is:

Every shapes inside the first box is shifting downward to get the the next figure in the cluster.

Therefore Figure in Option 1 will replace the (?) mark.

Hence, the correct answer is "Option 1".

Q28. Answer: (d) [figure]

The logic followed here is:

The first pair of numbers and the last pair of numbers are reversed and the middle number remains the same to get the next cluster.

Therefore The figure in Option 4 will replace the (?) mark.

Hence, the correct answer is "Option 4".

Q29. Answer: (a) DT180

Logic followed here is:

Logic: The first letter is shifted by +2, the second letter is shifted by +4, and the number is decreased by 60.

AK160 is coded as CO100 →

EU120 is coded as CQ180 →

Similarly, let's find the cluster related to BP140:

Therefore, the required cluster is DT180.

Hence, the correct answer is "Option 1".

Q30. Answer: (b) TWR624

Logic followed here is:

Logic: Each letter is shifted by +2 in the alphabetical sequence and the number is transformed as:

$(Number)^2 - 1$

AMR10 is coded as CPM99 →

Given	Operation	Result
A	+2	C
M	+3	P
R	−5	M
10	(10 × 10) − 1	99

BKP13 is coded as DNK168 →

Given	Operation	Result

B	+2	D
K	+3	N
P	−5	K
13	(13 × 13) − 1	168

Similarly, let's find the cluster for RTW25:

Given	Operation	Result
R	+2	T
T	+3	W
W	−5	R
25	(25 × 25) − 1	624

Therefore, the required cluster is TWR624.

Hence, the correct answer is "Option 2".

Q31. Answer: (d) NWBD

Logic followed here is: The letters of the word are shifted by specific values (+1, +2, -1, -4) based on their positions to obtain the code.

For

DUDS is coded as EWCO →

SLUM is coded as TNTI →

The pattern observed is: The letters are shifted by +1, +2, -1, -4.

Similarly, let's find the code for MUCH:

Therefore, the code for 'MUCH' is NWBD.

Hence, the correct answer is "Option 4".

Q32. Answer: (d) tmf wip

Given Codes:

'create brings girls cares' → 'nlg tmf nkf khk'

'every girls fear above' → 'nmh tmf toj wip'

'blood fear cover roads' → 'qnd ifl zhd wip'

Common word between first and second sentence:

'girls'

Common code between first and second code:

tmf

Therefore, the code for 'girls' is tmf.

Common word between second and third sentence:

'fear'

Common code between second and third code:

wip

Therefore, the code for 'fear' is wip.

Thus,

'girls fear' → tmf wip

Hence, the correct answer is "Option 4".

Q33. Answer: (c) JR621

Logic followed here is.

Each term contains two letters followed by a number.

The first letters move backward by 3 positions, the second letters move backward by 5 positions, and the numbers increase by 94.

Analysis of the First Letter:

Z	W	T	Q	N	K

26	23	20	17	14	11

Pattern: 26 - 3 = 23, 23 - 3 = 20, 20 - 3 = 17, 17 - 3 = 14, 14 - 3 = 11

The first letters follow the correct pattern.

Analysis of the Second Letter:

R	W	B	G	L	Q
18	23	2	7	12	17

Pattern: 18 + 5 = 23, 23 + 5 = 28 → 2 (B), 2 + 5 = 7, 7 + 5 = 12, 12 + 5 = 17

The second letters also follow the correct pattern.

Analysis of the Numerical Part:

150 + 94 = 244

244 + 94 = 338

338 + 94 = 432

432 + 94 = 526

526 + 94 = 620

But the last term is given as 621.

So, the correct term should be KQ620 instead of JR621.

Therefore, the wrong term in the series is JR621.

Hence, the correct answer is "Option 3".

Q34. Answer: (c) CDI432

Logic followed here is: All the letters are shifted by (+5) to their positional value to get the next letter in the cluster and the (+108) is added in the number to get the next one.

Therefore According to the logic followed CDI432 will replace the (?)mark.

Hence, the correct answer is "Option 3".

Q35. Answer: (b) 5:04

Formula used:

Angle between hour hand and minute hand

$= |30H - 5.5M|$

Here,

$H = 5$

Required angle = 130°

So,

$|30 \times 5 - 5.5M| = 130$

$|150 - 5.5M| = 130$

$150 - 5.5M = 130$

$5.5M = 20$

$M = 20 \div 5.5$

$M \approx 3.63$ minutes

≈ 4 minutes

Therefore, the required time is approximately 5:04 PM.

Hence, the correct answer is "Option 2".

Q36. Answer: (a) 1:30

Given:

At 11:30 AM, the clock is 5 minutes fast.

At 11:30 PM, the clock is 11 minutes fast.

Increase in error in 12 hours:

11 − 5 = 6 minutes

So, the clock gains:

6 minutes in 12 hours

YourMockTest.com — Free Study Material

Therefore, to gain 5 minutes:

Time taken =

[(12 × 5)/6 = 10 hours]

So, 10 hours before 11:30 AM, the clock was correct.

11:30 AM − 10 hours = 1:30 AM

Therefore, the clock showed the correct time at 1:30 AM.

Hence, the correct answer is "Option 1".

Q37. Answer: (b) [figure]

Logic followed in the figure series:

The figure is rotating 45° clockwise in every next figure and the number of lines inside the figure is increasing by 1 in every next figure.

Therefore Figure in Option 2 will replace the (?) mark.

Hence, the correct answer is "Option 2".

Q38. Answer: (a) [figure]

The logic followed here is :

The circle inside the box is flipping in every next figure towards right and the triangle is shifting anti-clockwise to the corners.

Therefore Figure in Option 1 will replace the (?) mark.

Hence, the correct answer is "Option 1".

Q39. Answer: (c) 37 years

Shortcut Trick

Age difference always remains constant regardless of time.

3 years ago, difference in ratio units = 22 − 17 = 5 units.

Given difference = 10 years => 5 units = 10 years.

1 unit = 2 years.

B's age 3 years ago = 17 × 2 = 34 years.

B's present age = 34 + 3 = 37 years.

Therefore The correct answer is 37 years.

Alternate Method

Given:

Difference between present ages of A and B = 10 years.

Ratio of ages of A and B (3 years ago) = 22 : 17.

Formula Used:

Age difference = Constant throughout life.

Age after n years = Past age + n.

Calculations:

=> Let the ages of A and B 3 years ago be 22x and 17x respectively.

=> Difference in their ages = 22x − 17x = 5x.

=> Since the age difference is always constant, 5x = 10.

=> x = 10 ÷ 5 = 2.

=> B's age 3 years ago = 17x = 17 × 2 = 34 years.

=> B's present age = 34 + 3 = 37 years.

Therefore The correct answer is 37 years.

Additional Information

Constant Age Difference

The difference between the ages of two individuals never changes with time. If A is 10 years older than B today, A will always be 10 years older than B.

Ratio Scaling

When a ratio a : b is given, the actual values can be represented as ax and bx, where x is the common scaling factor.

Time Shifts

To find the age 'n' years ago, subtract 'n' from the present age. To find the age 'n' years hence, add 'n' to the present age.

YourMockTest.com — Free Study Material

Q40. Answer: (a) 81 years

Shortcut Trick

Son's age after 3 years = 32 → Present age = 29 years.

Son's age 8 years ago = 29 − 8 = 21 years.

Father's age 10 years ago = 2 × 21 = 42 years.

Father's present age = 42 + 10 = 52 years.

Sum of present ages = 52 + 29 = 81 years.

Therefore The correct answer is 81 years.

Alternate Method

Given:

Son's age after 3 years = 32 years

Father's age (10 years ago) = 2 × Son's age (8 years ago)

Calculations:

Let the present age of the Father be F and the Son be S.

=> Son's age after 3 years: S + 3 = 32

=> S = 32 − 3 = 29 years

=> Son's age 8 years ago = S − 8 = 29 − 8 = 21 years

=> Father's age 10 years ago = 2 × (Son's age 8 years ago)

=> F − 10 = 2 × 21

=> F − 10 = 42

=> F = 42 + 10 = 52 years

=> Sum of present ages = F + S = 52 + 29 = 81 years

Therefore The correct answer is 81 years.

Additional Information

Constant Age Difference

The numerical difference between the ages of two people always remains constant, regardless of the time elapsed.

Ratio of Ages

If the ratio of ages is given for two different time periods, the change in the number of ratio units must be proportional to the actual number of years passed.

Average Age

If the average age of n people is A, then after k years, their average age will be A + k.

Q41. Answer: (b) Fourth

The correct answer is Fourth.

Key Points

• The Fourth Five-Year Plan (1969-1974) was the plan that immediately followed the period of Annual Plans (1966-1969).

• The period between 1966 and 1969 is famously known as the Plan Holiday. This was a significant gap in the long-term five-year planning cycle of India.

• The Third Five-Year Plan (1961-1966) was considered a failure due to multiple crises, including the Sino-Indian War in 1962 and the Indo-Pakistani War in 1965, which drained the nation's financial resources.

• A severe drought in 1965-66 led to a massive food grain shortage and high inflation, making it impossible for the government to commit to a new five-year plan immediately.

• Consequently, the government implemented three Annual Plans between 1966 and 1969 to stabilize the economy before launching the Fourth Plan in April 1969.

Additional Information

• Second Five-Year Plan (1956-1961): This plan was based on the P.C. Mahalanobis Model and focused primarily on rapid industrialization and the development of heavy industries like steel and capital goods.

• Sixth Five-Year Plan (1980-1985): This plan marked the beginning of economic liberalization in India. It focused on poverty eradication (Garibi Hatao) and achieving technological self-reliance.

• Seventh Five-Year Plan (1985-1990): Led by Rajiv Gandhi, this plan emphasized Food, Work, and Productivity. It aimed at increasing industrial productivity and the use of modern technology.

• First Five-Year Plan (1951-1956): Based on the Harrod-Domar model, it focused on the agricultural sector to address the food crisis following Independence and the Partition.

YourMockTest.com — Free Study Material

Important Points

• The Fourth Five-Year Plan was based on the Gadgil Strategy and aimed at Growth with Stability and the Progressive Achievement of Self-Reliance.

• A major milestone during this plan was the Nationalization of 14 major commercial banks on 19 July 1969, which aimed to expand credit to the agricultural and rural sectors.

• The Green Revolution reached its peak during this period, significantly increasing the production of High-Yielding Variety (HYV) crops and making India self-sufficient in food grains.

• India conducted its first peaceful nuclear test, code-named Smiling Buddha, at Pokhran in 1974, towards the end of this plan period.

