



Your Personal Exams Guide



NDA



CDS



SSC CGL



CBSE UGC NET



IAS



SSC CHSL



CTET



MPSC



AFCAT



CSIR UDC NET



IBPS PO



UP POLICE



SSC MTS



SBI PO



BPSC



UPTET



IBPS RRB



IBPS CLERK



IES



UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

Delhi Police Constable Previous Paper 8 (Held On: 27 Nov 2020 Shift 3)

Total Time: 1 Hour : 30 Minute

Total Marks: 100

Instructions

Sl No.	Section Name	No. of Question	Maximum Marks	Negative Marks	Positive Marks
1	General Knowledge/Current Affairs	50	50	0.25	1
2	Reasoning	25	25	0.25	1
3	Numerical Ability	15	15	0.25	1
4	Computer Fundamentals	10	10	0.25	1

- 1.) A total of 90 minutes is allotted for the examination.
- 2.) The server will set your clock for you. In the top right corner of your screen, a countdown timer will display the remaining time for you to complete the exam. Once the timer reaches zero, the examination will end automatically. The paper need not be submitted when your timer reaches zero.
- 3.) There will, however, be sectional timing for this exam. You will have to complete each section within the specified time limit. Before moving on to the next section, you must complete the current one within the time limits.

General Knowledge/Current Affairs

1. 'Samaveda' is considered to be one of the primary sources of Indian ----- (+1, -0.25)
- a. coinage
 - b. textile design
 - c. medicine
 - d. music and art
-
2. Which of the following places is associated with the tomb of Jahangir? (+1, -0.25)
- a. Karachi
 - b. Agra
 - c. Lahore
 - d. Delhi
-
3. Digboi Oil Refinery, commissioned on 11th December 1901, is India's oldest operating refinery and one of the oldest operating refineries in the world. It is located in ----- (+1, -0.25)
- a. Assam
 - b. Gujarat
 - c. Odisha
 - d. Uttar Pradesh

4. Which of the following statements is correct regarding the term 'pietra - dura'? (+1, -0.25)

- a. It was a technique for the inlay of precious stones and gems into stone walls.
- b. It was a style of gardening.
- c. It was a form of Hindustani classical music played in the courts of Delhi Sultans.
- d. It was a type of painting style carried out on palm leaves.

5. Which of the following pairs is INCORRECTLY matched? (+1, -0.25)

- a. Kuka movement – Assam
- b. Moplah rebellions – Malabar
- c. Polygar rebellions – Tamil Naidu
- d. Faraizi movement – Bengal

6. The cheque number of a bank in India consists of _____ digits as of August 2020. (+1, -0.25)

- a. five
- b. eight
- c. six
- d. seven

7. With which of the following soils are the terms 'khadar' and 'bhangar' associated? (+1, -0.25)

- a. Laterite
- b. Alluvial
- c. Black
- d. Arid

8. Which of the following pairs is INCORRECTLY matched? (+1, -0.25)

- a. Konark - Odisha
- b. Bhimbetka - Chhattisgarh
- c. Hampi - Karnataka
- d. Fatehpur Sikri - Uttar Pradesh

9. A glucometer is generally used as a monitor by a _____ patient. (+1, -0.25)

- a. hypoglycemic
- b. obstetric
- c. neurological
- d. hepatitis-B

10. _____ is an instrument for measuring the relative humidity of the atmosphere. (+1, -0.25)

- a. Hygrometer
 - b. Barometer
 - c. Hydrometer
 - d. Anemometer
-

11. Which of the followings was NOT built during the Tughlaq period? (+1, -0.25)

- a. Jama Masjid
 - b. Tughlaqabad
 - c. Feroz Shah Kotla
 - d. Khirki Masjid
-

12. As of August 2020, who among the following is NOT an incumbent nominated member to the Rajya Sabha? (+1, -0.25)

- a. Sonal Mansingh
 - b. Roopa Ganguly
 - c. Jaya Bachchan
 - d. Subramanian Swamy
-

13. As of August 2020, which of the following pairs is correct with reference to the administration of the Union Territories of India? (+1, -0.25)

- a. Ladakh – Anil Baijal

- b. Andaman and Nicobar Island – Dineshwar Sharma
- c. Delhi (NCT) – Praful Patel
- d. Jammu and Kashmir – Manoj Sinha

14. In September 2020, who among the following assumed charge as the Election Commissioner of India? (+1, -0.25)

- a. Rajiv Kumar
- b. Arvind Pangaria
- c. Amitabh Kant
- d. Bibek Debroy

15. In September 2020, the Reserve Bank of India decided to introduce the 'positive pay system' from 1 January 2021 for cheques, under which re-confirmation of key details may be needed for payments beyond (+1, -0.25)

-
- a. Rs. 50,000
 - b. Rs. 75,000
 - c. Rs. 55,000
 - d. Rs. 60,000

16. India's rank in the Global Innovation Index 2020 is (+1, -0.25)

- a. 52nd

- b. 87th
 - c. 63rd
 - d. 48th
-

17. With reference to Indian music, which of the following is NOT a 'Raga'? (+1, -0.25)

- a. Poorvi
 - b. Shringara
 - c. Hindol
 - d. Bhairavi
-

18. How many times has the Indian Men's Cricket team entered the ODI World Cup semi-finals till 2019? (+1, -0.25)

- a. Seven
 - b. Five
 - c. Eight
 - d. Six
-

19. _____ is an equatorial belt of low atmospheric pressure where the trade winds converge. (+1, -0.25)

- a. Moraine
- b. La Nina

- c. El Nino
 - d. Doldrums
-

20. In which year were the Commonwealth Games held in New Delhi? **(+1, -0.25)**

- a. 2010
 - b. 2006
 - c. 2012
 - d. 2018
-

21. Intensified Mission Indradhanush (IMI) 2.0 is a scheme launched by the Government of India to improve coverage in areas with low ----- **(+1, -0.25)**

- a. nutrition
 - b. digitisation
 - c. immunisation
 - d. education
-

22. The Thumba Equatorial Rocket Launching Station (TERLS) is located near ----- **(+1, -0.25)**

- a. Somnath
- b. Thiruvananthapuram
- c. Sriharikota

d. Chandipur

23. The 11th Five-Year Plan ended in the year _____. (+1, -0.25)

a. 2010

b. 2011

c. 2013

d. 2012

24. The Vyas Samman, started in 1991 is given for 'outstanding literary work' in _____ (+1, -0.25)

a. Rajasthani

b. Hindi

c. Sanskrit

d. Konkani

25. Which of the following pairs is INCORRECT? (+1, -0.25)

a. Kylian Mbappé – France

b. Paolo Rossi – Spain

c. Pele – Brazil

d. Diego Maradona – Argentina

26. Who among the following is the author of the book 'The Shadow Lines'? (+1, -0.25)
- a. Ravish Kumar
 - b. Amitav Ghosh
 - c. Amish Tripathi
 - d. Arundhati Roy

27. Pranab Mukherjee, who passed away in August 2020, served as the _____ President of India. (+1, -0.25)
- a. 14th
 - b. 13th
 - c. 11th
 - d. 12th

28. National Human Rights Commission of India is an independent statutory body established on 12 October _____. (+1, -0.25)
- a. 2002
 - b. 1993
 - c. 1996
 - d. 1999

29. Which of the following books was NOT written by MK Gandhi? (+1, -0.25)

- a. Golden Threshold
- b. India of My Dreams
- c. Indian Home Rule
- d. Nature Cure

30. In the context of economic system of Mughal Empire, the term 'Polaj' referred to _____. (+1, -0.25)

- a. cash payment
- b. annually cultivated land
- c. a type of coin introduced by Akbar
- d. a kind of tax

31. The dancing girl statue of Mohenjodaro was made of: (+1, -0.25)

- a. silver
- b. gold
- c. iron
- d. bronze

32. 'Operation Greens' was announced in the budget speech of _____ with an outlay of ₹500 crores to stabilize the supply of tomato, onion and potato (TOP) crops and to ensure availability of TOP crops throughout the country round the year without price volatility. (+1, -0.25)

- a. 2015-16
 - b. 2017-18
 - c. 2020-21
 - d. 2018-19
-

33. Nephritis is a medical condition that affects the _____. (+1, -0.25)

- a. kidney
 - b. heart
 - c. brain
 - d. muscle joints
-

34. Part _____ of the Constitution of India deals with the organisation, composition, duration, officers, procedures, privileges, powers and so on of the Parliament. (+1, -0.25)

- a. VIII
 - b. VI
 - c. V
 - d. VII
-

35. Who among the following was conferred the Shanti Swarup Bhatnagar Prize for Science and Technology, 2020 under the category of 'Earth, Atmosphere, Ocean and Planetary Sciences'? (+1, -0.25)

- a. Subhadeep Chatterjee
 - b. Vatsala Thirumalai
 - c. Subi Jacob George
 - d. Abhijit Mukherjee
-

36. In which year did the Government of India start the Central Rural Sanitation Programme? (+1, -0.25)

- a. 1986
 - b. 1992
 - c. 1989
 - d. 2014
-

37. In a photovoltaic cell which type of energy gets converted into electrical energy? (+1, -0.25)

- a. Chemical
 - b. Light
 - c. Sound
 - d. Magnetic
-

38. In which of the following places is the Agrasen ki Baoli, the historical step well located? (+1, -0.25)

- a. Chennai

- b.** Chandigarh
 - c.** Kolkata
 - d.** Delhi
-

39. The Sharqi style of architecture belonged to the modern state of: **(+1, -0.25)**

- a.** Telangana
 - b.** Punjab
 - c.** Uttar Pradesh
 - d.** Himachal Pradesh
-

40. In the context of retirement benefits and related issues of an employee in India, what does EPFO stand for? **(+1, -0.25)**

- a.** Extensive Pension Funding Ombudsman
 - b.** Employees' Provident Fund Organisation
 - c.** Employees' Privilege Financial Operation
 - d.** Employees' Pension Fixation Organization
-

41. Which of the following events was one of the important reasons for the Swadeshi Movement of 1905? **(+1, -0.25)**

- a.** Passing of Rowlatt Act
- b.** Partition of Bengal

- c. Formation of Muslim League
 - d. Formation of Indian National Congress
-

42. The YONO (You Only Need One) app is an integrated digital banking platform offered by _____ to enable its users to access a variety of financial services. (+1, -0.25)

- a. HDFC
 - b. Punjab National Bank
 - c. ICICI
 - d. State Bank of India
-

43. Which of the following is a mountain peak of the Eastern Ghats? (+1, -0.25)

- a. Annapurna
 - b. Deomali
 - c. Doddabetta
 - d. Devimala
-

44. The _____ Committee is related to electoral reforms in India. (+1, -0.25)

- a. Bimal Jalan
- b. Indrajit Gupta
- c. Balwantrai Mehta

d. Kothari

45. In Geography, the feature of 'meander' is primarily associated with which of the following options? **(+1, -0.25)**

a. River

b. Peak

c. Pond

d. Cliff

46. What is the total regulation time duration (in minutes) of any international football match going to extra-time? **(+1, -0.25)**

a. 120

b. 90

c. 100

d. 150

47. The base rate is the minimum interest rate of a bank below which it is NOT permissible to lend, except in some cases if allowed by the _____. **(+1, -0.25)**

a. NITI Aayog

b. Reserve Bank of India

c. CAG

d. Supreme Court

48. Which of the following pairs is correctly matched? (+1, -0.25)

- a. Fourth Buddhist Council – Rajgriha
- b. First Buddhist Council – Kashmir
- c. Second Buddhist Council – Viratnagar
- d. Third Buddhist Council – Pataliputra

49. The Bahujan Samaj Party was formed in 1984 under the leadership of ----- (+1, -0.25)

- a. Vijay Bahuguna
- b. Mayawati
- c. Kanshi Ram
- d. Anil Agrawal

50. Zika virus disease is caused by a virus transmitted primarily by ----- (+1, -0.25)

- a. Rodents
- b. Aedes mosquitoes
- c. Dogs
- d. Uranotaenia mosquitoes

Reasoning

51. Select the option figure is embedded in the figure (X) given below
(rotation is NOT allowed).

(+1, -0.25)



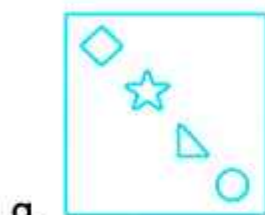
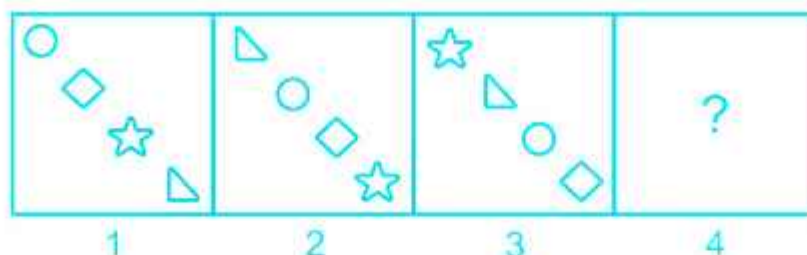
- a.
- b.
- c.
- d.

52. Which number will replace the question mark (?) in the given figure series? 97, 98, 106, 133, 197, ?

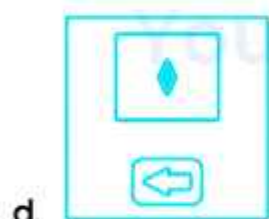
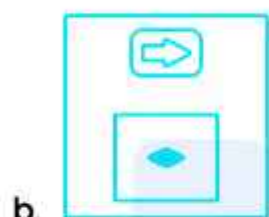
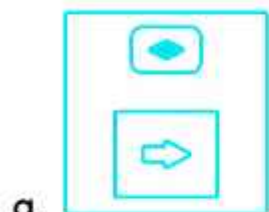
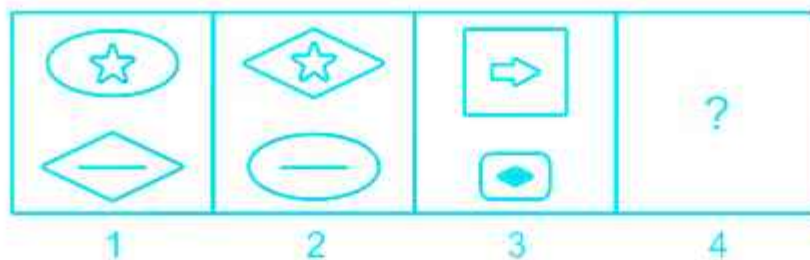
(+1, -0.25)

- a. 322
- b. 267
- c. 406
- d. 220

53. Select the figure that will replace the question mark (?) in the following figure series. (+1, -0.25)



54. Select the option that is related to the third figure in the same way as the second figure is related to the first figure. (+1, -0.25)



55. Two different positions of the same dice are shown, the six faces of which are numbered from 1 to 6. Select the number that will be on the face opposite to the face showing '5' (+1, -0.25)



- a. 3
- b. 2
- c. 1
- d. 4

56. Which two signs should be interchanged to make the given equation correct? (+1, -0.25)

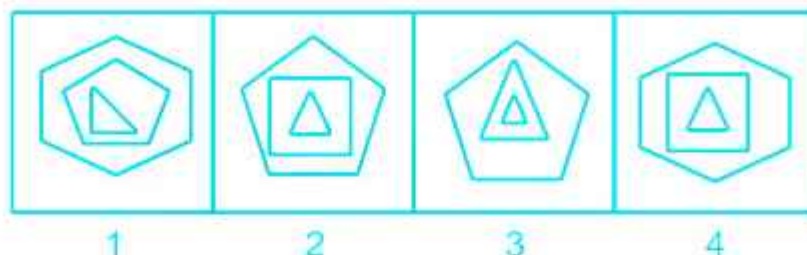
$$86 + 5 - 42 \div 28 \times 14 = 7$$

- a. $\div$ and $-$
- b. $\times$ and $+$
- c. $\times$ and $-$
- d. $\times$ and $\div$

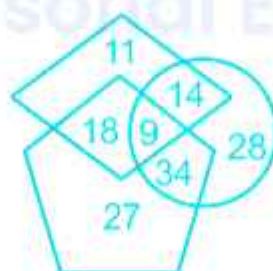
57. Ravindra pays Rs. 4,160 as one year's interest for the amount he borrowed from his friend at the interest rate of 8% per annum. How much money did Ravindra borrow from his friend? (+1, -0.25)

- a. Rs. 60,400
- b. Rs. 50,000
- c. Rs. 52,000
- d. Rs. 48,000

58. Three of the following four figures are similar in a certain manner while one is different, pick the odd one out. (+1, -0.25)



- a. 3
b. 1
c. 2
d. 4
59. In the following Venn diagram, the 'pentagon' stands for 'sailors', the 'circle' stands for 'females', and the 'rhombus' stands for 'illiterate'. The given number represent the numbers of persons in that particular category. How many female sailors are NOT illiterate? (+1, -0.25)



- a. 28
b. 34
c. 9
d. 14

60. Select the option that is related to the third term in the same way as the second term is related to the first term . (+1, -0.25)

Brazil : South America :: Sri Lanka : ?

- a. Country
- b. Capital
- c. Asia
- d. Australia

61. Select the given pattern carefully and select the number that can replace the question mark (?) in it. (+1, -0.25)

25	52	40
14	16	15
92	152	?

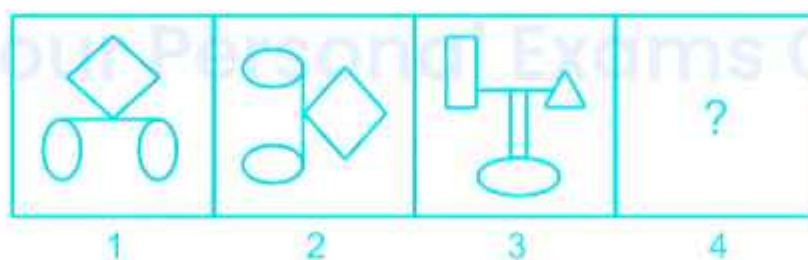
- a. 98
- b. 125
- c. 139
- d. 108

62. Select the correct mirror image of the given combination when the mirror is placed at 'PQ' as shown below. (+1, -0.25)

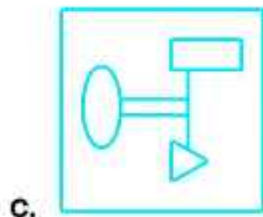
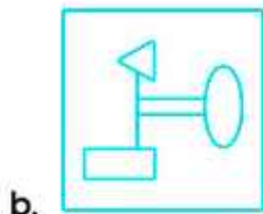


- a. 1 s W h f S
b. 1 s M h f S
c. 1 s M h f S
d. 1 s M h f S

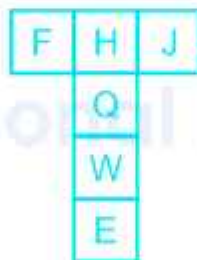
63. Select the option that is related to the third figure in the same way as the second figure is related to the first figure. (+1, -0.25)



- a.



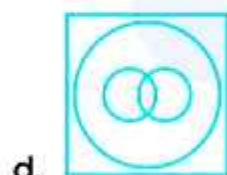
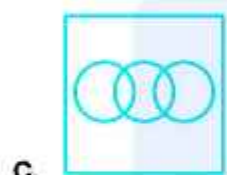
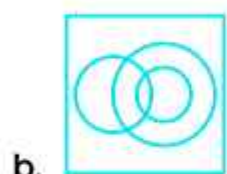
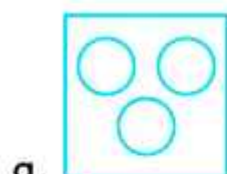
64. A cube is made by folding the given sheet. In the cube so formed, which letter will be on the opposite face to the face having the letter 'F'? (+1, -0.25)



- a. W
b. E
c. Q
d. J

65. Select the Venn diagram that best illustrates the relationship between the following classes. (+1, -0.25)

Mothers, Sales Managers, Males



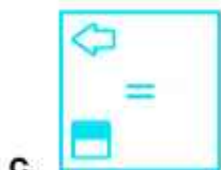
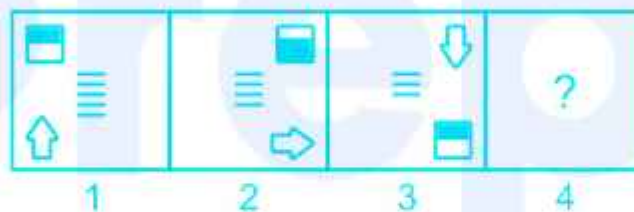
66. Select the option that is related to the third number in the same way as the second number is related to the first number. (+1, -0.25)

5573 : 20 :: 8991 : ?

