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TEST BOOKLET

C

CSAT APTITUDE TEST– (4291) – 2024

Time Allowed: Two Hours

Maximum Marks: 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C** OR **D** AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE ANSWER SHEET.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **DO NOT** write *anything else* on the Test Booklet.
4. This Test Booklet contains **80** items (Questions). Each item is printed in **English**. Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider most appropriate. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided. See direction in the answers sheet.
6. All items carry equal marks. Attempt all items. Your total marks will depend only on the number of **correct responses** marked by you in the answer sheet. For **every incorrect** response **one-third** of the allotted **Marks** will be deducted.
7. Before you proceed to mark in the Answer sheet the response to various items in the Test booklet, you have to fill in some particulars in the answer sheets as per the instruction sent to you with your Admission Certificate.
8. After you have completed filling in all responses on the answer sheet and the examination has concluded, you should hand over to Invigilator only the answer sheet. You are permitted to take away with you the Test Booklet.
9. Sheets for rough work are appended in the Test Booklet at the end.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO

1. A defective watch shows a weird behavior. It gains 3 seconds per 5 minutes in the first hour, loses 6 seconds per 5 minutes in the second hour, gains 9 seconds per 5 minutes in the next one hour, and so on. If the watch showed the correct time at 6:00 a.m. on Friday, then what was the time it indicated at 9:00 p.m. on Saturday?
- (a) 9:12 p.m.
(b) 9:20 p.m.
(c) 9:25 p.m.
(d) 9:02 p.m.

Directions for the following 3 (three) items:

Read the following **three** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

Commercial nuclear power is sometimes viewed by the public as a dangerous or unstable process. This perception is often based on three global nuclear accidents, its false association with nuclear weapons, and how it is portrayed on popular television shows and films. Department Of Energy (DOE), India and its national labs are working with industry to develop new reactors and fuels that will increase the overall performance of these technologies and reduce the amount of nuclear waste that is produced. DOE also works to provide accurate, fact-based information about nuclear energy through its social media and STEM outreach efforts to educate the public on the benefits of nuclear energy.

2. Which of the following statements **best reflects the logical inference** that can be drawn from the passage given above?
- (a) Considering the global nuclear accidents, the development of new reactors and fuels should be done with enhanced safety.
(b) Steps taken by DOE in the context of commercial nuclear power will help change the opinion built around it.
(c) Use of nuclear power is not only limited to nuclear weapons but it can also be harnessed in commercial form.
(d) Public should also participate in the efforts towards spreading correct knowledge about the benefits of nuclear energy.

Passage – 2

The global economy, with increased transport of goods and travel, has facilitated the movement of live species over long distances and beyond natural boundaries. While only a small percentage of transported organisms become invasive, they have a tremendous impact on the health of plants, animals and even humans—threatening lives and affecting food security and ecosystem health. Their negative impact on the economy costs countries billions of dollars in losses to agricultural production and some trillion dollars of environmental costs worldwide annually. Once established, eradication is the most desirable solution, but it can be very expensive to do.

3. Which of the following statements **best reflects the crux** of the passage?
- (a) Global organizations should work together to contain the spread of invasive species and protect the environment and economy.
(b) Invasive species have the potential to threaten the economy and environment of a country.
(c) The dire socio-economic consequences of invasive species call for their eradication at the point of source.
(d) Proper regulations for the transport of live species can help prevent the spread of invasive species.