• The Indo-Pak War of 1971 and the subsequent creation of Bangladesh occurred during this plan, leading to a massive influx of refugees that strained the Indian economy.

Q42. Answer: (c) Both I and II

The correct answer is Both I and II.

Key Points

• The First Five-Year Plan of India was launched for the period 1951 to 1956 under the leadership of the first Prime Minister, Jawaharlal Nehru. It was a crucial period as the nation was recovering from the aftermath of independence and partition.

• Influx of Refugees: Following the Partition of India in 1947, the country faced a massive humanitarian crisis. Millions of people migrated across the borders, leading to a huge influx of refugees who needed immediate rehabilitation, housing, and employment. This placed a significant strain on the country's limited resources and administrative machinery. Hence, statement I is correct.

• Severe Food Shortage: At the dawn of independence, India was grappling with a severe food shortage. The partition resulted in some of the most fertile and well-irrigated lands (located in West Punjab and East Bengal) going to Pakistan, while India retained a larger population to feed. This led to a high dependency on food imports and necessitated an urgent focus on increasing domestic production. Hence, statement II is correct.

• To tackle these immediate crises, the First Five-Year Plan prioritized agriculture, irrigation, and power projects. It was based on the Harrod-Domar model, which emphasized that economic growth depends on the level of savings and the capital-output ratio.

• The plan was successful in addressing these issues, as the food grain production increased significantly by the end of the plan period, and the refugee rehabilitation process was well underway.

Additional Information

• Architect of the Plan: While the plan was presented by Jawaharlal Nehru, a young economist named K.N. Raj is often considered the main architect of the draft.

• Target vs. Achievement: The plan set a target Growth Rate of 2.1% per annum. However, the actual growth achieved was 3.6%, making it a highly successful initiative.

• Major Projects: During this period, several multipurpose river valley projects were started, such as the Bhakra-Nangal Dam, Hirakud Dam, and the Damodar Valley Corporation, to boost irrigation and electricity generation.

• Community Development: The Community Development Programme was launched in 1952 to bring about an overall transformation in the socio-economic life of the rural population.

• Economic Indicators: By the end of the plan in 1956, the National Income had increased by 18% and the Per Capita Income had risen by 11%.

Important Points

• Education: Five Indian Institutes of Technology (IITs) were established by the end of the plan period to promote technical education. The University Grants Commission (UGC) was also set up in 1953.

• Health: The World Health Organization (WHO), along with the Indian government, addressed children's health and reduced infant mortality, contributing to a rise in life expectancy.

• Land Reforms: The plan initiated significant land reforms to abolish the Zamindari system, aiming to provide social justice to the actual tillers of the soil.

• Price Stability: One of the major achievements of the plan was the control of inflation and the stabilization of the economy, which had been volatile due to World War II and the Partition.

Q43. Answer: (d) Eka Sarana Nama Dharma

The correct answer is Eka Sarana Nama Dharma.

Key Points

• Srimanta Shankardeva (born 1449 – died 1568) was a 15th-16th century polymath, saint-scholar, poet, and social-religious reformer who spearheaded the Bhakti movement in Assam.

• The devotional philosophy promoted by him is known as Eka Sarana Nama Dharma. This philosophy is based on the worship of a single supreme deity, Lord Krishna (or Vishnu), through the chanting of his name (Nama).

• The term Eka Sarana literally means taking shelter in one. It emphasizes total surrender to Krishna and rejects complex Vedic

rituals, sacrifices, and idol worship, making it a revolutionary monotheistic movement of its time.

• Shankardeva used various cultural mediums to spread his teachings, including Borgeets (devotional songs), Ankiya Naat (one-act plays), and the establishment of Sattras (monasteries) and Namghars (prayer houses).

• The movement was highly egalitarian, as it aimed to create a society free from Caste-based discrimination, allowing people from all social backgrounds to participate in congregational prayers.

Additional Information

• Dvaita Vedanta (Option 1): This school of philosophy was founded by Madhvacharya in the 13th century. It posits a strict dualism between the supreme soul (Paramatman) and the individual soul (Jivatman), stating they are eternally distinct.

• Advaita Vedanta (Option 2): Promoted by Adi Shankara in the 8th century, this philosophy teaches non-dualism (Monism), where the individual soul is considered identical to the ultimate reality, Brahman.

• Achintya Bheda Abheda (Option 3): This is a sub-school of Vaishnavism founded by Chaitanya Mahaprabhu in Bengal. It describes the relationship between the creator and creation as being simultaneously identical and different in an inconceivable way.

• Sattriya Dance: One of the most significant cultural contributions of Shankardeva, this dance form originated in the Sattras and was recognized as one of the eight classical dances of India by the Sangeet Natak Akademi in the year 2000.

• Brajavali Language: Shankardeva created this unique literary language, which is a blend of Assamese, Maithili, and Braj Bhasha, to write his devotional plays and songs.

Important Points

• Kirtan Ghosha: This is the most revered religious text of the Eka Sarana Nama Dharma, consisting of a collection of poetical works by Shankardeva that are meant for community singing.

• Namghars: These are unique prayer houses established by Shankardeva that serve as the center for religious, social, and cultural activities in Assamese villages, fostering community harmony.

• Madhavdeva: He was the primary disciple of Shankardeva and authored the Naam Ghosha, which is another foundational text of the Neo-Vaishnavite faith in Assam.

• The Bhagavata Purana serves as the primary scriptural authority for this dharma, and Shankardeva translated several of its sections into the local language to make them accessible to the common people.

Q44. Answer: (b) They crush and grind the food into smaller particles

The correct answer is They crush and grind the food into smaller particles

Key Points

• The primary role of teeth in the digestive system is mechanical digestion. They physically break down large pieces of food into smaller particles through the process of mastication (chewing).

• By crushing and grinding food, teeth increase the surface area of the food, which allows digestive enzymes in the saliva and stomach to work more efficiently.

• Secreting enzymes is not a function of teeth; this is done by various glands such as the salivary glands, stomach lining, and pancreas.

• Saliva production is the responsibility of the salivary glands (parotid, submandibular, and sublingual), not the teeth.

• Nutrient absorption occurs primarily in the small intestine, where the lining is specialized to transport nutrients into the bloodstream.

Additional Information

• Humans have four main types of teeth: Incisors for cutting, Canines for tearing, and Premolars and Molars for grinding and crushing.

• The outermost layer of the tooth is called enamel, which is the hardest substance in the human body and protects the tooth from wear and tear.

• The human dental formula for permanent teeth is 2:1:2:3, representing the number of incisors, canines, premolars, and molars in one quadrant of the mouth.

• Mechanical digestion begins in the mouth with the teeth and tongue, while chemical digestion begins simultaneously as salivary amylase starts breaking down carbohydrates.

Q45. Answer: (c) mitochondria

The correct answer is mitochondria

Key Points

• The process of cellular respiration begins in the cytoplasm, where a six-carbon glucose molecule is broken down into two three-carbon molecules called pyruvate. This step is known as glycolysis.

• In the presence of oxygen (aerobic respiration), the pyruvate enters the mitochondria.

• Inside the mitochondria, the breakdown of pyruvate takes place to give carbon dioxide, water, and a large amount of energy in

the form of ATP.

• The cytoplasm is only responsible for the initial anaerobic stage (glycolysis), while the mitochondria are the primary sites for the oxygen-dependent stages like the Krebs cycle and the Electron Transport Chain.

• Lysosomes are known as the 'suicidal bags' of the cell as they contain digestive enzymes to break down waste, and the cell membrane is the outer covering that regulates the movement of substances in and out of the cell.

Additional Information

• Mitochondria are often referred to as the Powerhouse of the cell because they generate the energy currency, ATP (Adenosine Triphosphate).

• In the absence of oxygen (anaerobic respiration), pyruvate is converted into ethanol and carbon dioxide in yeast (fermentation), or into lactic acid in human muscle cells during vigorous exercise.

• Aerobic respiration in the mitochondria produces significantly more energy (up to 38 ATP molecules) compared to anaerobic respiration (only 2 ATP molecules).

• The mitochondria possess their own DNA and ribosomes, allowing them to produce some of their own proteins.

Q46. Answer: (d) Rig Veda

The correct answer is Rig Veda.

Key Points

• The Rig Veda is the oldest of the four Vedas and the earliest literary record of the Indo-Aryan civilization, composed roughly between 1500 BCE and 1200 BCE. It is in this ancient text that the river Sarasvatī is mentioned for the first time.

• In the Rig Veda, the Sarasvatī is described as a mighty, perennial river flowing from the Himalayan mountains to the Samudra (ocean or large water body). It was the most sacred river for the Vedic people during the Early Vedic Period.

• The river is lauded with titles such as Naditama (the best of all rivers), Ambitama (the best of all mothers), and Devitama (the best of all goddesses). These descriptions highlight its central role in the life and spirituality of the Aryans.

• The Nadi Stuti Sukta (Hymn of Praise of Rivers) found in the 10th Mandala of the Rig Veda explicitly mentions the Sarasvatī along with other major rivers like the Sindhu (Indus), Ganga, and Yamuna.

• While the other Vedas like Sam Veda, Yajur Veda, and Atharva Veda also contain references to the river, they were composed during the Later Vedic Period (c. 1000–600 BCE), making the Rig Veda the primary and first source of its mention.

Additional Information

• Sam Veda: This is known as the Veda of Melodies. It consists of 1,549 verses, most of which are taken from the Rig Veda and set to music for chanting during Soma sacrifices. It does not provide the first geographical mention of rivers.

• Yajur Veda: Known as the Veda of Rituals, it contains prose mantras and formulas for performing sacrifices. It is divided into two parts: Shukla Yajur Veda (White) and Krishna Yajur Veda (Black). It was composed after the Rig Veda.

• Atharva Veda: This is the Veda of Magical Formulas and charms. It deals with healing, protection from evil spirits, and daily life rituals. It is the youngest of the four Vedas and reflects a different socio-cultural stage than the Rig Veda.

• Geographical Identity: Modern scholars and geologists often identify the Sarasvatī with the Ghaggar-Hakra river system that flows through Haryana, Rajasthan, and Punjab. Scientific evidence suggests it was a major river that dried up due to tectonic shifts and climate changes around 1900 BCE.

• Sapta Sindhu: The Rig Veda describes the Land of Seven Rivers (Sapta Sindhu), which included the Indus, Vitasta (Jhelum), Asikni (Chenab), Parushni (Ravi), Vipasa (Beas), Sutudri (Sutlej), and the Sarasvatī.

