SSC CHSL 2020 Official Paper 14 (Held On: 19 April 2021 Shift 2) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2020 • 100 questions • 60 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-chsl/ssc-chsl-2020-official-paper-14-held-on-19-april-2021-shift-2-pr…

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

YourMockTest.com — Free Study Material

ENGLISH LANGUAGE

Q1. Select the most appropriate meaning of the given idiom.

Getting butterflies in one's stomach

(a) To be confident of oneself
(b) To be anxious and nervous
(c) To be suspicious of someone
(d) To be very angry with someone

Q2. Select the correct indirect form of the given sentence.

Dr. Chanda said, “I will definitely write about this case in the medical journal.”

(a) Dr. Chanda said that I will definitely write about this case in the medical journal.
(b) Dr. Chanda said that she will definitely write about this case in the medical journal.
(c) Dr. Chanda said that she would definitely write about that case in the medical journal.
(d) Dr. Chanda said that she would definitely be writing about this case in the medical journal.

Q3. Select the most appropriate ANTONYM of the given word.

HASTE

(a) urgency
(b) drive
(c) delay
(d) inspire

Q4. Select the most appropriate ANTONYM of the given word.

PLUNGE

(a) dive
(b) duck
(c) rise
(d) fall

Q5. Select the INCORRECTLY spelt word.

(a) celebrate
(b) separate
(c) celibate
(d) segragate

Q6. Select the most appropriate option to fill in the blank.

We had our time of peace and goodwill, a time I will _____ as long as I live.

(a) esteem
(b) cherish
(c) think

(d) cheap

Q7. Select the INCORRECTLY spelt word.

(a) parallal
(b) principal
(c) plural
(d) subsonic

Q8. In the given sentence, identify the segment which contains the grammatical error.

He part the grass at the place where he had seen the deer.

(a) He part the grass
(b) where he had seen
(c) at the place
(d) the deer

Q9. In the given sentence, identify the segment which contains the grammatical error.

Bags and purses were thoroughly checking at the entrance to the theatre.

(a) were thoroughly checking
(b) at the entrance
(c) to the theatre
(d) Bags and purses

Q10. Select the option which means the same as the group of words given.

Animals that live in water

(a) aerial
(b) aquatic
(c) terrestrial
(d) arboreal

Q11. Fill in the blank with most appropriate word.

_____ of adulterated food stuff being sold in the market.

(a) Wary
(b) Beware
(c) Aware
(d) Cautious

Q12. Select the correct passive form of the given sentence.

The prisoners of this jail have woven these carpets.

(a) The prisoners have been woven by these carpets of this jail.
(b) These carpets have been woven by the prisoners of this jail.
(c) These carpets were woven by the prisoners of this jail.
(d) These carpets wove the prisoners of this jail.

Q13. Select the correct indirect form of the given sentence.

The gardener said to the children, "Please do not pluck any flowers."

(a) The gardener requested the children not to pluck any flowers.
(b) The gardener told to the children to kindly not pluck any flowers.
(c) The gardener ordered the children to not pluck any flowers.
(d) The gardener requested to the children please do not pluck any flowers.

Q14. In the given sentence, identify the segment which contains a grammatical error.

Why didn’t you submitted your project on time?

(a) you submitted
(b) your project

YourMockTest.com — Free Study Material

(c) Why didn't
(d) on time

Q15. In the given sentence, identify the segment which contains the grammatical error.

Electric heaters were providing to all the officers at the guest house.

(a) at the guest house
(b) were providing
(c) to all the officers
(d) Electric heaters

Q16. Select the most appropriate synonym of the given word.

Stretch

(a) extend
(b) cease
(c) close
(d) compress

Q17. Select the most appropriate meaning of the given idiom.

Living in a fool's paradise

(a) To believe wrongly that your situation is good
(b) To be fooled by someone
(c) To live in luxuriously after fooling someone
(d) To live in a world of imagination

Q18. Select the misspelt word.

(a) parachute
(b) partner
(c) tarriff
(d) sergeant

Q19. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution'.

Supriya as well as her friends have gone of a trekking expedition.

(a) have gone on
(b) has gone on
(c) No substitution
(d) are going at

Q20. Select the most appropriate option to fill in the blank.

I should have stopped them then and there. But it never even _____ to me that I should.

(a) suggested
(b) happened
(c) occurred
(d) reminded

Directions

Direction: In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

Many people believe that animals possess a sixth sense and know (1) ____ the earth is going to shake. Some experts (2) __ that animals' more acute hearing helps (3) __ to hear or feel the earth's vibrations. (4) __ can sense an approaching disaster long before humans (5) ____ what's going on.

YourMockTest.com — Free Study Material

Q21. Select the most appropriate option for blank no. 1.

(a) why
(b) when
(c) where
(d) how

Q22. Select the most appropriate option for blank no. 2.

(a) believe
(b) are believing
(c) believing
(d) believed

Q23. Select the most appropriate option for blank no. 3.

(a) us
(b) them
(c) they
(d) one

Q24. Select the most appropriate option for blank no. 4.

(a) We
(b) Them
(c) You
(d) They

Q25. Select the most appropriate option for blank no. 5.

(a) reflect
(b) realise
(c) renew
(d) restore

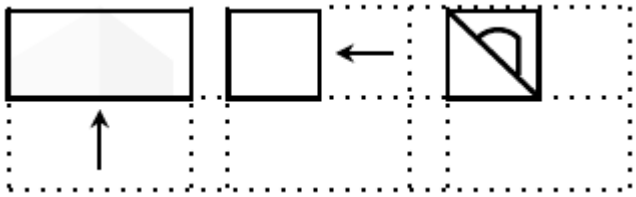
GENERAL INTELLIGENCE

Q26. Select the option in which the words share the same relationship as that shared by the given pair of words.

Butcher : Knife

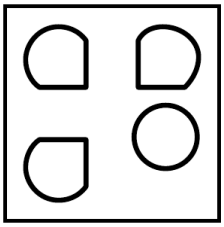
(a) Hairdresser : Hammer
(b) Electrician : Chisel
(c) Teacher : Chalk
(d) Carpenter : Scissors

Q27. The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in the following figures. How would this paper look when unfolded?

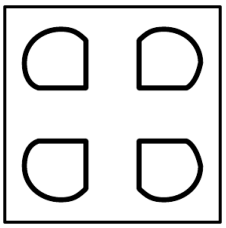


YourMockTest.com — Free Study Material

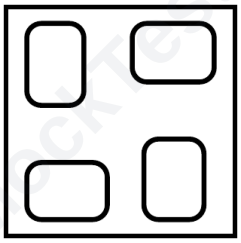
(a)



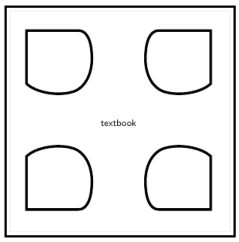
(b)



(c)



(d)



Q28. In a certain code language, IMPUDENT is written as PFXMHAWK. How will ABNORMAL be written in that language?

(a) EXRKPOOX
(b) YDLQJUID
(c) EKRXPOXO
(d) YQLDIUJD

Q29. Select the option that is related to the third term in the same way as the second term is related to the first term.

MONKEY : XDJMNL :: TIGER : ?

(a) QDFHP
(b) QDFHR
(c) QDFHS
(d) DQFHS

Q30. Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the letter-cluster that is different.

(a) SWDZ
(b) RVGC
(c) FJQM
(d) GKRN

YourMockTest.com — Free Study Material

Q31. Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary.

1. Misappropriate
2. Misbehave
3. Microorganism
4. Miscellaneous
5. Mineralize

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

Q32. Select the option that is related to the third word in the same way as the second word is related to the first word.

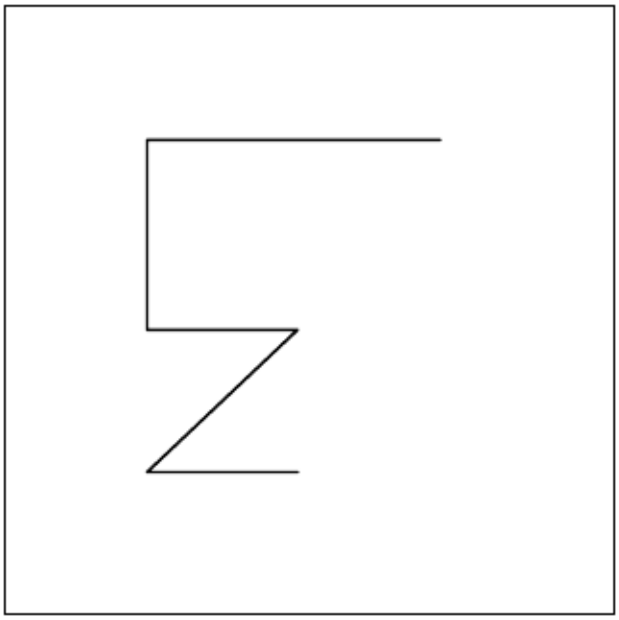
Death : Accident :: Starvation : ?

(a) Hunger strike
(b) Joy
(c) Unhappy
(d) Angry

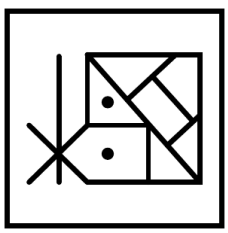
Q33. Four words have been given, out of which three are alike in some manner and one is different. Select the word that is different.

(a) Slavery
(b) Convenience
(c) Choice
(d) Autonomy

Q34. Select the option in which the given figure is embedded (rotation is NOT allowed).

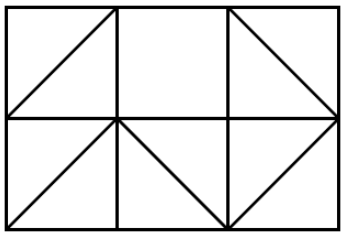


(a)

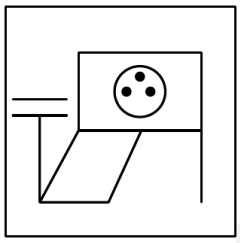


YourMockTest.com — Free Study Material

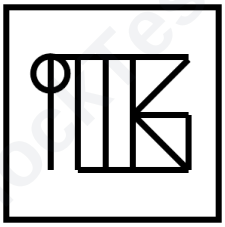
(b)



(c)



(d)



Q35. Four numbers have been given, out of which three are alike in some manner and one is different. Select the number that is different.

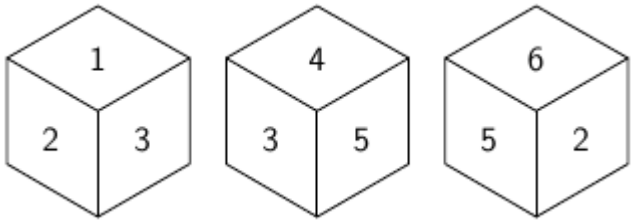
(a) 3437
(b) 7437
(c) 7415
(d) 5453

Q36. Select the number from among the given options that can replace the question mark (?) in the following series.

3, 7, 13, 25, 47, 83, ?

(a) 273
(b) 173
(c) 137
(d) 237

Q37. Three different position of the same dice are shown. Select the number that will be on the face opposite to the face showing '1'.



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

YourMockTest.com — Free Study Material

Q38. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All balls are fans.

No fan is a player.

Some players are wickets.

Conclusions:

I. Some players are fans.

II. Some wickets are balls.

III. Some fans are balls.

(a) Only conclusion I follows
(b) Only conclusion II follows
(c) Both conclusions II and III follow
(d) Only conclusion III follows

Q39. Which two signs should be interchanged to make the following equation correct?

13 × 2 - (8 ÷ 4) + (4 × 1) = 24

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

Q40. Select the option in which the numbers are related in the same way as are the numbers of the following set.

(7, 12, 18)

(a) (6, 12, 15)
(b) (4, 6, 8)
(c) (5, 9, 11)
(d) (8, 14, 21)

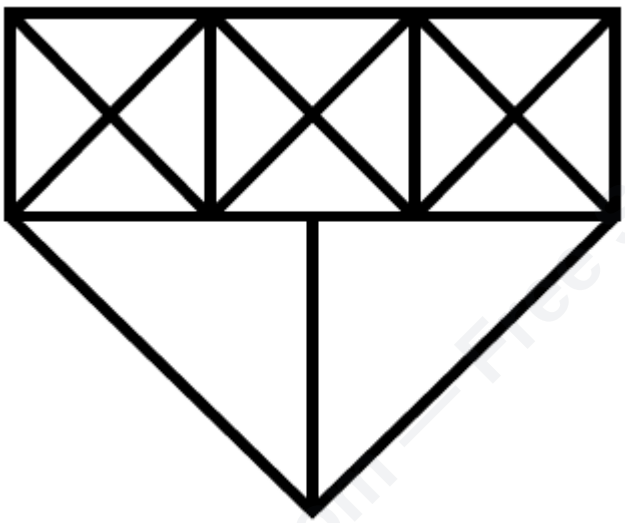
Q41. Select the option that is related to the third number in the same way as the second number is related to the first number.