- a. 52
- b. 37
- c. 27
- d. 90

67. In a code language, 'DYNASTY' is written as 'NYDAYTS'. How will 'RESPOND' be written in that language? (+1, -0.25)
- a. SRENPOD
 - b. TESTPDNO
 - c. SERPDNO
 - d. SERQDMO

68. Select the figure that will replace the question mark (?) in the following figure series. (+1, -0.25)



d.



69. Select the option in which the given figure (X) is embedded (rotation is NOT allowed). (+1, -0.25)



a.



b.



c.





d.

70. Three of the following four letter - clusters are alike in a certain way and one is different. Pick the odd one out. (+1, -0.25)

a. HEA

b. LIF

c. TQM

d. KHD

71. Which figure will replace the question mark (?) in the given figure series? (+1, -0.25)
14, 17, 68, 73, 438, ?

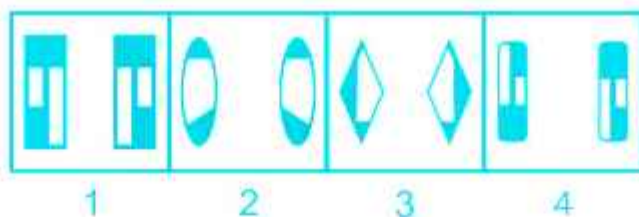
a. 876

b. 166

c. 405

d. 445

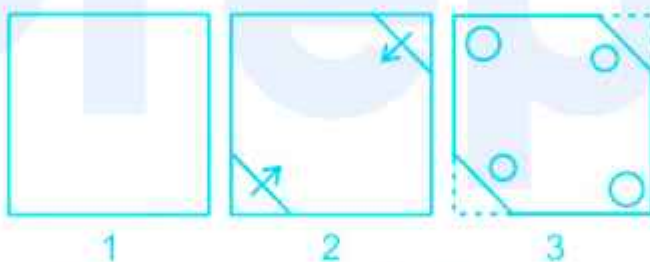
72. Three of the following four figures are similar in a certain way while one is different. Pick the odd one out. (+1, -0.25)



- a. 2
- b. 1
- c. 4
- d. 3

73. A paper is folded and cut as shown below. How will it appear when unfolded?

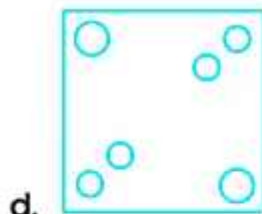
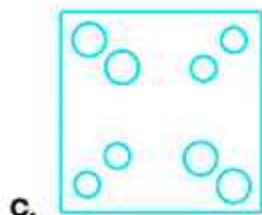
(+1, -0.25)



a.



b.



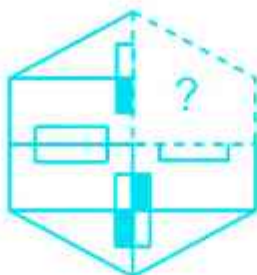
74. Select the option figure that can replace the question mark (?) in the given figure to complete the pattern.

(+1, -0.25)



75. Which of the following option figures will complete the pattern in the figure given below?

(+1, -0.25)



Numerical Ability

76. The length of a rectangular plot is 15 m more than its breadth. If the cost of fencing the plot at the rate of Rs. 16.50 per m is Rs. 4,950, then what is the length of the plot (in m)? (+1, -0.25)
- a. 82.5
- b. 75
- c. 60
- d. 67.5
-
77. A man travelled the first part of his journey at 160 km/h and the second part at 240 km/h, and covered a total distance of 3840 km to his direction in 20 hours. How long, in hours, did the second part of his journey last? (+1, -0.25)
- a. 8
- b. 10
- c. 12
- d. 15
-
78. The smallest number which when divided by 12, 10 and 11 leave remainders 11, 9 and 10, respectively, is: (+1, -0.25)
- a. 331
- b. 659
- c. 661

d. 329

79. A and B each borrowed equal sums for 3 years at a rate of 5% simple and compounded interest compounded annually, respectively. At the time of payment, B had to pay Rs. 427 more than A. The sum borrowed and the interest paid by B (in Rs.) were: (+1, -0.25)

a. Rs. 56,000; Rs. 8,400

b. Rs. 48,000; Rs. 7,200

c. Rs. 48,000; Rs. 7,566

d. Rs. 56,000; Rs. 8,827

80. A vendor bought two varieties of tea, brand A and brand B, costing Rs. 15 per 100 g and Rs. 18 per 100 g, respectively, and mixed them in a certain ratio. Then, he sold the mixture at Rs. 20 per 100 g, making a profit of 20%. What was the ratio of brand A to brand B tea in the mixture? (+1, -0.25)

a. 4 : 5

b. 1 : 2

c. 3 : 4

d. 2 : 3

81. An open cuboidal cistern is externally 1.6 m long, 1.3 m wide and 53 cm high. Its capacity is 900 litres and its walls are 5 cm thick. The thickness (in cm) of the bottom is: (+1, -0.25)

a. 4

b. 3

c. 5

d. 2

82. A shopkeeper bought 1000 kg of rice, a part of which was sold at a 10% profit and the remaining at a 20% loss, a loss of 11% was incurred on the whole transaction. What was the quantity (in kg) of rice that was sold at a 20% loss? (+1, -0.25)

a. 600

b. 500

c. 300

d. 700

83. If A's income is 35% more than B's income, then by what percentage is B's income less than A's income (correct to the nearest integer)? (+1, -0.25)

a. 26%

b. 19%

c. 35%

d. 17%

84. A tank full of petrol in a motorcycle lasts for 30 days. If a rider starts using 20% more petrol every day, then for how many days will the tank full of petrol last? (+1, -0.25)

- a. 25
- b. 18
- c. 10
- d. 20

85. A can do a piece of work in 45 days. He works for 30 days and leaves. If B completes the remaining work in 5 days, then in how many days can B alone complete the entire work? (+1, -0.25)

- a. 10
- b. 15
- c. 18
- d. 12

86. 2 years ago, the average age of a family of 5 members was 18 years. After a new member is added to the family, the average age of the family is still the same. The present age of the newly added member, in years, is: (+1, -0.25)

- a. 8
- b. 6
- c. 10
- d. 5

87. An amount of Rs. 43,892 is lent to each of two persons for 3 years. One at the rate of 30% simple interest and the other at the rate of 30% (+1, -0.25)

compound interest, compounded annually. by what percentage will the simple interest be less than the compound interest received in this 3 - year duration (correct to one decimal place)?

- a. 24.7%
- b. 23.8%
- c. 22.7%
- d. 25.7%

88. The sum of two numbers is 26 and their difference is 14. If three times the larger number is divided by the smaller number, then the quotient is: (+1, -0.25)

- a. 11
- b. 12
- c. 10
- d. 9

89. The marked Price of an article is Rs. 5000. Three successive discounts of 15%, 10% and 18%, are given on its marked price. The selling price (in Rs.) of the article is: (+1, -0.25)

- a. 3136.5
- b. 3250
- c. 3000
- d. 3362.75

90. Which of the following fractions is the smallest?

(+1, -0.25)

$$\frac{11}{12}, \frac{13}{14}, \frac{12}{13}, \frac{15}{16}, \frac{19}{20}$$

a. $\frac{13}{14}$

b. $\frac{15}{16}$

c. $\frac{19}{20}$

d. $\frac{11}{12}$

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Your Personal Exams Guide

Computer Fundamentals

91. Which of the following displays both the name of the application and the name of the spreadsheet in MS-Excel? (+1, -0.25)
- a. Title bar
 - b. Tool bar
 - c. Task bar
 - d. Menu bar
-
92. Which of the following is FALSE with reference to cell editing in MS-Excel? (+1, -0.25)
- a. Select the cell, click on the formula bar and edit the content
 - b. Edit the cell by double clicking the cell where the content is located
 - c. Select the cell and press the F2 function key on the keyboard to edit the content of the cell
 - d. Select the cell and press the F5 function key on the keyboard to edit the content of the cell
-
93. Which of the following can be used to change the width of the columns in a table in MS- Word? (+1, -0.25)
- a. Insert
 - b. Translate
 - c. Define
 - d. Table properties

94. Which of the following is the full form of 'CC', a field of E-mail header? (+1, -0.25)

- a. Continuous copy
- b. Carbon copy
- c. Character copy
- d. Control copy

95. Which of the following shortcuts is used to select a sentence in a paragraph in MS-Word? (+1, -0.25)

- a. Alt + click on a sentence to select it
- b. Single-click on a sentence to select it
- c. Ctrl + click on a sentence to select it
- d. Double-click on a sentence to select it

96. Which of the following is NOT a feature of internet? (+1, -0.25)

- a. Flexibility of communication
- b. Accessibility
- c. High cost
- d. Ease of use

97. The 'LEN' function in MS-Excel belongs to which of the following categories? (+1, -0.25)

- a.** Financial
 - b.** Logical
 - c.** Text
 - d.** Math & Trig
-

98. Under which of the following menu tabs are Page Setup options usually available in MS- Word 2007? **(+1, -0.25)**

- a.** Insert
 - b.** Page Layout
 - c.** Home
 - d.** Review
-

99. Which of the following is NOT a search engine? **(+1, -0.25)**

- a.** Bing
 - b.** Ask
 - c.** Yahoo
 - d.** Safari
-

100. Which of the following is NOT a character formatting option in Ms-Word? **(+1, -0.25)**

- a.** Font style
- b.** Font

- c. Size
- d. Alignment

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Your Personal Exams Guide

Answers

1. Answer: d

Explanation:

The correct answer is music and art.

- 'Samaveda' is considered to be one of the primary sources of Indian **music and art**.

★ Key Points

Sama Veda

- Sama Veda derives its roots from 'saman' which means melodies. It is a collection of melodies.
- The Sama Veda (**book of chants**) had 1549 hymns.
- All hymns (**excluding 75**) were taken from the Rig Veda.
- The hymns of the Sama Veda were recited by **Udgatri at the Soma sacrifice**.
- This Veda is important for **Indian music**.
- It contains **Dhrupad Raga**.

★ Additional Information

- Vedic literature comprises **four literary productions**.
- They are **The Samhitas or Vedas, The Brahamans, The Aranyakas, and The Upanishads**.
- The most important of Vedic Literature is **Vedas**.
- The word Veda comes from the word Vid, which means **to know or knowledge**.
- Vedic texts are divided between **Sruti (based on hearing) and Smriti (based on memory)**.
- There are four vedas – **Rig Veda, Sama Veda, Yajur Veda, and Atharva Veda**.
- The first three are jointly called **Vedatrayi (a trio of Vedas)**

Rig Veda

- The **oldest Veda** is the Rigveda (collection of hymns) and one of the **oldest religious texts** in the world.
 - This is also known as '**the first testament of mankind**'.
- It has **1028 hymns called 'Suktas'** and is a collection of **10 books called 'Mandalas.'**
- The **six mandalas (from 2nd to 7th Mandalas)** are the oldest and shortest Mandalas are called **Gotra/ Vamsha Mandalas (Kula Granth)** and also called family books
- Each of which is ascribed to a particular family of **Rishi Gritsamad, Visvamitra Vamadeva, Atri, Bharadwaj, Vasistha.**
- **8th Mandala** is ascribed to Kanvas and Angiras.
- **9th Mandala** is the compilation of Soma hymns.
- The **3rd Mandala contains the Gayatri Mantra**, which was compiled in the praise of Sun God Savitri
- **Saraswathi** is the deity river in the Rig Veda.
- The **first and tenth Mandalas** are said to have been added later.
- The **10th Mandalas** contains the famous **Purushasukta** hymn which explains that the **four Varnas** were born from the **mouth, arms, thighs, and feet** of the creator Brahma.

Yajur Veda

- The Yajur Veda (**book of sacrificial prayers**) is a ritual Veda.
- The two texts of Yajur Veda are **Shukla (white or bright)** and **Krishna (black or dark)**.
- Shukla Yajurveda has **arranged and clear verses**.
- Krishna Yajurveda has an **un-arranged, unclear, motley collection of verses**.

Atharva Veda

- Atharva Veda is a **book of magical formulae**.
- It contains **charms and spells to ward off evils and diseases**.

2. Answer: c

Explanation:

The correct answer is Lahore.

- Jahangir was buried in **Lahore**.
- The tomb is located across the **River Ravi** in **Shahdara Bagh**, northwest of the **Walled City of Lahore** in **Punjab** province in **Pakistan**.

★ Key Points

Jahangir (AD 1605 - 1627)

- In 1605, Prince Salim succeeded with the title **Jahangir (Conqueror of World)** when he assumed the throne after the death of Akbar.
- He issued 12 ordinances.
- He is known for his strict administration of justice.
- He established **Zanjir-i-Adil (chain of justice)** at **Agra** for the seekers of royal justice.
- He was the **eldest son of Akbar** was born at **Fatehpur Sikri** near **Agra** in 1569.
- In 1611, he married **Mehr-un-Nisa** whom he gave the title of **Nur Jahan (light of the world)**.
- He defeated and imprisoned his son, **Khusrau Mirza**.
- He also beheaded **Guru Arjun**, the 5th Sikh Guru and one of the supporters of **Khusrau Mirza**.
- **Captain Hawkins (1608-1611)** and **Sir Thomas Roe (1615-1616)** visited Jahangir's court.
- Production of Tobacco started in his reign.
- He wrote his autobiography **Tuzuk-i-Jahangir**.
- He died in 1627.

★ Additional Information

- Babur was buried at **Aram Bagh** in **Agra** and later his body was taken to **Kabul** and his tomb is at **Kabul**.
- Humayun was buried in **Delhi**.
- Akbar was buried at **Sikandara** near **Agra**.
- Shahjahan was buried at **Taj Mahal (Agra)** besides his loving life **Mumtaz Mahal**.
- Aurangzeb was buried at **Khuldabad (Daulatabad)**.

3. Answer: a

Explanation:

The correct answer is Assam.

- Digboi Oil Refinery, commissioned on 11th December 1901, is India's oldest operating refinery and one of the oldest operating refineries in the world. It is located in **Assam**.

★ Key Points

Assam

- Kamarupa is the old name of Assam.
- **Dispur** is the capital of Assam.
- Assam is known as the '**Tea Garden of India**'.
- Assam is the leading **producer of tea** in India.
- Assam is known as the '**Gateway to the North Eastern States of India**'.
- Assam shares international boundaries with **Bhutan and Bangladesh**.
- Guwahati is known as the '**light of the east**'.
- Guwahati High court is the **largest jurisdiction in terms of states (4 states)**.
- **Jorhat** is the cultural capital of Assam.
- **The Brahmaputra** is known as Sorrow of Assam.
- Manas National Park is famous for Royal Bengal Tigers.
- **Kaziranga National Park** is famous for its one-horned rhinoceros.
- **Orang National Park** is known as the Mini Kaziranga.
- **Dibru Saikhowa** in Assam is the smallest biosphere reserve in India.
- **Majuli Island** is the biggest riverine island in the world is situated in the river Brahmaputra.
- **Bhupen Hazarika Bridge** or Dhola Sadiya bridge is the longest bridge in India, over the River Lohit, in Assam.

★ Additional Information

Gujarat

- **Gandhinagar** is the capital of Gujarat.
- Gujarat is known as '**the Land of Legends**'.
- Gujarat has the **longest coastline** in India.
- **Kandla** is the first Special Economic Zone in India.
- The **first four-lane Express Highway** in India was established in Gujarat (**Ahmedabad to Vadodara**) . It is known as **N ational Expressway 1** or **MahatmaGandhi Expressway 1**.
- Largest Oil Refinery in India – **Jamnagar Oil Refinery (Reliance)**.
- **The Gir National Park** in Gujarat is famous for **Asiatic Lions**.
- **Ran of Kutch** is the largest biosphere in India
- The tallest statue in the world – **Sardar Vallabhai Patel (182 meters)** known as **the Statue of Unity** in Vadodara on the banks of the Narmada river in Gujarat.
- The **first Railway Univesity** in India is in Vadodara.
- Judicial Capital of Gujarat – **Ahmedabad**

Odisha

- The old name of Odhisa was **Kalinga**.
- The tagline of Odhisa is "**The soul of Incredible India**".
- **Bhubaneswar** is the capital of Odhisa and known as the '**Temple city**' and '**Cathedral city of India**'.
- **Rourkela** is the industrial capital of Odhisa.
- **Cuttack** is the cultural capital of Odhisa.
- The **high court** of Odhisa is situated in Cuttack
- **Konark Sun Temple** is known as '**Black Pagoda**' is at Odhisa.
- **Jaganatha Temple** is situated at Puri in Odhisa.
- **Chilka Lake** is the largest saline water lake in India.
- **Hirakud** is the longest dam in the world built across the **Mahanadi river**.
- The Mahanadi is known as **Sorrow of Odhisa**.
- **Nandankanan Tiger Reserve** is famous for **White Tigers**.
- **Paradip** is the major seaport of Odhisa.

Uttar Pradesh

- **Lucknow** is the capital of Uttar Pradesh.
- Uttar Pradesh is the **most populous state** in India.

- Uttar Pradesh is the **'Sugar Bowl of India'**.
- Uttar Pradesh has the **largest number of monuments** in India.
- Uttar Pradesh has the **maximum membership (80 seats)** in the Lok Sabha.
- Uttar Pradesh **shares its boundary with the most number of states** in India (9 states – Rajasthan, Haryana, Himachal Pradesh, Delhi, Uttarakhand, Bihar, Madhya Pradesh, Jharkhand, and Chhattisgarh including Delhi and Nepal).
- **Asia's first DNA bank** is in **Lucknow** in Uttar Pradesh.
- Uttar Pradesh is the state through which **most numbers of the National Highways** pass.

4. Answer: a

Explanation:

The correct answer is **It was a technique for the inlay of precious stones and gems into stone walls**.

★ Key Points

- **Pietra dura:**
 - It is several kinds of **hard stone used in commesso mosaic work**, an art that flourished in Florence particularly in the late 16th and 17th centuries.
 - It is **involved in the fashioning of highly illusionistic pictures** out of cut-to-shape pieces of colored stone.
 - It was a **type of painting style** carried out on palm leaves.
 - Pietra dura items are **generally crafted on green, white, or black marble base stones**.
 - This style of ornamentation was extensively **used on the walls of the Taj Mahal**.
 - This style carves floral designs **made of semi-precious stones onto the walls of monuments**.

★ Additional Information

- The **technique of pietra dura is a Florentine invention** of the end of the 16th century, at the time of the Medici.
- It is **Francis I of Medici, who is the promoter of this art in Florence**.

5. Answer: a

Explanation:

The correct answer is Option 1.

- **Kuka movement – Assam** is the incorrect pair of the following.

★ Key Points

Kuka movement – Punjab

- Kuka movement is an **anti-British reaction**.
- It was initiated in 1849 among the people in **Punjab 1857**.
- The Kukas is also known as **Namdharis**.
- They started as a group for religious purification in Sikhism under **Sant Guru Ram Singh**.
- The **Namdhari movement** was the most important phase.
 - It aimed at overthrowing British rule and played important role in the freedom struggle.
- This movement actively propagated the principles of boycott and non-cooperation given by **Sant Guru Ram Singh** who founded the Namdhari sect for the Namdharis.

★ Additional Information

Moplah rebellions – Malabar

- The Moplah Rebellion was a series of riots by Mappila Muslims of Kerala.
- It was started in the 19th and early 20th centuries against the British and the Hindu landlords in Malabar (Northern Kerala).
- It is also known as the Moplah Riots of 1921 which was an armed revolt.

- Variyamkunnath Kunjahammed Haji and Ali Musliyar was the main leader of this movement.
- The trigger of the uprising came from the **Non-Cooperation Movement** launched by Congress in 1920 along with the **Khilafat agitation**.
- The **anti-British sentiment** fuelled by these agitations affected the **Muslim Mapillahs** of the **South Malabar** region of **Kerala**.
- After the death of Tipu Sultan in 1799 in the **Fourth Anglo-Mysore War**, Malabar had come under British authority as part of the **Madras Presidency**.

Faraizi movement – Bengal

- Farazi movement was a religious movement.
- It started by **Hazi Shariatullah** in **1818 AD** for **Bengali Muslims** to give up un-Islamic practices and follow their religious duties.
- The objective was **to revive Islam and to improve the condition of Muslim peasants** who were opposed by Hindu and British landlords.

6. Answer: c

Explanation:

The correct answer is six.

- The cheque number of a bank in India consists of **six** digits as of August 2020.

★ Key Points

- A **cheque** is a negotiable instrument that contains an order to the bank, signed by the drawer to pay a certain sum of money to a specified person as per the **Negotiable Instrument Act 1881**.

There are three parties involved in a cheque.

- **Drawer:** The person who issues the cheque or holds the account in the bank.
- **Drawee:** The person who is directed to make payment against the cheque. Drawee is basically the bank on which the cheque is drawn.

- **Payee:** The person whose name is mentioned in the cheque has been issued. If the drawer has drawn the cheque in favor of self, then the drawer is the payee.