Passage – 3

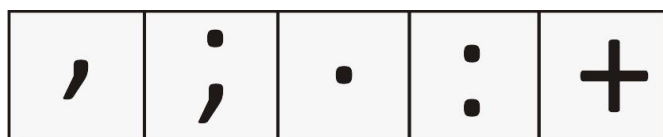
Cities are spaces of opportunity and well-being, but not everyone can flourish equally. Women are constrained by fear, violence and exclusion. Urban planning and management often do not address women's economic and social realities or foster their "right to the city". India's urban population is about 35 per cent. By 2050, it is projected to be around 60 per cent. It is crucial to address inequities as we imagine an urban India at 100. Over the past 20 years of working on women's safety and inclusion in cities, I have realised that they rarely feel a sense of freedom or autonomy. One of the key reasons is the lack of gender-responsive urban planning, design and governance. When cities are designed for able-bodied, heterosexual men, many realities are not reflected — including those of women, children and older persons. There are two key factors that prevent women from equitable access to the city — violence and fear, and the unequal burden of care work. While women's safety is on the agenda of many, solutions are predominantly posited with a technocratic approach — more CCTV cameras, policing or emergency apps. Safety though linked to inclusion and equity, cannot be subsumed under a security perspective alone. It is only when these linkages are translated into urban policies that we will find meaningful and sustainable solutions. First, we need to accept that this is not a "women's" issue but an urban issue of equity and inclusion. Change is needed in many arenas including physical and social infrastructure, safe spaces, services such as transport and response to gender-based violence. The public domain needs to be made more gender friendly and inclusive of all people of diverse ages, socio-economic statuses, genders, abilities and ethnicities. Further, the unequal burden of care shapes women's everyday reality in the city. Care work is central to any society and economy, but is invisible.

4. Which one of the following statements best reflects *the most logical and rational message* conveyed by the author of the passage?
- (a) Women are constrained by fear, hence could not avail opportunities of urban areas.
 - (b) Improvement in social infrastructure is the most important requirement for women's inclusion in cities.
 - (c) Men need to devote more time to household work so that women can devote more time to their jobs.
 - (d) Urban regions offer opportunities, but more needs to be done to make them women friendly.
5. A certain calendar-year has 337 days in a year and follows the same seven days week that is followed in regular English calendar. After how many years will the yearly calendar be repeated in this system if all the years in this system are the same (i.e. there is no concept of leap year)?
- (a) 5 years
 - (b) 6 years
 - (c) 7 years
 - (d) 8 years
6. At what time between 10 and 11 o'clock will the hands of a clock be overlapping?
- (a) 53(6/11) minutes past 10
 - (b) 54(6/11) minutes past 10
 - (c) 54(10/11) minutes past 10
 - (d) 54(5/11) minutes past 10
7. Consider the following arrangement:
5 e c 7 2 9 8 y 7 5 6 # 1 k 8 6 g 8 7 2 f 4 5 4 * 6
How many such digits are there in the sequence, each of which is immediately preceded by a consonant and immediately followed by a prime number?
- (a) 2
 - (b) 4
 - (c) 5
 - (d) 3

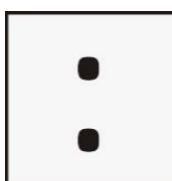
8. A, B, C, D and E went to a restaurant for dinner. They have different amounts of money with them. All of them combined have Rs. 4500 with them. If A takes Rs. 150 from B, they will have the same amount of money. If D takes Rs. 250 from E, they will have the same amount of money. A and C together have twice the money that E has. B and D together have the same amount of money that A and C together have. How much money does C have?

(a) Rs. 700
(b) Rs. 800
(c) Rs. 600
(d) Rs. 400

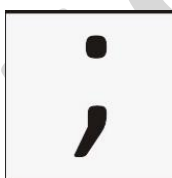
9. Out of the five symbols given below, four are similar in a certain manner but one symbol is not like the other four. Identify the symbol which is different from the rest.



(a)



(b)



(c)



(d)



10. $P = (20\% \text{ of } X) + (32\% \text{ of } Y)$; $Q = (25\% \text{ of } X) + (25\% \text{ of } Y)$. It is also known that X is greater than 10.

In this context, which of the following statements are correct?

(a) P is greater than Q.
(b) P is less than Q.
(c) P is equal to Q.
(d) None of the above can be concluded with certainty.

11. Which of the following equations in respect of Roman numerals – C, D, M and L is correct?

(a) $L + L = D$
(b) $C + C = M$
(c) $D + D = M$
(d) $M + M = C$

12. The electricity bill charged for household activities is partly fixed and partly varies with the number of units of electricity consumed. The electricity bill of Ram's house in May month was Rs. 3040 when 350 units were consumed, and in June month the bill was Rs. 3728 when 436 units were consumed. If 523 units have been consumed in July month, then what will be the bill for that month?