8 : 69 :: 7 : ?

(a) 56
(b) 57
(c) 54
(d) 55

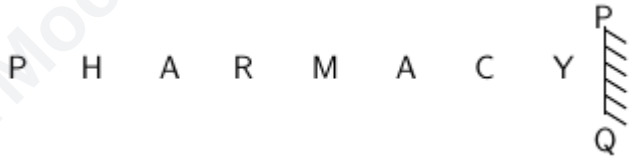
Q42. Find the number of triangles in the given figure.

YourMockTest.com — Free Study Material



(a) 29
(b) 31
(c) 27
(d) 33

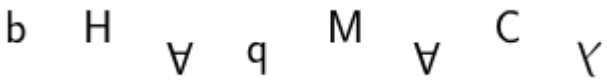
Q43. Select the correct mirror image of the given combination when the mirror is placed at 'PQ' at shown.



(a)



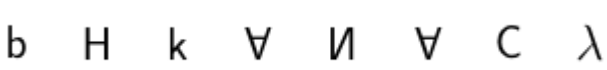
(b)



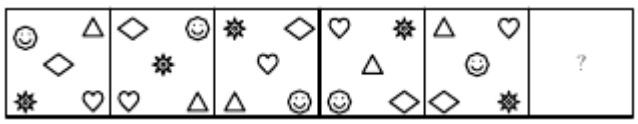
(c)



(d)



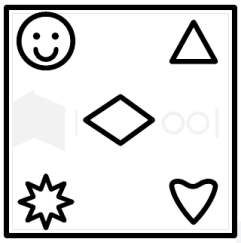
Q44. Select the figure that will replace the question mark (?) in the following figure series.



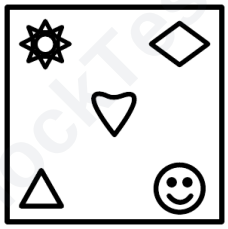
(a)



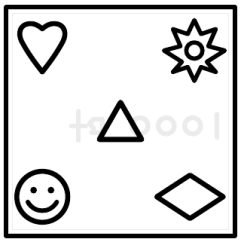
(b)



(c)



(d)



Q45. Study the given pattern carefully and select the number that can replace the question mark (?) in it.

4	10	16
6	4	13
8	?	26

(a) 18
(b) 14
(c) 12
(d) 16

Q46. 2 train tickets from Mohali to Delhi and 3 tickets from Mohali to Jammu cost Rs. 800. But 3 tickets from Mohali to Delhi and 2 tickets from Mohali to Jammu cost Rs. 700. What are the ticket prices for Delhi and Jammu, respectively, from Mohali?

(a) Rs. 100, Rs. 200
(b) Rs. 200, Rs. 200
(c) Rs. 100, Rs. 150
(d) Rs. 200, Rs. 100

YourMockTest.com — Free Study Material

Q47. U's daughter, X, is the daughter-in-law of V. W is the son of V's daughter. How is W related to X?

(a) Brother-in-law
(b) Father-in-law
(c) Nephew
(d) Cousin

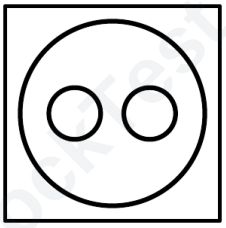
Q48. In a certain code language, INHALE is coded as 110 and DELAY is coded as 86. How will IGNORE be coded in that language?

(a) 93
(b) 95
(c) 91
(d) 94

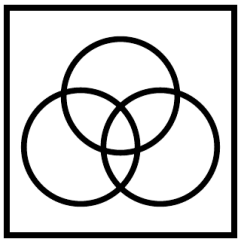
Q49. Select the Venn diagram that best represents the relationship between the following classes.

Telugu, Urdu, Poetry

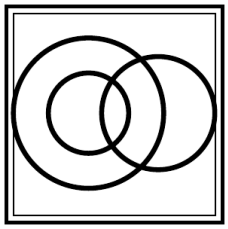
(a)



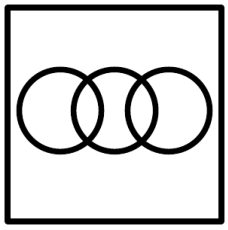
(b)



(c)



(d)



Q50. Select the combination of letters that when sequentially placed in the blanks of then given series will complete the series.

h _ c g _ h k _ g l _ k c _ l

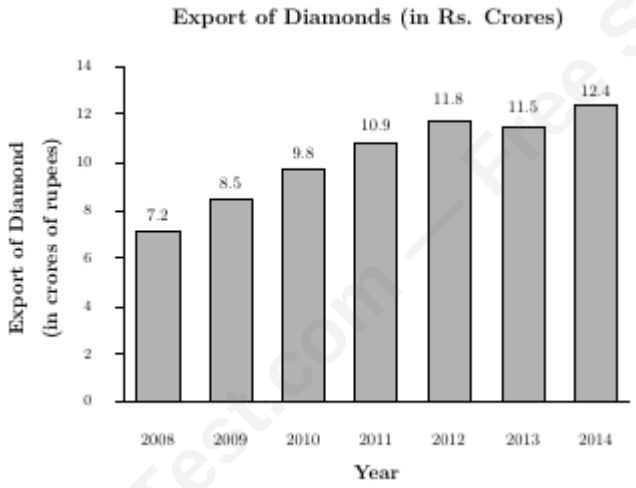
(a) c h l k g
(b) g h l c k
(c) k l c h g

YourMockTest.com — Free Study Material

(d) l g k h c

QUANTITATIVE APTITUDE

Q51. Study the following bar graph and answer the question that follows.



The average export of diamonds for the given period (in Rs.crores) was:

(a) 10.1
(b) 10.3
(c) 10.4
(d) 10.2

Q52. If x - y = 7/4 and 1/x-1/y=14/3, then $x^3 - y^3$ is equal to:

(a) 433/32
(b) 433/64
(c) 217/64
(d) 217/32

Q53. If a^4 + b^4 + a^2b^2 = 133 and $a^2 + b^2$ - ab = 19, then the value of ab will be:

(a) -9
(b) -6
(c) 12
(d) 15

Q54. The value of 18 ÷ 6 of 9 × [12 ÷ 3 of {16 × 2 ÷ (11 - 8)}] of (4 ÷ 2 of 8) is:

(a) 9/12
(b) 3/8
(c) 1/32
(d) 81/32

Q55. A sum of Rs.12,992 is divided among A, B and C such that the ratio of the shares of A and C is 4 : 15 and that of the shares of A and B is 2 : 5. The difference (in Rs.) between the shares of B and C is:

(a) 3,136
(b) 2,240
(c) 2,688
(d) 1,792

Q56. If $3\cos^2\theta - 4\sin\theta + 1 = 0$, $0° < \theta < 90°$, then the value of $3\cos^2\theta + 5\tan^2\theta$ will be:

(a) 51/5
(b) 52/3
(c) 54/5

(d) 62/3

Q57. A sum of Rs.x amounts to Rs.8,563.50 in 31/2 years and to Rs.10,527 in 7 years at y% p.a. simple interest. The value of x and y, respectively, are:

(a) 6600 and 8
(b) 6800 and 81/2
(c) 6600 and 81/2
(d) 7000 and 8

Q58. Savita spends 20% of her monthly income on groceries, 15% of the remaining on rent and then 60% of the left over on children's education and others. If she saves Rs.9,792 a month, then how much (in Rs.) does he spend on rent?

(a) 3,960
(b) 4,450
(c) 4,200
(d) 4,320

Q59. The marked price of an article is Rs.x. After allowing two successive discounts of 20% and 16% on the marked price, it is sold for Rs.504. What is the value of x?

(a) 720
(b) 700
(c) 740
(d) 750

Q60. The average marks obtained by 150 students in a certain examination is 50. If the average marks of the passed students are 54 and that of the students who failed are 30, then what will be the number of the students who failed?

(a) 25
(b) 24
(c) 20
(d) 28

Q61. The perimeter of ΔABC and ΔDEF are 39.6 cm and 26.4 cm, respectively, and ΔABC ~ ΔDEF. What is the ratio of the areas of ΔABC and ΔDEF?

(a) 3 : 2
(b) 9 : 4
(c) 16 : 9
(d) 9 : 2

Q62. By selling an article at 7/12 of its selling price, a man loses 16%. If he sells it at 90% of its original selling price, then what will be the profit percentage?

(a) 29.6%
(b) 26.4%
(c) 32.5%
(d) 30.2%

Q63. In ΔPQR, angle PQR = 135°, PQ = 8√2 cm and PR = 17 cm. What is the length (in cm) of QR?

(a) 7
(b) 10
(c) 8
(d) 9

Q64. If $x^2 - 5\sqrt{2}x - 1 = 0$, then what will be the value of $x^3 - 1/(x^3)$?

(a) 250√2
(b) 255√2
(c) 485√2
(d) 265√2

YourMockTest.com — Free Study Material

Q65. Pipes A and B can empty a full tank in 36 and 45 minutes, respectively, whereas pipe C alone can fill the tank in 15 minutes. B and C are opened together for 15 minutes, and then both are turned off and A is opened. Pipe A will empty the tank in (in minutes):

(a) 30
(b) 18
(c) 20
(d) 24

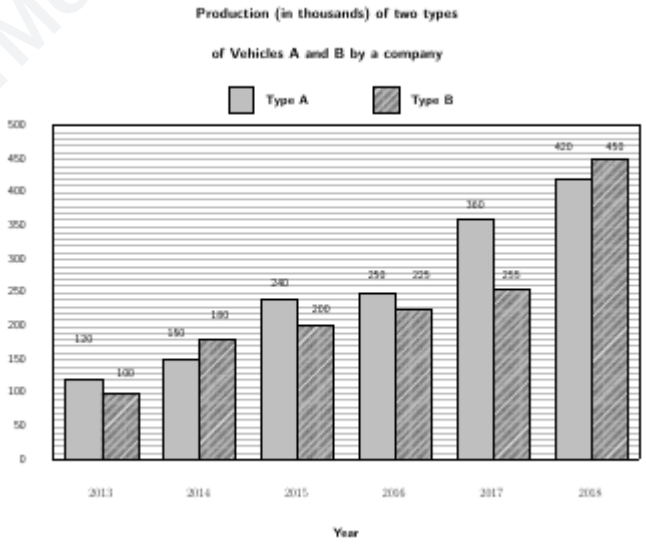
Q66. PQRS is a cyclic quadrilateral with QR as the diameter of the circle. If angle SQR = 24°, then what will be the measure of angle QPS?

(a) 114°
(b) 126°
(c) 104°
(d) 116°

Q67. Trains A and B of lengths 329 m and 296 m, respectively, are running in opposite directions on parallel tracks, at the speeds of 85 km/h and 65 km/h, respectively. In what time (in seconds) will they cross each other?

(a) 15
(b) 15.5
(c) 14
(d) 16.5

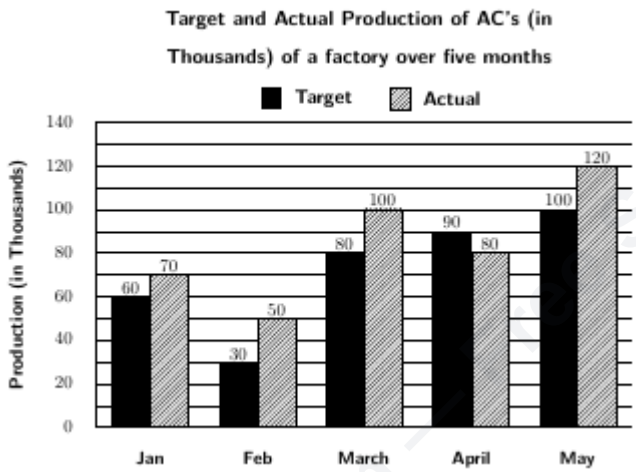
Q68. Study the given graph and answer the question the follows.



In 2019, if the production of vehicle of type A increased by the same percentage as that in 2018, over its previous year, then what was the number (in thousands) of vehicle of type A produced in 2019?