Apart from these, there are **two more parties** involved with a cheque.

- **Endorser:** When a payee transfers his right to take the payment to another party.
- **Endorsee:** The party in whose favor, the right is transferred.

Different types of Cheques

- **Bearer cheque:** is a type of cheque in which the bearer is authorized to get the cheque encashed. This means the person who carries the cheque to the bank has the authority to ask the bank for encashment. This type of cheque is endorsable.
- **Order Cheque:** Only the payee, whose name has been mentioned in the cheque is liable to get cash for that amount. The drawer needs to strike the "OR BEARER" mark as mentioned on the cheque so that the cheque can only be encashed to the payee. This type of cheque cannot be endorsed.
- **Crossed Cheque:** The amount can only be transferred from the **drawer's account to the payee's account**. Any third party can visit the bank to submit the cheque. In this type of cheque, no cash withdrawal can be done.
- **Account Payee Cheque:** The amount shall be transferred directly to the payee's account number. This is the same as the account payee cheque but no third-party involvement is required.
- **Post-Dated Cheque:** If a drawer wants the payee to apply for withdrawal or transfer of money after the present date, then he/she can fill a post-dated cheque.
- **Ante Dated Cheque:** If the drawer mentions a date prior to the current date on the cheque.
- **Blank Cheque:** When a cheque only has a drawer's signature and all the other fields are left empty.
- **Self Cheque:** If the drawer wishes cash for himself he can issue a cheque where in place of the Payee's name he can write "SELF" and get encashment from the branch where he owns an account.

- **Mutilated Cheque:** If the cheque is torn into two or more pieces and the relevant information is torn, the bank shall reject the cheque and declare it invalid, until the drawer confirms its validation.
- **Stale Cheque:** if a payee moves to the bank to get a withdrawal for a cheque that was signed 3 months ago, the cheque shall be declared a stale cheque.

★ Important Points

- A cheque can only be issued against a **current or savings bank account**.
- A cheque **without a date** shall be considered **invalid**.
- **Only the payee**, in whose name the cheque has been issued, **can encash it**.
- A cheque is only **valid 3 months from the date it has been issued**.
- A **9-digit MICR (Magnetic Ink Character Recognition) code** is mentioned at the bottom of the cheque. This makes the clearance of cheques easier for the banks.
- A MICR code that uniquely identifies a bank and a branch participating in an **Electronic Clearance System (ECS)**.

7. Answer: b

Explanation:

The correct answer is Alluvial.

★ Key Points

Alluvial Soil

- The alluvial soil occurs mainly in the **Sutlej- Ganga- Brahmaputra Plains**.
- Most available soil in India (**about 43%**) covers the land area.
- They are also found in the valleys of the **Narmada, Tapi, and the Eastern and Western coastal plains**.
- This soil has a **phosphorous deficiency** but **rich in potash and lime**.
- The color of soil varies from **light grey to ash**.
- This soil is suitable for **Kharif and Rabi crops** like rice, maize, wheat, sugarcane, pulses, oilseeds, jute, etc.

Alluvial soil is divided into two

- **Khadar Soil (New):** The khadar soils are enriched with fresh silts. They are low-lying, frequently inundated by floods during the rainy season. It occupies the flood plains of rivers. The khaddar tracts called kankar are rich in concentration.
- **Bhangar Soil (Old):** This soil lies above the flood level. It is well-drained but because of the calcium carbonate nodules, the texture of soil varies from loamy soil to clayey soil.

★ Additional Information

- The Indian Council of Agricultural Research (ICAR) has classified soils into 8 categories.
- **Alluvial Soil, Black Cotton Soil or Regur Soil, Red Soil, Laterite Soil, Mountainous or Forest Soils, Arid or Desert Soil, Saline and Alkaline Soil, Peaty, and Marshy Soil.**

Laterite Soil

- The laterite soils develop in areas of **high temperature and high rainfall**.
- Laterite soil is soft, when they are wet and so hard and cloddy on drying.
- Laterite soils are found mainly in the hills of the **Western Ghats, Raj Mahal hills, Eastern Ghats, Satpura, Vindhya, Odisha, Chhattisgarh, Jharkhand, West Bengal, North Cachar Hills, and the Garo hills**.
- Laterite soils are **red in color** with a **high content of iron oxides**.
- These are rich in **iron and aluminum**.
- These are poor in **organic matter, nitrogen, potassium, lime, and potash**.
- This soil is suitable for the cultivation of **tea, coffee, rubber, millets, and cashew nuts**.

Black or Regur Soil

- Black soil is also known as **cotton soil**.
- This is the third largest group in India. This soil is formed from **rocks of cretaceous lava**.
- This stretch over the parts of **Gujarat, Maharashtra, Western parts of Madhya Pradesh, North- Western Andhra Pradesh, Karnataka, Tamil Nadu, Rajasthan, Chhattisgarh, Jharkhand up to Raj Mahal hills**.

- The soil is rich in iron, lime, calcium, potash, magnesium, and aluminum.
- It has a **high water-retaining capacity**.
- This soil is suitable for **cotton, tobacco, jowar, sugarcane, wheat, rice, fruits and vegetables, and linseed**.

Arid or Desert Soil

- This soil is deposited by wind action and mainly found in the arid and semi-arid areas like **Rajasthan, West of the Aravallis, Northern Gujarat, Saurashtra, Kachchh, Western parts of Haryana, and southern part of Punjab**.
- They are **sandy with low organic matter**.
- It has **low soluble salts** and moisture with **very low retaining capacity**.
- If irrigated this soil gives a high agricultural return.
- These are suitable for less water-intensive crops like **bajra, pulses, millets, maize, fodder, and guar**.

8. Answer: b

Explanation:

The correct answer is **Option 2**.

★ Key Points

Bhimbetka – Madhya Pradesh

- Bhimbetka is located in the foothills of **Vindhya Range** in the **Raisen District** in the State of **Madhya Pradesh**.
- It is a **UNESCO World Heritage Site** that consists of seven hills and over 750 rock shelters distributed over 10 km.
- One of the oldest paintings in India and the World.
- Continuous occupation of these caves from 100000 BC to 1000 AD.
- Images of hunting, dancing, music, elephant and horse riders, honey collection, animal fighting, decoration of bodies, household scenes, etc.
- Bhimbetka drawings can be categorized into 7 Periods.
- The first Period is the **Upper Palaeolithic**.

- The second Period is **Mesolithic**.
- The third Period is the **Chalcolithic**.
- In 1957, archaeologist **Dr. Vishnu Wakankar** noticed these rock formations and thought these were similar to those he had seen in Spain and France.

★ Additional Information

Konark – Odisha

- Konark Sun temple is located near the **sacred city Puri in Odisha**.
- Konark temple is also known as '**Black Pagoda**'.
- Konark temple was built in the 13th century by **King Narasimhadeva I** (AD 1238-1264). Its scale, refinement and conception represent the strength and stability of the **Ganga Empire**.
- It was declared a UNESCO World Heritage Site in 1984.
- Konark Sun Temple is depicted on the reverse side of the Indian currency note of **Rs 10** to signify its importance to Indian cultural heritage.

Hampi – Karnataka

- Hampi is located near the modern-era city of **Hosapete in Karnataka**.
- Hampi is situated on the banks of the river **Tungabhadra**.
- **Harihara and Bukka** are the founders of the Vijayanagar City in 1336 A.D.
- They made Hampi the **capital city**.
- Hampi is also a UNESCO World Heritage Site
- Hampi Golden Chariot is depicted on the reverse side of the Indian currency note of **Rs 50** to signify its importance to Indian cultural heritage.

Fatehpur Sikri – Uttar Pradesh

- Fatehpur Sikri is located in **Agra** in the state of Uttar Pradesh.
- **Buland Darwaza (Door of Victory)** is the highest **Gateway in the World** is located at Fatehpur Sikri in Agra.
- It was built in 1602 AD by Mughal Emperor **Akbar to commemorate his victory over Gujarat**.
- It is the main entrance to the **Jama Masjid** at Fatehpur Sikri.

9. Answer: a

Explanation:

The correct answer is hypoglycemic

- A glucometer is generally used as a monitor by a **hypoglycemic** patient.

★ Key Points

- **Diabetes** is a long-term condition caused by too much glucose in the blood level.
- There are two main types of diabetes.
 - Diabetes Type 1: caused when the pancreas is unable to produce enough insulin.
 - Diabetes Type 2: caused due to insulin resistance i.e., when the body is unable to produce or use insulin efficiently.
- A blood sugar level less than 140 mg/dL (7.8 mmol/L) is **normal**.
- A blood sugar level is more than 200 mg/dL (11.1 mmol/L) after two hours indicates **diabetes**.
- A blood sugar level is between 140 and 199 mg/dL (7.8 mmol/L and 11.0 mmol/L) indicates **prediabetes**.
- During **hyperglycemia**, the glucose level is **high** in the blood and **insulin decreases** the sugar level.
- During **hypoglycemia**, the glucose level is **low** in the blood and **glucagon increases** the sugar level.

★ Important Points

- The pancreas is a **dual gland** because it acts as both endocrine and exocrine glands.
- The pancreas secretes both **enzymes and hormones**.
- **Insulin and glucagon** are the hormones produced by the pancreas and these hormones **control the sugar level** in the blood.
- Region of pancreas that produces hormones – **Islets of Langerhans**
- The two types of cells in the Islets of Langerhans are **α cells and β cells**.

- The hormone secreted by α cells - **Glucagon**
- The hormone secreted by β cells - **Insulin**
- Insulin was extracted by **Frederick Banting and Charles Best** in 1921.

10. Answer: a

Explanation:

The correct answer is Hygrometer.

★ Key Points

- Hygrometer
 - A hygrometer is an instrument for measuring the **relative humidity of the atmosphere**.
 - The hygrometer was invented by **Leonardo da Vinci**.

★ Additional Information

- Barometer
 - A barometer is an instrument used to measure **atmospheric pressure**.
 - The barometer was invented by **Torricelli**.
- Hydrometer
 - A hydrometer is an instrument used to measure **the specific gravity of liquids**.
 - The hydrometer was invented by **Nicholson**.
- Anemometer
 - An anemometer is an instrument used to measure **the velocity of wind and directions**.
 - The anemometer was invented by **Leon Alberti**.

11. Answer: a

Explanation:

The correct answer is Jama Masjid.

- Jama Masjid was built during the Mughal Period.

★ Key Points

- Jama Masjid was built by the **Mughal emperor Shahjahan** between 1650 and 1656 AD.
- During his reign, he is known for the promotion of **art, culture, and architecture**.
- **The Taj Mahal and the Red Fort** are some of the magnificent structures built during his reign.
- The architectural plan of **Badshahi Masjid in Lahore** is similar to the Jama Masjid was built by Shah Jahan's son **Aurangzeb**.

★ Additional Information

Tughlaqabad

- **Ghiyasuddin Tughlaq** built the city Tughlaqabad near Delhi and made it his capital.
- His real name is **Ghazi Malik**.
- During his period **canals** were constructed for the first time for irrigation and **formulated famine policy**.
- He gave up the **land measurement system** and started the **Batai system** or sharing of crops.
- Efficient **postal service** was restored.

Feroz Shah Kotla

- Feroz Shah Kotla fort was built by the Tughlaq ruler **Feroz Shah Tughlaq** in 1354 and located in New Delhi.
- He was a **great builder**. He built the cities **Fatehabad, Hisar, Jaunapur (in memory of Mohammad Bin Tughlaq), and Firozabad**.
- He established a hospital in Delhi known as **Dar-ul-Shifa**.
- He made the **Iqta system hereditary**.

Khirki Masjid

- Khirki Masjid was built between 1351-1354 AD by **Khan-i-Jahan Junan Shah**, the prime minister of Feroz Shah Tughlaq, the third ruler of the Tughlaq dynasty in Delhi.

★ Important Points

- On 27th August 2019, **Arun Jaitley Stadium** is formerly known as Feroz Shah Kotla stadium, is a cricket stadium located in New Delhi.

12. Answer: c

Explanation:

The correct answer is Jaya Bachchan.

- Jaya Bachchan is not an incumbent nominated member of the Rajya Sabha.

★ Key Points

- Jaya Bachchan was first elected in **2004** as the **Member of Parliament** from the **Samajwadi Party**, representing **Uttar Pradesh** in the Rajya Sabha till March 2006.
- She got a second term **from June 2006 till July 2010** and in **February 2010** she stated her intent to complete her term.
- She was re-elected in **2012** for the third term and again in **2018** for her fourth term in the Rajya Sabha from Samajwadi Party .

★ Additional Information

Sonal Mansingh

- Sonal Mansingh is an incumbent nominated from arts to the member of the Rajya Sabha with party affiliation as Bharatiya Janatha Party (from 14th April 2018 to 13th April 2024).
- Sonal Mansingh is an **Indian Classical dancer and Odissi dancing style and Guru Bharatnatyam**.

Roopa Ganguly

- Roopa Ganguly is an incumbent nominated from arts to the member of the Rajya Sabha with party affiliation as Bharatiya Janatha Party (from 4 th October 2016 to 24 th April 2022).
- Roopa Ganguly is an **Indian actress and playback singer**.

Subramanian Swamy

- Subramanian Swamy is an incumbent nominated from economics to the member of the Rajya Sabha with party affiliation as Bharatiya Janatha Party (from 25 th April 2016 to 24 th April 2022).
- Subramanian Swamy is an **Indian economist and statistician** and before joining politics, he was a **professor of Mathematical Economics at the Indian Institute of Technology, Delhi**.

13. Answer: d

Explanation:

The correct answer is option 4.

★ Key Points

- Union Territories are ruled directly by the Central Government.
- Union Territories has a Lieutenant Governor as an administrator.
- Lieutenant Governor is the representative of the President of India and appointed by the President on the recommendation of the Prime Minister.
- Union Territories have **no representation in the Rajya Sabha except Delhi and Puducherry**.
- There are **8 Union Territories** in India.

★ Important Points

Union Territory	Capital	Lieutenant Governor & Administrator
Andaman and Nicobar Islands	Port Blair	Admiral D K Joshi
Dadra and Nagar Haveli and Daman and Diu	Daman	Praful Patel
Chandigarh	Chandigarh	Shri Banwarilal Purohit (Administrator)
Lakshadweep	Kavaratti	Praful Patel
Puducherry	Puducherry	Tamilisai Soundarajan
Delhi	Delhi	Anil Baijal
Ladakh	Leh Kargil	Radha Krishnan Mathur
Jammu and Kashmir	Jammu (Winter) Srinagar (Summer)	Manoj Sinha

★ Additional Information

- Largest Union Territory: Jammu and Kashmir
- Smallest Union Territory: Lakshadweep
- Most densely populated Union Territory: Delhi
- Least densely populated Union Territory: Andaman Nicobar Islands
- Highest Sex-ratio Union Territory: Puducherry
- Lowest Sex ratio Union Territory: Daman and Diu

- Most Literate Union Territory: Lakshadweep
- Least Literate Union Territory: Daman and Diu

14. Answer: a

Explanation:

The correct answer is Rajiv Kumar.

★ Key Points

- **The Election Commission of India (ECI)** is a constitutional body vested with powers to supervise, direct and control the election process of the country.
- The Election Commission of India (EC) came into force on **25 January 1950**.
- From 2011, this day is observed as **'National Voters' Day'**.
- The Election Commission functions as a multi-member body comprising of **3 commissioners**.
- **The Chief and the two other Election Commissioners** have the same powers and emoluments including salaries, which are the same as a **Supreme Court judge**.
- The tenure of Election Commissioners is **6 years or until they attain 65 years**, whichever happens first. They can also be removed or can resign at any time before the expiry of their term.
- The Election Commissioners are **appointed by the President**.
- **Article 324** of the Indian Constitution deals it the power and authority to conduct, control, and supervise the entire election process in the country including elections to the Parliament, the Legislatures of every state, and to the offices of the President and Vice-President.
- The Election Commission is an all-India body that is common to **both the Central government and the State governments**.
- The Commission's functions and powers with respect to elections to the offices of the President, the Vice President, the state legislators, and the Parliament are divided under three headings: **Administrative Powers, Advisory Powers, and Quasi-Judicial Powers**.

- On **16 October 1989**, the voting age was reduced from 21 to 18 years by the **61st Constitutional Amendment Act 1988**.
- It must be noted here that the commission does not deal with the elections to the Municipalities and Panchayats in the states. Hence, a separate State Election Commission is provided by the Constitution of India.
- The right to vote is a **legal right**.

★ Additional Information

- Headquarter of Election Commission of India – **Nirvachan Sadan, New Delhi**
- The current Chief Election Commissioner of India – **Sunil Arora**
- The current two other Election Commissioners of India – **Rajiv Kumar** and **Sushil Chandra**
- The first Chief Election Commissioner of India – **Sukumar Sen**
- The longest-serving Chief Election Commissioner of India – **K. V. K. Sundaram**
- The shortest-serving Chief Election Commissioner of India – **V. S. Ramadevi**
- The first woman to become the Chief Election Commissioner of India – **V. S. Ramadevi**
- The Prime Minister who reduced the voting age from 21 to 18 years – **Rajiv Gandhi**
- The first general elections to the Lok Sabha were held in India – **Between 25th October 1951 and 21st February 1952**.

★ Important Points

- **Rajiv Kumar** is the current Chief Election Commissioner of India.

15. Answer: a

Explanation:

The correct answer is **Rs. 50,000**.

- In September 2020, the Reserve Bank of India decided to introduce the '**positive pay system**' from **1 January 2021** for cheques, under which re-confirmation of key details may be needed for payments beyond **Rs. 50,000**.

★ Key Points

- The concept of a **Positive Pay System** involves a process of **reconfirming key details of large value cheques**.
- Under this process, **the issuer of the cheque submits electronically**, through channels like SMS, mobile app, internet banking, ATM, etc., certain minimum details of that cheque (like date, name of the beneficiary/payee, amount, etc.) to the drawee bank, details of which are cross-checked with the presented cheque by **CTS (Cheque Truncation System)**.
- Any discrepancy is flagged by **CTS to the drawee bank and presenting bank, who would take redressal measures**.
- **SBI is introducing Positive Pay System from 1st January 2021 to make Cheque payment secure**.
- The cheque number of a bank in India consists of six digits as of August 2020.

★ Additional Information

- A cheque is a negotiable instrument that contains an order to the bank, signed by the drawer to pay a certain sum of money to a specified person as per the Negotiable Instrument Act 1881.

There are three parties involved in a cheque.

- **Drawer:** The person who issues the cheque or holds the account in the bank.
- **Drawee:** The person who is directed to make payment against the cheque. Drawee is basically the bank on which the cheque is drawn.
- **Payee:** The person whose name is mentioned in the cheque has been issued. If the drawer has drawn the cheque in favor of self, then the drawer is the payee.

Apart from these, there are two more parties involved with a cheque.

- **Endorser:** When a payee transfers his right to take the payment to another party.
- **Endorsee:** The party in whose favor, the right is transferred.

Different types of Cheques

- **Bearer cheque:** is a type of cheque in which the bearer is authorized to get the cheque encashed. This means the person who carries the cheque to the bank has the authority to ask the bank for encashment. This type of cheque is endorsable.
- **Order Cheque:** Only the payee, whose name has been mentioned in the cheque is liable to get cash for that amount. The drawer needs to strike the "OR BEARER" mark as mentioned on the cheque so that the cheque can only be encashed to the payee. This type of cheque cannot be endorsed.
- **Crossed Cheque:** The amount can only be transferred from the drawer's account to the payee's account. Any third party can visit the bank to submit the cheque. In this type of cheque, no cash withdrawal can be done.
- **Account Payee Cheque:** The amount shall be transferred directly to the payee's account number. This is the same as the account payee cheque but no third-party involvement is required.
- **Post-Dated Cheque:** If a drawer wants the payee to apply for withdrawal or transfer of money after the present date, then he/she can fill a post-dated cheque.
- **Ante Dated Cheque:** If the drawer mentions a date prior to the current date on the cheque.
- **Blank Cheque:** When a cheque only has a drawer's signature and all the other fields are left empty.
- **Self Cheque:** If the drawer wishes cash for himself he can issue a cheque where in place of the Payee's name he can write "SELF" and get encashment from the branch where he owns an account.
- **Mutilated Cheque:** If the cheque is torn into two or more pieces and the relevant information is torn, the bank shall reject the cheque and declare it invalid, until the drawer confirms its validation.
- **Stale Cheque:** if a payee moves to the bank to get a withdrawal for a cheque that was signed 3 months ago, the cheque shall be declared a stale cheque.

★ Important Points

- A cheque can only be issued against a current or savings bank account.
- A cheque without a date shall be considered invalid.
- Only the payee, in whose name the cheque has been issued, can encash it.
- A cheque is only valid 3 months from the date it has been issued.