Important Points

• The Sarasvatī is mentioned approximately 50 times throughout the Rig Veda, appearing more frequently than the Ganga or Yamuna in the earliest layers of the text.

• By the time of the Brahmanas and Puranas (later texts), the river is described as disappearing at a place called Vinasana, which marks the transition from a physical river to a mythical or subterranean one.

• In later Hinduism, Sarasvatī evolved from a river goddess into the Goddess of Knowledge, music, art, and wisdom, often depicted holding a Veena and a book.

• The Prayag Raj (Allahabad) confluence is traditionally believed to be the meeting point of the Ganga, Yamuna, and the invisible Sarasvatī, known as the Triveni Sangam.

Q47. Answer: (c) Nagaland

The correct answer is Nagaland.

Key Points

• Khupielilie is a traditional folk dance belonging to the northeastern state of Nagaland. It is a cultural expression deeply rooted in the heritage of the Angami Naga tribe.

• This dance is specifically performed by women, showcasing their grace, coordination, and rhythmic movements. It serves as a medium to celebrate femininity and community bonding.

• The dance is primarily associated with the Sekrenyi festival, which is the premier festival of the Angami people. It is celebrated to mark the purification of the soul and the body. Hence, the statement identifying Nagaland as the origin is correct.

• Other states mentioned in the options have different iconic dance forms: Karnataka is famous for Yakshagana and Dollu Kunitha; Kerala is the land of Kathakali and Mohiniyattam; and Himachal Pradesh is known for the Nati dance. None of these states feature Khupielilie as a native folk dance.

Additional Information

• Nagaland, known as the 'Land of Festivals', is home to 16 major tribes, each with its own unique customs, language, and attire. The state was inaugurated as the 16th state of India on 1st December 1963.

• The Sekrenyi festival, also known as Phousanyi, occurs in the month of February (specifically starting on the 25th day of the Angami month of Kezei). It lasts for 10 days and involves various rituals like 'Kizie' and 'Thekra Hie'.

• The Angami tribe is one of the most populous tribes in Nagaland, residing mainly in the Kohima and Dimapur districts. They are globally recognized for their terrace cultivation techniques and the Stone Pulling ceremony.

• Apart from Khupielilie, other significant folk dances of Nagaland include the Zeliang dance, Butterfly dance, Monyu Ashu, and the War Dance, which often mimics the movements of warriors.

• The Hornbill Festival, held annually from 1st to 10th December at the Naga Heritage Village in Kisama, is the most famous event where all tribes gather to perform their traditional dances, including those of the Angami.

Important Points

• The costumes worn during the Khupielilie dance are vibrant and symbolic. Women wear traditional mekhelas (wraparound skirts) and shawls adorned with intricate patterns that signify their tribal identity and social status.

• Jewelry plays a vital role in the performance attire, featuring necklaces made of carnelian beads, conch shells, and brass ornaments. These items are often passed down through generations as heirlooms.

• The musical accompaniment for such folk dances often involves the Tati, a popular single-stringed musical instrument used by the Angami and Chakhesang Nagas to sing traditional folk songs.

• The preservation of these dances is crucial for the Naga people as they transition into modernity, ensuring that the oral traditions and cultural history of the North East remain vibrant and documented.

Q48. Answer: (c) Lakshadweep

The correct answer is Lakshadweep.

Key Points

• The Lava dance is a traditional and highly rhythmic folk dance that originated in the Union Territory of Lakshadweep, specifically on the Minicoy Island.

• It is a performance strictly reserved for male members of the community, who display great coordination and stamina through their movements. Hence, the correct answer is Lakshadweep.

• The dancers wear traditional attire consisting of a multi-colored silk wrap (thube), a white headgear (rumal), and a waistband, which enhances the visual vibrancy of the performance.

• The dance is performed to the beat of drums (Dhol) and traditional songs. It typically begins at a slow tempo and gradually increases in speed, culminating in a fast-paced and energetic finale.

• Lava is usually performed during festive occasions such as Eid-ul-Fitr and Eid-ul-Adha, as well as during National Day celebrations, reflecting the rich cultural identity of the islanders.

• Chandigarh is incorrect because it is a planned city in North India that primarily follows Punjabi and Haryanvi cultural traditions, such as Bhangra and Giddha.

• Ladakh is incorrect as its traditional folk dances include the Cham Dance (mask dance) and Jabro, which are rooted in Tibetan-Buddhist culture.

• Andaman and Nicobar is incorrect because its indigenous tribes, like the Nicobarese, perform the Nicobari dance, which is distinct in style and performed during the Pig Festival.

Additional Information

• Lakshadweep: It is the smallest Union Territory of India, comprising 36 islands in the Arabian Sea. It was established as a Union Territory in the year 1956. The capital of Lakshadweep is Kavaratti.

• Other Dances of Lakshadweep: Apart from Lava, the region is famous for Kolkali and Parichakali. Kolkali is performed with wooden sticks, while Parichakali is a martial dance involving shields and swords made of wood.

• Chandigarh: Known as the City Beautiful, it was designed by the French architect Le Corbusier. It serves as the joint capital of Punjab and Haryana. The culture here is a blend of modern urban life and traditional North Indian folk arts.

• Ladakh: Often called the Land of High Passes, it became a Union Territory on 31st October 2019. The Cham Dance is its most famous religious dance, performed by Buddhist monks wearing colorful masks and robes in monasteries like Hemis.

• Andaman and Nicobar Islands: Located in the Bay of Bengal, these islands are home to ancient tribes. The Nicobari dance is a major traditional dance where performers move in a line or circle, holding each other by the waist, usually during the Ossuary Feast.

Important Points

• The Minicoy Island, where the Lava dance is most prominent, has a culture that is distinct from the rest of Lakshadweep and shares linguistic and social ties with the Maldives.

• The movements in Lava are often interpreted as a representation of the sea waves or the swaying of coconut palms, which are central to the islanders' environment.

• Lakshadweep has a very high literacy rate, exceeding 91% according to the 2011 Census, making it one of the most educationally advanced regions in India.

• The Union Territory is also known for its coral reefs, marine life, and coconut-based economy, which deeply influence its folk traditions and lifestyle.

Q49. Answer: (b) Arunachal Pradesh

The correct answer is Arunachal Pradesh.

Key Points

• Namdapha National Park is located in the Changlang district of the northeastern state of Arunachal Pradesh. It is situated near the international border between India and Myanmar. Hence, the option Arunachal Pradesh is correct.

• It was established as a Wildlife Sanctuary in 1972 and was later declared a National Park and a Tiger Reserve in the year 1983.

• The park covers a massive area of approximately 1,985.23 square kilometers, making it the fourth largest national park in India after Hemis National Park, Desert National Park, and Gangotri National Park.

• It is globally famous for being the only park in the world that provides a habitat for four big cat species: the Tiger (Panthera tigris), Leopard (Panthera pardus), Snow Leopard (Uncia uncia), and Clouded Leopard (Neofelis nebulosa).

• Assam is incorrect because it is home to other famous parks like Kaziranga National Park and Manas National Park, but not Namdapha. Hence, statement 1 is incorrect.

• Karnataka is incorrect as it is known for protected areas such as Bandipur National Park and Nagarhole National Park. Hence, statement 3 is incorrect.

• Kerala is incorrect because it hosts parks like Periyar National Park and Silent Valley National Park. Hence, statement 4 is incorrect.

Additional Information

• Biodiversity Hotspot: The park is located within the Indo-Burma biodiversity hotspot and features a wide range of altitudinal variations, from 200 meters to 4,571 meters at Dapha Bum.

• Flora: The vegetation is incredibly diverse, ranging from Tropical Evergreen forests and Moist Deciduous forests to Sub-tropical forests, Temperate forests, and Alpine meadows at higher elevations. It is home to rare species like the Blue Vanda orchid and Sapria himalayana.

• Fauna: Apart from big cats, the park is the only known habitat for the critically endangered Namdapha Flying Squirrel (Biswamoyopterus biswasi), which is endemic to this region. It also hosts the Hoolock Gibbon, the only ape found in India.

• Other Protected Areas in Arunachal Pradesh: The state also houses the Mouling National Park, Pakhui (Pakke) Tiger Reserve, and Kamlang Wildlife Sanctuary.

• Cultural Significance: Several indigenous tribes such as the Lisu, Chakma, and Tangsa live in the vicinity of the park, contributing to the cultural richness of the region.

Important Points

• UNESCO Status: Namdapha National Park has been on the Tentative List of UNESCO World Heritage Sites since 2006 due to its exceptional biodiversity and unique ecosystems.

• Climate: The climate of the park varies significantly with altitude, experiencing sub-tropical conditions in the valleys and arctic conditions in the high mountain peaks. The area receives heavy rainfall during the South-West Monsoon from June to September.

• Avifauna: The park is a paradise for birdwatchers, with over 425 bird species recorded, including the Great Indian Hornbill, Wreathed Hornbill, and the rare White-bellied Heron.

• River System: The Noa-Dihing River, which is a tributary of the Brahmaputra, flows through the park from east to west, providing a vital water source for the diverse ecosystem.

• Conservation Efforts: The park is managed under the Project Tiger initiative of the Government of India, focusing on the protection of the tiger population and its vast habitat.

Q50. Answer: (c) Chhattisgarh

The correct answer is Chhattisgarh.

Key Points

• The Madai Festival is a world-famous tribal festival celebrated with great fervor in the Indian state of Chhattisgarh. It is primarily observed by the Gond community and other sub-tribes of the Bastar region.

• The festival is celebrated during the months of December to March. It is a unique traveling festival that moves from one village to

another, starting in Bastar and concluding in the Kanker and Dantewada districts.

• The primary purpose of the festival is to worship the local deity, Goddess Kesharpal Kesharpalin Devi. Tribal people from various regions gather to seek her blessings for a prosperous year and a healthy harvest.

• A significant feature of the Madai Festival is the procession of local deities, where idols are brought from different villages to a central location, accompanied by traditional music played on instruments like the Mohari and Tudbudi.

• The festival serves as a major socio-cultural gathering where tribal people engage in traditional folk dances such as Saila, Karma, and Sua. It also acts as a massive market (mela) for the exchange of local forest produce and handicrafts.

Additional Information

• Chhattisgarh: Known as the Rice Bowl of India, this state was carved out of Madhya Pradesh on 1 November 2000. It is home to diverse festivals like Bastar Dussehra, which is the longest festival in the world lasting for 75 days, and Hareli, the harvest festival celebrated in the month of Shravan.