(a) 490
(b) 510
(c) 500
(d) 480

Q69. Study the given graph which shows the target and actual production of ACs (in thousands) of a factory over five months and answer the question that follows:



The actual production of ACs in February is what percent less than the average target production of ACs over the period of five months (correct to the nearest integer)?

(a) 30%
(b) 32%
(c) 29%
(d) 31%

Q70. If $\sin\theta = 2\sqrt{ab}/(a+b)$, $a > b > 0$, then the value of $(\cos\theta + 1)/(\cos\theta - 1)$ will be:

(a) -b/a
(b) -a/b
(c) a/b
(d) b/a

Q71. The length of a rectangle is 10 cm more than the side of a square and its breadth is 8 cm less than the side of the square. If the areas if both the rectangle and square are equal, then what will be perimeter (in cm) of the rectangle?

(a) 164
(b) 160
(c) 156
(d) 144

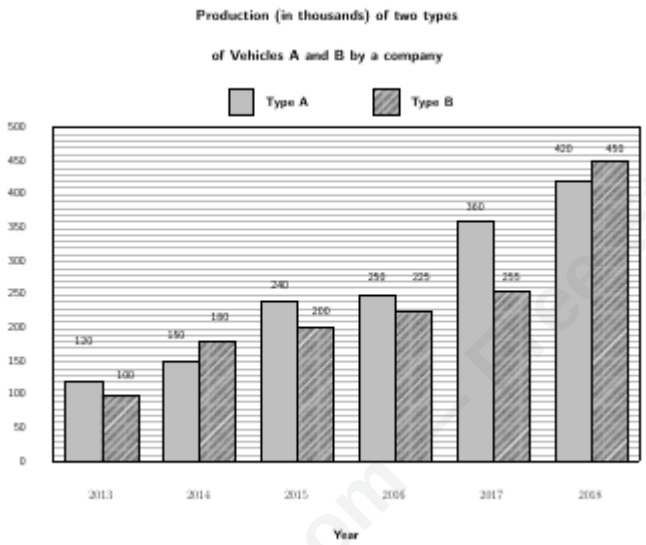
Q72. If the nine-digit number 48x4923y8 is divisible by 88, then the value of (6x + 5y) for the maximum value of y, will be:

(a) 76
(b) 72
(c) 65
(d) 71

Q73. The value of $(3\cos^2 27° - 5 + 3\cos^2 63°)/(\tan^2 32° + 4 - \text{cosec}^2 58°) + \sin 35°\cos 55° + \cos 35°\sin 55°$ is:

(a) -1/4
(b) -1/3
(c) 1/3
(d) 12/3

Q74. Study the given graph and answer the question that follows.



What is the ratio of the total number of vehicles of type A produced in 2015 and 2017 to the total number of vehicles of type B produced in 2016 and 2017?

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

Q75. Chords AB and CD of a circle are produced to meet at the point P, outside the circle, and AD is the diameter of the circle. If angle DAP = 36° and angle APC = 30°, then what will be the measure of angle CBD?

(a) 34°
(b) 26°
(c) 24°
(d) 16°

GENERAL AWARENESS

Q76. A _____ is a computer programme which can self-replicate and propagate over the network with or without human intervention and has malicious intent.

(a) kernel
(b) virus
(c) trojan horse
(d) worm

Q77. A government budget is an annual financial statement which outlines estimated government expenditures and expected government receipts or revenues for the forthcoming fiscal year. Depending on the feasibility of these estimates which of the following is NOT the budget type?

(a) Deficit budget
(b) Balanced budget
(c) Economy budget
(d) Surplus budget

Q78. When did the peasant movement in Bardoli begin?

(a) 1928
(b) 1934
(c) 1919
(d) 1943

Q79. On which of the following dates is the Good Governance Day observed in India every year?

(a) 12 September
(b) 4 October
(c) 25 December
(d) 5 July

Q80. ICAR is an autonomous body responsible for coordinating agriculture and research in India. What is the full form of ICAR?

(a) Institute of Central Aviation Research
(b) Indian Centre of Agriculture and Research
(c) Indian Council of Agricultural Research
(d) Institute of Central Agricultural Research

Q81. Where has Kiren Rijiju, Union Minister for Youth and Sports, launched the Assam Rifles Public School as the first sports school announced under Khelo India Scheme?

(a) Guwahati
(b) Nagaon
(c) Shillong
(d) Dispur

Q82. Where did Union Minister of Earth Sciences Dr. Harsh Vardhan virtually inaugurate India's highest Meteorological Centre?

(a) Shillong
(b) Leh
(c) Guwahati
(d) Shimla

Q83. _____ is a set of norms and guidelines to be followed by the political parties and contesting candidates during election time.

(a) Constitutional Norms
(b) Constitutional Rules
(c) Code of Conduct
(d) Delimitation

Q84. Pt. Satish Vyas was conferred upon the prestigious Tansen Samman in December 2020. He was associated with which of the following musical instruments?

(a) Flute
(b) Harmonium
(c) Santoor
(d) Tabala

Q85. Which of the following is not a good conductor of electricity?

(a) Graphite
(b) Gold
(c) Diamond
(d) Soil

Q86. Who among the following Sikh Gurus laid the foundation of 'Khalsa Panth'?

(a) Guru Gobind Singh
(b) Guru Arjan Dev
(c) Guru Teg Bahadur
(d) Guru Nanak Dev

YourMockTest.com — Free Study Material

Q87. Who among the following has been awarded the Bharathi award 2020?

(a) Raj Kamal
(b) Seeni Viswanathan
(c) Vidyut Mohan
(d) Kaniyan Poongunranar

Q88. Who among the following has become the Chief Justice of Orissa High Court in January 2021?

(a) S Muralidhar
(b) Pankaj Mithal
(c) Sanjib Banerjee
(d) Hima Kohli

Q89. Which of the following rivers does NOT culminate in the Arabian Sea?

(a) Sabarmati
(b) Tapti
(c) Indus
(d) Godavari

Q90. Big Bang theory explains:

(a) origin of Universe
(b) origin of Stars
(c) origin of Galaxies
(d) origin of Solar System

Q91. Who among the following is the brand ambassador of Equitas Small Finance Bank (ESFB)?

(a) Virat Kohli
(b) Rohit Sharma
(c) Mithali Raj
(d) Smriti Mandhana

Q92. Who among the following women cricketers has won the ICC Associate Player of the Decade award in 2020?

(a) Kathryn Bryce
(b) Stafanie Taylor
(c) Sarah Bryce
(d) Mithali Raj

Q93. _____ are built up by the liquid and solid rock erupting from the earth's interior.

(a) Volcanoes
(b) Fault-block mountains
(c) Erosional mountains
(d) Plateaus

Q94. Amino acids are often referred to as the building blocks of _____.

(a) sugar
(b) carbohydrates
(c) fats
(d) proteins

Q95. Hampi was declared as a World Heritage Site by UNESCO in which of the following years?

(a) 1999
(b) 1980
(c) 1990
(d) 1986

YourMockTest.com — Free Study Material

Q96. Who has become the new chief of the Central Industrial Security Force (CISF) in January 2021?

(a) Rajat Datta
(b) Kumar Rajesh Chandra
(c) Subodh Kumar Jaiswal
(d) Pankaj Kumar Singh

Q97. A User Interface is the part of _____ that allows the user to enter and receive information.

(a) computer network
(b) operating system
(c) computer hardware
(d) computer software

Q98. The world's oldest first-class cricketer and World War II veteran, Alan Burgess passed away in January 2021. He represented which of the following countries?

(a) Australia
(b) England
(c) New Zealand
(d) Spain

Q99. On which of the following idols of Hindu mythology has Italian screenwriter-film producer Alfredo Covelli authored 'Vahana Masterclass', a book for kids?

(a) Lord Vishnu
(b) Lord Ganesha
(c) Lord Shiva
(d) Lord Varuna

Q100. Which type of dam is a temporary dam constructed to exclude water from the specific area?

(a) Coffer
(b) Impounding
(c) Detention
(d) Debris

ANSWER KEY

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

SOLUTIONS

Q1. Answer: (b) To be anxious and nervous

The solution is in Hindi. Read it online.

YourMockTest.com — Free Study Material

Q2. Answer: (c) Dr. Chanda said that she would definitely write about that case in the medical journal.

The solution is in Hindi. Read it online.

Q3. Answer: (c) delay

The solution is in Hindi. Read it online.

Q4. Answer: (c) rise

The correct answer is option 3) i.e., 'rise'.

Key Points

• Plunge is a verb which means to jump or dive quickly and energetically.

• The correct antonym for the word is rise which means to move from a lower position to a higher one; come or go up.

Additional Information

• Dive is synonymous to plunge. It means to plunge head first into water with one's arms raised over one's head.

• Duck is a verb which means to lower the head or the body quickly to avoid a blow or missile or so as not to be seen.

• Fall is a verb that means to move from a higher to a lower level, typically rapidly and without control.

Q5. Answer: (d) segragate

The solution is in Hindi. Read it online.

Q6. Answer: (b) cherish

The correct answer is option 2) i.e., 'cherish'.

Key Points Let us see the meanings of the given options -

• esteem is a noun that means respect and admiration.

• He was held in high esteem by colleagues.

• cherish is a verb that means to hold (something) dear.

• I cherish the letters she wrote.

• think is a verb that means to have a particular opinion, belief, or idea about someone or something.

• You should think about your future seriously.

• cheap is an adjective that means low in price, especially in relation to similar items or services.

• I got the blanket for a cheap price.

• From the given meanings it is clear that the given blank should be filled by the verb cherish.

• Hence option 2 is the correct answer.

Q7. Answer: (a) parallal

The solution is in Hindi. Read it online.

Q8. Answer: (a) He part the grass

The correct answer is option 1) i.e., 'He part the grass'.

Key Points

• The given sentence is in past tense form as the subject (he) had seen the deer.

• Part is the simple present tense verb and hence cannot be used in the sentence.

• This makes segment 1 the incorrect part.

Correct sentence - He parted the grass at the place where he had seen the deer.

Q9. Answer: (a) were thoroughly checking

The erroneous segment is option 1) i.e., 'were thoroughly checking'.

Key Points

• The given sentence is in past tense form as the linking verb were is used.

• Checking is the present continuous tense form of the verb check.

• This is a passive voice construction where the action expressed by the verb is received by the subject.

• The structure: object+ was/were V3+ by + subject.

• Here, as per the V3 form 'checked' will be used as per the above rule.

• The correct answer is option 1.

Correct sentence - Bags and purses were thoroughly checked at the entrance to the theatre.

YourMockTest.com — Free Study Material

Q10. Answer: (b) aquatic

The solution is in Hindi. Read it online.

Q11. Answer: (b) Beware

The correct answer is option 2) i.e., 'beware'.

Key Points Let us see the meanings of the given options -

- Wary is an adjective which means feeling or showing caution about possible dangers or problems.
- Dogs which have been mistreated often remain wary of strangers.
- Beware is a verb which means to be cautious and alert to risks or dangers.
- You should beware of imitation birthstones.
- Aware is an adjective which means having knowledge or perception of a situation or fact.
- Most people are aware of the dangers of sunbathing.
- Cautious is an adjective which means (of a person) careful to avoid potential problems or dangers.
- Rohit is a cautious driver.
- From the given meanings it is clear that the given blank should be filled by the verb beware.
- Hence option 2 is the correct answer.

Q12. Answer: (b) These carpets have been woven by the prisoners of this jail.

The solution is in Hindi. Read it online.

Q13. Answer: (a) The gardener requested the children not to pluck any flowers.

The solution is in Hindi. Read it online.

Q14. Answer: (a) you submitted

The correct answer is option 1) i.e., 'you submitted'.

Key Points

- The given sentence is an interrogative sentence that is in present tense form.
- Submitted is the simple past tense form of the verb submit. As with an auxiliary verb 'did' we use 'the first form of the verb'
- Hence it cannot be used in the given sentence.
- This makes option 1 the incorrect segment.

Correct sentence - Why didn't you submit your project on time?

Q15. Answer: (b) were providing

The solution is in Hindi. Read it online.

Q16. Answer: (a) extend

The solution is in Hindi. Read it online.

Q17. Answer: (a) To believe wrongly that your situation is good

The solution is in Hindi. Read it online.

Q18. Answer: (c) tarriff

The solution is in Hindi. Read it online.

Q19. Answer: (b) has gone on

The solution is in Hindi. Read it online.

Q20. Answer: (c) occurred

The correct answer is option 3) i.e., 'occurred'.