- A 9-digit MICR (Magnetic Ink Character Recognition) code is mentioned at the bottom of the cheque. This makes the clearance of cheques easier for the banks.
- A MICR code that uniquely identifies a bank and a branch participating in an Electronic Clearance System (ECS).

16. Answer: d

Explanation:

The correct answer is 48 th.

- India's rank in the Global Innovation Index 2020 is 48 th.

★ Key Points

- **The Global Innovation Index** is a leading reference for measuring an economy's innovation performance of 131 countries around the world.
- It is published annually by **Cornell University, INSEAD**, and the **WIPO (World Intellectual Property Organization)**.
- Global Innovation Index was **first published in 2007**.

★ Important Points

- **Switzerland, Sweden, the USA, the UK, and the Netherlands** are the top five countries.
- India's rank in the Global Innovation Index 2019 is 52 nd.
- World Intellectual Property Day - **26 April**
- World Intellectual Property Theme 2020 - **Innovate for a Green Future**

17. Answer: b

Explanation:

The correct answer is Shringara.

- Shringara is one of the Navarasa usually translated as **erotic love, romantic love, or as attraction or beauty.**

★ Key Points

- Poorvi
 - Raga Poorvi belongs to Poorvi thaat.
 - Poorvi is a raga in Hindustani classical music.
 - It is a Sandhiprakash raga and rendered at dusk, that is the time when the day ends and the raga Poorvi is deeply serious, quiet and mysterious in character
 - It uses all the seven notes the ascent and the descent.
- Hindol
 - Hindol is a raga in Carnatic music.
 - The word 'Hindolam' means 'swing', conveying the power of wielding emotions alternately.
 - Hindolam is a child (Janya raga) of the 20th Melakarta raga, Natabhairavi (Audava Raga) owing to its difference of two Swaras (rishabam and panchamam) from its parent Natabhairavi.
 - Hindolam is a fairly popular raga for A alapanas in concerts, given its palliative and amiable tuning nature.
- Bhairavi
 - Bhairavi is a janya ragam in Carnatic music.
 - Bhairavi is a raga in Hindustani classical sampurna raga of Bhairavi thaat.
 - Bhairavi raga is known as the king of morning ragas.
 - Dhrupad and Dhamar compositions of abounding in Bhairavi.

★ Additional Information

- Rasas are created by bhavas (the state of mind) in Indian arts about the aesthetic flavour of any visual, literary, or musical work that evokes an emotion or feeling in the reader or audience but cannot be described
- The **nine emotions (Navarasa)** are:
 - Shringara (love/beauty)
 - Hasya (laughter)
 - Karuna (sorrow)

- Raudra (anger)
- Veera (heroism/courage)
- Bhayanaka (terror/fear)
- Bibhatsya (disgust)
- Adbutha (surprise/wonder)
- Shantha (peace or tranquillity).

18. Answer: a

Explanation:

The correct answer is **Seven**.

- There are **Seven** times has the Indian Men's Cricket team entered the ODI World Cup semi-finals till 2019

★ **Additional Information**

- The ICC (International Cricket Council) is the world governing body of Cricket.
- The ICC organizes world championship events such as **World Test Championship**, ICC Cricket World Cup, ICC T20 World Cup, ICC Champions Trophy, and Under -19 Cricket World Cup.
- The ICC has 104 member nations.
- India won the World Cup in **1983 and 2011**.
- India also the **runners-up at the 2003** World Cup, and semifinalists **four times** World Cup (1987, 1996, 2015, 2019).
- The BCCI (Board of Control for Cricket in India) is the governing body for Cricket in India.
- **Sourav Ganguly** is the current BCCI President.

★ **Important Points**

- Headquarter of ICC - **Dubai, UAE**
- Founded - **15th June 1909**
- Chairman of ICC - **Greg Barclay**
- CEO of ICC - **Manu Sawhney**

- ICC Men World Cup Champions 2019 - **England**
- ICC Men T-20 World Cup Champions 2016 - **West Indies**
- ICC Men World Cup 2023 Venue - **India**
- ICC Men T-20 World Cup 2021 Venue - **India**
- ICC Women World Cup Champions 2017 - **England**
- ICC Women T-20 World Cup Champions 2020 - **Australia**
- ICC Women World Cup 2021 Venue- **New Zealand**
- ICC Women T-20 World Cup 2023 Venue - **South Africa**
- ICC Under-19 Men World Cup Champions 2020 - **Bangladesh**
- ICC Under-19 Men World Cup 2022 Venue - **West Indies**

19. Answer: d

Explanation:

The correct answer is Doldrums.

- **Doldrums** is an equatorial belt of low atmospheric pressure where the trade winds converge.

★ Key Points

Moraine

- Moraines are distinct ridges or mounds of debris that are directly laid down by a moving glacier. This material is usually soil and rock.
- Moraines only show up in places that have, or used to have glaciers.
- Glaciers are **extremely large, moving rivers of ice**.
- Glaciers shape the landscape in a process called **glaciation**.
- Glaciation can affect the land, rocks, and water in an area for thousands of years. That is why **moraines are often very old**.

La Nina

- La Nina is a climate pattern that describes the cooling of surface ocean waters along the tropical west coast of South America.

- La Nina is the counterpart of El Nino.
- La Nina means **Little Girl** in Spanish.
- La Nina occurs at irregular intervals of about two to seven years.
- La Niña is caused by a build-up of cooler-than-normal waters in the tropical Pacific, the area of the Pacific Ocean between the Tropic of Cancer and the Tropic of Capricorn.
- Unusually strong, eastward-moving trade winds and ocean currents bring this cold water to the surface, a process known as **upwelling**.

El Nino

- El Nino is a climate pattern that describes the unusual warming of surface waters in the eastern tropical Pacific Ocean.
- El Nino means **Christ child or Little Boy** in Spanish
- During the time of El Nino, the trade winds weaken and warm water pushed back east towards the coast of Latin American countries.
- El Nino can affect our **weather significantly and trade winds**.
- El Nino has a **strong effect on marine life off** the Pacific coast.

★ Additional Information

- **Atmospheric Pressure belts** are seasonally identical horizontal pressure variations created in the earth's atmosphere just above the earth's surface due to seasonal and spatial variation of energy received by the earth at different places.
- There are **seven** pressure belts on the earth's surface. They are the **Equatorial Low, the two Subtropical highs, the two Subpolar lows, and the two Polar highs**. Except for the Equatorial low, the others form matching pairs in the **Northern and Southern Hemispheres**.

Equatorial Low-Pressure Belts

- It is located on either side of the North and South of the Equator in a zone extending from **0 to 5 °**.
- It is thermally induced because of the intense heating of the ground by the **vertical rays of the sun**.

- It represents the zone convergence of North-East and South-East trade winds. This convergence zone is characterized by light and feeble winds and because of the frequent calm conditions, this belt is also called a belt of calm or **doldrums**.

Subtropical High-Pressure Belts

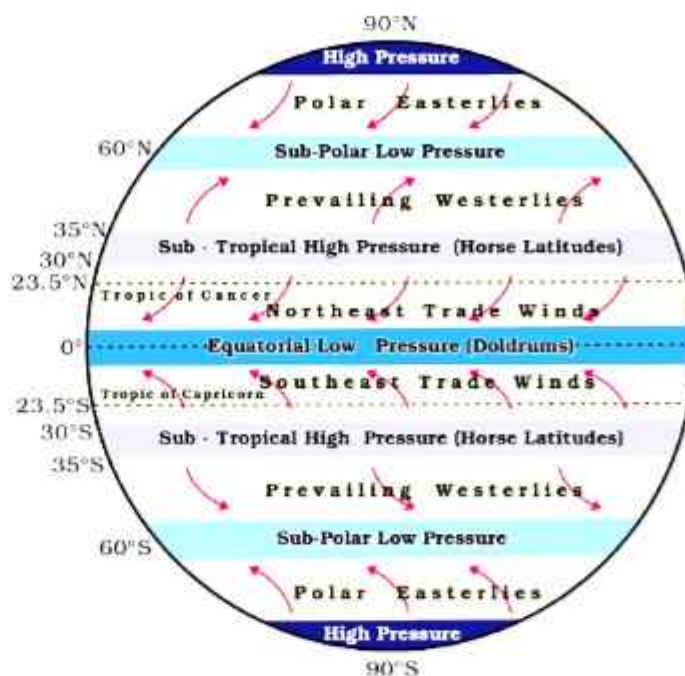
- It extends between **30 ° to 35 °** both the hemisphere
- It is not thermally induced but dynamically induced as it owes its origin to the rotation of the earth and sinking and settling down of winds.
- Here the zone convergence of winds at a higher altitude above this zone results in the subsidence of air from higher altitudes and this wind results in high pressure. This zone of high pressure is also called the **Horse latitude**.
- The permanent winds blowing from the Sub-Polar High-Pressure to Sub-Polar Low-Pressure in both the hemisphere are called **Westerlies**.

Sub-Polar Low-Pressure Belts

- It extends between **60 ° and 65 °** in both the hemisphere.
- The low-pressure belt does not thermally induce because there is low temperature throughout the year and as such there should have been a high-pressure belt instead of low pressure.
- Pressure gradient, rotation of the earth and Coriolis force, centrifugal action of wind are the factor that controls the air motion.
- This region is marked by **violent storms in winter**.

Polar High-Pressure Belts

- Polar high pressure is very small in area and extends between **70 ° to 90 °** in both the hemisphere.
- The temperatures are always extremely low.
- The Polar regions experience very cold climatic conditions due to the rays of the sun is extremely slanting.
- These regions of Polar high-pressure belts are known as the **Polar Highs**.
- These regions are characterized by **permanent IceCaps**.



Major Pressure Belts and Wind System

20. Answer: a

Explanation:

The correct answer is 2010.

- The 2010 Commonwealth Games, officially known as the XIX Commonwealth Games and commonly known as Delhi 2010 was held in **Delhi, India**.

★ Key Points

- The Commonwealth Games is an **international multi-sport event**.
- The Commonwealth of Nations is an association of independent sovereign states, most of which are former colonies of the United Kingdom.
- The British Monarch remains the **head of the Commonwealth**.
- The 2022 Commonwealth Games, officially known as the XXII Commonwealth Games and commonly known as **Birmingham 2022** is scheduled to be held in **Birmingham, England**.
- This is the third time England has hosted the Games, after London in 1934 and Manchester in 2002.

- The Games are expected to take place between **28 July and 8 August 2022**.
- The 2018 Commonwealth Games , officially known as the XXI Commonwealth Games and commonly known as Gold Coast 2018 was held in **Queensland, Australia**.
- The 2014 Commonwealth Games , officially known as the XX Commonwealth Games and commonly known as Glasgow 2014 held in **Glasgow in Scotland**.

★ Important Points

- 2018 Commonwealth Games Winner - **Australia** (Total - 198 medals, Gold - 80, Silver - 59, Bronze - 59)
- 2018 Commonwealth Games second-place - **England** (Total - 136 medals, Gold - 45, Silver - 45, Bronze - 46)
- 2018 Commonwealth Games third-place - **India** (Total - 66 medals, Gold - 26, Silver - 20, Bronze - 20)
- 2018 Commonwealth Games motto - Share the Dreams

21. Answer: c

Explanation:

The correct answer is immunization.

- Intensified Mission Indradhanush (IMI) 2.0 is a scheme launched by the Government of India to improve coverage in areas with low immunization.

★ Key Points

- The Intensified Mission Indradhanush 2.0 was launched in 2018.
- Its aims to **immunize children under 2 years of age and pregnant women** against eight vaccine-preventable diseases.
- It was a **nationwide immunization drive** to mark the 25 years of the Pulse polio programme (2019-20).
- It aimed to achieve at least **90% pan-India immunization coverage by 2022**.
- The diseases covered under the mission are **polio, diphtheria, measles, whooping cough, tuberculosis, hepatitis B, tetanus, meningitis, rubella**,

Japanese encephalitis and pneumonia.

- The Immunization Programme in India was introduced in 1978 as the '**Expanded Programme of Immunization (EPI)**' by the Ministry of Health and Family Welfare.
- In 1985, the Programme was modified as '**Universal Immunization Programme (UIP)**'.
- The **Intensified Mission Indradhanush (IMI) 3.0** scheme has been rolled out to cover children and pregnant women who missed routine immunization during the **Covid-19** pandemic.

22. Answer: b

Explanation:

The correct answer is Thiruvananthapuram.

- The Thumba Equatorial Rocket Launching Station (TERLS) is located near **Thiruvananthapuram**.

★ Key Points

- The Thumba Equatorial Rocket Launching Station (TERLS) was established on **21st November 1963**.
- The RH-75 is a rocket in the "**Rohini**" series of sounding rockets.
- RH-75 (Rohini-75) was the first indigenously developed rocket by ISRO (Indian Space and Research Organization) in India was launched from the Thumba Equatorial Rocket Launching Station (TERLS) on **20th November 1967**.
- Thumba is close to the **magnetic equator** and ideal for this programme.
- RH-75 had a **diameter of 75 mm** and hence the name. It **weighed 32 kg** and had a **height of 1.5 m**. It was a one-stage rocket. It flew 15 times between November 1967 and September 1968.
- In 1975, all sounding rocket activities were consolidated under one programme, the **Rohini Sounding Rocket (RSR) Programme**.
- The sounding rocket programme was the basis of all future launch vehicle technology that the ISRO has built.

- The research in the sounding rocket domain has been led by the **Vikram Sarabhai Space Centre (VSSC)** at Thiruvananthapuram.
- The launch of the RH-75 was a **truly remarkable feat for a developing country**.
- It proved the capabilities of the Indian space scientists and researchers.
- The Indian space programme has truly come a long way from the small 'toy rocket' RH-75 to **Mangalyaan, the Mars Orbiter**.
- **Satish Dawan Space Centre** is a rocket launch centre operated by ISRO and located in **Sriharikota in Andhra Pradesh**.

★ Important Points

- ISO Headquarter - **Bengaluru**
- ISRO formed - **15th August 1969**
- Chairman of ISRO - **S.Somnath**
- Father of Indian Space Programme - **Dr Vikram Sarabhai**

23. Answer: d

Explanation:

The correct answer is 2012.

- The 11th Five-Year Plan ended in the year **2012**.

★ Key Points

- The Planning Commission of India was a **non-constitutional and non-statutory body**, which was responsible to formulate India's five years plans for social and economic development in India.
- The Planning Commission is only an **advisory body**.
- The Prime minister of India is the **Ex-officio chairman of the planning commission**.
- It was established on **15th March 1950** in accordance with **article 39** of the constitution which is a part of directive principles of state policy.
- The apex body gives final approval to a five-year plan in India - **National Development Council**.

- National Development Council was established on 6th August 1952.
- NITI Aayog replaced the Planning Commission of India from 1st January 2015.

11 th Five-Year Plan (2007-2012)

- The 11 th Five-Year Plan focused on **Inclusive Growth**.
- India had emerged as one of the **fastest-growing economies by the end of the Tenth Plan**.
- The savings and investment rates had **increased**, the industrial sector had responded well to face competition in the global economy and foreign investors were keen to invest in India.
- But the growth was not perceived as sufficiently inclusive for many groups, especially **SCs, STs & minorities as borne out by data on several dimensions like poverty, malnutrition, mortality, current daily employment, etc.**
- The broad vision for the 11th Plan included several interrelated components like rapid growth reducing poverty & creating employment opportunities, access to essential services in health & education, especially for the poor, extension of employment opportunities using the National Rural Employment Guarantee Programme, environmental sustainability, reduction of gender inequality.
- Accordingly, various targets were laid down like reduction in **unemployment (to less than 5% among educated youth)** & **headcount ratio of poverty (by 10%)**, reduction in dropout rates, the gender gap in literacy, infant mortality, total fertility, malnutrition in the age group of 0-3 (to half its present level), improvement in sex ratio, forest & tree cover, air quality in major cities, ensuring electricity connection to all villages & BPL households (by 2009) & reliable power by end of 11th Plan, all-weather road connection to habitations with population 1000 and above (500 in hilly areas) by 2009, connecting every village by telephone & providing broadband connectivity to all villages by 2012.
- The Eleventh Plan started well with the first year achieving a growth rate of **9.3%**, however, the growth decelerated to a **6.7%** rate in **2008-09 following the global financial crisis**.
- The economy recovered substantially to register growth rates of **8.6% and 9.3% in 2009-10 and 2010-11 respectively**.
- The second bout of a global slowdown in 2011 due to the sovereign debt crisis in Europe coupled with domestic factors such as tight monetary policy and supply-side bottlenecks, resulted in a deceleration of growth to **6.2% in 2011-12**.

- The growth rate of the 11 th Five-Year Plan is **8%**.

★ Important Points

- The first five-year plan was started from **1951 to 1956**.
- The concept of the five-year plan was borrowed from **USSR**.
- Father of Indian Planning – **M. Visveswarayya**
- Father of Indian Economics – **Dadabhai Naoroji**
- The Chairman of NITI Aayog – **Narendra Modi**
- The Vice-Chairperson of NITI Aayog – **Dr. Suman Bery**
- The CEO of NITI Aayog – **Parameswaran Iyer**
- NITI Aayog Headquarters – **New Delhi**

24. Answer: b

Explanation:

The correct answer is Hindi.

★ Key Points

- The Vyas Samman started in 1991 is given for 'outstanding literary work' in **Hindi**.
- The Vyas Samman is awarded by the **K. K. Birla Foundation**.
- The Vyas Samman to be eligible for the **last 10 years literary work** must be published in the Hindi language.
- The Vyas Samman carries a cash prize of **Rs 4 lakh along with a citation and a plaque**.
- The first recipient of Vyas Samman – **Ram Vilas Sharma** for the work '**Bharat ke Pracheen bhasha Parivar aur Hindi**' in 1991.
- In 2019, **Nasira Sharma** got the 29 th Vyas Samman for the novel **Kagaz ki Nav**.

25. Answer: b

Explanation:

The correct answer is Option 2.

- Paolo Rossi was an **Italian professional football player**.

★ Key Points

- Paolo Rossi was a **forward football player**.
- He led Italy to the **1982 FIFA World Cup title** and he was the **top goalscorer**.
- He got **Golden Ball and Golden Boot** for the player of the tournament in the 1982 FIFA World Cup.
- He got the **Ballon d'Or award** in 1982.

★ Additional Information

Kylian Mbappé – France

- Kylian Mbappé is a **French professional football player** who played as a forward.
- He is playing **French Ligue 1 Club Paris Saint-Germain**.

Pele – Brazil

- Pele was a **Brazilian professional football player** who played as a forward.
- Pele is considered one of the **greatest players of all-time football**.
- During his international career, he won **three FIFA World Cups : 1958 , 1962, and 1970**.
- Pelé is the **all-time leading goalscorer** for Brazil with **77 goals in 92 games**.

Diego Maradona – Argentina

- Diego Maradona was an **Argentinian professional football player** who played as a forward.
- Diego Maradona was an **Argentinian Manager**.
- He is one of the **greatest players of all-time football**.
- Maradona played in **four FIFA World Cups , including the 1986 World Cup**.
- He **captained Argentina and led them to victory** over West Germany in the **1986 FIFA World Cup** final and won the **Golden Ball** as the tournament's best player.

★ Important Points

- Full form of FIFA – **International Federation of Association Football**
- FIFA Founded – **21st May 1904**
- FIFA Headquarter – **Zurich, Switzerland**
- FIFA President – **Gianni Infantino**
- FIFA 2018 Men World Cup Winner – **France**
- FIFA 2019 Women World Cup Winner – **United States Of America**
- FIFA 2022 Men World Cup Venue – **Qatar**
- FIFA 2023 Women World Cup Venue – **Australia and New Zealand**

26. Answer: b

Explanation:

The Correct Answer is "**Amitav Ghosh**".

★ Important Points

- Renowned English fiction writer **Amitav Ghosh** has been selected for the **Jnanpith award, 2018**.
- This has been announced by Jnanpith Selection Board on 14 December 2018.
- **Amitav Ghosh** was born in **Calcutta in 1956**.
- He is an alumnus of **Doon School, Dehradun**, St. Stephen's College, Delhi University and Delhi School of Economics.
- He was **awarded Padma Shri in 2007** and was elected as Fellow of the Royal Society of Literature in 2009.
- He was also named **Ford Foundation Art of Change Fellow in 2015**.

His works :

- The **Circle of Reason (1986)** was his first novel.
- Other fiction works include **The Shadow Lines (1988)**, **The Calcutta Chromosome (1995)**, **The Glass Palace (2000)**, **The Hungry Tide (2004)**.
- He has also written three works as a part of The Ibis trilogy of which the first volume is **Sea of Poppies (2008)**; the second volume is **River of Smoke (2011)**,

and the third volume is Flood of Fire (2015).

- His notable non-fiction works include **Antique Land (1992)**, Dancing in Cambodia and at Large in Burma (1998), Countdown (1999), and The Imam and the Indian (2002), The Great Derangement: Climate Change and the Unthinkable (2016).

