

STAFF SELECTION COMMISSION

CONSTABLE (GD) IN CAPFS, SSF, ASSAM RIFLES & NCB

SOLVED PAPER

(1st December 2020: Shift-1)

Time Allotted- 1 hours

Max marks- 180

Important Instructions:-

- This paper contains 90 questions which are divided into 3 sections.
- General Knowledge & General Awareness contains 50 questions
- General Intelligence & Reasoning contains 25 questions
- Numerical Ability 15 questions
- Computer proficiency section is not asked in the current exam pattern so this section is removed from the question paper.
- There will be 2 marks for each correct answer and also there will be negative marking of 0.5 marks for each wrong answer.
- Each question is compulsory to attempt and there will be no negative marking for unattempted questions.

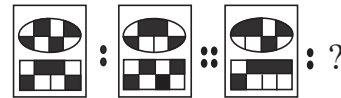
General Knowledge or Current Affairs

- As per the Union Budget 2020, which of the following taxes has been abolished?
1. Dividend distribution tax
2. Long term capital gains tax on securities
3. Securities transaction tax
4. Corporate tax
- The microbes that lie on the border line of the living and non-living world are called:
1. fungi 2. algae 3. bacteria 4. viruses
- Which of the following Articles of the Constitution of India contains the directive that the State shall make provision for maternity relief?
1. Article 40 2. Article 39 3. Article 42 4. Article 41
- Which of the following Articles of the Constitution of India prohibits the Indian State from conferring any title, except a military or academic distinction?
1. Article 15 2. Article 10
3. Article 18 (1) 4. Article 20
- With which of the following states is the theatre form 'Maach' traditionally associated?
1. Kerala 2. Madhya Pradesh
3. Assam 4. Karnataka
- Atanu Das, who was awarded the Arjuna Award 2020, is a professional player of:
1. wrestling 2. basketball 3. archery 4. badminton
- Which of the following books was conferred the International Booker Prize 2020?
1. The Discomfort of Evening
2. The Enlightenment of the Greengage Tree
3. Hurricane Season
4. Tyll
- Who among the following was appointed as the Chairperson of Advisory Committee on Corporate Insolvency Resolution and Liquidation process in June 2020?
1. Kumar Mangalam Birla 2. Nandan Nilekani
3. Anand Mahindra 4. Uday Kotak
- Which of the following states does NOT share its border with West Bengal?
1. Meghalaya 2. Assam 3. Jharkhand 4. Sikkim
- Who among the following has been selected for the 2020 World Food Prize?
1. Simon N Groot 2. Rattan Lal
3. Lawrence Haddad 4. MS Swaminathan
- As per the new income tax regime announced in the Union Budget 2020, the tax rate for taxable income between ₹5 lakh to ₹7.5 lakh has been reduced to:
1. 15% 2. 5% 3. 10% 4. 20%
- Which of the following modes of reproduction is carried out by specialised cells that proliferate to make large number of cells?
1. Layering 2. Fission
3. Fragmentation 4. Regeneration
- Which of the following countries does tennis player Alexander Zverev represent?
1. Switzerland 2. Germany 3. The US 4. France
- Which of the following rivers has Zaskar as one of its tributaries?
1. Yamuna 2. Ganga 3. Indus 4. Beas
- The famous hill station named McLeodganj is located in:
1. Ladakh 2. West Bengal
3. Uttarakhand 4. Himachal Pradesh
- As per the Census of India 2011, which of the following Union Territories is least densely populated as compared with the other three mentioned in the following options?
1. Chandigarh 2. Puducherry
3. Andaman & Nicobar Islands 4. Lakshadweep
- In the Union Budget 2020, the Finance Minister announced the hike of bank deposit insurance from _____ to ₹5 lakh.
1. ₹1 lakh 2. ₹3 lakh 3. ₹4 lakh 4. ₹2 lakh
- In 2020, the government of which of the following states instituted GV Raja Awards for sportspersons?
1. Telangana 2. Andhra Pradesh
3. Maharashtra 4. Kerala
- The painter Abdus Samad, the renowned painter of Iran, came to India on the invitation of:
1. Jahangir 2. Aurangzeb 3. Humayun 4. Akbar
- Who is the author of the book titled 'RAW: A History of India's Covert Operations'?
1. Bijal Vachharajani 2. Neena Rai
3. Yatish Yadav 4. Nirupama Yadav
- The unit of calorific value of a fuel is expressed as:
1. psi 2. micron 3. mmHg 4. kJ/kg
- In India, the custodian of foreign exchange reserves of the country is:
1. Union Cabinet 2. Reserve Bank of India
3. State Bank of India 4. Union Finance Ministry