(a) Rs. 5884
(b) Rs. 4424
(c) Rs. 4680
(d) Rs. 5680

Direction for the following 2 (two) items:

Consider the following information and answer the two items that follow.

There are 4 friends J, K, L and M. All the friends study two subjects each and play one sports each.

One of them is a volleyball player and studies English and History. J and K play badminton. Both badminton players study Mathematics. One badminton player also studies Physics. M is a boxer. The boxer studies Mathematics and Accounts. J studies Science.

13. Which one of the following combinations of person, sports and subjects is correct?
- (a) K; Badminton; Mathematics, Physics
 - (b) K; Badminton; Mathematics, History
 - (c) L; Boxing; English, Physics
 - (d) J; Badminton; English, History
14. L plays which sport?
- (a) Volleyball
 - (b) Boxing
 - (c) Badminton
 - (d) Can't be determined

Directions for the following 3 (three) items:

Read the following **two** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

The idea of a job for life, a one-company career, belonged to past generations, for whom career progression, albeit slow, was an important point of surety in a world of uncertainty. Young workers want to expedite their progress up the ladder. They are less inclined to defer gratification, and gladly jump ship if their demands are not met. In the workplace, command and control leadership is questioned.

15. What is the *essential message* in this passage?
- (a) In the workplace, command and control leadership is not successful.
 - (b) Young workers are ready to take risks for faster career progression.
 - (c) Young workers are more successful than their predecessors.
 - (d) Young workers do not have the ethics their predecessors demonstrated in their professional lives.

Passage – 2

China has been hit by devastating floods in recent weeks, inundating cities and causing deaths and infrastructural damage, as well as raising questions about the effectiveness of its 2015 “sponge city” initiative aimed at reducing urban flood risks. The initiative was launched to boost flood resilience in major cities and make better use of rainwater through architectural, engineering and infrastructural tweaks. China has long sought to improve the way it handles extreme weather and make highly populated cities less vulnerable to flooding and drought. The “sponge city” initiative was designed to make greater use of lower-impact “nature-based solutions” to better distribute water and improve drainage and storage. Those solutions included the use of permeable asphalt, the construction of new canals and ponds and also the restoration of wetlands, which would not only ease waterlogging but also improve the urban environment. Even if sponge city measures had been implemented in full, they would have been unable to prevent this year’s disasters. Zhengzhou in Henan province was one of the most enthusiastic pioneers of sponge city construction, allocating nearly 60 billion yuan to the programme from 2016 to 2021. But it was unable to deal with its heaviest rainfall in history in 2021. Experts believe sponge city infrastructure can only handle no more than 200 millimetres (7.9 inches) of rain per day. At the height of the rainstorms that lashed Beijing at the end of July, rainfall at one station reached 745 millimetres over three and a half days. In July 2021, Zhengzhou saw rainfall in excess of 200 mm in just one hour.

16. With reference to the above passage consider the following statements.

1. Sponge cities require heavy investment in infrastructure.
2. Sponge cities incorporate environmentally sustainable initiatives.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

17. Which of the following statements **best describes the crux** of the passage?

- (a) Floods are causing concerns in China.
- (b) Floods may continue to occur even after innovations are made to prevent it.
- (c) Droughts and floods often occur simultaneously.
- (d) Sponge cities are aligned with the climate goals of China.

18. Hand watch of Alex was not working properly. He noticed at 5 a.m. on Friday that it was 8 minutes slow. On the next day at 11 a.m. he noticed that the hand watch was 12 minutes fast. When did the hand watch showed the correct time if it gains time uniformly?

- (a) 5 p.m. on Friday
- (b) 11 p.m. on Friday
- (c) 1 p.m. on Friday
- (d) 5 a.m. on Saturday

19. Two clocks are set to show the correct time at 6 a.m. One clock gains 3 minutes in an hour, while the other gains 5 minutes in an hour. By how many minutes will the two clocks differ at 10 p.m. on the next day?

- (a) 80 minutes
- (b) 90 minutes
- (c) 70 minutes
- (d) 50 minutes

20. If the time shown by a clock is 4 hours 35 minutes, then what time does it show on the mirror image?

- (a) 6 hours 25 minutes
- (b) 7 hours 35 minutes
- (c) 6 hours 55 minutes
- (d) 7 hours 25 minutes

21. X was born on Monday on 8th June, 1996. On his first birthday and every birthday thereafter his parents made sure to take him to a temple. But if his birthday fell on a Saturday or Wednesday, this ritual was not followed. Till the age of 8, how many times did he visit the temple?