★ Additional Information

- **Jnanpith award** was instituted in **1961**.
- Via this award, the **Bhartiya Jnanpith** recognizes **Indian litterateurs** who write in one of the **22 Indian languages** listed in Schedule Eight of the Indian Constitution.
- The winners receive a cash prize, a citation and a bronze replica of Goddess Saraswati.
- **Famous Malayalam** writer G.S. Kurup was the first winner of the **Jnanpith award**.

27. Answer: b

Explanation:

The Correct Answer is "**13th**".

★ Important Points

- Pranab Mukherjee was the 13th President of India.
- Pranab Mukherjee was the president between 2012 and 2017.
- He was awarded the Bharat Ratna in 2019.
- He was the fifth president to receive this Bharat Ratna award.
- The **former President of India, Pranab Mukherjee** passed away at the **age of 84**.
- He had tested positive for the coronavirus disease before undergoing successful surgery to remove a brain clot.
- He was born in the village of **Mirati in the Birbhum** district of **West Bengal**.
- The current president of India is Ram Nath Kovind.

★ Additional Information

- Pranab Mukherjee held the important foreign, defense, commerce, and finance portfolios as a Union minister across various Congress-led governments in the past.
- Before becoming finance minister for the first time as part of **Indira Gandhi's Cabinet in 1982**, Mukherjee had served as a deputy minister for finance in 1973-74.
- Mukherjee also served on the board of governors of the International Monetary Fund (IMF), World Bank, Asian Development Bank, and **African Development Bank**.
- He was also appointed the deputy chairman of the Planning Commission in 1991 during the time of P V Narasimha Rao's government at the Centre and held that position for **five years**.

28. Answer: b

Explanation:

The Correct Answer is "**1993**".

★ Key Points

- The National Human Rights Commission is a statutory body established under the provisions of the Protection of Human Rights Act, 1993.
- It is responsible for looking into cases of excesses that are violating human rights and to strengthen the efforts to uphold human rights in the country.
- Presently it is comprised of a speaker and 4 members.
- This is a multilateral institution.
- The **Protection of Human Rights Act, 1993** provided that the chairperson of the **National Human Rights Commission (NHRC)** is a person who has been a Chief Justice of the Supreme Court.
- A person who has been Chief Justice of **the Supreme Court** or a Judge of the Supreme Court be the chairperson of the NHRC.
- Currently, the chairpersons of various commissions such as the National Commission for Scheduled Castes, the **National Commission for Scheduled Tribes**, and the **National Commission for Women** are members of the NHRC.

★ Additional Information

- The bill provides for the inclusion of the chairpersons of the **National Commission for Backward Classes**, the **National Commission for the Protection of Child Rights**, and the **Chief Commissioner for Persons with Disabilities** as members of the NHRC.
- The bill seeks to increase the persons having knowledge of human rights to be appointed as members from two to three. Further, it mandates one of them to be a woman.
- The bill provides that a person who has been Chief Justice or Judge of a **High Court** will be the chairperson of an SHRC.
- The bill seeks to reduce the term of office chairperson and members of the NHRC and SHRC from five years or till the age of seventy years to three years or till the age of seventy years, whichever is earlier.
- The Bill provides for the central government to confer on an SHRC human rights functions being discharged by Union Territories.
- Further, it provides for functions relating to human rights in the case of Delhi to be dealt with by the NHRC.

29. Answer: a

Explanation:

The Correct Answer is "Golden Threshold".

- Golden Threshold is written by **Sarojini Naidu**.

★ Important Points

- **M. K. Gandhi** was a **prolific writer**.
- Gandhi founded and edited several newspapers/journals including **Indian Opinion**, **Young India**, and b.
- There are innumerable books that are collections of Gandhi's writings on various topics.
- Here are the three books that Gandhi wrote:
 - Hind Swaraj or Indian Home Rule (1909)

- India of My Dreams (1947).
- Nature Cure (1954).

★ Additional Information

- Mohandas Karamchand Gandhi was born in **Porbandar** Town of the **Bombay** Presidency on **2 October 1869**, the year in which Lord Mayo took office as **Governor-General of India**.
- The honorific Mahātmā first applied to him in **1914** in **South Africa**, is now used throughout the world.

30. Answer: b

Explanation:

The Correct Answer is "annually cultivated land".

★ Key Points

- During the Mughal Period, the land was divided into four categories namely
 - Polaj.
 - Parati.
 - Chachar.
 - Banjar.
- Polaj was the land that is annually cultivated for each crop in succession and is never allowed to lie fallow.
- Polaj was the ideal and best type of land throughout the empire.
- This land was cultivated always and was never allowed to lie fallow.

★ Important Points

- There was no **Mughal land revenue system** before **Akbar**.
- His father Humayun and grandfather Babur did not introduce any changes because they were the first conquerors of their dynasty and remained pre-occupied with subduing rebellions, consolidating empires, and maintaining order.

- A proper **land revenue system** was founded by **Akbar**.
- However, the system of Akbar was itself based on what **Shershah Suri** implemented during his short tenure.
- Thus, the land revenue system of Akbar was neither innovation nor an invention.
- His indebtedness to the earlier rulers is immense but this has not diminished his fame as far as **the land revenue system** is concerned.
- He followed the policy of **Shershah** with greater precision and correctness and then extended it to various subah or provinces of his empire.
- But this correction or precision did not come overnight.
- Initially was tortuous enough to turn peasants into **beggars**, and forcing them to **sell their wives and children**.
- But it was revised several times.

The corrections done by the Akbar inland revenue system can be mainly divided into three heads as follows:

- Standardization of measurement of land
- Ascertaining the produce per Bigha of Land
- Fixation of state's share in that produce

31. Answer: d

Explanation:

The Correct Answer is "**Bronze**".

★ Important Points

- 'Dancing girl' found in Mohenjodaro is an artifact that is some **4,500 years old**.
- The **10.8 cm long** statue of the dancing girl was found in **1926** from a **house in Mohenjodaro** is made of **bronze**.
- **Steatite (Soap Stone)** artifacts have been found at nearly every excavated **Harappan** period site and were the primary element used to make seals.
- **Terracotta** was used to make **figurines**.

- It is a Pre-Historic Bronze Sculpture made in the Lost Wax technique in the 2300-1750 BCE century found in the Indus Valley Civilisation (IVC) city of Mohenjodaro (Present day, Pakistan).



★ Key Points

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Site	Excavator	Region	Findings
Harrapan	Dayaram Sahani (1921)	Montgomery district of Pakistan, Left bank of river Ravi.	• Rows of 6 granaries. • Stone lingam & yoni figures. • Wheat & Barley in the wooden altar. • Dancing Nataraja. • Copper scale, mirror, vanity box, dice.
Mohenjodaro	RD Banerjee (1922)	Larkana district in Sindh on the right bank of Indus.	• Pashupati seals. • Bronze Image of a dancing girl. • Steatite image of a bearded man. • Terracotta figurine of Mother Goddess. • Three cylindrical seals.
Sutkagandor	A. Stein (1927)	Situated in Baluchistan on Dasht river.	Evidence of horse.
Amri	MG Majumdar (1929)	Situated in Sindh, on the bank of the river Indus.	Evidence of antelope.
Chanhudaro	MG Majumdar (1931)	Situated in Sindh, on the bank of the river Indus.	• A huge number of copper implements.

			• Specialized drills for brad making. • Shops of shell ornament makers.
Kalibangan	A Ghosh (1953-60)	Situated in Rajasthan on the left bank of the river Ghaggar.	• Seven fire altars. • Cylindrical seals. • Wheels of toy carts. • Black bangles. • Joint burials.
Kot Diji	Fazal Ahmed (1953-54)	Situated on the left bank of the river Indus	• Wheels made painted pottery. • Artistic toys. • Five figurines of Mother Goddess

32. Answer: d

Explanation:

The Correct Answer is "2018-19".

★ Important Points

- It was **announced** in **Union Budget 2018-19** on the line of Operation Flood to promote **FPOs, agri-logistics, processing facilities, and professional management**.
- It aims to promote farmer producers organizations, processing facilities, **agri-logistics, and professional management**.
- It also aims to aid farmers and help control and limit erratic fluctuations in the prices of **tomatoes, onions, and potatoes (TOP)**.

- It is essentially a price fixation scheme that aims to ensure farmers are given the right price for their produce.
- The idea behind it is to double the income of farmers by the end of **2022**.

Its major objectives are:

- Price stabilization for producers and consumers by proper production planning in TOP clusters.
- Reduction in post-harvest losses by creation of farm gate infrastructure, development of suitable agro-logistics, and creation of appropriate storage capacity linking **consumption centers**.
- Enhance value realization of TOP farmers by targeted interventions to strengthen TOP production clusters and their **FPOs**,
- Increase in food processing capacities and value addition in the TOP value chain.
- Set up of market intelligence network to collect and collate real-time data on demand and supply and price of **TOP crops**.

33. Answer: a

Explanation:

The Correct Answer is "kidney".

★ Important Points

- **Nephritis** is a condition in which the nephrons, the functional units of the **kidneys, become inflamed**.
- This **inflammation**, which is also known as **glomerulonephritis**, can adversely **affect kidney function**.
- The kidneys are bean-shaped organs that filter the blood circulating the body to remove excess water and waste products from it.
- There are many types of **nephritis** with a range of causes. While some types occur suddenly, others develop as part of a chronic condition and require ongoing management.

★ Additional Information

- There are several different types of nephritis, including:
- **Acute glomerulonephritis:**
 - This form of nephritis can develop suddenly after a severe infection, such as **strep throat, hepatitis, or HIV**.
 - Lupus and rarer disorders, such as vasculitides and **granulomatosis with polyangiitis (GPA)**, can also lead to acute inflammation of the kidneys.
 - A person with these conditions will require prompt medical attention during a flare-up to reduce kidney damage.
- **Lupus nephritis:**
 - **Lupus** is an **autoimmune disease**, which means that the immune system mistakenly attacks healthy tissues in the body.
 - Over half of all individuals with a **lupus diagnosis** eventually develop **lupus nephritis**.
 - This occurs when the **immune system attacks the kidneys**.
- **The symptoms of lupus nephritis include:**
- foamy urine
- high blood pressure
- swelling of the legs, ankles, and feet

34. Answer: c

Explanation:

The Correct Answer is "**V**".

★ Important Points

- The **constitution of India** deals with the **organization ,composition ,duration , officers, procedures ,privileges , power of the parliament under Article 79 to 122 in Part V .**
- Article 79 of the Indian constitution says that India will have a parliament for making laws to run the democratic setup of the country.

- Article **79 to 122 in part V** of the constitution of India deal with the organization, privileges, and powers, and so on of the parliament.
- India has a bicameral parliament made of President, **Rajya Sabha** (Upper House / Council of States), and **Lok Sabha** (Lower House / House of People).
- While **Rajya Sabha** represents states and union territories, **Lok Sabha** represents the people of India.

★ Additional Information

Rajya Sabha :

- **Rajya Sabha** is the **upper house** of **parliament** that represents the states and union territories.
- Its membership is fixed to a maximum of **250 members** of which **238 are** elected by the **representatives** of states and union territories **while 12 members** are nominated by the **President** on account of their excellence in literature, science, art, or social service.
- The present strength of the Rajya Sabha is 245, of whom 233 are representatives of the **States/Union Territories** and **12 are nominated by the President**.

Lok Sabha :

- **Lok Sabha** is the **lower house of the parliament** that represents the people.
- Article 81 deals with the Composition of the Lok Sabha.
- The maximum strength of **Lok Sabha** is **552 members** of which **530 are elected from states ,20 are elected from Union Territories** and **2 are nominated by President** from the Anglo-Indian community if the president thinks that the community is not adequately represented in the house.
- The parliament by law can change the strength of the **Lok Sabha**.
- For example, when the **first General elections** were held in **1951-52** , the strength of the **Lok Sabha** at that time was **489**.
- Currently, the constitution has placed a bar for such changes until relevant figures are published of the first census taken after **the year 2026**.

35. Answer: d

Explanation:

The Correct Answer is "**Abhijit Mukherjee**".

★ Important Points

- **Abhijit Mukherjee** is an **Indian scientist and Professor of Geology and Geophysics** and the School of Environmental Science and Engineering of **IIT Kharagpur**.
- He has been selected for the **Shanti Swarup Bhatnagar Prize for Science and Technology** in 2020 in the field of Earth Atmosphere-Ocean and Planetary Sciences.
- Dr. Abhijit Mukherjee has made interdisciplinary, field, laboratory, and numerical-based studies to understand the decadal-scale changes in groundwater quantity and quality in India.
- This work of social relevance quantified geological and human influences on **groundwater chemistry**, **elucidated manmade** and **geogenic groundwater pollutants**, and measured **groundwater - sea water** interactions across India.
- He has also provided estimates on groundwater sourced drinking water availability across India and his studies have informed national water missions and policies.
- Abhijit Mukherjee is an Indian scientist and Professor of Geology and Geophysics and the School of Environmental Science and Engineering of **IIT Kharagpur**.
- He has been selected for the **Shanti Swarup Bhatnagar Prize for Science and Technology in 2020** in the field of **Earth Atmosphere-Ocean and Planetary Sciences**.
- Abhijit Mukherjee presently works as an Associate Professor at the Department of Geology and Geophysics and the School of Environmental Science and Engineering of Indian Institute of Technology (**IIT**)**Kharagpur**.

★ Additional Information

- The **Shanti Swarup Bhatnagar Prize for Science and Technology (SSB)** is a science award in India given annually by the **Council of Scientific and Industrial Research (CSIR)** for notable and outstanding research, applied or

fundamental, in biology, chemistry, environmental science, engineering, mathematics, medicine, and Physics.

- The prize recognizes outstanding Indian work (according to the view of the CSIR awarding committee) in science and technology.
- It is the most coveted award in multidisciplinary science in India.
- The award is named after the founder **Director of the Council of Scientific & Industrial Research, Shanti Swarup Bhatnagar.**
- It was first awarded in **1958**.

36. Answer: a

Explanation:

The Correct Answer is "**1986**".

★ Important Points

- The **Central Rural Sanitation Programme**, which was started in **1986**.
- It was one of India's first efforts to provide safe sanitation in **rural areas**.
- This programme focussed mainly on providing subsidies to people to construct sanitation facilities.
- A study done by the government in **1996-97** showed that it was more important to **raise awareness about sanitation as a whole rather than to just provide subsidies for construction**.
- This understanding marked the first shift in the programme.
- In **1999**, a restructured **Total Sanitation Campaign (TSC)** was initiated to create supply-led sanitation by promoting local sanitary marts and a range of technological options.

★ Key Points

- The rural sanitation campaign has the following as its objectives:
 - Accelerate sanitation coverage in rural areas.
 - Generate a push from the people to get facilities rather than expect the Government to do it (**demand-led promotion**).

- Focus on intensive education and awareness campaigns to ensure that people understand the need for safe sanitation.
- Take the scheme beyond rural **households** to **rural schools** and **nursery schools**. Here again, the emphasis was placed on promoting good hygiene practices.
- Promote cost-effective and appropriate technologies.
- Through all the above, **improve the health** and **quality of life** in rural areas.

★ Additional Information

- The last modification of the scheme happened in **2012**.
- It was restructured and renamed the **Nirmal Bharat Abhiyan**.
- With an intent to transform India into "**Nirmal Bharat**", the scheme's revised target for reaching total sanitation was changed from **2012 to 2022**.

37. Answer: b

Explanation:

The Correct Answer is "Light".

- A **photovoltaic device** has been developed which converts **Light radiation** directly into **electrical energy** with an overall efficiency of **11%**.
- This consists of a **p-n junction** formed by **gaseous diffusion** near the front surface of a **silicon plate**.

★ Key Points

- Solar Photovoltaic cells work by converting **sunlight** into **electric current**.
- A **Solar Photovoltaic cell** is a **semiconductor** system made of **silicon** or similar materials.
- The system **generates electricity** when it is **exposed to sunlight**.
- Power is generated by connecting thousands of tiny solar cells which form **modules**.

- The generated electricity will be in dc form which can be converted into Alternating Current form using **DC to AC** converters called **inverters**.



38. Answer: d

Explanation:

The Correct Answer is "Delhi".

★ Important Points

- **Agrasen ki Baoli**, designated a protected monument by the **Archaeological Survey of India (ASI)** under the Ancient Monuments and Archaeological Sites and Remains Act of **1958**.
- It is a **60-meter** long and **15-meter** wide historical step well on Hailey Road, near Connaught Place, Jantar Mantar in New Delhi, India.
- Although there are no known historical records to prove who built **Agrasen ki Baoli**, it is believed that it was originally built by the legendary king Agrasen, and the present architecture hints at it being rebuilt in the 14th century during the Tughlag period of Delhi Sultanate.

★ Key Points

- The Agrasen ki Baoli is a **60-meter** long and **15-meter** wide historical step well on Hailey Road in **New Delhi**.
- It was built in the pre-Lodhi era (14th century) by **Raja Agrasen** to collect rainwater during the **monsoon**.

- It is a protected monument by the Archaeological Survey of India (ASI) under the Ancient Monuments and **Archaeological Sites and Remains Act of 1958**.

39. Answer: c

Explanation:

The Correct Answer is "Uttar Pradesh".

★ Important Points

- **Sharqi Style of Architecture** was patronized by the Sharqi Dynasty of Sultans of Jaunpur.
- It is one of the most iconic and unique styles of wider **Indo-Islamic architecture** in the subcontinent. **some examples,**
- Jama Masjid of Jaunpur.
- Atala Masjid of Jaunpur
- Lal Darwaza Masjid.

★ Additional Information

- The main feature of Sharqi mosques is the huge rectangular pylon (gateway) with arches.
- They are made of stone and have **fine carving** and **lattice work**. Unlike the **Delhi mosques** of the same period, there are no minarets.
- The unique feature of the buildings here is the use of bold and forceful characters painted on huge screens in the center and side bays of the prayer hall.

40. Answer: b

Explanation:

The Correct Answer is "Employees' Provident Fund Organisation".

★ Important Points

- **Employees' Provident Fund** or **EPF** is a popular savings scheme that has been introduced by the **EPFO** under the supervision of the **Government of India**.
- The savings scheme is directed towards the salaried-class to facilitate their habit of saving money to build a substantial retirement corpus.
- The EPF scheme has catered to **over 5 Crore individuals** and is directed by three different Acts, namely, **the Employees' Provident Fund Scheme Act, 1952**, the **Employees' Deposit Linked Insurance Scheme Act, 1976**, and the **Employees' Pension Scheme Act, 1995**.
- The fund is built with monetary contributions extended by employees and their employers each month.
- Both parties **extend 12%** of each of the employees' monthly salary, as their share of contribution towards EPF.
- The fund thus built accrues a **pre-fixed rate of interest** that has been set by the **Employees Provident Fund Organisation**.

★ Additional Information

- The **Employee Provident Fund** is open for employees of both the **Public and Private Sectors**, which means all employees can apply to become a member of **EPF India**.
- Additionally, any organization that employs at least 20 individuals is deemed liable to extend the benefits of EPF to its employees.
- The **employees' provident fund scheme** extends an array of benefits towards the EPF employee members. It inculcates a sense of financial stability and security in them.
 1. Capital appreciation.
 2. Corpus for Retirement.
 3. Emergency Corpus.
 4. Tax-saving.

41. Answer: b

Explanation:

The Correct Answer is "Partition of Bengal".

★ Important Points

- The **Swadeshi Movement** was proclaimed on **August 7, 1905**, at the **Calcutta Town Hall, in Bengal**.
- The Boycott movement was also launched along with the **Swadeshi movement**.
- The movements included using goods produced in India and burning **British-made goods**.
- **Bal Gangadhar Tilak** encouraged **Swadeshi** and **Boycott movement** after the British government decided on the **partition of Bengal**.

★ Key Points

Timeline of Swadeshi movement:

- In **1900**, **Bengal** was the major province in **British India**. The Indian national movement began in Bengal and thus, Britishers decided to part in **Bengal**.
- When Lord Curzon, then Viceroy of India, announced the **partition of Bengal in July 1905**, **Indian National Congress**, initiated the Swadeshi movement in Bengal.
- Swadeshi movement was launched as a protest movement which also gave a lead to the Boycott movement in the country.
- In **1909**, the movement had spread across the country and people had started anti-partition and anti-colonial movements.
- In **Andhra Pradesh**, the **Swadeshi movement** was also known as the **Vandemataram movement**.
- In 1910, there were many secret associations that had been set up and there were many revolutionary movements, which were synonymous with the Swadeshi movement
- Later movements by Mahatma Gandhi **from 1915**, such as the **Satyagraha** movement, the **Non-Cooperation movement**, etc. were based on the **Swadeshi movement**.