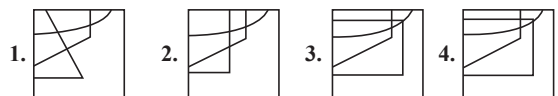
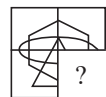
23. In which of the following soil types is the proportion of fine particles relatively higher than big particles?
1. Sandy soil 2. Clayey soil 3. Black soil 4. Loamy soil
24. In which of the following states are the Barabara Caves located?
1. Gujarat 2. Bihar
3. Madhya Pradesh 4. Maharashtra
25. Till 31 August 2020, the number of sportsperson/s awarded the Bharat Ratna was:
1. four 2. two 3. three 4. one
26. Who among the following was the author of the ancient text called 'Siddhant Shiromani'?
1. Aryabhata 2. Mahaviracharya
3. Brahmagupta 4. Bhaskaracharya
27. Which of the following is a protein digesting enzyme that is secreted in the small intestine?
1. Trypsin 2. Lipase 3. Pepsin 4. Bile
28. Which of the following Articles of the Constitution of India specifies the right of minorities to establish and administer educational institutions?
1. Article 29 2. Article 27 3. Article 28 4. Article 30
29. Which of the following is the largest river of Odisha?
1. Godavari 2. Tapi 3. Krishna 4. Mahanadi
30. At US Open 2020, Indian player Rohan Bopanna paired with _____ for the Men's Doubles events.
1. Denis Shapovalov 2. Mate Pavic
3. Bruno Soares 4. Sumit Nagpal
31. To which of the following dynasties did the ruler Gautamiputra Satkarni belong?
1. Chalukya 2. Pallava 3. Shaka 4. Satavahana
32. Which of the following is the earliest text containing the shlokas that were put to music?
1. Sama Veda 2. Sangeet Ratnakar
3. Meghaduta 4. Kamasutra
33. The folk songs named 'Pankhida' traditionally belong to:
1. Rajasthan 2. Chhattisgarh
3. Odisha 4. Kashmir
34. Who among the following propounded the philosophy of 'Ashtangika marga' (the Eightfold Path)?
1. Shankaracharya 2. Mahavir Swami
3. Ramanuja 4. Gautam Buddha
35. As on 31 August 2020, who among the following was the Member-Secretary of the Economic Advisory Council to the Prime Minister?
1. Bibek Debroy 2. Ashima Goyal
3. Ratan P Watal 4. Sajjid Chinoy
36. Which of the following cities has an astronomical observatory constructed under the patronage of Sawai Jai Singh?
1. Varanasi 2. Prayagraj 3. Agra 4. Bharatpur
37. In which of the following states are Dofla Hills mainly spread?
1. Odisha 2. Jharkhand
3. Arunachal Pradesh 4. West Bengal
38. In the Union Budget 2020, the Finance Minister projected that Indian farmer's income would double by the year:
1. 2022 2. 2025 3. 2023 4. 2024
39. In which year was the 9th Schedule added in the Constitution of India?
1. 1954 2. 1953 3. 1951 4. 1952
40. In which part of Ashoka's empire were his inscriptions written in Kharosthi script?
1. North Eastern 2. Central
3. Southern 4. North Western
41. The gigantic statue of Gautam Buddha, discovered at Sultanganj (near Bhagalpur in Bihar), has been dated to the _____ period.
1. Shunga 2. Nanda 3. Gupta 4. Maurya
42. In how many books is 'Akbar Nama', written by Abul Fazal, divided?
1. Five 2. Three 3. Two 4. Four
43. Which of the following amendments to the Constitution of India is also referred to as the 'mini Constitution'?
1. 38th Amendment 2. 42nd Amendment
3. 35th Amendment 4. 40th Amendment
44. Who among the following Indians is known for his exemplary contribution in the field of mathematics?
1. JC Bose 2. S Ramanujan
3. CV Raman 4. VA Sarabhai
45. In which year was the monopoly of British East India Company on trade with India broken by a legislation?
1. 1813 2. 1807 3. 1858 4. 1825
46. At which of the following places did the Buddhist event known as 'Dhammachakkapavattan' take place?
1. Lumbini 2. Kushinagar
3. Bodh Gaya 4. Sarnath
47. Which of the following does NOT have specialized tissue for the conduction of water?
1. Grass 2. Ipomoea
3. Paphiopedilum 4. Funaria
48. Which of the following is among the industries used for calculating the Index of Eight Core Industries in India?
1. Aluminium 2. Copper
3. Textile 4. Refinery products
49. In which of the following years was Article 21A inserted in the Constitution of India?
1. 2006 2. 2000 3. 2004 4. 2002
50. In August 2020, India and _____ were declared joint winners of the Chess Olympiad gold medal.
1. Australia 2. Russia
3. the US 4. New Zealand

Reasoning

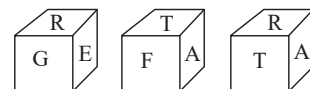
51. 'Thermometer' is related to 'Temperature' in the same way as 'Protractor' is related to '_____'.
1. Weight 2. Angle 3. Mass 4. Height
52. Select the option that is related to figure C in the same way as figure B is related to the figure A.



53. Which figure will replace the question mark (?) to complete the pattern?

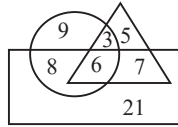


54. Three different positions of the same non-standard dice are shown. Which letter will be on the face opposite to the face with the letter 'T'?



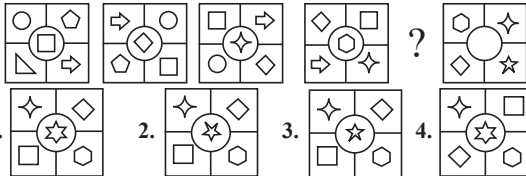
1. E 2. G 3. F 4. R

55. In the Venn diagram given below, the 'Rectangle' represents 'Lady Teachers'; the 'Triangle' represents 'Chemistry Teachers', and the 'Circle' represents 'Physics Teachers'. The numbers given in the diagram represents number of persons of that particular category.



What is the count of lady teachers who do NOT teach Physics subject?

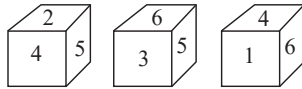
1. 17 2. 28 3. 21 4. 7
56. Which figure will replace the question mark (?) in the following series?



57. Select the option that is related to the third number in the same way as the second number is related to the first number.
7259 : 4154 :: 3852 : ?

1. 4201 2. 2401 3. 2410 4. 4210

58. Three different positions of the same non-standard dice are shown. Which number will be on the face opposite to the face with the number '2'?