Key Points

- The given blank should have a word in the past tense form that defines the thought process of the subject (I).
- The best fit word for the given blank is occurred which is the past tense form of the verb occur.
- Occur means (of a thought or idea) come into the mind of.
- Hence, option 3 is the correct answer.

Additional Information The meaning of the other given options and their usage are as follows -

- Suggested is the past tense form of suggest which means to put forward for consideration.
- I suggested the following tweaks to the action plan.

YourMockTest.com — Free Study Material

• Happened is the past tense form of happen which means to take place.

• The incident happened years ago.

• Reminded is the past tense form of remind which means to cause (someone) to remember someone or something.

• She was reminded about her obligations as a queen.

Q21. Answer: (b) when

The correct answer is option 2) i.e., 'when'.

Key Points

• Blank 1 needs to be filled with a question word which would provide the answer to a particular time or occasion (the occasion of the earth shaking).

• So, we need to use the adverb when which is used to answer questions about at or on which (referring to a time or circumstance).

• Hence, when is the correct word for the given blank.

Additional Information

• The adverb why is used to obtain an explanation or a reason. (= I want to know the reason)

• Why are you late?

• The adverb where is used when referring to a place or location. (= I want to know the place)

• Where is the venue for the wedding?

• The adverb how is used to describe the manner that something is done. (= I want to know the way)

• How fast can this dish be cooked?

Q22. Answer: (a) believe

The correct answer is option 1) i.e., 'believe'.

Key Points

• The given sentence with blank 2 is in present tense form.

• From the given options it is clear that we need to use the present tense form of the verb believe which means accept that (something) is true, especially without proof.

• Hence, believe is the correct word for the given blank.

Additional Information

• Believe is the present tense form.

• are believing is the present continuous tense.

• believing is the present participle form.

• believed is the simple past tense form.

Q23. Answer: (b) them

The correct answer is option 2) i.e., 'them'.

Key Points

• We need to use a pronoun in blank 3 to indicate the noun animals used previously in the sentence (... animals' more acute hearing helps ...).

• The given blank needs a third person plural object pronoun.

• Hence, the correct word for the given blank is them.

Additional Information

• Us is a first person plural object pronoun which is used as the object of a verb or a preposition to mean the person communicating and at least one other person.

• Rahul told us your secret.

• They is a third person plural subject pronoun which is used to refer to two or more people or things previously mentioned or easily identified.

• They were nervous about their results.

• One is a gender neutral indefinite pronoun which is used to refer to the speaker, or any person, as representing people in general.

• One has to admire her tenacity.

YourMockTest.com — Free Study Material

Q24. Answer: (d) They

The correct answer is option 4) i.e., 'they'.

Key Points

• We need to use a pronoun in blank 4 to indicate the noun animals as who can sense something (... can sense an approaching disaster long before humans ...).

• The given blank needs a third person plural subject pronoun.

• Hence, the correct word for the given blank is they.

Additional Information

• "We" is a first-person plural subject pronoun that is used to indicate the speakers/writers, or the speaker/writer and at least one other person

• We were told that the show was over.

• "Them" is a third-person plural object pronoun that is used as the object of a verb or preposition to refer to two or more people or things previously mentioned or easily identified.

• I asked them to talk softly.

• "You" is a second-person singular subject pronoun that is used to refer to the person or people that the speaker is addressing.

• You should never tell lies.

Q25. Answer: (b) realise

The correct answer is option 2) i.e., 'realise'.

Key Points

• The given blank needs a verb to show the action of the humans regarding an approaching disaster.

• Realise is a verb which means to become fully aware of (something) as a fact or to understand clearly.

• Reflect is a verb which means (of a surface or body) throw back (heat, light, or sound) without absorbing it.

• Renew is a verb which means to resume (an activity) after an interruption.

• Restore is a verb which means to bring back or re-establish (a previous right, practice, or situation).

• From the above meanings it is clear that realise is the correct word for the given blank.

Q26. Answer: (c) Teacher : Chalk

The logic followed here is:

The knife is used by the butcher to cut the meat.

Similarly,

The teacher used chalk to write on the blackboard.

Hence, "option 3" is the correct answer.

Additional Information

• The hammer is used by the blacksmith.

• Chisels are used by metal workers.

• Scissors are used by the barber for cutting hair.

Q27. Answer: (b) [figure]

The paper when unfolded appear as shown below-

Hence, "option 2" is the correct answer.

Q28. Answer: (a) EXRKPOOX

Table show alphabet serial number –

Given: IMPUDENT is written as PFXMHAWK

The logic followed here is,

1) First letter is subtracted by 3 and shifted to the second position and the second letter add by 3 and shifted to the first position.

2) Third letter is subtracted by 3 and shifted to the fourth position and fourth letter add by 3 and shifted to the third position.

3) And the last two letters are interchanged and decreased or increased by 3.

Similarly,

ABNORMAL = ?

‘’ABNORMAL" is coded as ‘EXRKPOOX’.

Hence, "option 1" is the correct answer.

Q29. Answer: (c) QDFHS

Table show alphabet serial number –

Given: MONKEY is written as XDJMNL

The logic followed here is,

Subtract 1 in each letter and the 1st letter shifted to 6th letter, 2nd letter shifted to 5th letter, 3rd letter shifted to 4th letter, 4th letter shifted to 3rd letter, 5th letter shifted to 2nd letter and 6th letter shifted to 1st letter.

Similarly,

TIGER = ?

‘’TIGER" is coded as ‘QDFHS’.

Hence, "option 3" is the correct answer.

Q30. Answer: (b) RVGC

The logic followed here is:

From option 1:-

Add 4 in 1st letter we get 2nd letter, add 7 in 2nd letter we get 3rd letter, subtract 4 in 3rd letter we get 4th letter.

From option 2:-

Add 4 in 1st letter we get 2nd letter, add 11 in 2nd letter we get 3rd letter, subtract 4 in 3rd letter we get 4th letter.

From option 3:-

Add 4 in 1st letter we get 2nd letter, add 7 in 2nd letter we get 3rd letter, subtract 4 in 3rd letter we get 4th letter.

From option 4:-

Add 4 in 1st letter we get 2nd letter, add 7 in 2nd letter we get 3rd letter, subtract 4 in 3rd letter we get 4th letter.

Option 2 is different from other.

Hence, "option 2" is the correct answer.

Q31. Answer: (c) 3, 5, 1, 2, 4

The table of the alphabet is given below:-

The logic followed here is:

We arrange in alphabetical order, first come Microorganism then come to Mineralize, then come to Misappropriate, then come Misbehave, then come Miscellaneous, which is given below:-

3. Microorganism

5. Mineralize

1. Misappropriate

2. Misbehave

4. Miscellaneous

Hence, "option 3" is the correct answer.

Q32. Answer: (a) Hunger strike

The logic followed here is:

Death is caused by an Accident.

Similarly,

Starvation is caused by a hunger strike.

Hence, "option 1" is the correct answer.

Q33. Answer: (a) Slavery

The logic followed here is:

Option 1:- Slavery means bondage.

Option 2:- Convenience means the quality of being easy, useful, or suit able for somebody.

Option 3:- Choice means an act of choosing between two or more people or things.

Option 4:- Autonomy means the right of a person.

The meaning of options 2, 3, and 4 is positive or to make something but option 1 meaning is negative.

Hence, "option 1" is the correct answer.

Important Points

1. A person who is the property of and wholly subject to another and forced to provide unpaid labor. a person entirely under the domination of some influence or person: She was a slave to her own ambition. a drudge: a housekeeping slave.

YourMockTest.com — Free Study Material

2. Self-directing freedom and especially moral independence personal autonomy.

3. The definition of choice is the act of making a selection or the person or thing which is selected.

• An example of choice is someone deciding what to have for dinner.

Q34. Answer: (b) [figure]

The option in which the given figure is embedded when rotation is not allowed is shown below:

Hence, "option 2" is the correct answer.

Q35. Answer: (b) 7437

The logic followed here is:

In option 1, 3, and 4 addition of all four digits is 17 but in option 2 addition of all four digits is 21.

Option 1:- 3 + 4 + 3 + 7 = 17

Option 2:- 7 + 4 + 3 + 7 = 21

Option 3:- 7 + 4 + 1 + 5 = 17

Option 4:- 5 + 4 + 5 + 3 = 17

Hence, "option 2" is the correct answer.

Q36. Answer: (c) 137

The logic followed here is:

Hence, "option 3" is the correct answer.

Q37. Answer: (b) 5

For this question, the relation is given below -

From figure (A) and figure (B), only 3 is common.

Now we take clockwise direction from 3 in figure (A) and figure (B) respectively, then letter opposite to each other.

Dice A	Dice B
2	4
1	5
3	6

From figure (A) take a clockwise direction from 3 which is 2 and 1 respectively.

From figure (B) take a clockwise direction from 3 which is 4 and 5 respectively.

From figure (A) 2 is opposite to figure (B) 4.

From figure (A) 1 is opposite to figure (B) 5.

From figure (A) 3 is opposite to figure (B) 6.

Hence, "5" is the correct answer.

Q38. Answer: (d) Only conclusion III follows

The Venn diagram is given below:-

Conclusions:

I. Some players are fans → False (No fan is a player given so, never some players are fans)

II. Some wickets are balls → False (All balls are fans, no fan is a player, some players are wickets. So, no relation between wickets and balls.)

III. Some fans are balls → True (All balls are fans. So some fans are balls also true.)

Hence, "option 4" is the correct answer.

Additional InformationSuppose for an Example: All A are B.

If we go from In to Out means from A to B then cases with All and some will be true like All A are B and Some A are B.

But if we go Out to In then only cases with Some will be true and All will be can't say like Some B are A will be true but All B are A will be can't say.

Q39. Answer: (b) • and -

Given that:-

13 × 2 - (8 ÷ 4) + (4 × 1) = 24

From option 1:-

• and ÷
13 × 2 - (8 + 4) ÷ (4 × 1) = 24
Apply BODMAS rule:-
13 × 2 - 12 ÷ 4 = 24
13 × 2 - 3 = 24
26 - 3 = 24
23 ≠ 24, It is not follow.
From option 2:-
• and -
13 × 2 + (8 ÷ 4) - (4 × 1) = 24
Apply BODMAS rule:-
13 × 2 + 2 - 4 = 24
26 + 2 - 4 = 24
28 - 4 = 24
24 = 24, It is follow.
From option 3:-
• and ×
13 - 2 × (8 ÷ 4) + (4 - 1) = 24
Apply BODMAS rule:-
13 - 2 × 2 + 3 = 24
13 - 4 + 3 = 24
16 - 4 = 24
12 ≠ 24, It is not follow.
From option 4:-
• and ×
13 + 2 - (8 ÷ 4) × (4 + 1) = 24
Apply BODMAS rule:-
13 + 2 - 2 × 5 = 24
13 + 2 - 10 = 24
15 - 10 = 24
5 ≠ 24, It is not follow.
Hence, "option 2" is the correct answer.

Q40. Answer: (d) (8, 14, 21)

The logic is followed here-
1) Addition of 1st number and 1st number minus 2 (1st number - 2) then we get 2nd number,
2) Then we add 2nd number and 1st number minus 1 (1st number - 1) then we get 3rd number.
For (7, 12, 18)
7 + (7 - 2) = 7 + 5 = 12
12 + (7 - 1) = 12 + 6 = 18
Similarly,
From option 1:-
For (6, 12, 15)
6 + (6 - 2) = 6 + 4 = 10 ≠ 12
10 + (6 - 1) = 10 + 5 = 15
So, It is not correct.
From option 2:-
For (4, 6, 8)
4 + (4 - 2) = 4 + 2 = 6
6 + (4 - 1) = 6 + 3 = 9 ≠ 8
So, It is not correct.
From option 3:-

YourMockTest.com — Free Study Material

For (5, 9, 11)

5 + (5 - 2) = 5 + 3 = 8 ≠ 9

8 + (5 - 1) = 8 + 4 = 12 ≠ 11

So, It is not correct.

From option 4:-

For (8, 14, 21)

8 + (8 - 2) = 8 + 6 = 14

14 + (8 - 1) = 14 + 7 = 21

So, It is correct.

Hence, "option 4" is the correct answer.

Q41. Answer: (c) 54

The logic is followed here-

Square of 1st number + 5 = second number.

For 8 : 69;

$8^2 + 5 = 64 + 5 = 69$

Similarly,

For 7 : ?

$7^2 + 5 = 49 + 5 = 54$

Hence, "option 3" is the correct answer.