Key people in the Swadeshi movement:

- Bal Gangadhar Tilak
- Bipin Chandra Pal
- Lala Lajpat Rai
- Aurobindo Ghosh
- VO Chidambaram Pillai
- Babu Genu

42. Answer: d

Explanation:

The Correct Answer is "State Bank of India".

★ Important Points

- **YONO SBI**, which literally means **You Only Need One**.
- It's an app by the State Bank of India that provides **multiple services in one place**.
- It eliminates the need for multiple apps on our phones.
- It has made mobile banking easy too with services such as digitally opening a **bank account, fund transfers, cashless bill payments, applying and availing loans in real-time**.
- We can even initiate the **cash withdrawal process** using our smartphones by using this app.
- We have to set a **6 digit YONO cash pin** for withdrawing money from SBI ATMs, designated as **YONO cashpoints**.
- Check our account balance, create a fixed deposit and add a beneficiary for fund transfers.
- Make an immediate fund transfer to a newly added beneficiary **up to Rs. 10,000**.
- Link all our SBI entities in one app like credit cards, life insurance, general insurance, travel insurance, accident insurance, SIP, mutual funds, and other investments.

- Get an overview of your expenses by checking the spend analysis provided by the app that automatically tags and categorizes your expenses.
- Get pre-approved personal loans **up to Rs. 5 lakhs, 24X7** using the app and portal without any documentation.

43. Answer: b

Explanation:

The Correct Answer is "Deomali".

★ Important Points

- **Deomali** is the highest Peak Point in Odisha state, located in eastern Ghats in the Koratpur district of Odisha.
- Deomali Peak an elevation of about **1,672 m**.
- It is situated near **Doodhari village**, Pottangi Panchayat division which is 70 km from Koraput in Southern Odisha.
- Deomali is dotted with brooks and deep valleys and inhabited by tribes such as Kandhas, Parajas, Bhumia, Malis, and Bhotias.
- **Many waterfalls** also found while heading for the **top of the hill**.

★ Additional Information

- **Doddabetta** is the highest Peak in Tamil Nadu.
 - Doddabetta is the highest mountain in the Nilgiri Hills, at 2637 meters (8650 feet).
 - There is a reserved forest area around the peak.
- Devimala is one of the 14 highest peaks of Western Ghats.

44. Answer: b

Explanation:

The Correct Answer is "Indrajit Gupta".

★ Important Points

- **Indrajit Gupta** was the chairman of the **all-party parliamentary committee** on **state funding of elections**.
- The **8-member committee** that set up by the all-party conference in **May 1998** , submitted its report in **January 1999** .
- The election commission has produced a comprehensive set of proposals regarding **electoral reforms** and implemented many of the recommendations of the above committees.

★ Additional Information

- **India's electoral system** was largely free from any major flaw till t **he fourth general elections (1967)**.
- The distortions in its working appeared, for the first time, in **the fifth general elections (1971)** and these got multiplied in the successive elections, especially in those held in the eighties and thereafter. Many a time, the **Election Commission expressed** its concern and anxiety for removing obstacles in the way of free and fair polls.
- It had made a number of recommendations and repeatedly reminded the government of the necessity of changing the existing laws to check the electoral malpractices.
- Some of the key classic committees towards electoral reforms in the country include Tarkunde Committee Report (1975), Goswami Committee Report (1990), Election Commission's recommendations (1998), **Indrajit Gupta Committee Report (1998)**.

45. Answer: a

Explanation:

The Correct Answer is "River".

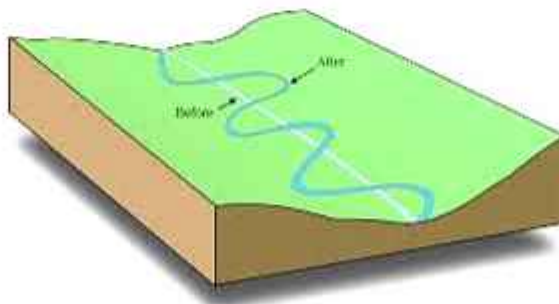
★ Important Points

- **River landforms** can be divided into **upper**, **middle** and **lower course** features.
- As the river moves from the upper course to the lower course, the features in the river will change.
- In the **middle course** the river has **more energy** and a **high volume of water**.
- The **gradient** here is gentle and lateral (sideways) erosion has widened the river channel.
- The **river channel** has also **deepened**.
- A larger river channel means there is **less friction**, so the **water flows faster**.

★ Key Points

The formation of a meander :

- As the **river erodes** laterally, to the right side then the left side, it forms large bends, and then horseshoe-like loops called **meanders**.
- The formation of meanders is due to both deposition and erosion and meanders **gradually migrate downstream**.
- The force of the water erodes and undercuts the river bank on the outside of the bend where water flow has most energy due to **decreased friction**. This will form a river cliff.
- On the inside of the bend, where the river flow is slower, material is deposited, as there is more friction. This will form a **slip-off slope**.
- Over time the horseshoe become tighter, until the ends become very close together. As the river breaks through, e.g. **during a flood** when the river has a higher discharge and more energy, and the ends join, the loop is cut-off from the main channel.
- The cut-off loop is called an **oxbow lake**.



46. Answer: a

Explanation:

The Correct Answer is "120".

★ Important Points

- The **idea of extra-time** in football was also added to the rules with those **1897 amendments**, at least for **British clubs and competitions**.
- It wasn't the case everywhere, though, which is demonstrated neatly by the German Championship final of 1922 when **Hamburg and Nuremberg** were drawing 2-2 after **90 minutes** but wanted to find a winner.
- They decided to keep playing until a team scored, resulting in another **99 minutes** of football.
- Even then it wasn't a goal that ended the contest so much as it was the encroachment of night.
- When the two sides met for a replay seven weeks later they did include extra-time, but the **match still couldn't be finished** because of the number of injuries and sendings off.

★ Key Points

- In a **professional football match** that typically lasts **90 minutes**, there are some exceptions.
- For instance, the time limit is decreased in youth games to compensate for the **youngsters' lack of fitness**.
- Both men's and women's games last **90 minutes** with a **15-minute half-time** period in the middle.
- Both games can acquire extra time depending on **stoppages and injuries**.
- The duration of each match **shall be 90 minutes**, except in special cases, provided for in these Competition Rules, **where an extra 30 minutes** shall be played.
- The Referee shall allow for time lost in accordance with the Laws of the Game or through accident or other cause and his decision on this matter is not subject to appeal.

- The half-time interval shall be **15 minutes** for all ties in all competitions.
- Both teams shall enter the field of play together, five minutes prior to the kick-off time, along with **the Match Officials**.

47. Answer: b

Explanation:

The Correct Answer is "Reserve Bank of India".

★ Important Points

- The **Base Rate** is the **minimum interest rate of a bank** below which it cannot lend, **except** in some cases allowed by the **RBI**.
- It is the minimum interest rate of a bank below which it is not viable to lend.
- The base rate, introduced with effect from **1st July 2011** by the Reserve Bank of India, is the new benchmark rate for lending operations of banks.
- Thus all categories of domestic rupee loans should be priced only with reference to the Base Rate, subject to the conditions mentioned in RBI circulars dated **April 9, 2010** and **January 19, 2015**.
- The reason for introducing Base Rate was to bring out the transparency in bank lending rates as well as to improve monetary policy transmission.
- Since the **Base Rate** will be the **minimum rate for all loans**, banks are not permitted to resort to any lending **below the Base Rate**.

★ Additional Information

- **Base Rate** replaced the **benchmark prime lending rate (BPLR)**, the interest rate which commercial banks charged their most credit worthy customer.
- Following the announcement in the Annual Policy Statement for the **year 2009-10**, a working group was constituted under the chairmanship of Shri Deepak Mohanty to review the benchmark prime lending rate.
- It was observed that the **benchmark prime lending rate**, which was introduced in **2003**, had **failed in its objective**.
- The **banks** were **lending below BPLR** rates due to **competitive pressures**.

- For the same reason, it was also difficult to assess the transmission of policy rates of **the Reserve Bank** to lending rates of banks.
- Hence a need was felt for transition to a more transparent and **effective interest rate mechanism**.

48. Answer: d

Explanation:

The Correct Answer is "Third Buddhist Council – Pataliputra".

★ Important Points

- **Six Buddhist Councils** marked important turning points in the story of **early Buddhism**.
- This story spans the time from immediately after the death and Parinirvana of the **historical Buddha in the 5th century BCE** to sometime early in the first millennium CE.
- This is also the story of sectarian clashes and the eventual Great Schism that resulted in the **two major schools, Theravada and Mahayana**.
- In total, **6 Buddhist councils** were convened.

The description of the six Buddhist councils has been given below:

First Buddhist Council :

- It was held soon after the **Mahaparinirvan** of the **Buddha, around 483 BC** under the patronage of **King Ajatshatru**.
- It was presided by Mahakasyapa, a monk. The council was held in the Sattapani cave at Rajgriha.
- The council was held with the purpose of preserving Buddha's teachings (Sutta) and rules for disciples. During this council, the teachings of Buddha were divided into three Pitakas.
- The significance of the First Council is that 500 senior monks adopted the Vinaya-Pitaka and Sutta-Pitaka as the accurate teaching of the Buddha, to be remembered and kept by generations of nuns and monks to come.

Second Buddhist Council :

- The Second Buddhist Council was held at **Vaisali (or Vaishali)**, an ancient city in what is now the **state of Bihar in northern India**, bordering Nepal under the patronage of King Kalasoka while it was presided by Sabakami.
- This Council probably was held about a century after the first one, or about 383 BCE.
- It was called to discuss **monastic practices** , in particular, whether monks could be allowed to **handle money**.

Third Buddhist Council :

- It was held in **250 B C** at **Pataliputra** under the **patronage** of **King Asoka**.
- It was presided by Moggliputta Tissa. The third part of the Tripitaka was coded in the **Pali language**.
- This Council appears to have met to compose commentaries on the **Tipitaka** .

Fourth Buddhist Council :

- The fourth Buddhist council was held in **72 AD** at **Kundalvana ,Kashmir** .
- It was presided by **Vasumitra** , while **Asvaghosa** was **his deputy**.
- The council was held under the patronage of Kushan King Kanishka of the **Kushan Empire**.
- Buddhism was divided into two sects namely **Mahayana** and **Hinayana** .

Fifth Buddhist Council :

- The fifth Buddhist council was held in Mandalay , **Burma in the year 1871** under the patronage of **King Mindon**.
- It was presided by **Jagarabhivamsa** , Narindhabhidhaja and Sumangalasami.
- During this council, **729 stone slabs** were engraved with **Buddhist teachings**.

Sixth Buddhist Council :

- The **Sixth Buddhist Council** was held in **1954** in **Burma** at **Kaba Aye, Yangoon**.
- It was held under the patronage of the Burmese government and it was presided by **Prime Minister U Nu**.
- The council commemorated **2500 years of Buddhism**.

49. Answer: c

Explanation:

The Correct Answer is "Kanshi Ram".

★ Important Points

- Bahujan Samaj Party (BSP) , a national political party in India, was formed in 1984.
- The BSP states that it represents the people at the lowest levels of the Hindu social system—those officially designated as members of the Scheduled Castes, Scheduled Tribes, and Other Backward Classes—as well as other religious and social minorities.
- The core support group of the BSP consists primarily of the Dalits (**Scheduled Castes** , formerly called **untouchables**).
- The party espouses no specific ideology, other than its opposition to and outspoken criticism of the inequalities of the caste system, and its main tenets are focused on respecting and upholding the constitutional rights of the **lower members of Indian society**.

★ Key Points

- **Kanshi Ram (1934–2006)**, a Dalit and a civil service worker, was spurred into pro-Dalit activism in the **1960s** after reading Ambedkar's writings and through witnessing firsthand caste discrimination.
- Ram's efforts to mobilize Dalits and other minorities led to his involvement in politics, in which he spent years crisscrossing Uttar Pradesh state and traveling throughout the country eliciting support for the cause.
- In 1984 he founded the party and led it until he was succeeded by **Kumari Mayawati in 2003**.
- Although Ram was responsible for building the support base for the party, Mayawati shaped and nurtured it into a powerful political force in **Uttar Pradesh** —India's most populous state—and at the **national level**.

- The state long remained the **BSP's** stronghold, and the party also has a presence in **Punjab state**.
- The first significant political success for the BSP came in 1993, when it entered into an alliance with the Samajwadi (Socialist) Party for the governance of Uttar Pradesh.
- In **1995**, however, the BSP left the coalition, and Mayawati, with support from **the Bharatiya Janata Party (BJP)**, became **chief minister** (head of government) in the state.
- Her first term lasted less than five months until the BJP withdrew its support.
- In the next several years Mayawati served two more short stints as chief minister: **6 months in 1997 and another 15 months in 2002–03**.

50. Answer: b

Explanation:

The Correct Answer is "**Aedes mosquitoes**".

★ Important Points

- The **Zika virus** was first discovered in the **Zika forest in Uganda in 1947** in a **rhesus monkey**.
- And again in 1948, it was found in the mosquito *Aedes africanus*, which is the forest relative of ***Aedes aegypti***.
- The virus can be spread by both ***Aedes aegypti*** and ***Aedes albopictus*** **mosquitos**.
- The virus has a lot in common with dengue and chikungunya.
- The three are originated from the same areas – West and Central Africa, and Southeast Asia and now they have expanded their range to much of the tropics and sub-tropics areas.
- The three are spread through the same **species of mosquitoes**.

★ Key Points

- The **Zika virus**, although, was first discovered **almost 70 years ago**, its outbreak started **only in 2007**.

- Initially, the outbreak occurred in Yap Island of Micronesia and six years later, it appeared in French **Polynesia** .
- Its outbreak occurred in **Brazil in May 2015**. By now, millions of people in tropical regions of the Americas might have been infected.
- Presently, the virus is known to be present in countries across Africa, the Americas, Asia, and the Pacific.
- The female mosquitoes pick up the virus from the blood when they bite people.
- The virus then travels from their gut through their circulatory system to their salivary glands.
- The virus is injected into others when the **female mosquito bites** them. The **mosquitoes bite during the daytime** only.

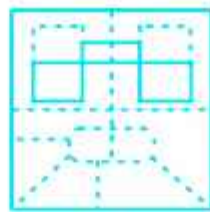
★ Additional Information

- The Indian government has issued guidelines on the disease and asked the **NCDC (National Center For Disease Control)** and the National Institute of Virology, Pune to take lead in studying the virus and finding the required diagnosis.
- The union health ministry has asked the states to control the growth of **the Aedes mosquito**, which is responsible for spreading deadly dengue and also **Zika virus** .
- Pregnant women are advised to either defer or cancel their travel to the affected countries.
- Travelers are asked to report to customs if they are returning from affected countries and suffering from febrile illness.
- Rapid Response Teams (RRTs) have been activated at central and state surveillance units with each team comprising an **epidemiologist** or public health specialist, a microbiologist, and a medical specialist.

51. Answer: b

Explanation:

The option figure which is embedded in the figure (X) when rotation is NOT allowed is shown below:



(X)

Hence, 'option 2' is the correct answer.

52. Answer: a

Explanation:

The logic is:

$$97 + 1^3 = 98$$

$$98 + 2^3 = 106$$

$$106 + 3^3 = 133$$

$$133 + 4^3 = 197$$

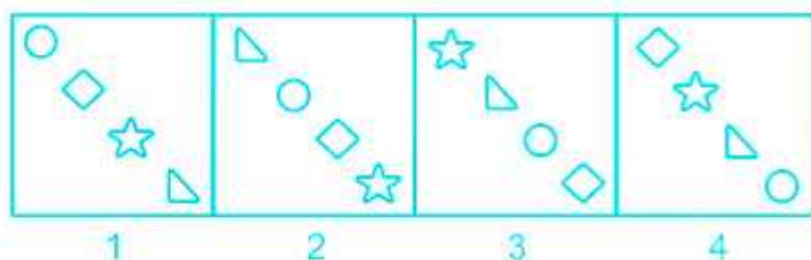
$$197 + 5^3 = 322$$

Hence, '322' is the correct answer.

53. Answer: a

Explanation:

The figure that will replace the question mark (?) in the figure series is shown below:



The figure at the extreme right end gets shifted to the extreme left end as we move along the series. So, the next image in the series will be option 1.

Hence, 'option 1' is the correct answer.

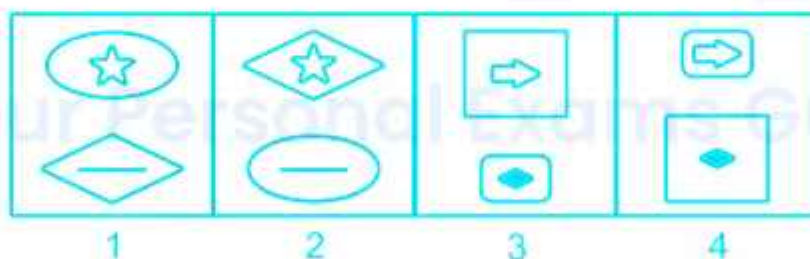
54. Answer: b

Explanation:

The logic is:

→ The circle and quadrilateral in Image 1 swapped their position in Image 2.

Similarly,

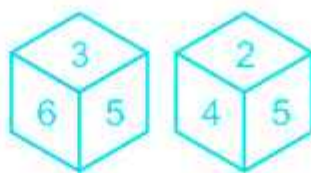


→ The outer images in Image 3 will swap their position in Image 4.

Hence, 'option 2' is the correct answer.

55. Answer: c

Explanation:



In the two different positions of the same dice the six faces of which are numbered from 1 to 6, we can clearly see that 3, 6, 2 and 4 are adjacent to 5, so the remaining face '1' is opposite to '5'.

Hence, '1' is the correct answer.

56. Answer: d

Explanation:

1) $\div$ and $-$

Given expression: $86 + 5 - 42 \div 28 \times 14 = 7$

After replacing the symbols, we get:

$$\text{L.H.S} = 86 + 5 \div 42 - 28 \times 14$$

$$= 86 + 0.12 - 392$$

$$= 86.12 - 392$$

$$\Rightarrow -305.88 \neq \text{R.H.S}$$

2) $\times$ and $+$

Given expression: $86 + 5 - 42 \div 28 \times 14 = 7$

After replacing the symbols, we get:

$$\text{L.H.S} = 86 \times 5 - 42 \div 28 + 14$$

$$= 430 - 1.5 + 14$$

$$= 444 - 1.5$$

$$= 442.5 \neq \text{R.H.S}$$

3) $\times$ and $-$

Given expression: $86 + 5 - 42 \div 28 \times 14 = 7$

After replacing the symbols, we get:

$$\text{L.H.S} = 86 + 5 \times 42 \div 28 - 14$$

$$= 86 + 7.5 - 14$$

$$= 93.5 - 14$$

$$= 79.5 \neq \text{R.H.S}$$

4) $\times$ and $\div$

Given expression: $86 + 5 - 42 \div 28 \times 14 = 7$

After replacing the symbols, we get:

$$\text{L.H.S} = 86 + 5 - 42 \times 28 \div 14$$

$$= 86 + 5 - 84$$

$$= 91 - 84$$

$$= 7 = \text{R.H.S}$$

Hence, ' $\times$ and $\div$ ' is the correct answer.

57. Answer: c

Explanation:

$$\text{Interest} = \text{Rs. } 4,160$$

$$\text{Rate} = 8\%$$

Time = 1 year

$$\text{Interest} = (P \times R \times T) / 100$$

$$\Rightarrow 4160 = (P \times 8 \times 1) / 100$$

$$\Rightarrow 4160 \times 100 = 8 \times P$$

$$\Rightarrow 416000 / 8 = P$$

$$\Rightarrow P = 52,000$$

So, Ravindra borrowed Rs. 52,000 from his friend.

Hence, 'Rs. 52,000' is the correct answer.

58. Answer: a

Explanation:

Sides of polygons in each option is shown below:

Image 1 → 3 sides - 5 sides - 6 sides

Image 2 → 3 sides - 4 sides - 5 sides

Image 3 → 3 sides - 3 sides - 5 sides

Image 4 → 3 sides - 4 sides - 6 sides

We clearly observe that in all images except 'Image 3' the sides of polygons are increasing while in image 3, the sides of first two polygons are same.

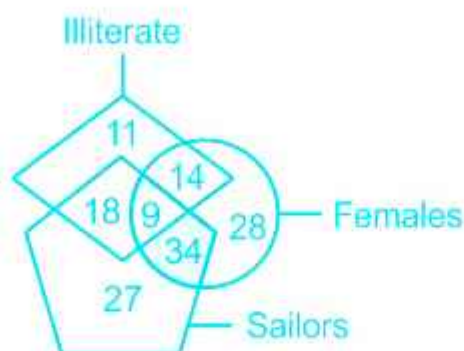
Therefore, Image 3 is the odd one out.

Hence, 'option 1' is the correct answer.