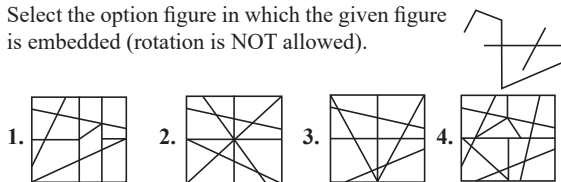
1. 1 2. 5 3. 6 4. 3

59. Which number will replace the question mark (?) in the following series?

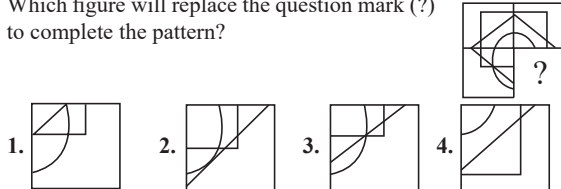
1, 5, 13, 29, ?, 125, 253, 509, 1021

1. 57 2. 88 3. 75 4. 61

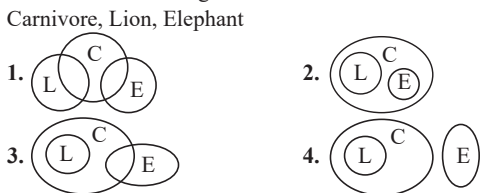
60. Select the option figure in which the given figure is embedded (rotation is NOT allowed).



61. Which figure will replace the question mark (?) to complete the pattern?



62. Select the Venn diagram that best illustrates the relationship between the following classes.
Carnivore, Lion, Elephant



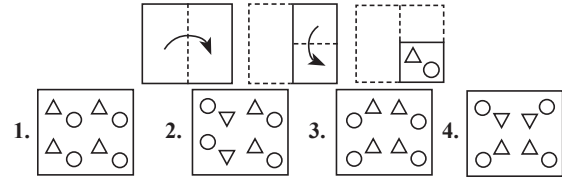
63. Select the set in which the numbers are related in the same way, as the numbers of the following set.
(9, 6, 27)

1. (7, 5, 13) 2. (3, 2, 21) 3. (8, 6, 16) 4. (6, 4, 16)

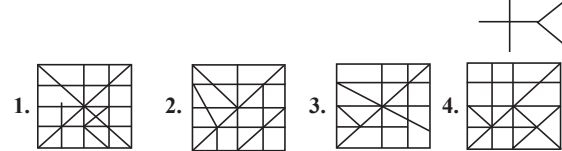
64. In a code language, PARROT is written as RLNMUI. How will CUCKOO be written in that language?

1. MGLYOV 2. MLGXOV 3. MLGYOV 4. MLGXQV

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



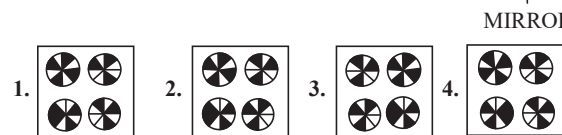
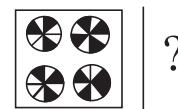
66. Select the option figure in which the given figure is embedded (rotation is NOT allowed).



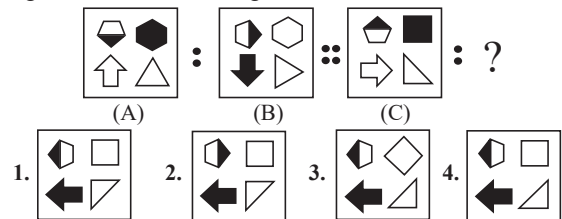
67. The distance between Surat and Ahmedabad is 280 km. Satish starts from Surat at 6:00 a.m. and drives in his car towards Ahmedabad at a constant speed of 50 km/h. After two hours, he increases his speed to 60 km/h and maintains the speed till he reaches Ahmedabad. At what time will he reach Ahmedabad?

1. 11:00 a.m. 2. 10:00 a.m. 3. 10:30 a.m. 4. 11:30 a.m.

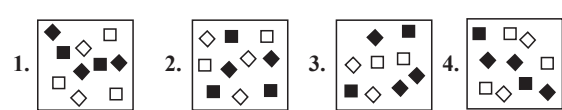
68. Select the correct mirror image of the given figure when a vertical mirror is placed to the right of the figure.



69. Select the option that is related to figure C in the same way as figure B is related to the figure A.



70. Three of the following four figures are alike in a certain way and one is different. Find the odd one.



71. Which number will replace the question mark (?) in the following series?

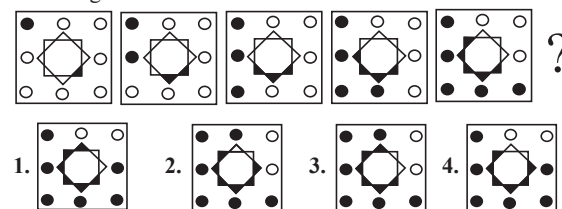
21, 13, 33, 36, 67, 81, ?, 49, 102

1. 96 2. 64 3. 24 4. 100

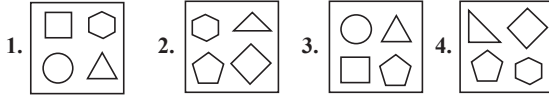
72. Three of the following four words are alike in a certain way and one is different. Find the odd one.

1. Retrench 2. Rejuvenate 3. Restore 4. Regenerate

73. Which figure will replace the question mark (?) in the following series?



74. Which two signs should be interchanged to make the given equation correct?
 $42 \div 23 + 870 \times 3 - 5 = 541$
 1. + and \times 2. \div and $-$ 3. \times and \div 4. + and $-$
75. Three of the following figures are alike in a certain way and one is different. Find the odd one out.