- (a) 8
- (b) 6
- (c) 7
- (d) 5

22. When P will be as old as P's father is now, P will be six times as old as what P's son is now. But at that time P's son will be seven years older than what P is now. At present, the sum of the ages of P's father and P is 120 years. After 10 years, how old would P be?

- (a) 52 years
- (b) 40 years
- (c) 48 years
- (d) 58 years

23. A businessman earns an income of Rs. x on the 1st day of his business. On every subsequent day, he earns an income which is thrice of what he made on the previous day. On the p th day of business his income would be:
- (a) $(3x)^p$
 (b) $(3x)^{3p-1}$
 (c) $(3)^{p-1} x$
 (d) $(3x)^{p-1}$

Direction for the following 3 (three) items:

Consider the following information and answer the three items that follow.

Seven people namely T, U, V, W, X, Y and Z like seven different hill stations of Uttarakhand namely, Badrinath, Dehradun, Mussoorie, Mukteshwar, Nainital, Ranikhet and Rishikesh, not necessarily in that order. Each of them works in either one of the three fields viz. Healthcare, Information Technology and Finance, with at least two of them belonging to each of these fields.

The one who likes Dehradun works in the field of Information Technology only with T. The one who likes Mukteshwar works with the one who likes Rishikesh. Y works with the one who likes Nainital. V neither works with T nor in the field of Finance. W likes Ranikhet. W does not work with Y. X works with only one person. X does not like Dehradun and does not work in Healthcare. Z works with V. V does not like Mukteshwar. Y likes Badrinath.

24. Y works in ____ field and likes ____ hill station. Fill in the blanks using the following options.
- (a) Healthcare, Mussoorie
 (b) Finance, Badrinath
 (c) Information Technology, Dehradun
 (d) Healthcare, Dehradun

25. Which one of the following combinations represents the field in which V works and the hill station he likes?
- (a) Finance, Nainital
 (b) Healthcare, Mussoorie
 (c) Healthcare, Rishikesh
 (d) Information Technology, Dehradun
26. Three of the following are alike in a certain way as per the given arrangement. Which one of the following is the odd one out?
- (a) Z, Y
 (b) T, W
 (c) X, Y
 (d) U, V
27. A knock out cricket tournament is to be held among the 45 members of a club. Every time a member loses a game, it is knocked out of the tournament. There are no ties. What is the minimum number of matches that must be played to determine the winner?
- (a) 55
 (b) 40
 (c) 45
 (d) 44
28. In a family of husband, wife and a son, the sum of the husband's age, twice the wife's age and thrice the son's age is 85 years; while the sum of thrice the husband's age, six times the wife's age and nine times the son's age is 255 years. It is also given that the sum of four times the husband's age, eight times the wife's age and twelve times the son's age equals 340 years. What is the age of the son?
- (a) 27 years
 (b) 35 years
 (c) 30 years
 (d) Can't be determined

Directions for the following 6 (six) items:

Read the following **five** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

Forty-one people are believed dead after a migrant boat capsized off Tunisia, Italian state RAI television reported, citing four survivors who were rescued and brought to land on Wednesday. According to RAI and ANSA news agency, the four were first rescued by the Maltese-flagged bulk carrier Rimona in the Straits of Sicily. They were then transferred to the Italian coast guard, which brought them to the Sicilian island of Lampedusa. The island, which is closer to Africa than the Italian mainland, is a frequent destination for migrant smugglers and has seen its migrant holding centre repeatedly overcrowded with new arrivals this summer. Alessandra Filograno, a spokeswoman for the Italian Red Cross, confirmed four survivors arrived at the Lampedusa centre Wednesday morning: two men, a woman and an unaccompanied minor. Filograno had no further information. Neither ANSA nor RAI provided attribution for the information but reported the four survivors – who hailed from Ivory Coast and Guinea – as saying that 41 people died, including three children. This summer, there have been numerous shipwrecks of smugglers' boats leaving from Tunisia bound for Italy. According to the Interior Ministry, more than 93,000 migrants have arrived in Italy so far this year, more than twice the 45,000 who arrived during the same period in 2022. The top nationalities of those arriving are from Guinea, Ivory Coast, Egypt and Tunisia. Italian Premier Giorgia Meloni, whose right-wing government includes the anti-migrant League party, has galvanised the European Union to join it in efforts to coax Tunisia to crack down on smuggling operations, but the boats continue to set off.