59. Answer: b

Explanation:

Female sailors who are NOT illiterate is shown below:



Hence, '34' is the correct answer.

60. Answer: c

Explanation:

The logic is:

Brazil : South America → Brazil is a country in the continent of South America.

Similarly,

Sri Lanka : ? → Sri Lanka is a country in the continent of Asia.

Hence, 'Asia' is the correct answer.

61. Answer: b

Explanation:

The logic is:

$$\text{Column 1: } (25 + 14) \times 2 + 14 = 92$$

Column 2: $(52 + 16) \times 2 + 16 = 152$

Similarly,

Column 3: $(40 + 15) \times 2 + 15 = 125$

Hence, '125' is the correct answer.

62. Answer: b

Explanation:

the correct mirror image of the figure when the mirror is placed at 'PQ' is shown below:



Hence, 'option 2' is the correct answer.

63. Answer: c

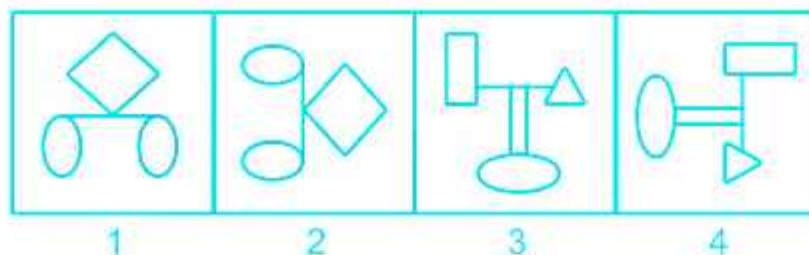
Explanation:

The logic is:

→ Image 2 is obtained when Image 1 is rotated in clockwise direction.

Similarly,

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→ Image 4 is obtained when Image 3 is rotated in clockwise direction.

Hence, 'option 3' is the correct answer.

64. Answer: d

Explanation:

When the paper is folded to form a cube, the faces that will be opposite to each other is shown below:



Letter 'J' will be on the opposite face to the face having the letter 'F'.

Hence, 'J' is the correct answer.

65. Answer: c

Explanation:

The Venn diagram that best illustrates the relationship between Mothers, Sales Managers, and Males is shown below:



Some sales manager can be mothers.

Some sales manager can be males.

Hence, 'option 3' is the correct answer.

66. Answer: c

Explanation:

The logic is:

$$5573 : 20 \rightarrow 5573 : (5 + 5 + 7 + 3)$$

Similarly,

$$8991 : ? \rightarrow 8991 : (8 + 9 + 9 + 1)$$

$$\Rightarrow ? = 27$$

Hence, '27' is the correct answer.

67. Answer: c

Explanation:

The logic is:



Similarly,

RESPOND
XIX
SERPDNO

Hence, 'SERPDNO' is the correct answer.

68. Answer: d

Explanation:

The image that will come next in the following series is shown below:



The pattern followed is:

Number of lines in the middle of the image is decreasing as we move along the series.

So, Image 4 will have two lines.

The arrow in Image 1 and Image 3 are facing in opposite directions.

So, the arrow in Image 4 will be facing west, opposite to the direction of Image 2.

The square box in Image 1 and Image 3 is same.

So, the square in Image 4 will be similar to Image 2.

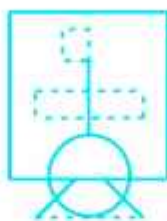
Option 4 satisfies all the above conditions.

Hence, 'option 4' is the correct answer.

69. Answer: a

Explanation:

The option in which the given figure (X) is embedded when rotation is NOT allowed is shown below:



Hence, 'option 1' is the correct answer.

70. Answer: b

Explanation:

The pattern followed here is:

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Here the logic followed is:

First letter - 3 = Second letter, Second letter - 4 = Third letter

According to the alphabetical positions of the letters,

1) HEA $\rightarrow$ H - 3 = E; E - 4 = A

2) LIF $\rightarrow$ L - 3 = I; I - 3 = F

3) $TQM \rightarrow T - 3 = Q; Q - 4 = M$

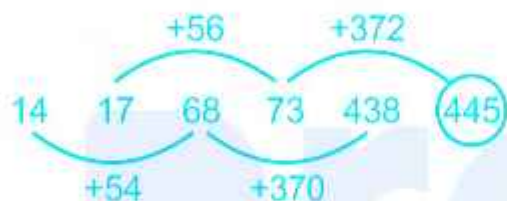
4) $KHD \rightarrow K - 3 = H; H - 4 = D$

Hence, 'LIF' is the odd one out.

71. Answer: d

Explanation:

The logic is:



Hence, '445' is the correct answer.

72. Answer: c

Explanation:

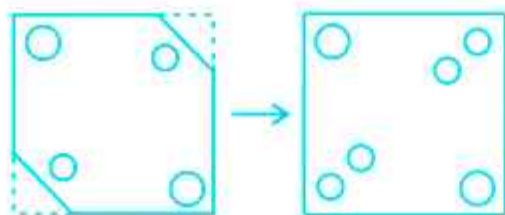
Image 1, 2 and 3 the pair of the images are mirror image of each other, while in Image 4, the pair is not mirror image of each other.

Hence, 'option 3' is the odd one out.

73. Answer: d

Explanation:

The paper when cut and unfolded will appear as shown below:

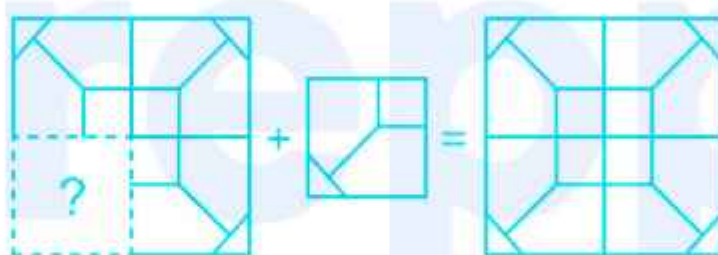


Hence, ' **option 4** ' is the correct answer.

74. Answer: a

Explanation:

The option figure that can replace the question mark (?) in the figure to complete the pattern is shown below:



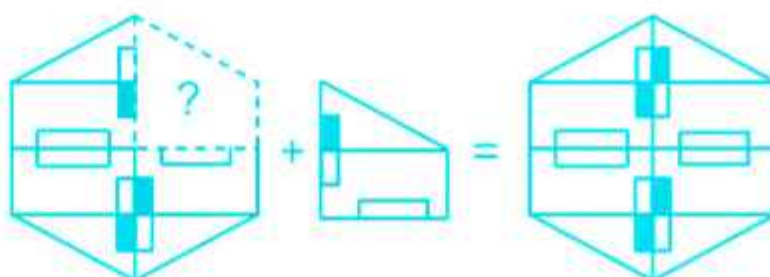
Hence, ' **option 1** ' is the correct answer.

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75. Answer: c

Explanation:

The option figure that will complete the pattern in the figure given is shown below:



Hence, ' option 3 ' is the correct answer.

76. Answer: a

Explanation:

Given:

Length of rectangular plot is 15 m more than its breadth.

Rate of cost of fencing is Rs.16.50 per m.

Total cost of fencing is Rs.4,950.

Formula Used:

Perimeter of rectangle = $2(L + B)$

Calculation:

Length of plot $L = B + 15$

Perimeter of plot = $2(L + B)$

$$\Rightarrow 2 \{(B + 15) + B\}$$

$$\Rightarrow 2 (2B + 15)$$

$$\Rightarrow 4B + 30$$

Now, the cost of fencing the plot at the rate of Rs.16.50 per m is Rs.4,950.

$$\Rightarrow 16.50 \times (4B + 30) = \text{Rs.}4,950$$

$$\Rightarrow 66B + 495 = 4950$$

$$\Rightarrow 66B = 4950 - 495$$

$$\Rightarrow 66B = 4455$$

$$\Rightarrow B = 4455/66 = 67.5$$

$$\text{Length} = B + 15$$

$$\Rightarrow 67.5 + 15 = 82.5$$

$$\therefore \text{Length of the rectangular plot} = 82.5$$

77. Answer: a

Explanation:

Given:

Speed of first part of journey = 160km/h

Speed of second part of journey = 240km/h

Total distance = 3840 km

Total time = 20hr.

Formula Used:

Distance = Speed $\times$ Time

Calculation:

Let time taken to travel in the first part = x hr.

Time taken to travel the second part = 20 - x hr.

Distance travelled in the first part = 160x

Distance travelled in the second part = 240(20 - x)

According to question:

Distance travelled in the first part = Distance travelled in the second part

$$\Rightarrow 160x + 240(20 - x) = 3840$$

$$\Rightarrow 160x + 4800 - 240x = 3840$$

$$\Rightarrow -80x = -960$$

$$\Rightarrow x = -960/-80$$

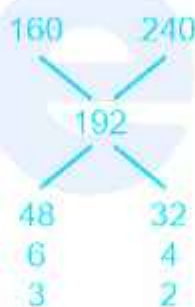
$$\Rightarrow x = 12$$

Time taken in first half = $x = 12$ hr.

Time taken in second half = $20 - x = 20 - 12 = 8$ hr.

$\therefore$ Time taken in second half = 8 hr.

★ Alternate Method



5 = 20 Hrs

2 = 8 Hrs

78. Answer: b

Explanation:

First take the LCM of 12, 10 and 11.

The LCM is 660

Now, we can see that in each number there is a difference of 1.

$$\Rightarrow 12 - 11 = 1$$

$$\Rightarrow 10 - 9 = 1$$

$$\Rightarrow 11 - 10 = 1$$

$\Rightarrow$ So, subtract the LCM by 1

$$\Rightarrow 660 - 1 = 659$$

$\therefore$ The smallest number is 659.

79. Answer: d

Explanation:

Given:

A and B borrow equal sum of money for 3 years at the rate of 5% for SI and CI respectively

Difference between interest of A and B is 427

Formula Used :

$$SI = (P \times R \times T)/100$$

$$CI = P \left(1 + \frac{R}{100}\right)^t - P$$

Calculation:

$$SI \text{ of A} = (P \times 3 \times 5)/100 = 3P/20 \quad \text{----(i)}$$

$$CI \text{ of B} = P \left(1 + \frac{5}{100}\right)^3 - P$$

$$\Rightarrow P \times \frac{21}{20} \times \frac{21}{20} \times \frac{21}{20} - P$$

$$\Rightarrow \frac{9261P}{8000} - P$$

$$\Rightarrow 1261P/8000 \quad \text{----(ii)}$$

According to question,

$$\Rightarrow \frac{1261P}{8000} - \frac{3P}{20} = 427$$

$$\Rightarrow 61P/8000 = 427$$

$$\Rightarrow P = (427 \times 8000)/61$$

$$\Rightarrow P = \text{Rs.}56000$$

Interest Paid by B = $56000 (1 + 5\% \times 3) - P$

$$\Rightarrow 56000 \times \frac{21}{20} \times \frac{21}{20} \times \frac{21}{20} - P$$

$$\Rightarrow 56000 \times (9261/8000) - P$$

$$\Rightarrow 64827 - P$$

$$\Rightarrow 64827 - 56000 = \text{Rs.}8827$$

$\therefore$ The sum borrowed is Rs.56,000 and interest paid by B is Rs.8827.

80. Answer: a

Explanation:

Given:

Brand A costing Rs. 15 per 100 g

Brand B costing Rs. 18 per 100 g

Sold the mixture at Rs. 20 per 100 g, making a profit of 20%

Formula used:

$$\text{Profit\% or Loss\%} = (\text{Profit or Loss} / \text{Cost price}) \times 100$$

Calculation:

Let x gram of brand A and y gram of brand B is mixed.

For 100g brand A costs Rs. 15

For x g brand A will cost $15x/100$

For 100g brand B costs Rs. 18

For y g brand B will cost $18y/100$

So, the total cost price for $(x + y)$ grams is

$$\Rightarrow x + y = 15x/100 + 18y/100 \quad \text{----(i)}$$

Sold at Rs. 20 with 120% profit, Cost price will be

$$\Rightarrow 100\% = (20/120) \times 100 = \text{Rs. } 100/6$$

Cost price for 100g is Rs. $100/6$,

Now find cost price for $(x + y)$ grams

$$\Rightarrow x + y = (100/6) \times \{(x + y)/100\}$$

$$\Rightarrow x + y = (x + y)/6$$

Put value of equation(i)

$$\Rightarrow 15x/100 + 18y/100 = (x + y)/6$$

$$\Rightarrow 90x + 108y = 100x + 100y$$

$$\Rightarrow 8y = 10x$$

$$\Rightarrow x/y = 8/10 = 4/5$$

$\therefore$ The ratio of the mixture of Brand A and B is 4 : 5

★ Alternate Method

Sold at Rs. 20 with 120% profit, Cost price will be

$$\Rightarrow 100\% = (20/120) \times 100 = \text{Rs. } 100/6$$

$$15 \times 6$$

$$18 \times 6$$

$$\frac{100 \times 6}{6}$$

90

108

100

8
4

:
:

10
5

∴ The ratio of the mixture of Brand A and B is 4 : 5

81. Answer: b

Explanation:

Given:

The length of open cuboidal cistern is 1.6 m.

The breadth of open cuboidal cistern is 1.3 m.

The height of open cuboidal cistern is 53 cm.

The capacity of open cuboidal cistern is 900 litres.

The thickness of wall is 5 cm.

Formula Used:

Volume of Cuboidal = length $\times$ Breadth $\times$ Height

Calculation:

The length of open cuboidal cistern = 1.6 m = 160 cm

The thickness of wall is 5 cm.

The resultant length of open cuboidal cistern = $160 - 2 \times 5 = 150$ cm

The breadth of open cuboidal cistern = 1.3 m = 130 cm

The thickness of wall is 5 cm.

The resultant breadth of open cuboidal cistern = $130 - 2 \times 5 = 120$ cm

The height of open cuboidal cistern = 53 cm

The thickness of bottom is x cm.

The resultant height of open cuboidal cistern = $(53 - x)$ cm

The capacity of open cuboidal cistern = 900 litres = $900 \times 1000 \text{ cm}^3$

$$\Rightarrow 150 \times 120 \times (53 - x) = 900 \times 1000$$

$$\Rightarrow 180 \times (53 - x) = 9 \times 1000$$

$$\Rightarrow 20 \times (53 - x) = 1 \times 1000$$

$$\Rightarrow 53 - x = 50$$

$$\Rightarrow x = 3$$

$\therefore$ The thickness of bottom is 3 cm.

82. Answer: d

Explanation:

Given:

A shopkeeper bought 1000 kg of rice.

A part sold at a 10% profit.

A remaining part at a 20% loss.

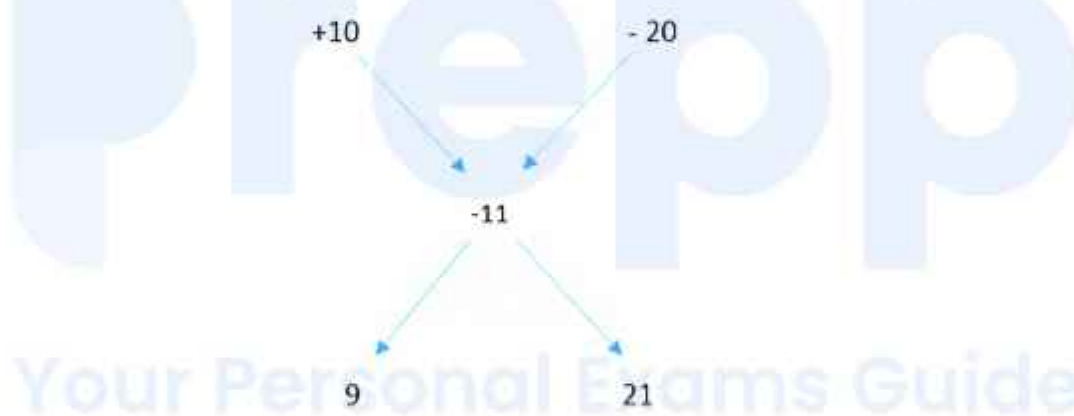
A loss of 11% was incurred on the whole transaction.

Calculation:

A part sold at a 10% profit.

A remaining part at a 20% loss.

A loss of 11% was incurred on the whole transaction.



The ratio of mixture = $9 : 21 = 3 : 7$

A shopkeeper bought 1000 kg of rice.

The quantity of rice that was sold at a 20% loss = $\frac{7}{(3 + 7)} \times 1000 = 700$ kg

$\therefore$ The quantity of rice that was sold at a 20% loss is 700 kg.

83. Answer: a

Explanation:

Given:

A's income is 35% more than B's income.

Concept Used:

$$\text{Percentage} = (A - B)/A \times 100$$

Calculation:

Let the value of B be x.

$$\text{Then, the value of A} = (100 + 35)/100 \times x = 1.35x$$

$$\text{The percentage of B's income less than A's income} = (1.35x - x)/1.35x \times 100 = 25.92\% \approx 26\%$$

∴ The percentage of B's income less than A's income is 26%.

★ Alternate Method

Let the value of B be 100.

$$\text{Then, the value of A} = (100 + 35)/100 \times 100 = 135$$

$$\text{The percentage of B's income less than A's income} = (135x - x)/135 \times 100 = 25.92\% \approx 26\%$$

∴ The percentage of B's income less than A's income is 26%.

84. Answer: a

Explanation:

Given:

A tank full of petrol in a motorcycle lasts for 30 days.

Concept Used:

Total capacity of tank = Petrol used per day $\times$ No. of days

Calculation:

Let the quantity of petrol used per day be x .

The capacity of tank = $30 \times x = 30x$

According to the question;

A rider starts using 20% more petrol every day.

The new quantity of petrol used per day = $120/100 \times x = 1.2x$

Let the number of days be y .

The capacity of tank = $30x$

$$\Rightarrow 30x = 1.2x \times y$$

$$\Rightarrow 30/1.2 = y$$

$$\Rightarrow y = 25$$

$\therefore$ The number of days the tank full of petrol last is 25 days.

★ **Shortcut Trick**

The number of days = $30 / (100 + 20) \times 100 = 30/1.2 = 25$

$\therefore$ The number of days the tank full of petrol last is 25 days.

85. Answer: b

Explanation:

Given:

A can do a piece of work in 45 days.

A works for 30 days.

B completes the remaining work in 5 days.

Concept Used:

Work done = $1/\text{Time}$

Calculation:

A can do a piece of work in 45 days.

A's 1 days work = $1/45$

A's 30 days work = $1/45 \times 30 = 2/3$

The remaining work = $1 - 2/3 = 1/3$

B's complete $1/3$ th of work in 5 days

Then, B's 1 day work = $1/(3 \times 5) = 1/15$

B can complete the whole work = 15 days

$\therefore$ B can complete the whole work is 15 days.

86. Answer: a

Explanation:

Given:

The average age of a family of 5 members 2 years ago was 18 years.

The average after a new member add to the family is 18 years.

Concept Used:

The average = Sum of the all numbers/Number of the numbers

Calculation:

The average age of a family of 5 members 2 years ago was 18 years.

The sum of age of all family member 2 years ago = $18 \times 5 = 90$

The sum of age of all family member at present = $90 + 2 \times 5 = 100$

Let the age of new member be x .

The sum of age of a family of 6 member = $6 \times 18 = 108$

$$\Rightarrow 100 + x = 108$$

$$\Rightarrow x = 8 \text{ years}$$

$\therefore$ The age of new member of family is 8 years.

★ Shortcut Trick

Let the age of new member be x .

The sum of age of a family of 6 member = $6 \times 18 = 108$

$$\Rightarrow 18 \times 5 + 2 \times 5 + x = 108$$

$$\Rightarrow 90 + 10 + x = 108$$

$$\Rightarrow x = 8 \text{ years}$$

$\therefore$ The age of new member of family is 8 years.

87. Answer: a

Explanation:

Given:

The principal of each person is Rs.43892.

The first on SI at rate of 30% for 3 years.

The second on CI at rate of 30% for 3 years.

Formula Used:

$$SI = P \times R \times T/100$$

$$\text{Amount} = P[1 + R/100]^n$$

$$CI = \text{Amount} - \text{Principal}$$

Calculation:

The principal of each person is Rs.43892.

The first on Simple Interest at rate of 30% for 3 years.

$$\text{Simple Interest} = 43892 \times 30 \times 3/100 = \text{Rs.}39502.8$$

The second on Compound Interest at rate of 30% for 3 years.

$$\text{Amount} = 43892[1 + 30/100]^3$$

$$\Rightarrow 43862 \times 130/100 \times 130/100 \times 130/100$$

$$\Rightarrow \text{Rs.}96364.81$$

$$\text{Compound Interest} = 96364.81 - 43892 = \text{Rs.}52472.81$$

$$\text{The difference between Compound Interest and Simple Interest} = \text{Rs.}12970.01$$

$$\text{The percentage} = 12970.01/52472.81 \times 100 = 24.7\%$$

$\therefore$ The percentage simple interest be less than the compound interest is 24.7%.