Q42. Answer: (b) 31

The diagram is given below:-

The triangles are AJB, ABH, AJI, AHI, BJH, BHI, BKC, BAI, IJH, BKH, BCF, HKF, CHB, BFH, CKF, CHF, CLD, CLF, CED, CEF, DLE, DFE, LEF, DCF, IGM, GME, IEM, AHC, IBF, HCE, and BFD.

There are total of 31 triangles present.

Hence, "option 2" is the correct answer.

Alternate Method

We know that:

Now,

Counting the figure separately:

From fig 1 shown below:

No of triangles = 1 + 2 = 3 or triangles = AOD, AOB, and ABD = 3

From fig 2 shown below:

No of triangles = 1 + 2 = 3 or triangles = DOC, OCB, and DCB = 3

merginf the fig 1 and 2 we get:

No of triangle = 3 + 3 of (fig 1 and 2) + 2 extra merging traingles i.e ADC and ABC.

Total = 8.

Now, we have a total of 3 such figure.

No of triangles = 8 × 3 = 24

From the final figure shown below:

There are an extra 4 merging triangles i.e ACE, CEH, DBF, and BFG.

Thus total number of triangles = 24 + 4 = 28.

From the final question figure shown below:

Total number of triangles = 28 + 3 = 31.

Hence, "31" is the correct answer.

Q43. Answer: (c) [figure]

The mirror image is given below:-

Hence, "option 3" is the correct answer.

YourMockTest.com — Free Study Material

Q44. Answer: (b) [figure]

The logic is here followed as:-

1) Triangle (

) move from top right side to bottom right, then bottom right to bottom left, then bottom left to middle, then middle to top left, and then top left to top right.

2) Diamond (

) move from middle to top left, and then top left to top right, then top right side to bottom right, then bottom right to bottom left, then bottom left to middle.

3) Face (

) move top left to top right, then top right side to bottom right, then bottom right to bottom left, then bottom left to middle, and then middle to top left.

4) Flower (

) move the bottom left to middle, then middle to top left, then top left to top right, then top right side to bottom right, and then bottom right to bottom left.

Heart (

) move bottom right to bottom left, then bottom left to middle, then middle to top left, then top left to top right, and then top right side to bottom right.

The final arrangement is given below:-

Hence, "option 2" is the correct answer.

Q45. Answer: (b) 14

The logic followed here is:

First number × 1.5 + Second number = Third number

In the first row:

=> 4 (First number) × 1.5 = 6

=> 6 (Number obtained) + 10 (Second number) = 16 (Third number)

In the second row:

=> 6 (First number) × 1.5 = 9

=> 9 (Number obtained) + 4 (Second number) = 13 (Third number)

In the third row:

=> 8 (First number) × 1.5 = 12

=> 12 (Number obtained) × X = 26

=> X = 26 - 12

Hence, the correct answer is "14".

Q46. Answer: (a) Rs. 100, Rs. 200

Let tickets from Mohali to Delhi = x

Tickets from Mohali to Jammu = y

Given that:-

2x + 3y = 800 .....(I)

3x + 2y = 700 .....(II)

We multiply 3 in equation (I) and multiply 2 in equation (II) we get:-

6x + 9y = 2400

6x + 4y = 1400, Now solve both equations, we get:-

y = Rs. 200 (tickets price from Mohali to Jammu)

x = Rs. 100 (tickets price from Mohali to Delhi)

Hence, "option 1" is the correct answer.

Q47. Answer: (c) Nephew

U's daughter, X, is the daughter-in-law of V.

W is the son of V's daughter.

The family tree is given below:-

W is the nephew of X.

Hence, "option 3" is the correct answer.

Q48. Answer: (c) 91

The logic followed here is:

In the question putting the opposite letter of place value and add all the values and then subtract the number of vowels and get the value.

(The sum of the alphabets in the opposite positional value) - (Number of vowels in a word) = Number code.

INHALE is coded as 110

And,

DELAY is coded as 86.

Similarly,

IGNORE = ?

Hence, "option 3" is the correct answer.

Q49. Answer: (d) [figure]

The logic followed here is:

Poetry can be written in Telugu or Urdu.

Telugu and Urdu both are different languages.

Venn diagram is given below:-

Hence, "option 4" is the correct answer.

Q50. Answer: (c) k l c h g

Given :- h _ c g _ h k _ g l _ k c _ l

By checking options and substituting accordingly.

1:- c h l k g → h c c g h - h k l g l - k k c g l

2:- g h l c k → h g c g h - h k l g l - c k c k l

3:- k l c h g → h k c g l - h k c g l - h k c g l

♦ (Repetition of h k c g l).

4:- l g k h c → h l c g g - h k k g l - h k c c l

♦ Option (3) gives a pattern of h k c g l - h k c g l - h k c g l.

Hence, "option 3" is the correct answer.

Q51. Answer: (b) 10.3

Calculation:

The export of diamonds in the given year = (7.2 + 8.5 + 9.8 + 10.9 + 11.8 + 11.5 + 12.4)

=> Rs. 72.1 crores

The average export of diamonds in the given year = (72.1/7)

=> Rs. 10.3 crores

Therefore The required average is 10.3

Alternate MethodDeflection method:

Let the average export be 10.9.

The total deflection of all observations from the average

= [(10.9 - 7.2) + (10.9 - 8.5) + (10.9 - 9.8) + (10.9 - 10.9) + (10.9 - 11.8) + (10.9 - 11.5) + (10.9 - 12.4)]/7

=> (3.7 + 2.4 + 1.1 + 0 - 0.9 - 0.6 - 1.5)/7

=> 4.2/7 = 0.6

Required average = 10.9 - 0.6 = 10.3

Therefore The required average is 10.3

Q52. Answer: (c) 217/64

Given:

$x – y = 7/4$

$1/x-1/y=14/3$

Formula used:

$x3 – y^3 = (x – y)[(x – y)^2 + 3xy]$

Calculation:

According to the question
1/x-1/y=14/3
=> -(x – y)/xy = 14/3
Putting the value of x – y in the given equation
=> -(7/4)/xy = 14/3
=> -1/xy = 14/3 × 4/7
=> -1/xy = 8/3
=> xy = -3/8
Now,
x3 – y3 = (x – y)[(x – y)2 + 3xy]
=> x3 – y³ = (7/4) × (49/16) – (9/8)
=> x³ – y³ = 7/4 × (49 – 18)/16
=> x3 – y³ = (7/4 × 31/16)
=> x3 – y³ = 217/64
Therefore The required value is 217/64

Q53. Answer: (b) -6

Given:
a4 + b4 + a2b2 = 133 and a2 + b2 – ab = 19
Calculation:
a2 + b2 – ab = 19
=> a² + b² = 19 + ab
And,
a4 + b4 + a2b2 = 133
=> a^4 + b^4 + 2a²b² – a²b² = 133
=> (a² + b²)² – a²b²= 133
=> (19 + ab)² – a²b² = 133
=> 361 + 38ab + a²b² – a²b²= 133
=> 38ab = 133 – 361
=> 38ab = -228
=> ab = (-228/38)
=> ab = -6
Therefore The required value of ab is -6
Alternate Methoda4 + b4 + a2b2 = 133
(a2 + b2 – ab)(a2 + b2 + ab) = 133
=> 19 × (a2 + b2 + ab) = 133
=> a2 + b2 + ab = 7 ....(1)
And, a2 + b2 – ab = 19 ....(2)
Subtract equation (2) from equation (1),
2ab = -12
=> ab = -6
Therefore The required value of ab is -6

Q54. Answer: (c) 1/32

Concept Used:
Follow the BODMAS rule according to the table given below:
Calculation:
18 ÷ 6 of 9 × [12 ÷ 3 of {16 × 2 ÷ (11 - 8)}] of (4 ÷ 2 of 8)
=> 18 ÷ 6 of 9 × [12 ÷ 3 of {16 × 2 ÷ 3}] of (4 ÷ 2 of 8)
=> 18 ÷ 6 of 9 × [12 ÷ 3 of (16 × 2/3)] of (4 ÷ 2 of 8)
=> 18 ÷ 6 of 9 × [12 ÷ (3 of 32/3)] of (4 ÷ 2 of 8)
=> 18 ÷ 6 of 9 × [12 ÷ (3 × 32/3)] of (4 ÷ 2 of 8)

YourMockTest.com — Free Study Material

=> 18 ÷ 6 of 9 × (12 ÷ 32) of (4 ÷ 2 of 8)
=> 18 ÷ 6 of 9 × 3/8 of (4 ÷ 2 of 8)
=> 18 ÷ 6 of 9 × 3/8 of (4 ÷ 16)
=> 18 ÷ 6 of 9 × 3/8 × 1/4
=> 18 ÷ 54 × 3/8 × 1/4
=> 1/3 × 3/8 × 1/4
=> 1/8 × 1/4
=> 1/32
Therefore The required value is 1/32

Q55. Answer: (b) 2,240

Given:
The total sum of money = Rs.12,992
Ratio of A and C = 4 : 15
Ratio of A and B = 2 : 5
Calculation:
Let the total sum be x
Simplifying the ratios to get the same unit by cross multiplication
Ratio of A and C = (4 : 15) × 2
=>8 : 30
Ratio of A and B = (2 : 5) × 4
=> 8 : 20
Ratio of A, B and C = 8 : 20 : 30
Total sum = Rs. (8x + 20x + 30x)
=> 58x = 12,992
=> x = 224
The share of B = 20x = (20 × 224)
=> Rs. 4,480
The share of C = 30x = (30 × 224)
=> Rs. 6,720
The difference between the share of B and C = Rs. (6,720 – 4,480)
=> Rs. 2,240
Therefore The required difference is Rs. 2,240
Alternate MethodA : B = 2 : 5 and A : C = 4 : 15
C : A : B
= 2 : 2 : 5
15 : 4 : 4 ×
= 30 : 8 : 20
=> C : A : B = 30 : 8 : 20
The total amount = (30 + 8 + 20) units = 12992
=> 58 units = 12992
=> 1 unit = 224
The difference between the share of B and C = (30 - 20) = 10 units
=> 10 × 224 = Rs. 2240
Therefore The required difference is Rs. 2,240

Q56. Answer: (b) 52/3

Given:
$3\cos 2\theta - 4\sin\theta + 1$
Formula used:
$b^2 = h^2 – p^2$
$\cos^2\theta = 1 – \sin^2\theta$

Calculation:
$3\cos2\theta - 4\sin\theta + 1 = 0$
$\Rightarrow 3 (1 – \sin^2\theta – 4 \sin\theta + 1 = 0$
$\Rightarrow 3 – 3\sin^2\theta – 4\sin\theta + 1 = 0$
$\Rightarrow 3\sin^2\theta + 4\sin\theta – 4 = 0$
$\Rightarrow 3\sin2\theta + 6\sin\theta – 2\sin\theta – 4 = 0$
$\Rightarrow 3\sin\theta (\sin\theta + 2) – 2(\sin\theta + 2) = 0$
$\Rightarrow \sin\theta = 2/3, -2$
Now,
$\sin\theta = p/h = 2/3$
$b2 = h2 – p^2$
$\Rightarrow b^2 = (9 – 4)$
$\Rightarrow b^2= 5$
$\Rightarrow b = \sqrt{5}$
$\cos\theta = b/h = \sqrt{5}/3$
$\tan\theta = p/b = 2/\sqrt{5}$
$3\cos2\theta + 5\tan2\theta = (3 \times 5/9) + (5 \times 4/5)$
$\Rightarrow (5/3 + 4)$
$\Rightarrow 17/3$
$\Rightarrow 52/3$
Therefore The required value is 52/3

Q57. Answer: (c) 6600 and 81/2

Given:
Amount1 = Rs. 8,563.50
Time1 = 31/2 years = 7/2 years
Amount2 = Rs. 10,527
Time2 = 7 years
Calculation:
Let the Principal be x and Rate be y respectively
According to the question
SI on Rs. 8,563.50 for (7 – 7/2) years = Rs. (10,527 – 8,563.50)
$\Rightarrow$ 7/2 years = Rs.1,963.50
$\Rightarrow$ 1 year = Rs. (1,963.50 × 2)/7
$\Rightarrow$ 1 year = Rs. 561
Principal = (8,563.50 – 1,963.50) = Rs. 6600
Now,
Rate = (561/6600 × 100)
$\Rightarrow$ (56,100/6600)
$\Rightarrow$ 8.5%
$\Rightarrow$ 81/2
Therefore The value of x and y is 6600 and 81/2

Q58. Answer: (d) 4,320

Given:
Salary spent on groceries = 20%
Salary spent on the remaining on rent = 15%
Salary spent on children's education and others = 60%
Saving of Savita in a month = Rs. 9,792
Calculation:
Let the monthly income be 100x
Salary spent on groceries = (20% of 100x)