Numerical Ability

76. What should be subtracted from $\left(3\frac{1}{7} + 4\frac{3}{7}\right) + \frac{7}{6}$ to make the number a whole number?
 1. $\frac{7}{42}$ 2. $\frac{31}{42}$ 3. $\frac{11}{42}$ 4. $\frac{17}{42}$
77. The ratio of the price of two bicycles was 7 : 8. Two years later, when the price of the first has risen by 30% and the price of the second increases by 1,500, then their prices are in the ratio 15 : 16. What is the original price of (in ₹) the second bicycle?
 1. 7,031.25 2. 8,103.25 3. 7,013.25 4. 8,031.25
78. A person invested ₹50,000, partly at 10% and the rest at 12% per annum at simple interest. At the end of two years, the total interest received was ₹11,640. How much is the first and the second part of the investment?
 1. ₹9,000; ₹41,000 2. ₹31,000; ₹19,000
 3. ₹20,000; ₹30,000 4. ₹10,000; ₹40,000
79. The radii of two circles are 4 cm and 3 cm, respectively. What is the diameter (in cm) of the circle having an area equal to four times the sum of the area of the two circles?
 1. 12 2. 20 3. 24 4. 10
80. In a two-digit number, the unit's digit exceeds its ten's digit by 4. If the product of the given number and the sum of its digits is 370, then what is the number?
 1. 62 2. 37 3. 26 4. 73
81. The length and breadth of a rectangular floor are 14.35 m and 11.55 m, respectively. How many minimum number of square tiles would be required to cover it completely?

1. 1353 2. 1271 3. 1107 4. 1435
82. A person travelled 120 km by steamer, 450 km by train and 60 km by horse. It took him 13 hours 30 minutes. If the speed of the train is 3 times that of the horse and 1.5 times that of the steamer, then what is the speed (in km/h) of the steamer?
 1. 40 2. 20 3. 30 4. 60
83. A person spends 75% of his monthly income. If his income increases by 50% and the expenditure increases by 80%, then what is the percentage increase/decrease in his monthly savings?
 1. Increase by 35% 2. Decrease by 40%
 3. Increase by 25% 4. Decrease by 15%
84. The difference between the selling prices with a discount of 32% and two successive discounts of 20% and 12% is ₹36. What is the marked price (in ₹) of the article?
 1. 1,250 2. 1,500 3. 2,000 4. 1,800
85. A library has an average of 502 visitors on Sundays, 475 on Saturdays and 340 on weekdays. What is the average number of visitors per day in a month of 30 day beginning with a Sunday?
 1. 391 2. 362 3. 400 4. 385
86. A group of men decided to do a work in 20 days, but five of them remained absent. If the rest of the group could complete the work in 24 days, then how many men were in the original group?
 1. 30 2. 25 3. 25 4. 20
87. Rohit marks his goods at 30% above the cost price, and allows 13.5% discount. If he sells an article for ₹1,012.05, then what is the cost price (in ₹) of the article?
 1. 900 2. 750 3. 1,000 4. 800
88. The effective annual rate of interest corresponding to 12% per annum payable quarterly, is (correct to two decimal places):
 1. 13.25% 2. 12.75% 3. 12.55% 4. 13.75%
89. A medicine-capsule is in the shape of a cylinder of diameter 0.8 cm with two hemispheres stuck to each of its ends. The length of the entire capsule is 2 cm. What is the capacity (in cm^3) of the capsule? (correct to two decimal places) (use $\pi = \frac{22}{7}$)
 1. 0.91 2. 0.75 3. 0.87 4. 0.67
90. What percentage of 4.5 kg is 18 gm?
 1. 4% 2. 0.4% 3. 0.004% 4. 0.04%

Answer Key

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

Answers with Explanations

1. Option (1) is correct.

In 2020, the government removed a tax called Dividend Distribution Tax (DDT) that companies had to pay before giving dividends to their shareholders. Before this change, companies had to pay this tax first, and then shareholders got their dividends. The idea behind this move was to make

shareholders responsible for paying taxes on the dividends they receive, instead of the company paying it on their behalf.

2. Option (4) is correct.

Viruses are like tiny beings that are in between being alive and not alive. They can't do important life activities by themselves,

so they rely on a host cell to copy and work. Without a host, viruses are inactive and do not show signs of life.

3. Option (3) is correct.

Article 42 of the Constitution of India states: "The State shall make provision for securing just and humane conditions of work and for maternity relief."

4. Option (3) is correct.

Article 18(1) abolishes all titles. It prohibits the state from conferring titles on anyone, whether a citizen or a non-citizen. Military and academic distinctions are, however, exempted from the prohibition.

5. Option (2) is correct.

The "Maach" theatre form is traditionally associated with Madhya Pradesh in India. It originated in the Malwa region of the state and has been a prominent part of the local culture for centuries.

6. Option (3) is correct.

Atanu Das, honoured with the Arjuna Award in 2020, is a skilled professional in archery. The Arjuna Award is conferred to recognize outstanding achievements in sports, and Atanu Das received the award for his excellence in the field of archery.

7. Option (1) is correct.

The International Booker Prize 2020 winner is "The Discomfort of Evening". It is authored by Marieke Lucas Rijneveld (Dutch-Netherlands) and is translated by Michele Hutchison. It was published by Faber & Faber. Marieke Lucas Rijneveld is a Dutch writer who was born on 20 April 1991.

8. Option (4) is correct.

In June 2020, Uday Kotak became the head of the Advisory Committee for dealing with corporate insolvency and liquidation processes. Uday Kotak is a wealthy banker from India and serves as the top executive, Managing Director, and CEO of Kotak Mahindra Bank.

9. Option (1) is correct.

Meghalaya does not share its border with West Bengal. West Bengal shares its borders with Assam, Jharkhand, and Sikkim. Meghalaya, on the other hand, is located to the northeast of West Bengal but does not share a direct border with it.

10. Option (2) is correct.

Dr Rattan Lal, an Indian-American soil scientist, received the 2020 World Food Prize for his important work in promoting a soil-centered approach to boost food production. This method focuses on taking care of the soil, ensuring its health and conservation, and encouraging sustainable agricultural practices.

11. Option (3) is correct.

As per the new income tax regime announced in the Union Budget 2020, the tax rate for taxable income between ₹ 5 lakh to ₹ 7.5 lakh has been reduced to 10%.

12. Option (4) is correct.

Regeneration is the mode of reproduction where specialized cells, called blastema cells, proliferate to make a large number of cells that rebuild missing or damaged body parts. These specialized cells have the unique ability to divide and differentiate into various cell types needed to form the missing structure.