• Haryana: This northern state is famous for the Surajkund International Crafts Mela held annually in February at Faridabad. Other notable festivals include Gugga Naumi and the Pinjore Heritage Festival, which showcase the agrarian culture of the state.

• Goa: A coastal state known for its Portuguese influence, it celebrates the Goa Carnival in February and the Shigmo Festival, which is the Konkani version of Holi. Goa is also famous for the Feast of St. Francis Xavier held in December.

• Gujarat: This western state is globally recognized for Navratri, where Garba and Dandiya Raas are performed for nine nights. It also hosts the International Kite Festival (Uttarayan) on 14 January every year and the Rann Utsav in the Kutch region.

Important Points

• The Gond Tribe, the primary organizers of the Madai Festival, is one of the largest tribal groups in India, with a significant population in Chhattisgarh, Madhya Pradesh, and Maharashtra.

• The Narayanpur Madai is considered the most famous among all the Madai celebrations in the state, attracting thousands of tourists and devotees every year in the month of February.

• During the festival, a sacred pole made of wood is worshipped, and goats are often sacrificed as part of the traditional rituals to appease the deities and ensure the protection of the village from evil spirits.

• The festival highlights the primitive culture of India, where the bond between nature, spirits, and humans is celebrated through ancient rituals that have remained unchanged for centuries.

Q51. Answer: (d) Behdienkhlam

The correct answer is Behdienkhlam.

Key Points

• Behdienkhlam is the most significant and popular religious festival of the Jaintia people, also known as the Pnars, in the state of Meghalaya. Hence, the correct answer is Behdienkhlam.

• The festival is celebrated annually in the month of July, following the sowing season, primarily in the town of Jowai, which serves as the headquarters of the West Jaintia Hills district.

• The term Behdienkhlam is derived from the local words Beh (to drive away), Dien (wood or stick), and Khlam (plague or pestilence), which together signify the ritual of 'driving away the plague' or 'driving away the demon of cholera'.

• The primary objective of this celebration is to invoke the blessings of God (U Blei Wa Booh Wa Thoo) for a bountiful harvest and to protect the community from diseases and evil spirits.

• A central feature of the festival is the creation of Rots, which are tall, decorative, and colorful structures made of bamboo and paper, which are eventually immersed in the sacred pool called Aitnar.

Additional Information

• Kang Festival: This is a major Hindu religious celebration in Manipur, observed by the Meitei community. It is a version of the Rath Yatra where the deities are pulled in a chariot called Kang during the month of June or July. Hence, statement 1 is incorrect.

• Bumchu Festival: This unique festival is celebrated at the Tashiding Monastery in West Sikkim. It involves the opening of a vessel containing holy water, the level of which is used to predict the prosperity or misfortune of the state for the upcoming year. Hence, statement 2 is incorrect.

• Chaitrual: This refers to traditional festivities in Mizoram, often associated with the harvest and agricultural cycles. Mizoram is more famously known for its Kut festivals like Chapchar Kut and Pawl Kut. Hence, statement 3 is incorrect.

• Meghalaya, often called the 'Abode of Clouds', is inhabited by three major tribes: the Khasi, the Garo, and the Jaintia, each having their own distinct cultural heritage and festivals.

Important Points

• The Behdienkhlam festival lasts for four days and involves various rituals, including the symbolic act of beating the roofs of houses with bamboo poles to drive away evil forces.

• A highlight of the concluding day is a traditional game called Dad-lawakor, which is played with a wooden log in a muddy field; it is believed that the winning side will enjoy a superior harvest.

• The Jaintia community, like other tribes in Meghalaya, follows a matrilineal social structure where the family lineage and

inheritance are traced through the mother.

• Other prominent festivals in Meghalaya include the Nongkrem Dance and Shad Suk Mynsiem of the Khasi tribe, and the Wangala Festival (also known as the 100 Drums Festival) of the Garo tribe.

Q52. Answer: (a) 1839

The correct answer is 1839.

Key Points

• Maharaja Ranjit Singh, the founder and the most powerful ruler of the Sikh Empire, died on 27 June 1839. He breathed his last in Lahore, which was the capital of his sovereign state. Hence, option 1 is correct.

• His death at the age of 58 was primarily due to failing health; he had suffered from multiple paralytic strokes starting from 1835, which eventually led to his demise in 1839.

• The year 1842 is incorrect as it falls during the reign of his successors, specifically during the period of the First Anglo-Afghan War, which concluded that year.

• The year 1845 is incorrect because it marks the beginning of the First Anglo-Sikh War, which occurred six years after the Maharaja's death due to the political instability that followed his passing.

• The year 1851 is incorrect as by this time, the Sikh Empire had already been annexed by the British East India Company in 1849 following the Second Anglo-Sikh War.

Additional Information

• Early Life: He was born as Buddh Singh on 13 November 1780 in Gujranwala. He was the son of Maha Singh, the leader of the Sukerchakia Misl. He survived smallpox in his infancy but lost sight in his left eye.

• Unification of Punjab: He was crowned the Maharaja of Punjab on 12 April 1801. He is credited with uniting the fractured Sikh Misls into a unified empire that stretched from the Khyber Pass to the Sutlej River and from Kashmir to Mithankot.

• Military Excellence: He established the Khalsa Army and modernized it using European warfare techniques. He employed French and Italian generals like Jean-Baptiste Ventura and Jean-Claude Allard to train his elite Fauj-i-Khas.

• Diplomacy and Treaties: To maintain peace with the rising British power, he signed the Treaty of Amritsar in 1809 with Lord Minto (represented by Charles Metcalfe), which established the Sutlej River as the boundary between the two powers.

• Secular Governance: Despite being a devout Sikh, his administration was secular. His Prime Minister, Dhian Singh Dogra, was a Hindu, and his Foreign Minister, Fakir Azizuddin, was a Muslim.

• Cultural Legacy: He is famously known for donating gold to cover the Harmandir Sahib in Amritsar, giving it the name Golden Temple. He also held the Koh-i-Noor diamond, which he acquired from Shah Shuja Durrani in 1813.

Important Points

• Succession Struggles: After his death in 1839, the empire faced a series of rapid successions and assassinations. His son Kharak Singh succeeded him but died in 1840. This was followed by the short reigns of Sher Singh and finally Maharaja Duleep Singh.

• British Annexation: The lack of strong leadership after 1839 allowed the British East India Company to intervene. Following the Treaty of Lahore (1846) and the Second Anglo-Sikh War, Lord Dalhousie annexed Punjab in March 1849.

• Administrative Divisions: The empire was divided into four main provinces for better administration: Lahore, Multan, Peshawar, and Kashmir, each headed by a governor known as a Nazim.

Q53. Answer: (c) 24

The correct answer is 24

Key Points

• A geo-stationary satellite is an earth-orbiting satellite placed at an altitude of approximately 35,800 kilometers (22,236 miles) directly over the equator.

• The period of revolution of a geo-stationary satellite is exactly equal to the rotational period of the Earth, which is approximately 24 hours.

• Because the satellite rotates in the same direction as the Earth (from west to east) and has the same period, it appears to be stationary at a fixed position in the sky to an observer on the ground.

• The synchronization with the Earth's rotation is what allows ground-based satellite dishes to remain pointed at a single position without moving.

Additional Information

• The orbit in which these satellites reside is known as the Geostationary Orbit (GEO) or the Clarke Orbit, named after the writer Arthur C. Clarke who popularized the concept.

• These satellites are primarily used for telecommunication, satellite television (DTH), and weather forecasting because they provide continuous coverage over a specific area.

• To provide global coverage (excluding the extreme polar regions), a minimum of three geo-stationary satellites are required.

YourMockTest.com — Free Study Material

• The precise sidereal period of the Earth's rotation is 23 hours, 56 minutes, and 4 seconds, which is the exact time these satellites take to complete one orbit.

Q54. Answer: (d) Law of inertia

The correct answer is Law of inertia

Key Points

• Newton's First Law of Motion states that an object will continue to be in a state of rest or in a state of uniform motion along a straight line unless acted upon by an external unbalanced force.

• This law is also known as the Law of Inertia because it describes the inherent property of an object to resist any change in its state of motion.

• Inertia is the tendency of objects to keep doing what they are doing. If an object is at rest, it wants to stay at rest; if it is moving, it wants to keep moving at the same speed and in the same direction.

• Law of acceleration refers to Newton's Second Law, which states that the force acting on an object is equal to the mass of that object times its acceleration (F = ma).

• Law of action and reaction refers to Newton's Third Law, which states that for every action, there is an equal and opposite reaction.

• Law of momentum is closely related to the Second Law, as force is defined as the rate of change of linear momentum.

Additional Information

• The concept of inertia was first formulated by Galileo Galilei for horizontal motion on Earth and was later generalized by Sir Isaac Newton.

• Mass is a quantitative measure of inertia. The more mass an object has, the greater its inertia and the harder it is to change its state of motion.

• Newton's laws were first published in his seminal work titled Philosophiæ Naturalis Principia Mathematica in 1687.

• There are three types of inertia: Inertia of rest, Inertia of motion, and Inertia of direction.

Q55. Answer: (a) Chandrayaan-I

The correct answer is Chandrayaan-I

Key Points

• Chandrayaan-I was India's first mission to the Moon, launched by the Indian Space Research Organisation (ISRO) in October 2008.

• It is globally credited for the groundbreaking discovery of water molecules (H_2O) and hydroxyl (OH) on the lunar surface, which fundamentally changed the scientific understanding of the Moon.

• The discovery was made using the Moon Mineralogy Mapper (M3), an instrument provided by NASA that was carried aboard the Chandrayaan-I spacecraft.

• This finding revived international interest in lunar exploration, as it suggested that the Moon was not a completely dry desert and could potentially support future human habitation or serve as a refueling station.

• Chandrayaan-II and Chandrayaan-III were subsequent missions designed to build on this legacy by attempting soft landings and exploring the Lunar South Pole in greater detail.

• Aditya L-1 is India's first space-based mission to study the Sun and is not related to the search for water on the Moon.

Additional Information

• The PSLV-C11 rocket was used to launch Chandrayaan-I from the Satish Dhawan Space Centre in Sriharikota.

• The mission also included the Moon Impact Probe (MIP), which was intentionally crashed into the lunar surface near the Shackleton Crater to analyze the thin lunar atmosphere.

• India became the fourth country to reach the lunar surface (via the impact probe) after the Soviet Union, the United States, and Japan.

• On August 23, 2023, India's Chandrayaan-III successfully performed a soft landing near the Lunar South Pole, making India the first nation to reach that specific region.