88. Answer: c

Explanation:

Given:

The sum of two numbers is 26.

The difference of two number is 14.

Calculation:

Let the larger number be x .

Let the smaller number be y .

According to the question;

The sum of two numbers is 26.

$$\Rightarrow x + y = 26$$

$$\Rightarrow x = 26 - y$$

The difference of two number is 14.

$$\Rightarrow x - y = 14$$

$$\Rightarrow 26 - y - y = 14$$

$$\Rightarrow 26 - 14 = 2y$$

$$\Rightarrow 12 = 2y$$

$$\Rightarrow y = 6$$

The larger number $x = 26 - 6 = 20$

Three times the larger number is divided by the smaller number

$$\Rightarrow 20 \times 3/6 = 10$$

$\therefore$ The quotient is 10.

89. Answer: a

Explanation:

Given:

The marked Price of an article is Rs. 5000.

Three successive discounts of 15%, 10% and 18%, are given on its marked price.

Formula Used:

$$\text{Selling price} = \text{Marked price} \times (100 - \text{Discount\%})/100$$

Calculation:

The marked Price of an article is Rs. 5000.

$$\text{The Selling Price} = 5000 \times (100 - 15)/100 \times (100 - 10)/100 \times (100 - 18)/100$$

$$\Rightarrow 5000 \times 85/100 \times 90/100 \times 82/100$$

$$\Rightarrow \text{Rs.}3136.5$$

$\therefore$ The Selling price of the article is Rs.3136.5.

90. Answer: d

Explanation:

Given:

$$\frac{11}{12}, \frac{13}{14}, \frac{12}{13}, \frac{15}{16}, \frac{19}{20}$$

Calculation:

$$\text{Prime factor of } 12 = 1 \times 2^2 \times 3$$

$$\text{Prime factor of } 14 = 1 \times 2 \times 7$$

$$\text{Prime factor of } 13 = 1 \times 13$$

Prime factor of 16 = 1×2^4

Prime factor of 20 = $1 \times 2^2 \times 5$

Now the least common multiple of (12, 14, 13, 16 and 20) = $2^4 \times 3 \times 7 \times 13 \times 5$

$$\Rightarrow 16 \times 3 \times 7 \times 13 \times 5$$

$$\Rightarrow 21,840$$

Now multiply each given fraction with this LCM, we get

$$(11/12) \times 21,840$$

$$\Rightarrow 20,020$$

$$(13/14) \times 21,840$$

$$\Rightarrow 20,280$$

$$(12/13) \times 21,840$$

$$\Rightarrow 20,160$$

$$(15/16) \times 21,840$$

$$\Rightarrow 20,475$$

$$(19/20) \times 21,840$$

$$\Rightarrow 20,748$$

Now we can see only a fraction (11/12) gives the smallest value in all fractions.

$\therefore$ The smallest fraction from all fractions is (11/12)

★ Alternate Method

Concept used:

If series like $n/(n+1)$, $(n+1)/(n+2)$, $(n+2)/(n+3)$ and so on

The first term in the series gives the smallest value and the last term in the series gives the maximum value.

Calculation:

The fractions are $11/12$, $13/14$, $12/13$, $15/16$, and $19/20$

After arranging we get,

$11/12$, $12/13$, $13/14$, $15/16$, and $19/20$

$\Rightarrow 11/(11+1)$, $(11+1)/(11+2)$, $(11+2)/(11+3)$, $(11+4)/(11+5)$ and $(11+8)/(11+9)$

So the smallest value is $11/(11+1)$

$\Rightarrow 11/12$

$\therefore$ The smallest fraction from all fractions is $(11/12)$

★ Shortcut Trick

For this type of problem, we must remember the table of each denominator and then we divide each numerator from the respective denominator.

Now $11/12 = 0.916$

$13/14 = 0.928$

$12/13 = 0.923$

$15/16 = 0.937$

$19/20 = 0.95$

So we can see that only a fraction $(11/12)$ gives the smallest value.

$\therefore$ The smallest fraction from all fractions is $(11/12)$

91. Answer: a

Explanation:

The correct answer is the Title bar.

- The title bar displays both the name of the application and the name of the spreadsheet in MS-Excel.

★ Key Points

- Microsoft Excel consists of the basic components like an Active cell, title bar Column headings, a Formula bar, a Name box, the mouse pointer, Row headings, Sheet tabs, a Taskbar, Tab scrolling buttons and Toolbars.
- The title bar displays both the name of the application and the name of the spreadsheet.

★ Additional Information

- A **toolbar** is just a collection of icons that provides a shortcut to using a drop-down menu.
- A **quick access toolbar** shows the options that are frequently used.
 - The user can add favourite options by adding new options to the quick access toolbar.
- The **Menu Bar** at the top of the screen gives access to different commands that are used for tasks such as opening and closing files, printing documents, formatting data, and other operations.

92. Answer: d

Explanation:

The correct answer is Select the cell and press the F5 function key on the keyboard to edit the content of the cell.

- Select the cell and press the F5 function key on the keyboard to edit the content of the cell as FALSE with reference to cell editing in MS-Excel.
- F5 key displays the "Go-To" dialogue box .

- The Go-To box will list down the valid "named range" available in the opened excel workbook.
- Along with this, you can enter the reference of the cell where you want to go in the "Reference" text box.

★ Key Points

- **Microsoft Excel** is a spreadsheet developed by Microsoft for Windows, macOS, Android and iOS.
 - It features calculation, graphing tools, pivot tables, and a macro programming language called Visual Basic for Applications (VBA).

93. Answer: d

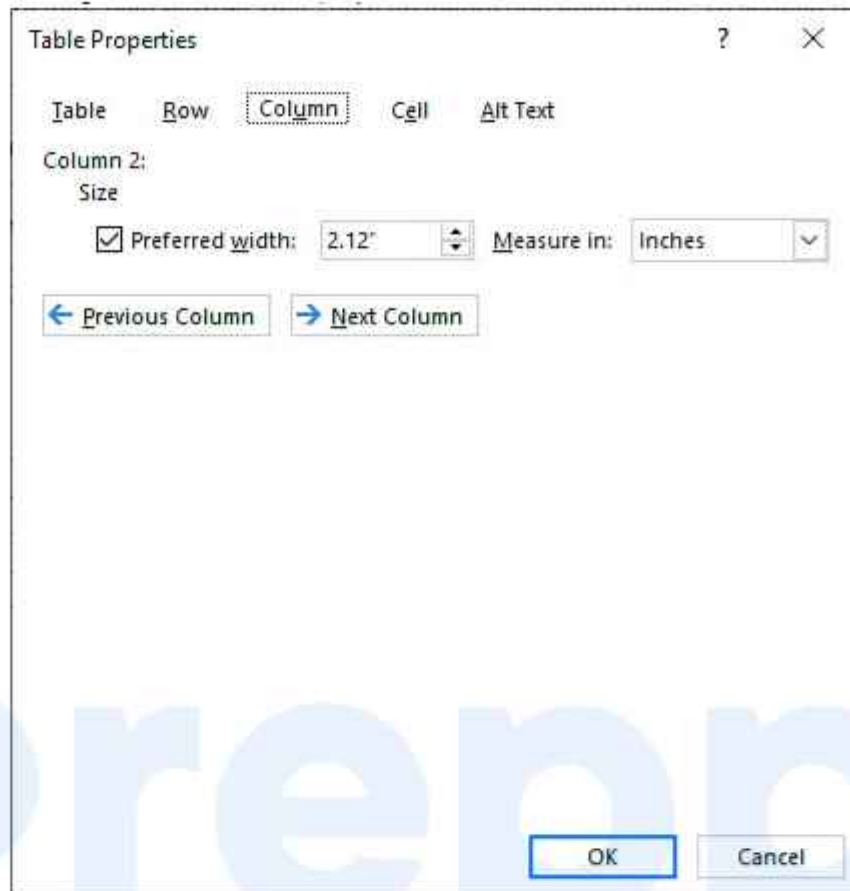
Explanation:

The correct answer is the Table properties.

- Table properties can be used to change the width of the columns in a table in MS- Word.

★ Key Points

- The width of the columns can be adjusted by using the mouse.
- By clicking on the column dividing line and drag it one way or the other.
- Select the column whose width needs to be changed.
 - Word displays two additional tabs on the ribbon: Table Design and Layout.
- Display the Layout tab of the ribbon.
- Click the Properties option in the Table group.
- Word displays the Table Properties dialogue box.
- The following Column tab is displayed:



- Using the Preferred Width control, set the column width as wanted.

94. Answer: b

Explanation:

The correct answer is a Carbon copy.

- The full form of 'CC', a field of E-mail header is a Carbon copy.

★ Key Points

- The meaning of Cc is that whose address appears after the Cc: header would receive a copy of the message and the Cc header would also appear inside the header of the received message.
- Cc is used for **emailing individual or multiple contacts**.
- In this header, the **email addresses viewable by all**.

- Bcc stands for **blind carbon copy**.
- Bcc is similar to that of Cc besides that the Email address of the recipients specified in the Bcc field does not appear in the received message header and the recipients in the To or Cc fields will not know that a copy sent to these address.
- It is also used for **emailing individual or multiple contacts**.
- The email addresses **viewable only by the sender**.
- BCC should be used when sending out **marketing emails, newsletters, or other unsolicited emails**.

95. Answer: c

Explanation:

The correct answer is Ctrl + click on a sentence to select it.

- Double-click on a sentence to select it is used to select a sentence in a paragraph in MS-Word.

★ Key Points

- Shortcut in MS word for selection:
 - To select the current word, **double-click on it**.
 - To select the current paragraph, triple-click on the paragraph.
 - To select a sentence and not just a line, hold down [Ctrl] and click once in **any place within the sentence**.
 - To select a vertical block of text, click at the start of the block. Later, hold down the [Shift] key and click a second time at the opposite end of the block. This trick is used when only want to copy one column of a tabular list

Approach (to find the difference in the shortcut)

These can be easily understood if you do it practically on MS word as it has very minute differences which you need to see while performing and reading each point.

96. Answer: c

Explanation:

The correct answer is High cost.

- The high cost is NOT a feature of the internet.

★ Key Points

- Internet :
 - Computers in an office are networked using LAN (Local Area Network).
 - Computers in different locations are connected by WAN (Wide Area Network).
 - Both these network systems are not for public use and have limited usage.
 - The Internet is a **network of thousands of networks**.
 - Millions of computer networks are connected to the Internet network and are available to the public.
 - **Internet was invented** by the **American Department of Defence in 1969**.
 - Internet today offers various features such as flexibility of communication, ease of accessibility, Ease of use and is also available at cheap and affordable rates (in terms of cyber cafe ,mobile packs ,wifi packs).

97. Answer: c

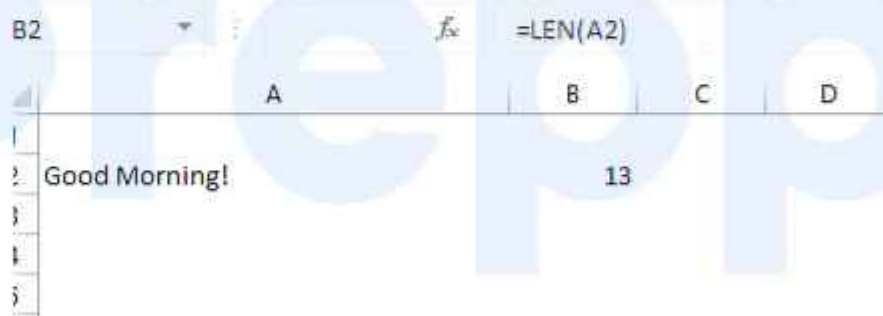
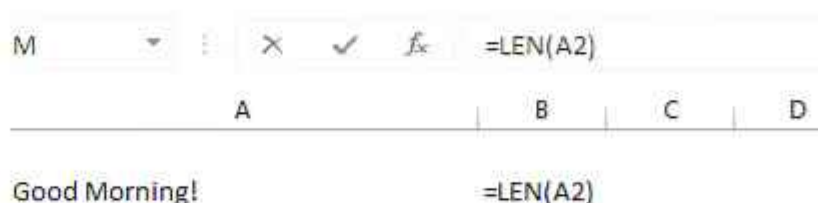
Explanation:

The correct answer is Text.

- The 'LEN' function in MS-Excel belongs to text.

★ Key Points

- LEN function in excel is taken from the length and is used to count the number of characters is there in a cell.
- It considers special characters, spaces and alphabets and counts all these values if there is a selected cell.
- LEN function only counts the character length for only one cell.
- Example to use LEN function:



★ Additional Information

- **Financial functions** in EXCEL are FV Function, IPMT, XIRR in Excel, PMT Function, IRR Excel Function, RATE Function, NPV Function, etc.
- **Logical functions** in EXCEL are AND Function, NOT, OR Excel Function, TRUE Function, IFERROR Excel Function, Excel XOR Function and Excel Lo
- **Math functions** in EXCEL are EVEN Excel Function, SUM Function, POWER Function, SUMIF and LOG Excel Function.

98. Answer: b

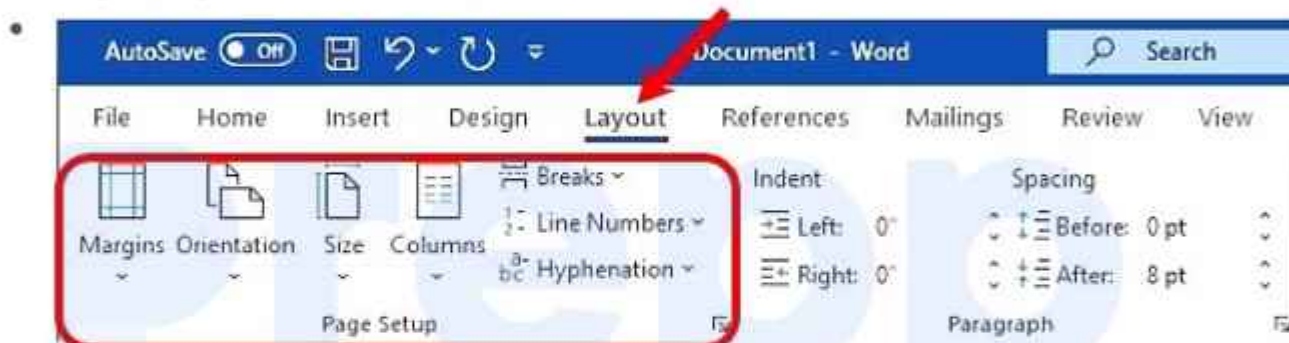
Explanation:

The correct answer is Page Layout.

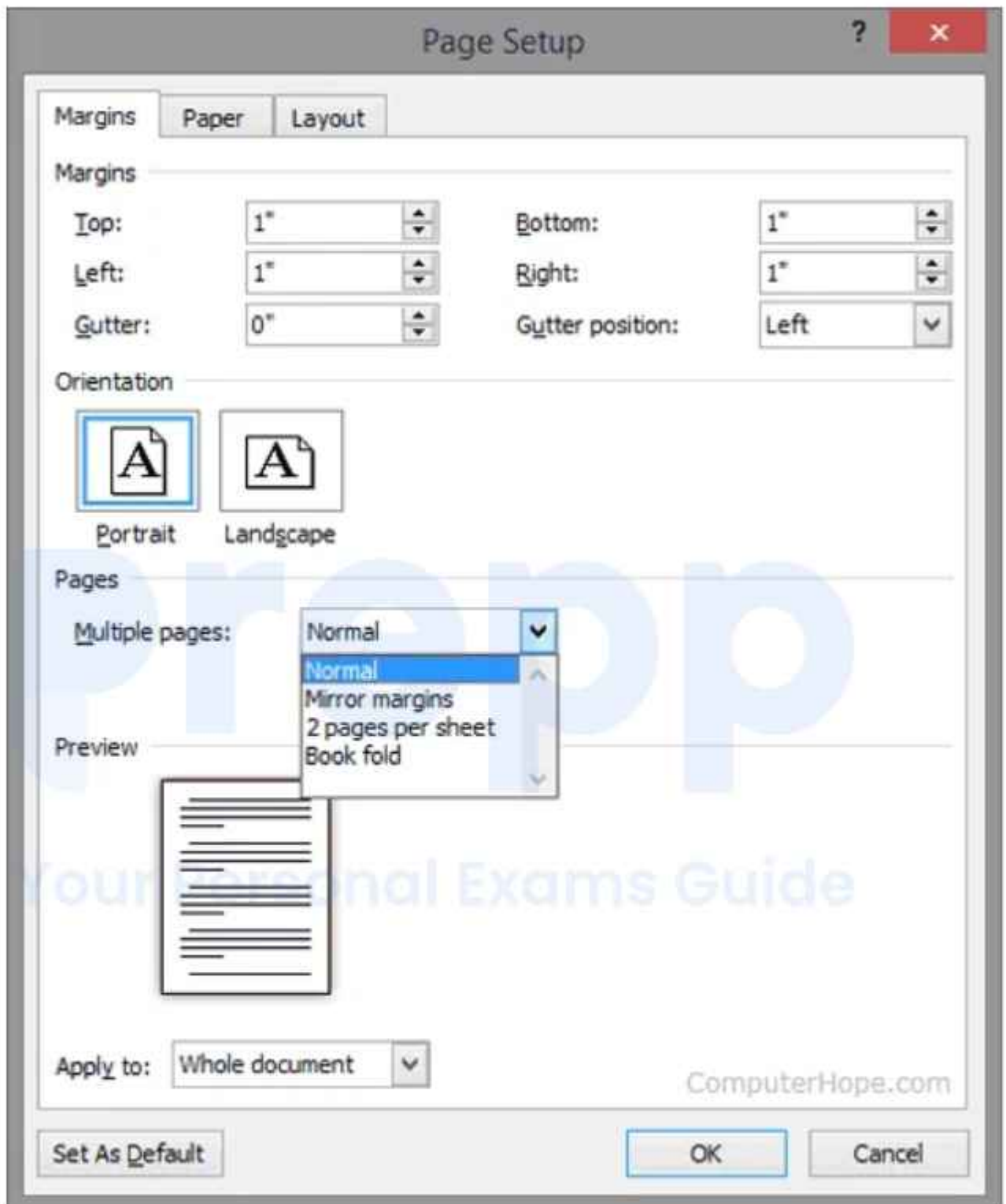
- Page Setup options are usually available in Page Layout in MS- Word 2007.

★ Key Points

- The page setup is the parameters defined by the user that help determine how a printed page appears.
- These parameters can include everything from the size, margins, page orientation, and quality of the print.
- It's a tool that allows users to change and customize the size and layout of a single page or an entire document.



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★ Additional Information

- Insert option is used to insert the picture, charts, filter, hyperlink etc.

- The **Excel Home Tab** is used to perform commands such as bold, underline, copy, and paste.
 - It is also used to apply formats to cells in a worksheet.
- The **review tab** contains the editing feature, comments, track changes and workbook protection options.

99. Answer: d

Explanation:

The correct answer is Safari.

- Safari is not a search engine.

★ Key Points

- Safari is a **browser** for **IOS**. **WebKit** is the search engine used as a default search engine for **Safari**.
- IOS is used only in Apple phones.
- **Search Engines:**
 - These are websites available on the Internet that provide information on any topic that you want.
 - Search engines **contain a programme that collects information from other websites.**
 - This information is then stored according to the category it belongs to, e.g., websites about music will be stored in a category named Fine Arts. Examples of popular search engines are **Yahoo, Alta Vista and Google.**

★ Additional Information

- **Yahoo** was founded by **Jerry Yang, David Filo.**
- **Ask** was founded by **David Warthen, Garrett Gruener.**
- **Bing** is a search engine operated under **Microsoft.**

100. Answer: d

Explanation:

The correct answer is Alignment.

- Alignment is NOT a character formatting option in Ms-Word. Microsoft Word provides for aligning text in paragraphs in four different ways – left alignment, right alignment, centre alignment and justified.
1. Ctrl + E Aligns the line or selected text to the center of the screen.
 2. Ctrl + L – Aligns the line or selected text to the left of the screen.
 3. Ctrl + R – Aligns the line or selected text to the right of the screen.
 4. Ctrl + J – Aligns the selected text or line to justify the screen.

★ Key Points

- The alignment feature comes under **paragraph formatting**.
- It is used for aligning the paragraph in left, right, centre or justifies positions.
- Character formatting is defined as the one where changes apply to an individual or group of characters.
- The features involved in character formatting are:
 - font, font style, size, font colour, underline, and effects like superscript and subscript.
- **Font style:** It is used to define the style of the characters both alphabets and numbers.
- **Font-size:** It is used to specify the size of the font.
- **Font colour:** It is used to specify the colour of the font.
- **Underline:** Underline is used to underline the important characters.