13. Option (2) is correct.

Alexander Zverev plays tennis for Germany. He is a skilled professional known for his strong playing style and has done well in many tournaments, including Grand Slam events, representing Germany.

14. Option (3) is correct.

The Zaskar River is one of the tributaries of the Indus River. The Indus River is one of the major rivers in South Asia, flowing through China, India, and Pakistan, and the Zaskar River contributes to its flow as a tributary.

15. Option (4) is correct.

McLeodganj, a popular hill station, is in Himachal Pradesh, India. McLeodganj is a suburb of Dharamshala and is known for its picturesque landscapes, Tibetan culture, and being the residence of the 14th Dalai Lama.

16. Option (3) is correct.

Population Density in Andaman & Nicobar Islands is 46 per square km. The population density of Chandigarh is 9258 people per square kilometre. The population density of Puducherry is 3231 per square kilometre. The population density of Lakshadweep is 2149 per square kilometre. Therefore, As per the Census of India 2011, Andaman & Nicobar Island is the least densely populated as compared with the other three mentioned in the following options.

17. Option (1) is correct.

In the Union Budget 2020, the finance minister announced the increase of bank deposit insurance from ₹ 1 lakh to ₹ 5 lakh. This means that in the event of a bank failure, each depositor is insured up to ₹ 5 lakh, providing a level of financial protection for depositors.

18. Option (4) is correct.

In 2020, the Kerala government started giving out GV Raja Awards to recognize and honour excellent achievements by athletes in the state. These awards are named after GV Raja, a well-known sports administrator who played a key role in the Indian Olympic Association. The aim is to appreciate and acknowledge outstanding accomplishments in sports within Kerala.

19. Option (3) is correct.

The painter Abdus Samad travelled to India at the invitation of Humayun. Humayun, the second Mughal emperor, was an admirer of Persian art and literature. He invited several talented artists, including Abdus Samad and Mir Sayyid Ali, to his court in Delhi in the 16th century.

20. Option (3) is correct.

Yatish Yadav is the author of the book titled 'RAW: A History of India's Covert Operations.' The book explores the history of India's covert operations conducted by the Research and Analysis Wing (RAW), the country's primary foreign intelligence agency.

21. Option (4) is correct.

The calorific value of a fuel is measured in kilojoules per kilogram (kJ/kg). Calorific value shows how much heat energy is released when a certain amount of the fuel burns completely. The unit kJ/kg tells us the energy produced for each kilogram of the fuel.

22. Option (2) is correct.

In India, the custodian of foreign exchange reserves of the country is the Reserve Bank of India (RBI). The RBI manages and holds foreign exchange reserves, which include various foreign currencies, gold, and other assets.

23. Option (2) is correct.

Clayey soil is characterized by its higher proportion of fine particles, specifically clay particles, making it have a fine texture. The high clay content in this soil type gives it a sticky consistency when wet, and it tends to retain water more effectively than soils with a higher proportion of sand or silt. This texture affects the soil's properties, influencing factors

- like drainage, aeration, and overall suitability for various types of vegetation.
24. **Option (2) is correct.**
The Barabar Caves are situated in Bihar. These rock-cut caves, dating back to the Mauryan Empire (322–185 BCE), are found in the Makhdumpur region of Jehanabad district, Bihar, India, approximately 24 km north of Gaya.
25. **Option (4) is correct.**
Until August 31, 2020, only one sportsperson had been awarded the Bharat Ratna, which is India's highest civilian award. This honour was bestowed upon Sachin Tendulkar, the legendary cricketer, in 2014. The Bharat Ratna is given in recognition of exceptional service in the fields of art, literature, science, and public service, in addition to sports.
26. **Option (4) is correct.**
Bhaskaracharya II is the author of the ancient text Siddhanta Shiromani. The text was written in 1150 when Bhaskaracharya was 36 years old. The work is composed in Sanskrit and is 1450 verses long.
27. **Option (1) is correct.**
Trypsin is a special enzyme that helps digest proteins in our small intestine. The pancreas makes it in an inactive form called trypsinogen. Once it reaches the small intestine, it becomes active. Trypsins play a crucial role in breaking down proteins into smaller parts called peptides and amino acids. This makes it easier for our body to absorb and use them during digestion.
28. **Option (4) is correct.**
Article 30(1) of the Constitution of India gives religious and linguistic minorities the fundamental right to establish and administer educational institutions of their choice.
29. **Option (4) is correct.**
Mahanadi is the largest river in Odisha. It is a major river in East Central India, flowing through the state of Odisha before discharging into the Bay of Bengal.
30. **Option (1) is correct.**
At the US Open 2020, Indian player Rohan Bopanna paired with Denis Shapovalov for the Men's Doubles event.
31. **Option (4) is correct.**
Gautamiputra Satkarni belonged to the Satavahana dynasty. He was a notable ruler of the Satavahana dynasty that ruled a significant part of India during the ancient period.
32. **Option (1) is correct.**
The Sama Veda is the oldest text where verses were set to music. It's one of the four Vedas, which are ancient sacred texts in Hinduism. Sama Veda has hymns and chants meant to be sung during religious rituals.
33. **Option (1) is correct.**
The folk songs named 'Pankhida' traditionally belong to Rajasthan. 'Pankhida' is a form of traditional folk music in Rajasthan, and these songs are often associated with cultural and festive occasions in the region.
34. **Option (4) is correct.**
The philosophy of 'Ashtangika marga' (the Eightfold Path) was propounded by Gautam Buddha. The Eightfold Path is a fundamental concept in Buddhism and outlines the ethical and mental guidelines to achieve enlightenment and liberation from suffering. The Eightfold Path includes things like having the right understanding, good intentions, speaking and acting rightly, and focusing the mind correctly. It's a way for Buddhists to lead a wise and ethical life on the journey to enlightenment.
35. **Option (3) is correct.**
As of August 31, 2020, Ratan P. Watal was the Member-Secretary of the Economic Advisory Council to the Prime Minister.
36. **Option (1) is correct.**
Maharaja Sawai Jai Singh II (1686-1743) was a Rajput ruler in the early 18th century who built five observatories in North India between 1724 and 1737. He named these observatories Jantar Mantar and built them in Jaipur, Mathura, New Delhi, Ujjain, and Varanasi. Therefore, The correct answer is Varanasi.
37. **Option (3) is correct.**
Dafra Hills are mainly spread in the state of Arunachal Pradesh. These hills are a part of the Eastern Himalayas and are known for their scenic beauty and rich biodiversity.
38. **Option (1) is correct.**
In the Union Budget 2020, the finance minister aimed to double the income of Indian farmers by the year 2022.
39. **Option (3) is correct.**
The 9th Schedule was added to the Constitution of India in 1951. It was introduced through the First Amendment Act of 1951 to protect specific laws from being questioned for violating fundamental rights. Laws listed in the 9th Schedule were given protection from being reviewed by the courts to avoid legal challenges. This addition aimed to balance the protection of fundamental rights and the implementation of socio-economic policies by the government.
40. **Option (4) is correct.**
In Ashoka's empire, his inscriptions written in the Kharosthi script were primarily found in the North Western part. This region includes present-day Pakistan and Afghanistan. Ashoka, the Mauryan emperor, used various scripts for his inscriptions, including Brahmi and Kharosthi, to spread his messages and edicts.
41. **Option (3) is correct.**
The Sultanganj Buddha is a copper statue of Buddha that dates back to the Gupta Empire, between 500–700 AD. It is 2.3 meters tall, 1 meter wide, and weighs over 500 kilograms. The statue is considered the largest substantially complete copper Buddha figure from the time.
42. **Option (2) is correct.**
Beginning in 1589, Abu'l Fazl worked on the 'Akbar Nama' for thirteen years. The Akbar Nama is divided into three books: The first book deals with Akbar's ancestors. The second recorded the events of Akbar's reign. The third is the Ain-i Akbari.
43. **Option (2) is correct.**
The 42nd Amendment to the Constitution of India is often referred to as the 'Mini Constitution.' It was enacted in 1976 and introduced significant changes to various provisions of the Constitution. The 42nd Amendment expanded the powers of the government, altered the Preamble, and made several other amendments. The term 'Mini Constitution' is used because it reflects the broad and thorough impact of this amendment.
44. **Option (2) is correct.**
S. Ramanujan, born in 1887, was an Indian mathematician renowned for his significant contributions to mathematics. His independent discoveries and advancements in number theory, mathematical analysis, and infinite series have left a lasting impact on the field.
45. **Option (1) is correct.**
The monopoly of the British East India Company on trade with India was broken by the Charter Act of 1813. Before