Q56. Answer: (d) Large drums

The correct answer is Large drums.

Key Points

• In the cultural context of Uttar Pradesh, specifically the Braj region, the word Bumb refers to Large drums. These are massive kettle drums that serve as the primary percussion instrument for the Rasiya folk tradition. Hence, option 4 is correct.

• The term Bumb does not refer to Mini guitars. Traditional folk music of this region relies on percussion and wind instruments rather than western-style string instruments like guitars. Hence, option 1 is incorrect.

• While the Flute (Bansuri) is iconic to the Braj area due to its association with Lord Krishna, the specific term Bumb is reserved for

the drum, not Soft flutes. Hence, option 2 is incorrect.

• Heavy cymbals, known locally as Manjira or Jhanj, are often played alongside the Bumb, but they are distinct instruments. The Bumb specifically denotes the giant drum. Hence, option 3 is incorrect.

• The performance is popularly known as Bumb-Rasiya. It is a vibrant combination of high-energy drumming on the Bumb and the soulful singing of Rasiya songs, which are usually performed during the Holi festival in districts like Mathura, Agra, Firozabad, and Hathras.

• The Bumb drum is constructed using a large iron or wooden tub-like frame, over which buffalo hide is stretched and secured. Because of its immense size, it is played by two men using thick sticks to produce a deep, resonant sound that can be heard across several villages.

Additional Information

• Rasiya Folk Songs: The term Rasiya is derived from the word Ras, which means nectar or emotion. These songs are dedicated to the divine love between Radha and Lord Krishna. They are characterized by their erotic yet devotional themes (Shringara Rasa).

• Regional Significance: The Braj region is the heartland of this art form. It encompasses the area where Lord Krishna is believed to have spent his childhood. The songs often describe the Leelas (divine acts) of Krishna in Vrindavan and Gokul.

• Festival Association: Bumb-Rasiya is most prominent during the month of Phalguna (February-March). It is a staple of the Lathmar Holi celebrations in Barsana and Nandgaon, where the thunderous beats of the Bumb energize the crowds.

• Musical Structure: While the Bumb provides the rhythm, the melody is supported by instruments like the Dholak, Harmonium, Alghoza, and Khadtal. The singing usually involves a lead singer followed by a chorus of villagers.

• Social Function: Historically, these performances served as a means of community bonding and entertainment for farmers and laborers after the Rabi crop harvest. It remains a powerful symbol of the folk identity of Western Uttar Pradesh.

Important Points

• The Bumb drum is also known as Nagada in some contexts, but the specific Braj variant used for Rasiya is significantly larger than standard ceremonial drums.

• The Rasiya tradition has evolved over centuries, with its roots found in the Bhakti Movement of the 15th and 16th centuries, influenced by poets like Surdas and Nanddas.

• In 2019 and subsequent years, the Government of Uttar Pradesh has made significant efforts to promote Bumb-Rasiya through cultural festivals and state-sponsored fairs to preserve the dying oral traditions of the rural hinterlands.

• The Bumb is not just a musical instrument but is often treated with religious reverence, sometimes being decorated with vermilion and garlands before a major performance during Holi.

Q57. Answer: (c) Concentration

The correct answer is Concentration

Key Points

• Concentration refers to the amount of solute that is dissolved in a specific volume of solvent or a total volume of solution. It indicates how 'crowded' the solute particles are within the mixture.

• A solute is the substance being dissolved (like sugar or salt), and the solvent is the substance doing the dissolving (like water).

• Dilution is the opposite of concentration; it is the process of reducing the concentration of a solute by adding more solvent to the solution.

• Saturation is a state where a solution has dissolved the maximum amount of solute possible at a given temperature. Any further solute added will not dissolve and will settle at the bottom.

• Diffusion is the movement of particles from a region of higher concentration to a region of lower concentration until they are spread evenly.

Additional Information

• Concentration can be expressed in several ways, such as Mass by Mass percentage, Mass by Volume percentage, Molarity, and Molality.

• The Mass Percentage of a solution is calculated as: (Mass of solute / Mass of solution) × 100.

• In a homogeneous mixture, the concentration is uniform throughout the entire volume of the solution.

• Molarity is one of the most common units of concentration used in chemistry, defined as the number of moles of solute per liter of solution.

Q58. Answer: (a) Tamil Nadu

The correct answer is Tamil Nadu.

Key Points

• Tuticorin Port, which was officially renamed as the V.O. Chidambaranar Port Trust in 2011, is one of the 13 major ports in India. It is located in the Thoothukudi district of Tamil Nadu. Hence, the option Tamil Nadu is correct.

• The port is situated on the Coromandel Coast of the Bay of Bengal, specifically within the Gulf of Mannar. It serves as an all-weather artificial deep-sea port.

• The port was declared a Major Port on 11 July 1974. It is the second-largest port in Tamil Nadu after Chennai Port and is a significant hub for container trade in South India.

• The other options provided are incorrect because:

• Kerala: Its primary major port is the Cochin Port (Kochi), which is a natural harbor.

• Goa: The major port in this state is Mormugao Port, primarily known for iron ore exports.

• Maharashtra: This state houses the Mumbai Port and the Jawaharlal Nehru Port Trust (JNPT), which is the largest container port in India.

Additional Information

• Tamil Nadu is unique in India for having three major ports: Chennai Port, Kamarajar Port (Ennore), and V.O. Chidambaranar Port (Tuticorin). This highlights the state's strategic importance in maritime trade.

• The V.O. Chidambaranar Port is named after the legendary freedom fighter V.O. Chidambaram Pillai, who launched the Swadeshi Steam Navigation Company in 1906 to challenge the British monopoly in shipping.

• The port primarily handles commodities such as coal (for thermal power plants), fertilizers, rock phosphate, petroleum products, and edible oils. It acts as a gateway for the exim trade of the hinterland comprising southern Tamil Nadu and parts of Kerala.

• In terms of infrastructure, the port features a deep draft that allows it to handle large Panamax and Post-Panamax vessels, making it a vital link in the international sea route.

• The Sagar Mala Project, a flagship program of the Ministry of Ports, Shipping and Waterways, aims to modernize these ports and promote port-led development across the 7,517 km coastline of India.

Important Points

• Geographical Significance: The port's location in the Gulf of Mannar provides it with natural protection from storms and cyclones, ensuring operational efficiency throughout the year.

• Economic Impact: It contributes significantly to the industrial growth of the Madurai-Thoothukudi Industrial Corridor. The port handles over 30 million tonnes of cargo annually as per recent data.

• Environmental Initiatives: The V.O. Chidambaranar Port is striving to become a Green Port by implementing solar power projects and wind energy systems to meet its energy requirements sustainably.

• Historical Context: Tuticorin has been a center for pearl fishery for centuries, earning it the nickname Pearl City. The development of the modern port has transformed this ancient trading post into a global maritime hub.

Q59. Answer: (c) Tertiary

The correct answer is Tertiary.

Key Points

• The Tertiary sector, also known as the service sector, involves the provision of services to businesses as well as final consumers. It does not produce tangible goods but facilitates the distribution and consumption of products.

• When a fruit or vegetable vendor sells farm produce to a household, they are performing the function of Retail Trade. Trade, transport, and commerce are fundamental activities classified under the Tertiary sector. Hence, the correct answer is Tertiary.

• The Primary sector involves activities that directly exploit natural resources, such as Agriculture, Fishing, Mining, and Forestry. While the fruit itself is a product of the primary sector, the act of selling it in a market is a service. Hence, the statement regarding the Primary sector is incorrect.

• The Secondary sector includes activities where natural products are changed into other forms through ways of manufacturing or industrial processing. Since the vendor is selling the produce in its raw form without industrial transformation, it does not fall under this sector. Hence, the statement regarding the Secondary sector is incorrect.

• The Quinary sector is a specialized sub-division of the tertiary sector that includes the highest levels of decision-making in an economy. This involves top government officials, CEOs, and research scientists. Selling vegetables is a routine commercial activity and not a high-level policy-making function. Hence, the statement regarding the Quinary sector is incorrect.

Additional Information

• Primary Sector: This is often called the Agriculture and Allied sector. It provides the base for all other products that we subsequently make. In India, this sector is the largest employer, providing livelihoods to nearly 45% of the population, though its contribution to the Gross Domestic Product (GDP) is approximately 18-20%.

• Secondary Sector: Known as the Industrial sector, it adds value to raw materials by converting them into finished goods. It includes Manufacturing, Construction, Electricity, Gas, and Water Supply. This sector is crucial for the economic development of a nation as it creates infrastructure and mass employment.

• Tertiary Sector: This sector has emerged as the largest producing sector in India, replacing the primary sector in terms of GDP contribution. It includes Banking, Insurance, Education, Healthcare, Tourism, and Information Technology (IT). It accounts for over 50% of India's GDP.

• Quaternary Sector: This is the Knowledge Sector of the economy. It involves intellectual activities such as Research and

Development (R&D), Financial Planning, Consultancy, and Information Generation. It is a more specialized part of the service sector.

• Quinary Sector: This sector focuses on the creation, re-arrangement, and interpretation of new and existing ideas. It includes high-level decision-makers in government, universities, healthcare, and science.

Important Points

• Sectoral Interdependence: No sector operates in isolation. For example, a farmer in the Primary sector needs a tractor from the Secondary sector and a loan from a bank in the Tertiary sector to produce and sell crops.

• Economic Transition: Historically, developing nations like India move from being Agrarian economies (Primary-led) to Industrial economies (Secondary-led) and finally to Service economies (Tertiary-led). However, India has seen a unique trend of leapfrogging directly from agriculture to services.

• Data Collection: In India, the National Statistical Office (NSO), under the Ministry of Statistics and Programme Implementation (MoSPI), is responsible for classifying economic activities and calculating the National Income and GDP based on these sectors.

• Employment vs. GDP: While the Tertiary sector contributes the most to India's GDP, it does not employ as many people as the Primary sector, leading to a situation of disguised unemployment in agriculture.

Q60. Answer: (d) Reserve Bank of India

The correct answer is Reserve Bank of India.

Key Points

• The Reserve Bank of India (RBI) is the sole custodian and manager of the foreign exchange reserves in India. It is responsible for maintaining the external value of the Indian Rupee and ensuring the smooth conduct of international trade and payments.

• The legal framework for the custody of these reserves is provided by the Reserve Bank of India Act, 1934. Specifically, the Act mandates the bank to manage the Forex to ensure monetary stability. Hence, the correct answer is Reserve Bank of India.