YourMockTest.com — Free Study Material

=> (100x × 20/100)
=> 20x
Salary spent on the remaining on rent = (15% of 80x)
=> (80x × 15/100)
=> 12x
Salary spent on children's education and others = (60% of 68x)
=> (68x × 60/100)
=> 40.8x
Remaining salary = 100x – (20 + 12 + 40.8)x
=> (100x – 72.8x)
=> 27.2x
Now, as per the question
=> 27.2x = 9,792
=> x = (9,792/27.2)
=> x = 360
Salary spent on rent = 12x = (12 × 360)
=> Rs. 4,320
Therefore Required salary spent on rent is Rs. 4,320

Q59. Answer: (d) 750

Given:
Two successive discounts = 20% and 16%
Selling price = Rs. 504
Formula used:
Successive discount = D1 + D2 – (D1 × D2)/100
Selling price = {MP × (100 – D)/100}
Calculation:
According to the formula
Substituting tje values in formula, we get
=> Successive discount = 20 + 16 – (20 × 16)/100
=> 20 + 16 – 3.2
=> 32.8%
Now,
=> 67.2% = Rs. 504
=> 1% = Rs. 7.5
=> 100% = Rs. 750
Therefore The value of x is Rs. 750
Shortcut Trick Selling price = (x) × 80/100 × 84/100 = 504
x = 504 × 10000/ 128
x = 750

Q60. Answer: (a) 25

Given:
The average marks of 150 students = 50
The average marks of passed students = 54
The average marks of failed students = 30
Formula used:
Average = Sum of observations/Number of observations
Calculation:
Let the number of students who passed the examination be x
Let the number of students who failed the examination = (150 – x)
Sum of marks of 150 students = (150 × 50) = 7500

YourMockTest.com — Free Study Material

According to the question
=> 54x + 30(150 – x) = 7500
=> 54x + 4500 – 30x = 7500
=> 24x = 3000
=> x = 125
Now,
The number of students who failed the examination = (150 – 125)
=> 25
Therefore The number of the students who failed is 25
Shortcut Trick
=> 1/6 × 150 = 25

Q61. Answer: (b) 9 : 4

Given:
The perimeter of ΔABC and ΔDEF = 39.6 and 26.4 cm
Concept used:
If two triangles are similar, the ratio of their area will be the square of the ratio of the length of their respective sides.
Calculation:
According to the question
ΔABC ~ ΔDEF
=> 39.6/26.4 = ΔABC/ΔDEF
=> 3/2
Now,
The ratio of the areas of ΔABC and ΔDEF = $(3)^2/(2)^2$
=> 9 : 4
Therefore The required ratio is 9 : 4

Q62. Answer: (a) 29.6%

Given:
Selling an article at 7/12 of its selling price
Loss = 16%
He sells at original price = 90%
Formula used:
Profit = SP – CP
Profit% = (Profit/CP × 100)
Calculation:
According to the question
=> SP/12 = New SP/7
=> 16% = (16/100) = 4/25
Now,
Cost price of an article = 25
New selling price of an article = 21
=> 7New SP= 21
=>New SP = 3
The selling price of an article = (3 × 12) = 36
Now,
=> (90% of 36)
=> (90/100 × 36)
=> 32.4
Profit = (32.4 – 25) = 7.4
Profit% = (7.4/25 × 100)
=> 29.6%

Therefore The profit percentage is 29.6%.

Q63. Answer: (a) 7

Given:

angle PQR = 135°

PQ = 8√2 cm

PR = 17 cm

Formula used:

Cosine rule - $\cos\theta = (b^2 + c^2 – a^2)/2bc$

Calculation:

Let the value of b be x

According to the question

$\text{Cos } 135° = [x^2 + (8\sqrt{2})^2 – (17)^2]/2 \times x \times 8\sqrt{2}$

$\Rightarrow -1/\sqrt{2} = (x^2 + 128 – 289)/(2 \times x \times 8\sqrt{2})$

$\Rightarrow -1/\sqrt{2} = (x^2 – 161)/2 \times x \times 8\sqrt{2}$

$\Rightarrow -16x = x^2 – 161$

$\Rightarrow x^2 + 16x – 161 = 0$

$\Rightarrow x^2 + 23x – 7x – 161 = 0$

$\Rightarrow x(x + 23) – 7(x + 23) = 0$

$\Rightarrow (x + 23) (x – 7) = 0$

$\Rightarrow x = -23, 7$

Therefore The required value of QR is 7

Q64. Answer: (d) 265√2

Given:

x2 - 5√2x - 1 = 0

Calculation:

x2 - 5√2x - 1 = 0

Divide by x on both sides

$\Rightarrow x – 1/x = 5\sqrt{2}$

$\Rightarrow x^3 – 1/x^3 = (5\sqrt{2})^3 + 3 \times 5\sqrt{2}$

$\Rightarrow x3 – 1/x^3 = 250\sqrt{2} + 15\sqrt{2}$

$\Rightarrow x3 – 1/x^3 = 265\sqrt{2}$

Therefore The required value is 265√2

Q65. Answer: (d) 24

Given:

Time taken to empty a full tank by Pipe A = 36 min

Time taken to empty a full tank by Pipe B = 45 min

Time taken to fill the tank by Pipe C = 15 min

B and C opened together = 15 min

Formula used:

Work = Efficiency × Time

Calculation:

LCM of 36, 45 and 15 is 180

Efficiency of A = 180/36 = 5 units/min

Efficiency of B = 180/45 = 4 units/min

Efficiency of C = 180/15 = 12 units/min

Efficiency of B and C together = (12 – 4) = 8 units/min

B and C opened for 15 min = (8 × 15) units

$\Rightarrow$ 120 units

Now,

Pipe A will empty the tank = (120/5) mins

=> 24 mins

Therefore Required time is 24 mins

Q66. Answer: (a) 114°

Given:

angle SQR = 24°

Calculation:

angle QSR = 90° (Angle inscribed in a semicircle)

=> angle SQR + angle QSR + angle QRS = 180° [sum of interior angles of a triangle is 180°]

=> 24° + 90° + angle QRS = 180°

=> 114° + angle QRS = 180°

=> angle QRS = (180° – 114°)

=> angle QRS = 66°

Now,

angle QPS + angle QRS = 180° [sum of pair of opposite sides of cyclic quadrilateral is 180°]

=> angle QPS + 66° = 180°

=> angle QPS = (180° – 66°)

=> angle QPS = 114°

Therefore The required value of angle QPS is 114°

Q67. Answer: (a) 15

Given:

Length of train A = 329 m

Length of train B = 296 m

Speed of train A = 85 km/h

Speed of train B = 65 km/h

Formula used:

Time = Distance ÷ Speed

To convert km/h to m/sec, multiply the given value by 5/18

Calculation:

According to the question

=> [(329 + 296)/(85 + 65) × 18/5] m/sec

=> [(625/150) × 5/18] m/sec

=> [(625 × 18)/(150 × 5)] m/sec

=> (11,250/750) m/sec

=> 15 m/sec

Therefore Required time is 15

Q68. Answer: (a) 490

Calculation:

The production of vehicle of type A in 2017 = 360

The production of vehicle of type A in 2018 = 420

Required percentage = [(420 – 360)/360 × 100]

=> (60/360 × 100)

=> 50/3

Now,

=> (420/50/3 × 100)

=> (420/3 × 50/100)

=> (140/2)

=> 70

The number (in thousands) of vehicle of type A produced in 2019 = (420 + 70)

=> 490

Therefore Required production of type A vehicle in 2019 is 490

YourMockTest.com — Free Study Material

Q69. Answer: (d) 31%

Calculation:

The actual production of ACs in February = 50

The target production of ACs over the period of five months = (60 + 30 + 80 + 90 + 100)

=> 360

The average target production of ACs over the period of five months = (360/5)

=> 72

Required percentage = [(72 – 50)/72 × 100]

=> (22/72 × 100)

=> 30.55% ~ 31%

Therefore The required percentage is 31%

Q70. Answer: (b) -a/b

Given:

$\sin\theta = 2\sqrt{ab}/(a+b)$

Formula used:

$b^2 = h^2 – p^2$

Calculation:

$\sin\theta = p/h = 2\sqrt{ab}/a + b$

b2 = h2 – p²

=> $b^2 = (a + b)^2 – (2\sqrt{ab})^2$

=> $b^2 = (a + b)^2 – 4ab$

=> $b^2 = (a – b)^2$

=> b = (a – b)

Now,

$\cos\theta = b/h = (a – b)/(a + b)$

$(\cos\theta + 1)/(\cos\theta - 1) = [(a – b)/(a + b) + 1]/[(a – b)(/(a + b) – 1]$

=> (a – b + a + b)/(a – b – a – b)

=> 2a/(-2b)

=> -a/b

Therefore The required value is -a/b

Q71. Answer: (a) 164

Given:

The length of rectangle = 10 cm more than the side of square

The breadth of rectangle = 8 cm less than the side of the square

Formula used:

Area of square = a^2

Area of rectangle = l × b

Perimeter of rectangle = 2(l + b)

Calculation:

Let the side of square be a

According to the question

=> $(a + 10)(a – 8) = a^2$

=> 2a – 80 = 0

=> 2a = 80

=> a = 40 cm

Now,

Length of rectangle = a + 10 = (40 + 10) = 50 cm

Breadth of rectangle = a – 8 = (40 – 8) = 32 cm

Perimeter of rectangle = 2(l + b)

=> 2(50 + 32)

=> 2 × 82 cm

=> 164 cm

Therefore The perimeter of rectangle is 164 cm

Q72. Answer: (b) 72

Given:

The nine-digit number = 48x4923y8

Divisible by = 88

Concept used:

Divisibility rule of 8 - The last three digits of a number are divisible of 8

Divisibility rule of 11 - If the difference between the sum of the digits at odd places and even places equals 0 or divisible by 11

Calculation:

We know that the last three digits of a number are divisible of 8

=> The number made from the last three digits without altering their position will be divisible by 8

=> Possible values of y = 2 and 6

=> y is the largest then, y = 6

Now, check the divisibility rule of 11

=> (4 + x + 9 + 3 + 8) – (8 + 4 + 2 + y) = 0 or 11

=> (4 + x + 9 + 3 + 8) – (8 + 4 + 2 + 6) = 0 or 11

=> (24 + x – 20) = 0 or 11

=> 4 + x = 0 or 11

Then, x = (11 – 4) = 7

Now,

=> (6x + 5y) = (6 × 7) + (5 × 6)

=> 42 + 30

=> 72

Therefore The required value is 72

Q73. Answer: (c) 1/3

Given:

$(3\cos^2 27° - 5 + 3\cos^2 63°)/(\tan^2 32° + 4 - \operatorname{cosec}^2 58°)$

Formula used:

$\sin^2\theta + \cos^2\theta = 1$

$\tan^2\theta = \sec^2\theta - 1$ 'or' $\sec 2\theta - \tan^2\theta = 1$

Calculation:

According to the question

$(3\cos^2 27° - 5 + 3\cos^2 63°)/(\tan^2 32° + 4 - \operatorname{cosec}^2 58°) + \sin 35° \cos 55° + \cos 35° \sin 55°$

$\Rightarrow (3\cos^2 27° – 5 + 3\sin^2 27°)/(\tan^2 32° + 4 – \sec^2 32°) + \sin 35° \sin 35° + \cos 35° \cos 35°$

$\Rightarrow 3(\sin^2 27° + \cos^2 27°) – 5/4 – (\sec 232° - \tan 232) + (\sin^2 35° + \cos^2 35°)$

$\Rightarrow [3(1) – 5]/(4 – 1) + 1$

$\Rightarrow (3 – 5)3 + 1$

$\Rightarrow -2/3 + 1$

$\Rightarrow (-2 + 3)/3$

$\Rightarrow 1/3$

Therefore The required value is 1/3

Q74. Answer: (b) 5 : 4

Calculation:

The total number of vehicle of type A produced in 2015 and 2017 = (240 + 360)

=> 600

The total number of vehicles of type B produced in 2016 and 2017 = (225 + 255)

=> 480

Required ratio = (600 : 480)

=> 5 : 4

Therefore The required ratio is 5 : 4

Mistake PointsNo. of vehicles of type B produced in 2017 = 255 and not 225.