this legislation, the company held exclusive rights to trade with India. The act allowed for the entry of private traders in certain commodities and marked a significant step towards the liberalization of trade.

46. Option (4) is correct.

The Buddhist event known as ‘Dhammachakkapavattan,’ also known as the “Turning of the Wheel of Dharma,” happened in Sarnath. During this event, Gautama Buddha gave his first teaching to five of his previous ascetic companions.

47. Option (4) is correct.

Funaria is a moss, and mosses generally lack specialized vascular tissues for the efficient conduction of water.

48. Option (4) is correct.

The Index of Eight Core Industries in India comprises key sectors that significantly contribute to the overall industrial output of the country. “Refinery products” is one of the industries used in calculating this index. Other sectors included in the Eight Core Industries are coal, crude oil, natural gas, electricity, steel, cement, and fertilizers. Together, these sectors offer insights into the performance and growth of crucial industries in the Indian economy.

49. Option (4) is correct.

The right to free and compulsory education for children aged 6 to 14, ensured by Article 21A, was added to the Constitution of India through the 86th Amendment Act in 2002.

50. Option (2) is correct.

In August 2020, India and Russia were declared joint winners of the 2020 Online FIDE Chess Olympiad. The joint winners were declared after a global internet outage impacted the second and decisive match. Two Indian players, Nihal Sarin and Divya Deshmukh, lost their internet connection during the final round.

51. Option (2) is correct.

In the given analogy, thermometer is a device which is used to measure temperature of the body, Similarly, a protractor is used to measure angle.

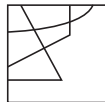
52. Option (3) is correct.

As per the pattern followed, the given image is related to the following figure:



53. Option (1) is correct.

The following figure will complete the series:



54. Option (2) is correct.

In the given 1st and 3rd dice images, R is common.

Now, moving clockwise, we get:

G, E, T, A are adjacent to R and the following opposite pairs can be formed:

G — T

E — A

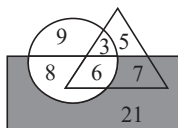
R — F

Hence, G will be opposite to T.

55. Option (2) is correct.

The count of lady teachers who do not teach Physics subject are highlighted below:

Hence, $21 + 7 = 28$ is the correct answer.



56. Option (3) is correct.

According to the pattern followed, following figure will complete the series:



57. Option (1) is correct.

Given set : 7259 : 4154 : 3852 : ?

The patten followed here is:

Multiply 1st and 2nd digits of first term then reverse it.

and multiply 3rd and 4th digits of first term then reverse it.

So,

$$7 \times 2 = 14 \xrightarrow{\text{Reverse}} 41$$

$$5 \times 9 = 45 \xrightarrow{\text{Reverse}} 54$$

Resultant number is 4154.

Similarly,

$$3 \times 8 = 24 \xrightarrow{\text{Reverse}} 42$$

$$5 \times 2 = 10 \xrightarrow{\text{Reverse}} 01$$

Resultant number is 4201

Hence, 4201 is the correct answer.

58. Option (3) is correct.

According to the figure 2nd and 3rd of dice, 6 is common in both and 3, 5, 1, 4 are adjacent to 6.