• The Foreign Exchange Management Act (FEMA), 1999, which replaced the Foreign Exchange Regulation Act (FERA) of 1973, empowers the RBI to regulate and manage foreign exchange transactions and reserves in a more liberalized economic environment.

• The Ministry of Finance (Option 2) oversees the fiscal policy, taxation, and the Union Budget, but it does not hold the reserves. Hence, statement 2 is incorrect.

• The Ministry of Foreign Affairs (Option 1) manages India’s external relations and diplomacy, while the Ministry of Corporate Affairs (Option 3) focuses on the administration of the Companies Act, 2013 and other corporate laws. Neither of these institutions acts as a custodian of financial reserves. Hence, statements 1 and 3 are incorrect.

Additional Information

• Components of India’s Forex Reserves: The reserves are composed of four distinct elements: Foreign Currency Assets (FCA), Gold, Special Drawing Rights (SDRs), and the Reserve Tranche Position (RTP) in the International Monetary Fund (IMF).

• Foreign Currency Assets (FCA): This is the largest part of the reserves. It includes the value of non-US currencies like the Euro, Pound Sterling, and Japanese Yen held in the reserves, though they are usually expressed in US Dollar terms. These assets are invested in multi-currency and multi-market portfolios.

• Special Drawing Rights (SDR): Created by the IMF in 1969, the SDR is an international reserve asset. It is not a currency but a potential claim on the freely usable currencies of IMF members.

• Reserve Tranche Position (RTP): This is a portion of the quota of currency that each member country contributes to the IMF. It can be utilized by the country for its own purposes without a service fee or economic reform conditions.

Important Points

• Objectives of Reserve Management: The RBI manages the reserves with the primary objectives of safety, liquidity, and yield. Safety and liquidity are prioritized over returns to ensure the country can meet its external obligations even during global financial volatility.

• Section 40 of RBI Act: This specific section requires the Central Government to fix the exchange rate, and the RBI is obligated to buy and sell foreign exchange at that rate to maintain stability.

• Weekly Reporting: The RBI releases the data regarding the status of Foreign Exchange Reserves every Friday in its Weekly Statistical Supplement (WSS).

• Historical Significance: India’s management of reserves became a critical focus after the 1991 Balance of Payments (BoP) crisis. Since then, the RBI has maintained a robust level of reserves to act as a buffer against external shocks and speculative pressures.

Q61. Answer: (c) Gun Island

The correct answer is Gun Island.

Key Points

• Gun Island is a novel authored by Amitav Ghosh, published in June 2019. The book is a contemporary story that deals with pressing global issues such as climate change and human migration, while intertwining them with Bengali folklore and mythology.

The narrative follows the protagonist, Deen Datta, a rare book dealer, on a journey from Kolkata to the Sundarbans and eventually to Venice.

• War Talk is a collection of essays written by Arundhati Roy, published in 2003. It focuses on themes of globalization, imperialism, and the war on terror. Therefore, it is not authored by Amitav Ghosh. Hence, statement 1 is incorrect.

• Selection Day is a novel by Aravind Adiga, published in 2016. The story revolves around cricket and the lives of two brothers in Mumbai who are pushed by their father to become stars in the sport. Hence, statement 2 is incorrect.

• Midnight's Children is one of the most famous works of Salman Rushdie, published in 1981. It deals with India's transition from British colonialism to independence and the partition of India. It won the Booker Prize in 1981. Hence, statement 4 is incorrect.

• The correct book among the options authored by Amitav Ghosh is Gun Island, which highlights his recurring interest in the environment and historical connections. Hence, statement 3 is correct.

Additional Information

• Amitav Ghosh was born on 11 July 1956 in Kolkata, West Bengal. He is a prolific Indian writer known for his work in English fiction and non-fiction. In 2018, he was honored with the 54th Jnanpith Award, making him the first English-language writer to receive India's highest literary honor.

• His notable literary contributions include The Shadow Lines (1988), which won the Sahitya Akademi Award, and The Glass Palace (2000), which explores the history of Burma (now Myanmar), India, and Malaya.

• Ghosh is well-known for his Ibis Trilogy, which consists of Sea of Poppies (2008), River of Smoke (2011), and Flood of Fire (2015). This trilogy is set against the backdrop of the Opium Wars of the 19th century and involves a diverse cast of characters traveling across the Indian Ocean.

• In addition to fiction, he has written significant non-fiction works like The Great Derangement: Climate Change and the Unthinkable (2016) and The Nutmeg's Curse: Parables for a Planet in Crisis (2021), both of which examine the geopolitical and historical roots of the climate crisis.

• He was awarded the Padma Shri by the Government of India in 2007 for his distinguished service in the field of literature and education. His works are often characterized by complex narrative structures and a deep focus on post-colonialism and identity.

Q62. Answer: (a) Lala Lajpat Rai

The correct answer is Lala Lajpat Rai.

Key Points

• The book 'Unhappy India' was written by Lala Lajpat Rai in 1928. This work served as a systematic and scathing rebuttal to 'Mother India', a book published in 1927 by the American journalist Katherine Mayo. Hence, option 1 is correct.

• Katherine Mayo's book was widely regarded by Indians as British propaganda. It focused exclusively on the social pathologies of India, such as child marriage, untouchability, and sanitation issues, to argue that Indians were culturally backward and unfit for self-governance.

• In 'Unhappy India', Lala Lajpat Rai utilized comparative statistics and historical data to show that similar social problems existed in Western countries, including the United States and England. He argued that the British colonial administration was largely responsible for the economic and social stagnation of the Indian subcontinent.

• Rajendra Prasad, who later became the first President of India, authored the book 'India Divided' in 1946, which analyzed the Two-Nation Theory and the demand for Pakistan. Hence, statement 2 is incorrect.

• Bipin Chandra Pal was a revolutionary leader and a brilliant orator often called the 'Father of Revolutionary Thoughts', but he was not the author of this specific reply to Mayo. Hence, statement 3 is incorrect.

• Bal Gangadhar Tilak, a prominent nationalist leader, wrote 'The Arctic Home in the Vedas' and 'Gita Rahasya' (written during his imprisonment in Mandalay), but he passed away in 1920, years before Mayo's book was published. Hence, statement 4 is incorrect.

Additional Information

• Lala Lajpat Rai (born January 28, 1865) was a legendary freedom fighter from Punjab, earned the titles 'Punjab Kesari' and 'Sher-e-Punjab' (Lion of Punjab). He was a key figure in the Lal-Bal-Pal trio of the Extremist faction of the Indian National Congress.

• He was a staunch follower of Swami Dayanand Saraswati and played a pivotal role in the expansion of the Arya Samaj in North India. He also co-founded the Punjab National Bank in 1894 and the Lakshmi Insurance Company.

• Katherine Mayo's 'Mother India' caused such an international stir that Mahatma Gandhi reviewed it in 'Young India', famously labeling it a 'Drain Inspector's Report' because it focused only on the filth and ignored the beauty of the nation.

• Lala Lajpat Rai was also the President of the Indian National Congress during the Calcutta Special Session in 1920, where the Non-Cooperation Movement was first discussed.

• He founded the Servants of the People Society in 1921, a non-profit welfare organization aimed at training national missionaries for service to the country.

Important Points

• Martyrdom: In October 1928, Lala Lajpat Rai led a massive protest against the Simon Commission in Lahore. During the

demonstration, he was severely injured in a lathi charge sanctioned by the British police superintendent James A. Scott.

• He famously declared, 'Every blow on my body will prove a nail in the coffin of the British Empire.' He passed away on November 17, 1928, due to the injuries sustained.

• Retaliation: His death deeply affected the young revolutionaries of the Hindustan Socialist Republican Association (HSRA). Bhagat Singh, Shivaram Rajguru, and Sukhdev Thapar vowed to avenge his death, leading to the Lahore Conspiracy Case and the assassination of John P. Saunders in December 1928.

• Literary Contributions: Apart from 'Unhappy India', his other significant writings include 'Young India: An Interpretation and a History of the Nationalist Movement from Within' and 'The Story of My Deportation'.

Q63. Answer: (d) Gangaikonda Cholapuram Temple

The correct answer is Gangaikonda Cholapuram Temple.

Key Points

• Gangaikonda Cholapuram Temple, also known as the Brihadisvara Temple at Gangaikondacholapuram, is a recognized UNESCO World Heritage Site. It is part of the Great Living Chola Temples group, which showcases the architectural brilliance of the Chola Empire. Hence, statement 4 is correct.

• Kamakhya Temple is a significant Shakti Peeth located on the Nilachal Hill in Guwahati, Assam. Although it is a site of immense religious and historical importance, it has not been inscribed on the UNESCO World Heritage list. Hence, statement 1 is incorrect.

• Meenakshi Amman Temple is an iconic Dravidian style temple situated in the ancient city of Madurai, Tamil Nadu. While it is currently on the UNESCO Tentative List, it does not yet hold the official status of a World Heritage Site. Hence, statement 2 is incorrect.

• Kashi Vishwanath Temple is one of the holiest Hindu temples dedicated to Lord Shiva, located in Varanasi, Uttar Pradesh. Despite its ancient heritage and spiritual status, it is not a UNESCO World Heritage Site. Hence, statement 3 is incorrect.

• The Great Living Chola Temples were built by kings of the Chola Empire and stretch across the state of Tamil Nadu. This site includes three great temples of the 11th and 12th centuries: the Brihadisvara Temple at Thanjavur, the Brihadisvara Temple at Gangaikondacholapuram, and the Airavatesvara Temple at Darasuram.

Additional Information

• Gangaikonda Cholapuram Temple: It was constructed by Rajendra Chola I in the 11th Century (around 1035 AD) to commemorate his victory over the Pala Dynasty of Bengal. He took the title Gangaikonda, meaning 'the one who conquered the Ganges'. The temple is famous for its Vimana (tower) which stands at a height of 55 meters and its intricate sculptures of Dancing Ganesha and Ardhanarishvara.

• UNESCO World Heritage Sites in India: As of 2024, India is home to 42 UNESCO World Heritage Sites. This includes 34 cultural sites, 7 natural sites, and 1 mixed site (Khangchendzonga National Park). The Great Living Chola Temples represent the peak of Dravida architecture and were inscribed in 1987 (Thanjavur) and expanded in 2004 (Gangaikondacholapuram and Darasuram).

• Kamakhya Temple Features: It is the center of Tantric practices and is famous for the annual Ambubachi Mela. The temple's current structure was rebuilt in the 16th Century by the Koch King Nara Narayana.