Q75. Answer: (c) 24°

Given:

angle DAP = 36°

angle APC = 30°

Calculation:

According to the question

angle ADC = angle DAP + angle APC [Ext. angle = sum of opp. int. angle]

=> angle ADC = 36° + 30° = 66°

So, angle ABC = 66° [angles is the same segment]

Since AD is a diametre

So, angle ABD = 90°

=> angle ABC + angle CBD = 90°

=> 66° + angle CBD = 90°

=> angle CBD = 24°

Therefore The required value of angle CBD = 24°

Q76. Answer: (d) worm

The correct answer is Worm.

Key Points

• A worm is a computer programme that can self-replicate and propagate over the network with or without human intervention and has malicious intent.

• Its purpose is to secretly duplicate itself into other computers.

• Unlike a computer virus, which "infects" other programmes in order to spread to new ones, worms are often self-contained programmes that do not require a "host."

• Worms typically do not require human intervention to spread across networks.

• Robert Morris, a computer science student at Cornell University, unleashed the first worm into the Internet from the Massachusetts Institute of Technology on November 2, 1988.

• Viruses and worms are a type of malicious software.

• Worms frequently take advantage of network configuration mistakes or security flaws in the operating system (OS) or applications.

Additional Information

• A kernel is computer software that runs at the core of the operating system and has complete control over all of the system's components.

• A Trojan Horse Virus is a sort of malware that disguises itself as a genuine programme and downloads into a computer.

• A computer virus is designed to spread from host to host and duplicate itself.

Q77. Answer: (c) Economy budget

The correct answer is Economy budget.

Important Points

• Among the options, only an Economy budget is NOT a budget type.

• A government budget is an annual financial statement that outlines estimated government expenditures and expected government receipts or revenues for the forthcoming fiscal year.

• In India, it is a constitutional requirement (Article 112) that the government give a statement of estimated income and expenditures to Parliament for each financial year that runs from April 1 to March 31.

• This 'Annual Financial Statement' is the government's primary budget document.

• Budgets are grouped into three categories based on these estimates:

1. Balanced budget.

2. Surplus budget.

3. Deficit budget.

Key Points

YourMockTest.com — Free Study Material

• A government budget is said to be a balanced budget if the estimated government expenditures in a given fiscal year are equal to the expected government receipts.

• A balanced budget ensures economic stability if implemented successfully.

• A balanced budget is Inapplicable in less developed countries as it limits the scope of economic growth.

• A government budget is said to be a surplus budget if the expected government revenues exceed the estimated government expenditure in a particular financial year.

• A country's financial wealth is indicated by a surplus budget.

• If the estimated government expenditure exceeds the expected government revenue in a given fiscal year, the budget is considered to be a deficit budget.

• A deficit budget is best suited for developing economies, such as India

Q78. Answer: (a) 1928

The correct answer is 1928.

Key Points

• In India, the Bardoli movement was a tax-free movement.

• In the year 1928, the Bardoli Satyagraha took place.

• This movement was known as one of the biggest incidents of the Civil Disobedience movement, which was a part of India's war for independence.

• Sardar Vallabhbhai Patel eventually headed the movement, and its success helped pave the way for Patel to become one of the most prominent leaders of the independence struggle.

Important Points

• Sardar Vallabhbhai Patel initially wrote to the Governor of Bombay, requesting that the taxes be reduced during the year during which the tragedies were occurring.

• The Governor, on the other hand, ignored the letter and responded by announcing the collection.

• The Bombay Presidency ignored the plight of the farmers and increased tax rates by 22%.

• Patel then informed all of the farmers in the Bardoli taluka to refuse to pay their taxes.

• The government had commissioned the Maxwell-Broomfield Commission to investigate the situation.

• Following a thorough investigation, the tax increase was determined to be only 6.03%.

• Gandhiji also supported the movement through his writings in the periodical 'Young India.'

Q79. Answer: (c) 25 December

The correct answer is 25 December.

Key Points

• On the 25th of December, India commemorates Good Governance Day.

• Former Prime Minister Atal Bihari Vajpayee's birthday is commemorated on this day.

• In 2014, Good Governance Day was launched to honour Prime Minister Atal Bihari Vajpayee by raising public awareness of government accountability in India.

• In accordance with this philosophy, the Indian government has declared Good Governance Day to be a working day.

• The day aims to raise public awareness of government accountability among the country's population.

• The day was first celebrated in 2014.

• Atal Bihari Vajpayee and Pandit Madan Mohan Malaviya (posthumously) were awarded the Bharat Ratna on December 23, 2014.

• Following the declaration, Prime Minister Narendra Modi declared that Atal Bihari Vajpayee's birthday would be observed yearly in India as Good Governance Day.

Q80. Answer: (c) Indian Council of Agricultural Research

The correct answer is Indian Council of Agricultural Research.

Key Points

• Indian Council of Agricultural Research is the full form of ICAR.

• ICAR is an autonomous body responsible for coordinating agriculture and research in India.

• It was established under the Department of Agricultural Research and Education (DARE).

• ICAR was formerly known as the Imperial Council of Agricultural Research

• In response to the Royal Commission on Agriculture's recommendations, it was founded on July 16, 1929, as a registered society under the Societies Registration Act, 1860.

Important Points

• New Delhi is the headquarters of the ICAR.

• The Council is the country's top organization for coordinating, supervising, and managing agricultural research and education, encompassing horticulture, fisheries, and animal sciences.

• ICAR is one of the world's largest national agricultural systems, with 111 ICAR institutes and 71 agricultural universities distributed around the country.

Q81. Answer: (c) Shillong

The correct answer is Shillong.

Key Points

• Kiren Rijiju, Union Minister of Youth Affairs and Sports inaugurated the Assam Rifles Public School (ARPS) as a Khelo India Sports School in Shillong.

• Currently, 9 Sports Schools have been approved across the country, with 5 of them being run by the military and paramilitary services.

• Assam Rifles Public School is the first Sports School to be launched under the Khelo India Scheme in the North-East.

• The government will now cover the costs of lodging, boarding, schooling, competition exposure, insurance & medical, sports training & support, salaries of coaches & support personnel, sports equipment, and more for the school's Talented Sports Students.

• A Khelo India Sports School's goal is to connect sports and education, thereby developing sports in the country and improving players' whole profile and viewpoint.

• This will also aid in the identification and development of talent in the North-East, rural, and tribal areas.

• Lt. Gen. Sukhdeep Sangwan, Director-General, Assam Rifles, was also praised by the Union Minister for his efforts in bringing various good reforms to the school over the years.

Additional Information

• In 2018, Khelo India was launched.

• Its goal is to improve the country's sports culture.

• The Rajiv Gandhi Khel Abhiyan, the National Sports Talent Search System, and the Urban Sports Infrastructure Scheme were merged to form Khelo India.

• "Sports for all" and "sports for excellence" are promoted in the programme.

Q82. Answer: (b) Leh

The correct answer is Leh.

Key Points

• Union Minister of Earth Sciences Dr. Harsh Vardhan virtually inaugurates India’s highest Meteorological Centre in Leh, Ladak.

• It is located at 3,500 metres above sea level in Leh.

• The Leh centre is the second Meteorological Centre in the Himalayas, after Itanagar in Arunachal Pradesh.

• It would give localised weather predictions and early warnings for the Union Territory's Leh and Kargil districts, as well as various tourist destinations.

• All stakeholders will receive regular updates from the new meteorological centre, which will provide weather forecasts for short (3 days), medium (12 days), and long (1 month) periods.

• The India Meteorological Department (IMD) intends to set up ten Automatic Weather Stations (AWS) in key sites such as Drass, Kargil, Pangong Tso, Zanskar Valley, and Nubra Valley.

• Currently, India has 28 meteorological centres located throughout the country.

• The India Meteorological Department (IMD), the country's primary agency for meteorological observations and forecasting, relies on these centres to deliver accurate and timely weather-related information.

Q83. Answer: (c) Code of Conduct

The correct answer is Code of Conduct.

Key Points

• Code of Conduct is a set of norms and guidelines to be followed by the political parties and contesting candidates during election time.

• The Election Commission of India issues a set of guidelines for candidates and political parties to follow during elections.

• Speeches, polling booths, polling day conduct, election manifestos, processions, and general conduct are all covered under the criteria.

• It comes into effect as soon as the election schedule is announced by the Election Commission of India.

YourMockTest.com — Free Study Material

• Respective parties are required to notify the local police department in advance of scheduled meetings, providing accurate information on the location and time, in order to maintain law and order and control traffic in the area.

• During the election process, government bodies are barred from participating in any recruitment procedure.

• Kerala was the first state in India to use the model code of conduct in its elections in 1960.

Additional Information

• According to the Model Code of Conduct no party or candidate can:

• Use any place of religion for electoral propaganda.

• For elections, use government vehicles, planes, and personnel.

• Ministers are not allowed to lay foundation stones for any projects, make major policy choices, or make commitments to provide public services until elections are announced.

Q84. Answer: (c) Santoor

The correct answer is Santoor.

Key Points

• Satish Vyas is a santoor player from India.

• C. R. Vyas, an Indian classical vocalist, is his father.

• He has been a splendid musician for over 30 years.

• He was conferred upon the prestigious Tansen Samman in December 2020.

• He has performed at famous locations all over the world.

• In 2019, he performed for the Raag-Mala Music Society of Toronto at the Aga Khan Museum in Toronto, Canada.

• He was honoured with the Padma Shri in 2003.

Important Points

• Famous Santoor players in India are:

• Pandit Shivkumar Sharma.

• Rahul Sharma.

• Tarun Bhattacharya.

• Abhay Sopori.

• Ulhas Bapat.

Additional Information

• Famous Flute players in India are:

• Hariprasad Chaurasia.

• Ustad Bismillah Khan.

• Pravin Godkhindi.

• Raghunath Seth.

• Famous Harmonium players in India are:

• Tulsidas Borkar.

• Sudhir Nayak.

• Vidyadhar Oke.

• Santosh Ghante.

• Baburaj.

• Famous Tabala players in India are:

• Zakir Hussain,

• Trilok Gurtu.

• Talvin Singh.

• Anindo Chatterjee.

• Rimpa Siva.

Q85. Answer: (c) Diamond

The correct answer is Diamond.

Key Points

• Among the options, only diamond is NOT a good conductor of electricity.

• Diamond is a naturally-occurring solid.

• It is a mineral composed of pure carbon.

• Diamond is the smallest mass element capable of forming a stable covalently bonded crystal lattice with a highly symmetric and tightly bound structure.
• Diamond does not conduct electricity, is a good electrical insulator.
• Pure diamond is unable to conduct electricity because it lacks any delocalized free electrons in the carbon atom's outer shell.
• Diamond is a good conductor of heat due to its strong covalent bonding and low phonon scattering.
• All of the carbon atoms in the diamond lattice are sp^3 hybridized.

Additional Information
• Graphite is a crystalline form of carbon with its atoms arranged in a hexagonal structure.
• Graphite is a good conductor of electricity.
• Gold is a chemical element with the atomic number 79.
• Gold is a good conductor of both electricity and heat.
• Soils are electric current conductors.

Q86. Answer: (a) Guru Gobind Singh

The correct answer is Guru Gobind Singh.

Key Points
• Guru Gobind Singh was the tenth Guru of the Sikhs.
• He is the son of Guru Tegh Bahadur.
• In 1666, he was born in Patna, Bihar.
• Khalsa Panth, a community that considers Sikhism as its faith was founded by Guru Gobind Singh.
• Guru Gobind Singh was the final human Guru of the Sikhs.

Additional Information
• Guru Arjan Dev was the fifth of the Ten Gurus of Sikhism.
• He became Sikh Guru on 16 September 1581.
• He developed Amritsar as a Centre of Excellence.
• He was the first Guru of the Sikh faith to be martyred.
• Guru Tegh Bahadur was the Sikhs' ninth Guru.
• He is the second Sikh to die in battle.
• In 1621, he was born in the Punjabi city of Amritsar.
• At the command of Mughal Emperor Aurangzeb, Guru Tegh Bahadur was killed in Delhi in 1675.
• Guru Nanak is the founder of the Sikh religion.
• Guru Nanak was born on 15th April 1469 at Rai Bhoi di Talvandi(Present day Nankana Sahib) in Pakistan.
• Gurdwara Janam Asthan marks his birthplace.
• He is considered the first of the ten Sikh Gurus.

Q87. Answer: (b) Seeni Viswanathan

The correct answer is Seeni Viswanathan.

Key Points
• Seeni Viswanathan was a noted writer in India.
• He was conferred with the 2020 Bharathi Award.
• He is credited with compiling the voluminous works of Bharathi in chronological order.
• Since 1994, the Bharathi Award has been given to prominent individuals who have rendered outstanding service in any sector of social importance.
• The occasion commemorates Tamil poet and writer Mahakavi Subramanya Bharati's 138th birthday (December 11, 2020).