Hence, 2 is left which will be opposite to 6.

59. Option (4) is correct.

Given series : 1, 5, 13, 29, ?, 125, 253, 509, 1021

The pattern followed here is:

$$1 + (2)^2 = 5$$

$$5 + (2)^3 = 13$$

$$13 + (2)^4 = 29$$

$$29 + (2)^5 = 61$$

$$61 + (2)^6 = 125$$

$$125 + (2)^7 = 253$$

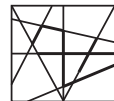
$$253 + (2)^8 = 509$$

$$509 + (2)^9 = 1021$$

Hence, 61 is the correct answer.

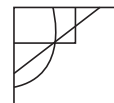
60. Option (3) is correct.

The given image is embedded in the option figure 3 as highlighted below:



61. Option (3) is correct.

The following figure will complete the series:

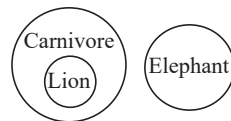


62. Option (4) is correct.

Given classes : Carnivore, Lion, Elephant.

In the given analogy, all lions are carnivorous and elephants are herbivorous.

So, the Venn diagram which best illustrates the relationship between the mentioned classes is:



63. Option (3) is correct.

Given set : (9, 6, 27).

The pattern followed here is:

$$(1^{\text{st}} \text{ term} - 2^{\text{nd}} \text{ term}) \times 1^{\text{st}} \text{ term} = 3^{\text{rd}} \text{ term.}$$

So,

$$(9 - 6) \times 9$$

$$\Rightarrow 3 \times 9 = 27$$

Similarly, upon checking option (3), we get:

$$(8 - 6) \times 8$$

$$\Rightarrow 2 \times 8 = 16$$

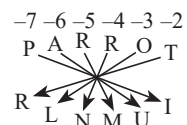
Hence, (8, 6, 16) is the correct answer.

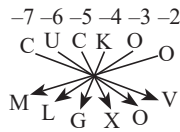
64. Option (2) is correct.

Given that : PARROT is written as R L N M U L

The pattern followed here is:

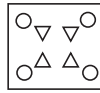
Similarly





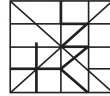
65. **Option (4) is correct.**

After unfolding the paper, it will appear as follows:



66. **Option (1) is correct.**

The given figure is embedded in option figure(1) as highlighted below:



67. **Option (1) is correct.**

Satish started driving at 6:00 a.m with a constant speed of 50 km/h till 2 hours.

$$\text{So, the distance covered by him} = \text{Speed} \times \text{time} \\ = 50 \times 2 = 100 \text{ km.}$$

$$\text{Remaining distance} = 280 - 100 = 180 \text{ km.}$$

Now, his speed is constant at 60 km/h

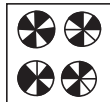
$$\text{So, time taken} = \frac{\text{Distance}}{\text{Speed}} = \frac{180}{60} = 3 \text{ hours.}$$

∴ Total time taken = 2 + 3 = 5 hours.
i.e 5 hours from 6:00 a.m is 11:00 a.m.

Hence, 11 a.m is the correct answer.

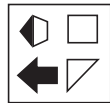
68. **Option (2) is correct.**

In the mirror image, left becomes right and right becomes left. So, the required answer figure is:



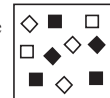
69. **Option (1) is correct.**

As per the symmetry and pattern followed, the required answer figure is:



70. **Option (2) is correct.**

According to the symbols and shapes in the option figures, option 2 is the odd one out.



71. **Option (3) is correct.**

Given series : 21, 13, 33, 36, 67, 81, ?, 49, 102

The pattern followed here is:

$$1^{\text{st}} \text{ term} = 21 \xrightarrow{\text{reverse}} 12$$

$$12 + 1 = 13 \xrightarrow{\text{reverse}} 31$$

$$31 + 2 = 33 \xrightarrow{\text{reverse}} 33$$

$$33 + 3 = 36 \xrightarrow{\text{reverse}} 63$$

$$63 + 4 = 67 \xrightarrow{\text{reverse}} 76$$

$$76 + 5 = 81 \xrightarrow{\text{reverse}} 18$$

$$18 + 6 = 24 \xrightarrow{\text{reverse}} 42$$

$$42 + 7 = 49 \xrightarrow{\text{reverse}} 94$$

$$94 + 8 = 102$$

Hence, 24 is the correct answer.

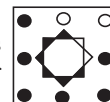
72. **Option (1) is correct.**

The words, rejuvenate, restore, and regenerate has similar meanings related to renewal or revival, while retrench means to reduce or remove.

Hence, retrench is the odd one out.

73. **Option (1) is correct.**

In the given figure series, the highlighted parts are increasing by 1. Hence, the required answer figure is:



74. **Option (2) is correct.**

Given equation : $42 \div 23 + 870 \times 3 - 5 = 541$

Upon checking option (2) and interchanging \div and $-$, we get:

$$42 - 23 + 870 \times 3 \div 5 = 541$$

$$\Rightarrow 42 - 23 + 174 \times 3 = 541$$

$$\Rightarrow 42 - 23 + 522 = 541$$

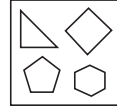
$$\Rightarrow 564 - 23 = 541$$

$$\Rightarrow 541 = 541$$

$$\text{LHS} = \text{RHS}$$

75. **Option (4) is correct.**

Out of the four options, figure (4) is the odd one out.



76. **Option (2) is correct.**

$$\text{The value of } \left(3\frac{1}{4} + 4\frac{3}{7} \right) + \frac{7}{6},$$

$$= \left(7 + \frac{1}{7} + \frac{1}{3} \right) + 1 + \frac{1}{6}$$

$$= 8 + \frac{4}{7} + \frac{1}{6}$$

$$= 8 + \frac{31}{42}$$

So, $\frac{31}{42}$ should be subtracted to make the expression a whole number.