• Meenakshi Temple Features: It is known for its 14 gopurams (gateway towers), ranging from 45 to 50 meters in height. The tallest is the southern tower, reaching 51.9 meters. It was largely rebuilt by the Nayyak Dynasty in the 16th and 17th centuries.

• Kashi Vishwanath Temple Features: The current structure was built by the Maratha ruler, Ahilyabai Holkar of Indore, in 1780. The temple's two domes were covered in gold donated by Maharaja Ranjit Singh of Punjab in 1839.

Important Points

• The UNESCO (United Nations Educational, Scientific and Cultural Organization) designates sites that have 'outstanding universal value' to humanity.

• The Chola temples are unique because they are 'living' temples, meaning the rituals and worship established nearly a thousand years ago are still practiced today.

• The Brihadisvara Temple at Thanjavur was the first of the group to be listed in 1987, while the Gangaikonda Cholapuram and Darasuram temples were added during the 28th session of the World Heritage Committee in 2004.

• The Airavatesvara Temple at Darasuram was built by Rajaraja Chola II in the 12th Century and is smaller but more ornate than the other two Brihadisvara temples.

Q64. Answer: (a) Mumbai

The correct answer is Mumbai.

Key Points

• The Chhatrapati Shivaji Maharaj Terminus (CSMT) is a historic terminal train station and a UNESCO World Heritage Site located in the city of Mumbai, Maharashtra, India.

• It serves as the headquarters of the Central Railway, one of the 19 zones of the Indian Railways.

• The station was designed by the British architectural engineer Frederick William Stevens, who worked on the project for ten years starting in 1878.

• It is a prime example of Victorian Gothic Revival architecture in India, which also incorporates elements of Indian traditional architecture, such as the stone dome, turrets, and pointed arches.

• The station is the correct answer as it is a landmark synonymous with Mumbai; other options like Kolkata, Delhi, and Ahmadabad have their own primary terminals such as Howrah Junction, New Delhi Railway Station, and Ahmedabad Junction respectively.

Additional Information

• The station was originally named Victoria Terminus (VT) to commemorate the Golden Jubilee of Queen Victoria in 1887.

• In 1996, the station was renamed Chhatrapati Shivaji Terminus in honor of the founder of the Maratha Empire, Chhatrapati Shivaji. The word Maharaj was later added to the name in July 2017.

• The architectural style is often described as Indo-Saracenic, featuring a blend of Western and Eastern influences, including wood carvings, ornamental iron, and brass railings.

• The building is constructed from a mix of light-colored sandstone and grey basalt, with Italian marble used for some of the interior decorative elements.

• It is one of the busiest railway stations in the world, serving as a hub for both long-distance trains and the Mumbai Suburban Railway, which carries millions of passengers every day.

Important Points

• The site where CSMT stands today was originally known as Bori Bunder, which was the location of the first railway station in India.

• The first passenger train in India departed from Bori Bunder to Thane on April 16, 1853, covering a distance of 34 kilometers.

• The station has 18 platforms in total; platforms 1 to 7 are utilized for Suburban local trains, while platforms 8 to 18 are used for Main Line outstation trains.

• The UNESCO recognition was granted in 2004, citing the station as an outstanding example of the meeting of two cultures, as British architects worked with Indian craftsmen to create a unique architectural style.

• The central dome of the building is topped by a colossal figure of a woman holding a torch pointing upwards, symbolizing Progress.

Q65. Answer: (a) Only I

The correct answer is Only I

Key Points

• Electromagnets are temporary magnets that consist of a coil of wire wrapped around a soft iron core, which becomes magnetized only when an electric current flows through the coil.

• Statement I is correct because electromagnets are extensively used in cranes at junk yards and recycling centers to separate magnetic substances like iron and steel from non-magnetic scrap material.

• Statement II is incorrect because sharpening pencils is a mechanical process involving cutting blades or abrasive surfaces to shave away wood; it does not utilize magnetic fields or electromagnetic induction.

• The strength of an electromagnet can be easily controlled by changing the amount of electric current or the number of turns in the solenoid, making it ideal for industrial lifting.

Additional Information

• Electromagnets are used in various daily appliances such as electric bells, loudspeakers, headphones, and electric motors.

• In the field of medicine, they are a critical component of Magnetic Resonance Imaging (MRI) scanners, which help in visualizing the internal structures of the body.

• Maglev (Magnetic Levitation) trains use powerful electromagnets to lift and propel the train above the tracks, eliminating friction and allowing for extremely high speeds.

• Unlike permanent magnets, the magnetism of an electromagnet can be turned ON or OFF instantly by controlling the power supply.

Q66. Answer: (d) Work the system

The correct answer is Work the system

Key Points

• The correct answer is: Work the system. It means to exploit rules or loopholes for personal gain, often in a clever or slightly dishonest manner.

Additional Information

• Buck the system means opposing or resisting established rules.

Q67. Answer: (b) As the crow flies

The correct answer is: As the crow flies. It means the shortest, most direct path between two points in a straight line, ignoring geographical obstacles.

Key Points

• It denotes direct distance; others are incorrect.

Additional Information

• Used in navigation.

Q68. Answer: (d) Greater value for the amount of money one is spending

The correct answer is Greater value for the amount of money one is spending

Key Points

• The correct answer is: Greater value for the amount of money one is spending. It means better value.

Additional Information

• Buck: dollar.

Q69. Answer: (c) Occasional

The correct answer is Occasional

Key Points

• The correct answer is: Occasional. The correct spelling is Occasional, meaning happening from time to time or occurring irregularly.

Additional Information

• It is an adjective.

Q70. Answer: (c) anathema

The correct answer is anathema

Key Points

• The correctly spelled word is anathema, which refers to something or someone that one vehemently dislikes or a formal ecclesiastical curse involving excommunication.

• The spelling provided in the sentence, 'anathima', is incorrect because the vowel following the 'th' must be an 'e', not an 'i'.

• Option 1 (anethema) is incorrect because the first syllable starts with the letter 'a', not 'e'.

• Option 2 (anathama) is incorrect because the third syllable uses the vowel 'e', not 'a'.

• In the context of the sentence, the word signifies that the person's actions were repugnant, detestable, or offensive to the community, resulting in his exile.

Additional Information

• The word anathema originates from the Greek word 'anathema', which originally meant 'a thing set up' but later evolved to mean 'a thing devoted to evil'.

• Common synonyms for anathema include abomination, curse, execration, antipathy, and bane.

• It is frequently used in religious, political, or social contexts to describe ideas or behaviors that are completely rejected by a group.

Q71. Answer: (a) Comfort

The correct answer is Comfort

Key Points

• The word Solace refers to the comfort, consolation, or relief provided to someone during a time of distress, sadness, or misfortune.

• Comfort is the closest synonym because it describes the state of being eased from pain or grief, which aligns perfectly with the meaning of solace.

• Sorrow and Distress are incorrect because they represent the negative emotional states that a person might feel, rather than the relief from them. In fact, solace is what one seeks when experiencing sorrow or distress.

• Anger is incorrect as it refers to a strong feeling of displeasure or hostility, which is unrelated to the concept of finding peace or consolation.

Additional Information

• The word Solace originates from the Old French word solas and the Latin word solari, which means to console.

• Common synonyms for solace include consolation, relief, alleviation, and succor.

• Common antonyms for solace include anguish, misery, torment, and suffering.

YourMockTest.com — Free Study Material

• Example usage: 'After the loss of her pet, she found solace in writing poetry.'

Q72. Answer: (c) Unique

The correct answer is Unique

Key Points

• The correct answer is: Unique. Special means better or different from what is usual. Unique means being the only one of its kind. Both words describe something distinct, making them similar in meaning as synonyms.

Additional Information

• Words like Common, Ordinary, and Usual are antonyms of special, as they refer to things that are regular or frequent.

Q73. Answer: (a) indispensible

The correct answer is indispensible

Key Points

• The word indispensible is misspelt in the given sentence. The correct spelling is indispensable.

• The term indispensable is an adjective used to describe something that is absolutely necessary, essential, or requisite for a particular purpose.

• The spelling error occurs in the suffix; it must end with -able rather than -ible. This is a frequent error in English orthography due to the neutral vowel sound (schwa) in the unstressed syllable.

• The other words in the sentence are spelled correctly:

• Transformative: Refers to something that causes a significant change or metamorphosis.

• Strategic: Relates to a carefully planned action to achieve a specific long-term goal.

• Premature: Refers to something happening too early or before the appropriate time.

Additional Information

• The word indispensable is derived from the Medieval Latin word indispensabilis, where in- means not and dispensabilis means disposable.

• Common synonyms for indispensable include critical, integral, paramount, and fundamental.

• Common antonyms include redundant, optional, minor, and dispensable.

• A useful mnemonic to remember the spelling is that indispensable is able to be needed (ending in -able).

Q74. Answer: (c) Abandon

The correct answer is Abandon

Key Points

• The correct answer is: Abandon. Accompany means to go with someone. Abandon means to leave someone behind. These words are opposites, as one implies staying together while the other implies leaving.

Additional Information

• Antonyms are words with contrasting meanings. Common synonyms for accompany include escort, guide, and consort, which all imply togetherness.

Q75. Answer: (d) Pain

The correct answer is Pain

Key Points

• The correct answer is: Pain. Pleasure means a feeling of happy satisfaction. Pain means physical suffering or discomfort. These words are antonyms because they represent completely opposite emotional or physical states.

Additional Information

• Words like Enjoyment, Delight, and Happiness are synonyms of Pleasure as they share similar meanings.

Q76. Answer: (b) Botanist

The correct answer is Botanist

Key Points

• Botanist: A scientist who specializes in the study of plant life, including their structure, properties, and biochemical processes. This is the most suitable one-word substitution for a person who studies plants.

• Zoologist: A scientist who studies animals, their behavior, physiology, classification, and distribution.

• Biologist: A broad term for a scientist who studies living organisms and their relationship to their environment. This field encompasses both botany and zoology.

• Horticulturist: A person who specializes in the art or practice of garden cultivation and management, focusing on growing fruits,

YourMockTest.com — Free Study Material

vegetables, flowers, or ornamental plants for human use or beauty.

Additional Information

• The scientific study of plants is known as Botany, which is a major branch of Biology.

• Theophrastus, a Greek philosopher, is widely regarded as the Father of Botany due to his extensive writings on plants.

• Modern botany uses DNA sequencing and molecular biology to understand the evolutionary relationships between different plant species.

• Carl Linnaeus is another significant figure in this field, known as the Father of Modern Taxonomy, for developing the system of naming organisms called binomial nomenclature.