Additional Information
• Raj Kamal was a famous Indian composer.
• B.R. Chopra's legendary television show Mahabharat's music was composed by him.
• Vidyut Mohan is the co-founder and CEO of Takachar.
• Kaniyan Poongunranar was an influential Tamil philosopher from the Sangam age.

Q88. Answer: (a) S Muralidhar

The correct answer is S Muralidhar.

Key Points

• S. Muralidhar has become the Chief Justice of Orissa High Court in January 2021.
• He is the 32nd Chief Justice of Orissa High Court.
• He succeeds Justice Mohammad Rafiq as the new chief justice of the Orissa High Court.
• He served on the Punjab and Haryana High Court as a judge.
• On March 6, 2020, he was appointed to the Punjab and Haryana High Court as a Judge.

Additional Information

• Hima Kohli is a Judge of the Supreme Court of India.
• She served as the Chief Justice of the Telangana High Court in 2021.
• Sanjib Banerjee is the Chief Justice of Meghalaya High Court.
• He also served as the Chief Justice of Madras High Court and a Judge in Calcutta High Court.
• Justice Pankaj Mithal is the Chief Justice of the High Court of Jammu and Kashmir and Ladakh.

Q89. Answer: (d) Godavari

Godavari is correct.

Key Points

• Among the options, only Godavari does NOT culminate in the Arabian Sea.
• Godavari river covers about 10% of the total geographical area of India.
• After the Ganges, it is the second-longest river in India.
• It rises from the slopes of the Western Ghats at Trimbakeshwar in Maharashtra.
• Through a vast network of tributaries, the Godavari River eventually drains into the Bay of Bengal.
• It is also known as 'Dakshin Ganga' because of its length and its area.
• Maharashtra, Chhattisgarh, Telangana, and Andhra Pradesh are the states through which the river flows.
• The Purna, Pranahita, Indravati, and Sabri rivers are the major tributaries of the Godavari River.

Additional Information

• The Sabarmati river is a west-flowing river in India.
• It originates in the Aravalli Range of the Udaipur District of Rajasthan and culminates in the Arabian Sea.
• The Tapti River is a west-flowing river in India.
• It flows westwards before draining into the Arabian Sea.
• The Indus is a west-flowing river in India that rises in Western Tibet.
• It empties into the Arabian Sea.

Q90. Answer: (a) origin of Universe

The correct answer is origin of Universe.

Key Points

• The most widely accepted theory about the origin of the universe is the Big Bang Theory.
• Expanding universe hypothesis. is another name for Big Bang Theory.
• George Lamaitre coined the term "Big Bang Theory."
• According to the Big Bang Theory, the universe began as a small hot body that exploded massively and then swiftly expanded.
• The universe cooled as a result of its fast expansion, bringing it to its current state.
• The temperature plummeted to 4,500K within 300,000 years after the Big Bang, allowing atomic matter to form.
• Around 13,75 billion years ago, the big bang happened.
• Edwin Hubble in 1920 provided evidence that the universe is expanding.

Q91. Answer: (d) Smriti Mandhana

The correct answer is Smriti Mandhana.

Key Points

• Smriti Mandhana is an Indian women's cricketer.
• She was voted the Best Women's International Cricketer by the Board of Control for Cricket in India (BCCI) in June 2018.
• Smriti Mandhana is the brand ambassador of Equitas Small Finance Bank (ESFB).
• Equitas Small Finance Bank has named Rani Rampal, a women's hockey player, and Smriti Mandhana, a cricketer, as brand ambassadors.
• This announcement coincides with the bank's 5th anniversary, which will take place on September 5, 2021.

Additional Information

• Virat Kohli was appointed as the brand ambassador of Fire-Boltt in 2021.
• Rohit Sharma is the first non-footballer to become the brand ambassador of La Liga in India.
• Mithali Raj is the brand ambassador for L'oreal Paris.

Q92. Answer: (a) Kathryn Bryce

The correct answer is Kathryn Bryce.

Key Points

• Kathryn Bryce is a national cricket player in Scotland's women's cricket team.
• She was selected as the ICC Associate Cricketer of the Decade in December 2020.
• She became the first cricketer from Scotland to reach the top ten of the ICC Player Rankings in June 2021.
• For her performance against Ireland in May 2021, Bryce was named the ICC Women's Player of the Month.
• She was the first Associate woman to be nominated for the award, and she was also the first Associate player to win it.

Additional Information

• Stafanie Taylor is the current captain of the West Indies women's cricket team.
• She became the ICC Women's Cricketer of the Year in 2011.
• Sarah Bryce is a national cricket player in Scotland's women's cricket team.
• She was nominated for the ICC Women's Associate Cricketer of the Decade award in November 2020.
• Mithali Raj is the Test and ODI captain of the Indian women's national cricket team.
• She won the Wisden Leading Woman Cricketer in the World in 2017.

Q93. Answer: (a) Volcanoes

The correct answer is Volcanoes.

Key Points

• A volcano is a conical hill or mountain built around a vent that connects to reservoirs of molten rock beneath the Earth's surface.
• Volcanoes are formed from liquid and solid rock emanating from the interior of the Earth.
• A hole or vent from which molten rock and associated gases escape is also called a volcano.
• Volcanoes are mountains, but they are not like other mountains, because they do not result from folding and crumpling, or uplift and erosion.
• Volcanoes are formed by the accumulation of explosive materials such as lava and bombs.
• Volcanoes occur most often on Earth when tectonic plates are separating or convergent, and most of them are found underwater.
• Basalt, a form of lava that is typically liquid when erupted, forms most volcanoes.

Additional Information

• Fault-block mountains are formed by the movement of large crustal blocks, which are formed when stressing forces pull the crust apart.
• Circum-erosional or relict or residual mountains (Aravallis in India, Urals in Russia) are remnants of older fold mountains that have resulted from denudation. Residual mountains may also develop from plateaus that have been divided by rivers into hills and valleys.
• A plateau is a flat, elevated landform that rises sharply from the surrounding area on at least one side. Plateaus occur on every continent and occupy one-third of the Earth's landmass. They are one of the four major landforms along with mountains, plains and hills.

Q94. Answer: (d) proteins

The correct answer is proteins.

Key Points

• Amino acids are chemical molecules with an amino group and an acidic group on the same carbon atom.
• Amino acids are often referred to as the building blocks of proteins.
• They are organic compounds that combine to form proteins.
• They also help in hormone and neurotransmitter synthesis.

Important Points

• Proteins are polypeptides.
• Proteins are linear chains of amino acids linked by peptide bonds.
• Proteins are known as building blocks of life.
• Proteins are made up of Carbon, Hydrogen, Oxygen, and Nitrogen.

YourMockTest.com — Free Study Material

• Proteins make up around 60% of the dry weight of cells and are the most prevalent molecules in the body.
• Protein is the nutrient known as 'bodybuilders'.

Additional Information

• Triglyceride is the simple unit of Fat.
• Fats and carbohydrates are the energy sources of the body.
• Sucrose is the most commonly used sugar form.

Q95. Answer: (d) 1986

The correct answer is 1986.

Key Points

• Hampi is a temple town in Karnataka's northern state.
• The historical Vijayanagara Dynasty's capital was Hampi.
• Hampi was declared as a World Heritage Site by UNESCO in 1986.

Important Points

• In the 14th century, Hampi was the capital of the Vijayanagara Empire.
• Hampi is “World’s Largest Open-air Museum” and covers an area of nearly 29 sq km.
• Hampi was the world's second-largest medieval-era city after Beijing.
• Hampi is located on the banks of the Tungabhadra River.
• Vijayanagara rulers embellished and constructed this city with numerous beautiful temples, palaces, market streets, and monuments, making it one of India's most famous ancient metropolises.

Q96. Answer: (c) Subodh Kumar Jaiswal

The correct answer is Subodh Kumar Jaiswal.

Key Points

• Subodh Kumar Jaiswal is an Indian police officer.
• He is currently serving as the director of the Central Bureau of Investigation (CBI).
• He was appointed as the chief of the Central Industrial Security Force (CISF) in January 2021.
• He was the 28th chief of the force at the CISF.
• He served as the additional secretary of R&AW for three years.
• He is set to retire from service in September 2022.
• He has previously worked with the PM's Special Protection Group and RAW.

Mistake Points

• As of November 2021, Sheel Vardhan Singh is the new chief of the Central Industrial Security Force.

Additional Information

• As of January 2021, Rajat Datta is the new director-general of the Armed Forces Medical Services.
• Kumar Rajesh Chandra was appointed as Director-General of Sashastra Seema Bal (SSB) in January 2019.
• Pankaj Kumar Singh was appointed as the director-general (DG) of the Border Security Force (BSF) in August 2021.

Q97. Answer: (b) operating system

The correct answer is operating system.

Key Points

• Computer software includes both system and application software, and it's the component that enables user interaction through a user interface.
• The user interface (UI) is a software feature that allows users to interact with the computer, enter commands, and receive feedback.
• The UI can be graphical (GUI) or text-based (CLI), and is present in operating systems, apps, and other programs.
• Therefore, UI is not exclusive to the operating system but spans across all types of software.
• Examples of software with UI include:
• Operating systems like Windows, Linux, macOS.
• Applications like Microsoft Word, Google Chrome, VLC Media Player.
• Mobile apps and development tools.

Additional Information

• Operating System is a type of system software that manages hardware and provides core UI elements like taskbars, file

YourMockTest.com — Free Study Material

explorers, etc.

• Computer Network refers to interconnected systems that share resources but are not the source of UI themselves.

• Hardware refers to the physical components like keyboard, monitor, CPU – which are used by UI but do not provide it themselves.

Q98. Answer: (c) New Zealand

The correct answer is New Zealand.

Important Points

• Alan Burgess was a former New Zealand cricketer.

• He played first-class cricket for Canterbury from 1940 to 1952.

• During World War II, he served as a tank driver.

• He joined the New Zealand Army in 1941.

• In 1944, he took part in the Battle of Monte Cassino.

• He toured England with the New Zealand Services team as a batsman after the war in Europe finished.

Key Points

• Alan Burgess was the world's oldest living first-class cricketer.

• He passed away in January 2021.

• When Tom Pritchard died in August 2017, Alan Burgess became New Zealand's oldest living first-class cricketer.

• Burgess became the oldest living first-class cricketer on June 13, 2020, when Vasant Raiji died.

• Following Burgess' death, Raghunath Chandorkar of India became the world's oldest living first-class cricketer, while Iain Gallaway of New Zealand became the world's oldest living first-class cricketer.

Q99. Answer: (b) Lord Ganesha

The correct answer is Lord Ganesha.

Key Points

• Alfredo Covelli is an Italian author and screenwriter-film producer.

• Alfredo Covelli authored ‘Vahana Masterclass’, a book for kids based on Lord Ganesha.

• The book is titled “Vahana Masterclass”.

• The book narrates the story of Lord Ganesha looking for a new 'vahana' to accompany him to great adventures around the cosmos.

• "Vahana Masterclass" is also his first book in English and the first for children.

Q100. Answer: (a) Coffer

The correct answer is Coffer.

Key Points

• A cofferdam is a temporary dam constructed to exclude water from a specific area.

• It is designed to allow for the construction of a permanent structure in arid environments, along with damming, diversion, or dewatering.

• A cofferdam is constructed of a waterproof fence by depositing sheets into a bed, which is usually steel in modern works.

• The walls of a cofferdam must be solid and well-bonded, to withstand the shock of hitting a heavy dredging bucket; When water is pulled out of the cofferdam, they must also be able to bear horizontal forces from the surrounding body of water.

• Water should not be able to enter the construction site because of the dam walls.

• As a result, the height of the wall must exceed the excessive water level, and it must also be waterproof.

• Dams are preferred in large construction sites and places with sufficient depth of dry soil bed.

• Permanent dams, oil platforms, bridge piers, and other structures standing in or above water are regularly built or repaired along cofferdams.

Additional Information

• An impounding reservoir is a basin built in the valley of a stream or river to contain stream flow so that the stored water can be used when supply is in short supply.

• A detention dam is a structure designed to capture surface runoff and stream water flow in order to control the flow of water in areas below the dam.

• Debris dams are a form of detention dam that collects material to keep it from flowing into locations where a substantial deposit of debris could be harmful.

YourMockTest.com – Free Study Material

More previous year papers and mock tests: **www.yourmocktest.com/pyq**

YourMockTest.com — Free Study Material