29. Which of the following statements can be ***inferred*** from the above passage?

1. Lampedusa is probably an accessible destination for migrants from Africa.
2. The number of migrants entering Italy has decreased as a result of the anti-migrant initiatives of Italy.

Select the correct answer using the codes given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

30. Which of the following statements ***best reflects the crux*** of the passage?

- (a) People migrate to other countries in pursuit of economic possibilities.
- (b) People continue to emigrate to other nations despite the potential for accidents.
- (c) Push and pull factors are equally responsible for migration.
- (d) Migration has caused demographic changes in the host countries.

Passage – 2

As of 2022, it is a rarity to find anyone without a cell phone. A great majority of people have ditched landlines, transferring themselves to full-time cell phone usage. Nearly five billion people use mobile phones throughout the globe, with three million of those accessing the Internet regularly. While this change has done wonders for so many reasons, research shows that excessive cell phone usage may have negative impacts on mental health. Additionally, there are physical health problems that are linked to cell phone use. This is not to say that cell phone usage is all bad, but rather it can lead to harm if it gets out of control.

31. Which of the following statements *best reflects the crux* of the passage?

- (a) Cell phones have revolutionised the life of humans.
- (b) Cell phones are a good servant but a bad master.
- (c) Giving up cell phones and readoption of landlines should be encouraged.
- (d) Productive use of cell phones is not possible until we work on our psychology.

Passage – 3

In contemporary democracies, protest feeds on the difficulties currently facing political representation and is expressed within the framework of direct rather than representative democracy. The increase in protest-based attitudes and behaviours observed in many countries around the world (especially among younger generations) is undoubtedly related to the current climate of widespread mistrust in the institutionalized and representative mediation of politics. This more demanding and protest-based political culture has led to greater familiarity with a protest-based repertoire of opinions and/or actions, and an enhanced tendency towards extremism and radicalization, particularly among younger generations.

32. Which one of the following statements is the *most rational and logical implication* of the passage?

- (a) No political model can allow protests which fuel extremism and radicalization of youth.
- (b) To address the extremism and radicalization of youth in democracies, there is a need to build trust in the mediation of politics.
- (c) Direct democracy is more beneficial than representative one due to the ease of protests and trust in the mediation of politics.
- (d) Youth should have the freedom to contribute to the politics of the nation even in an extremist and radicalized form.

Passage – 4

Climate change is radically redefining the geography, biodiversity, and political units of the Arctic. The extent of sea ice in the Arctic is shrinking. The “twilight of the Arctic ice” would devastate many habitats. The plight of polar bears, for example, has become a symbol of global warming in the Arctic due to the cascading impacts of sea ice loss. Polar bears that do survive are less likely to produce healthy offspring, reducing the population over generations. Scarcer food sources also drive polar bears into more contact with human populations, often relying on trash heaps for nutrition. This food source impacts the health of polar bears and increases the incidents of conflict with human communities in the Arctic.

33. Which of the following statements *best reflects the crux* of the passage?

- (a) Polar bears are the worst sufferers of climate change in the Arctic.
- (b) Habitat, food, and reproduction of polar bears can be conserved by minimizing their conflicts with humans.
- (c) Sea ice loss due to climate change has put the survival of polar bears in question.
- (d) Conservation of sea ice in the Arctic should be the highest priority for the protection of polar bears.