Q77. Answer: (a) Raconteur

The correct answer is Raconteur

Key Points

• The correct answer is: Raconteur. A raconteur is a person who tells anecdotes in a skilful and amusing way. This word describes a gifted storyteller who captivates an audience with wit, humour, and skill.

Additional Information

• Sybarite refers to a luxury-loving person, Martinet is a strict disciplinarian, and Epicurean denotes someone fond of fine food and pleasure.

Q78. Answer: (a) with

The correct answer is with

Key Points

• The phrasal verb 'part with' is an idiomatic expression that means to give up possession of something, especially something that you would prefer to keep or that is valuable.

• In the context of the sentence, 'money' is a possession that people are often reluctant to give away, making 'with' the grammatically correct preposition.

• The phrase 'part from' is typically used when referring to separating from a person or leaving someone's company (e.g., 'He was sad to part from his friends').

• Options like 'on' and 'away' do not form standard idiomatic collocations with the verb 'part' to convey the meaning of giving something up.

Additional Information

• Prepositions are words that show the relationship between a noun or pronoun and other words in a sentence.

• Fixed Prepositions are specific prepositions that are always used with certain verbs, adjectives, or nouns to convey a particular meaning.

• Example of 'part with': 'She found it hard to part with her childhood toys.'

• Example of 'part from': 'The travelers parted from each other at the crossroads.'

Q79. Answer: (a) instead of

The correct answer is instead of

Key Points

• The prepositional phrase instead of is used to indicate that one person, thing, or action replaces or is chosen in preference to another.

• In the given sentence, pancakes were eaten as a substitute for burgers, making instead of the logically correct choice.

• Option 2 (because of) and Option 3 (owing to) are used to indicate a reason or cause. They do not fit here because burgers are not the cause of eating pancakes.

• Option 4 (again) is an adverb meaning 'once more'. It cannot function as a preposition to connect the two nouns 'pancakes' and 'burgers' in this context.

Additional Information

• Instead of is a compound preposition that is typically followed by a noun, pronoun, or a gerund (the -ing form of a verb).

• Owing to is often used at the beginning of a sentence and is generally considered more formal than because of.

• Prepositions are essential parts of speech that establish relationships in time, space, or logic between different elements of a sentence.

Q80. Answer: (a) of

The correct answer is of

Key Points

YourMockTest.com — Free Study Material

• The verb deprived is a transitive verb that is consistently followed by the fixed preposition of.

• The phrase deprived of means to take something away from someone or to prevent them from possessing or enjoying something, especially something essential.

• In the given sentence, the poor and the downtrodden are the subjects who were denied their basic necessities, making of the only grammatically correct choice.

• Options such as up, for, and about do not form standard idiomatic expressions with the word deprived and therefore result in an incorrect sentence structure.

Additional Information

• Fixed Prepositions are specific prepositions that are mandatory after certain verbs, adjectives, or nouns to convey a particular meaning.

• Other common examples of verbs followed by of include: Accused of, Aware of, Guilty of, Remind of, and Think of.

• The term downtrodden describes people who are oppressed, subjugated, or treated unfairly by those in positions of authority.

• The word necessities refers to things that are indispensable or absolutely required for life, such as food, water, and shelter.

Q81. Answer: (a) consistent with the facts presented earlier

The correct answer is consistent with the facts presented earlier

Key Points

• The underlined part consistent to the facts presented earlier contains a prepositional error.

• The adjective consistent is idiomatically followed by the preposition with when it means being in agreement or harmony with something.

• The phrase consistent with is used to show that two or more things (statements, behaviors, or facts) do not contradict each other.

• Therefore, Option 1 is the correct replacement as it uses the appropriate preposition with to link the statement to the facts.

• Options 2 and 3 are incorrect because consistent on and consistent of are not standard idiomatic expressions in this context.

Additional Information

• Synonyms for consistent with include compatible with, in accord with, and congruent with.

• Antonym: The opposite is inconsistent with, which means having parts that disagree with each other.

• Example: The findings of the new study are consistent with previous research in the field.

Q82. Answer: (c) CDBA

The correct answer is CDBA

Key Points

• The correct answer is: CDBA. S1 introduces fear, which C links to knowledge. D defines this knowledge as understanding devastation. B argues nuclear bombs don't naturally inspire peace, while A credits human activism for preventing war. This sequence is correct because it logically transitions from the psychology of fear to the necessity of knowledge, concluding with S2's focus on ignorance.

• The core logic relies on the lexical chain of fear and knowledge. S1 ends with fear, and Sentence C immediately qualifies it using the conjunction But. Sentence D acts as a grammatical extension of C, explaining what the knowledge entails.

• Sentence B and Sentence A form a contrasting pair; B negates the idea that bombs inherently create peace, and A provides the actual reason (human effort). The paragraph concludes with S2, which mirrors the knowledge theme by identifying ignorance as the reason deterrence fails.

Additional Information

• Nuclear Deterrence is a military strategy based on the idea that an enemy will be dissuaded from attacking if the cost of retaliation is too high, often associated with the Mutually Assured Destruction (MAD) doctrine.

• This text is an excerpt from Arundhati Roy's essay The End of Imagination, written in response to India's Pokhran-II nuclear tests in 1998.

Q83. Answer: (b) DBAC

The correct answer is DBAC

Key Points

• The correct answer is: DBAC. S1 introduces tree competition. D identifies the banyan's dominance. B notes its adaptation under pressure. A describes the spreading process. C details the complex trunk-dropping mechanism creating thickets. S2 concludes with their unrivalled complexity. D follows S1 because it specifies the banyan as the dominant species in the competition.

Additional Information

• The Banyan tree (Ficus benghalensis) is the National Tree of India, symbolizing eternal life due to its expanding branches. It is a strangler fig that begins life as an epiphyte, eventually surrounding its host with aerial prop roots that grow into thick, woody

trunks.

Q84. Answer: (b) CDAB

The correct answer is CDAB

Key Points

• The correct answer is: CDAB. S1 introduces Peter, C notes his local fame, D describes his laziness, A specifies his refusal of indoor trades, and B highlights his preference for the outdoors, leading to S2's nature details. CDAB is correct because it moves from general reputation to specific traits, concluding with his love for nature which perfectly aligns with S2.

Additional Information

• The story of Peter Klaus is a traditional German folk tale that served as the primary inspiration for Washington Irving's famous 1819 short story, 'Rip Van Winkle'. It explores themes of character, nature, and the passage of time.

Q85. Answer: (a) on the same page

The correct answer is Option 1

Key Points

• The underlined part 'in the same page' is grammatically incorrect because it uses the wrong preposition.

• The correct idiomatic expression is 'on the same page'.

• The idiom 'on the same page' means to be in agreement, to think in a similar way, or to have the same understanding of a situation or plan.

• In the context of the sentence, it signifies that all stakeholders must be aligned and share the same information before the negotiations begin.

• Option 2 ('on the same plate') is not a standard idiom, and Option 3 ('in the same boat') refers to being in the same difficult situation, which does not fit the context of reaching a mutual understanding as well as Option 1 does.

Additional Information

• Idioms are fixed expressions whose meanings cannot be understood simply by looking at the individual words. Precision with prepositions is crucial in English idioms.

• 'In the same boat': This idiom means to be in the same unpleasant or challenging circumstances as others. Example: 'Since we both lost our jobs, we are in the same boat.'

• 'Have a lot on one's plate': A related phrase meaning to be very busy or to have a lot of responsibilities to handle at once.

• 'Stakeholders': Refers to individuals or groups that have an interest or investment in a business or project and are affected by its outcomes.

Q86. Answer: (c) Mismatch between skills and market needs

The correct answer is: Mismatch between skills and market needs. The passage identifies mismatches between labour market skills and education as a primary cause of youth unemployment.

Key Points

• The text explicitly states that youth unemployment results from mismatches between labour market skills and education levels, alongside automation and lack of job creation.

• Graduates remain outside the workforce because their academic knowledge does not align with the skills required for stable employment in the current market.

Additional Information

• Addressing this issue requires systematic approaches that link educational institutions with market demands through vocational and digital training.

• Long-term unemployment can lead to psychological distress, social alienation, and significant delays in achieving financial independence for young people.

Q87. Answer: (a) Prolonged unemployment results in delays in financial independence and limits upward mobility

The correct answer is: Prolonged unemployment results in delays in financial independence and limits upward mobility. Passage states that long-term unemployment causes financial delays and restricts upward mobility.

Key Points

• The passage explicitly identifies that long-term unemployment leads to delays in financial independence and limits upward mobility, making option 1 the only logically supported consequence.

Additional Information

• Other negative effects of youth unemployment include lost productivity, psychological distress, and social alienation, necessitating systematic policy interventions involving education, business, and government.

Q88. Answer: (a) To align education with labour market demands and provide vocational and digital training

The correct answer is: To align education with labour market demands and provide vocational and digital training

Key Points

• The passage suggests linking educational institutions with labour market demands.

Additional Information

• Youth unemployment contributes to psychological distress and social alienation.

Q89. Answer: (b) It produces graduates who have both academic knowledge and practical skills for sustained growth

The correct answer is: It produces graduates who have both academic knowledge and practical skills for sustained growth. This synergy ensures youth gain academic knowledge and practical skills.

Key Points

• The passage emphasizes that successful policy intervention must combine education, business, and government to bridge the gap between academic knowledge and labour market demands.

• This collaboration is essential to produce graduates equipped with the practical skills necessary for sustained social and economic growth, unlike options suggesting theoretical memorization or isolated government action.

Additional Information

• Youth unemployment leads to lost productivity, psychological distress, and social alienation, while limiting financial independence and upward mobility.

• Strategies like vocational training, digital training, and inclusive economic opportunities are vital for aligning education with automation and job creation.

Q90. Answer: (d) Education should adapt to market needs while promoting inclusive economic opportunities.

The correct answer is: Education should adapt to market needs while promoting inclusive economic opportunities. The passage advocates aligning educational institutions with labour market demands for sustainable employment.

Key Points

• The text identifies a skill mismatch between higher education and labour market skills as a primary cause of youth unemployment.

• It proposes a systematic approach that links educational institutions, business, and government to ensure economic growth.

• The solution emphasizes vocational training and digital skills to prepare young people for modern workforce demands.

Additional Information

• Automation and a lack of job creation are significant barriers preventing young people from finding meaningful employment.

• Persistent unemployment contributes to psychological distress, social alienation, and delayed financial independence for the youth.

More previous year papers and mock tests: **www.yourmocktest.com/pyq**

YourMockTest.com - Free Study Material