77. **Option (1) is correct.**

Let the price of bicycle 1 = $7x$

And the price of bicycle 2 = $8x$

According to the question,

$$\Rightarrow \frac{7x \times \frac{130}{100}}{8x + 1500} = \frac{15}{16}$$

$$\Rightarrow \frac{9.1x}{8x + 1500} = \frac{15}{16}$$

$$\Rightarrow 145.6x = 120x + 22500$$

$$\Rightarrow 25.6x = 22500$$

$$\Rightarrow x = \frac{225000}{256}$$

$$\text{So, the price of cycle 2} = \frac{225000}{256} \times 8 = ₹7031.25$$

78. **Option (1) is correct.**

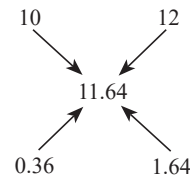
Total invested amount = ₹50000

Interest amount of two years = ₹11640

$$\text{So, per year interest} = \frac{11640}{2} = ₹5820$$

$$\text{Total aggregate earning per year} = \frac{5820}{50000} \times 100 = 11.64\%$$

Using mixture,



$$\text{So, first part of the investment} = 50000 \times \frac{0.36}{0.36 + 1.64} = ₹9000$$

$$\text{So, first part of the investment} = 50000 \times \frac{1.64}{0.36 + 1.64} = ₹41000$$

79. **Option (2) is correct.**

Area of 1st circle = $\pi r^2 = 16\pi \text{ cm}^2$

Area of 2nd circle = $\pi r^2 = 9\pi \text{ cm}^2$

Let the radius of new circle = $r \text{ cm}$

According to the question,

$$\Rightarrow \pi r^2 = 4(16\pi + 9\pi)$$

$$\Rightarrow r^2 = 100$$

$$\Rightarrow r = 10 \text{ cm}$$

So, diameter of new circle = $10 \times 2 = 20 \text{ cm}$

80. Option (2) is correct.

From the given options, only option (2) is following both the conditions. *i.e.*,

$$\text{Difference of the digits} = 7 - 3 = 4$$

And the product of the given number and the sum of its digits = $37 \times (7 + 3) = 370$

Hence, option (2) is correct.

81. Option (1) is correct.

Given that, the length and breadth of a rectangular floor are 14.35 m or 1435 cm and 11.55 m or 1155 cm respectively.

$$\text{HCF}(1435, 1155) = 35 \text{ cm}$$

So, side of required squares = 35 cm

$$\text{Hence, number of required squares} = \frac{1435 \times 1155}{35 \times 35} = 1353$$

82. Option (1) is correct.

Let the speed of horse = $x \text{ km/h}$

And the speed of train = $3x \text{ km/h}$

And the speed of steamer = $2x \text{ km/h}$

According to the question,

$$\frac{120}{2x} + \frac{450}{3x} + \frac{60}{x} = \frac{27}{2}$$

$$\frac{270}{x} = \frac{27}{2}$$

$$x = 20 \text{ km/h}$$

So, speed of steamer = 40 km/h

83. Option (2) is correct.

Let the monthly income of the person = ₹100

So, his monthly expenditure = ₹75

And savings = ₹25

His new income = ₹150

$$\text{And new expenditure} = 75 \times \frac{180}{100} = ₹135$$

So, his new savings = $150 - 135 = ₹15$

$$\text{Hence, percentage decrease in savings} = \frac{25 - 15}{25} \times 100$$

84. Option (2) is correct.

Let the MRP = ₹ x

Percentage discount equivalent to two successive discounts =

$$20 + 12 - \frac{20 \times 12}{100} = 29.6\%$$

According to the question,

$$\frac{32}{100}x - \frac{29.6}{100}x = 36$$

$$2.4x = 3600$$

$$x = 1500$$

85. Option (4) is correct.

Total Sundays in given month = 5

So, total visitors on Sundays = $5 \times 502 = 2510$

Total Saturdays in given month = 4

So, total visitors on Saturdays = $4 \times 475 = 1900$

And number of visitors on weekdays = $21 \times 340 = 7140$

$$\text{So, average number of visitors per day} = \frac{2510 + 1900 + 7140}{30} = 385$$

86. Option (1) is correct.

Let the total number of men = x

$$\text{Using, } M_1D_1 = M_2D_2$$

$$\Rightarrow x \times 20 = (x - 5) \times 25$$

$$\Rightarrow 4x = 120$$

$$\Rightarrow x = 30$$

87. Option (1) is correct.

Let the cost price of the good = x

So, MRP = $1.3x$

According to the question,

$$1.3x \times \frac{100 - 13.5}{100} = 1012.05$$

$$\Rightarrow x = 900$$

So, the cost price of the good = ₹900

88. Option (3) is correct.

Given that rate of interest = 12% per annum

So, quarterly rate of interest = 3%

Now, multiplier for effective rate of interest

$$= \frac{103}{100} \times \frac{103}{100} \times \frac{103}{100} \times \frac{103}{100} = 1.1255$$

$$\text{So, effective rate of interest} = \frac{1.1255 - 1}{1} \times 100 = 12.55\%$$

89. Option (3) is correct.

According to the question,

$$\text{Radius of cylinder} = \frac{0.8}{2}$$

So, the length of cylinder = $2 - (0.4 + 0.4) = 1.2 \text{ cm}$

So, total capacity of capsule = volume of cylinder + volume of 2 hemisphere

$$= \pi r^2 h + 2 \times \left(\frac{2}{3} \pi r^3 \right)$$

$$= \frac{22}{7} \left(0.4^2 \times 1.2 + 2 \times \left(\frac{2}{3} \times 0.4^3 \right) \right)$$

$$= 0.87 \text{ cm}^3$$

90. Option (2) is correct.

$$\text{Required percentage} = \frac{18}{4.5} \times 100 = 0.4\%$$