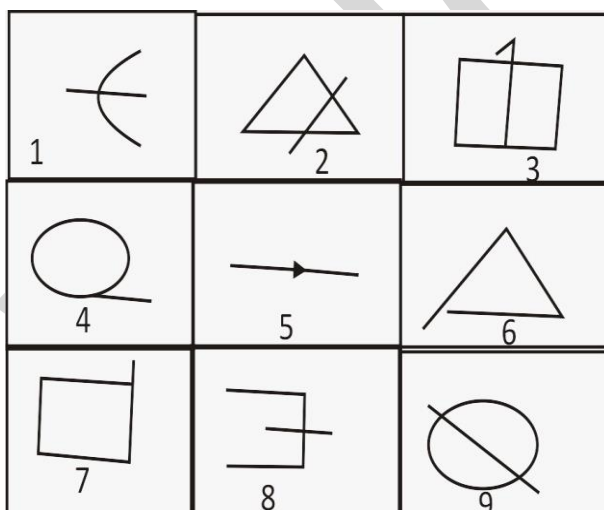
Passage – 5

Increasing connectivity alone will not help in the goal of granting universal access to higher quality and inclusive education. Granting universal access implies making sure that the benefits of education and technology are accessible to everyone; this means, also to girls and to children and youth belonging to minorities, indigenous and marginalized groups, refugees, and displaced learners, as well as children with disabilities. Today, women and girls are 25 per cent less likely than men to know how to leverage digital technology for basic purposes. According to the Equals.org partnership, women represent just 6 per cent of software developers; overall, the proportion of all women using the Internet globally is 48 per cent against 58 per cent of all men.

34. Which of the following statements *best reflects the crux* of the passage?

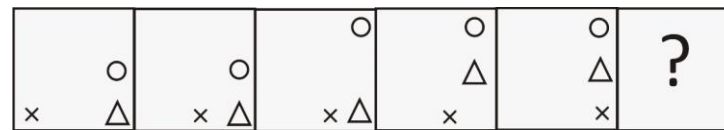
- (a) Information Technology education must be given in schools to ensure that there is gender equality in the digital world.
- (b) Increasing connectivity has caused a wide gap in digital education between women and men.
- (c) Digital empowerment of the vulnerable is dependent on access to inclusive technology and education.
- (d) The need for increasing connectivity reflects the existing lacunae in the implementation of right to education.

35. Group the following figures into three classes on the basis of identical properties.

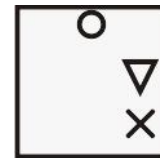


- (a) (1, 3, 7), (2, 5, 8), (4, 6, 9)
- (b) (1, 8, 9), (2, 3, 5), (4, 6, 7)
- (c) (4, 8, 9), (1, 2, 5), (3, 6, 7)
- (d) (4, 5, 9), (1, 3, 8), (2, 6, 7)

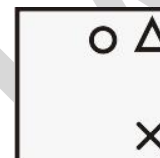
36. Select the answer figure that can replace the question mark (?) in the following series.



(a)



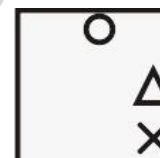
(b)



(c)



(d)



37. Consider the following marks obtained by 30 students of Class IX of a school (out of a total of 100 marks):

10	20	36	92	95	40	50	56	60	70
92	88	80	70	72	70	36	40	36	40
92	40	50	50	56	60	70	60	60	88

What is the frequency of 40 marks?

- (a) 3
- (b) 6
- (c) 4
- (d) 2

- 38.** An airline has a certain free luggage allowance and charges for excess luggage at a certain rate per kg. Two passengers, A and B have a combined 90 kg of luggage with them, and are charged Rs. 1600 and Rs. 3200 respectively for excess luggage. Had the entire luggage belonged to one of them, the excess luggage charge would have been Rs. 6000. What is the weight of B's luggage?
- (a) 55 kg
(b) 20 kg
(c) 15 kg
(d) 25 kg
- 39.** The minute-hand of a clock overtakes the hour-hand at intervals of 70 minutes of the correct time. How much in a week does the clock gain or lose?
- (a) 10(10/11) hours gain
(b) 10(20/11) hours lose
(c) 10(20/11) hours gain
(d) 10(10/11) hours lose
- 40.** At what time between 9 and 10 o'clock will the hands of a clock be at 180° ?
- (a) 16(7/11) minutes past 9
(b) 16(4/11) minutes past 9
(c) 16(8/11) minutes past 9
(d) 15(4/11) minutes past 9
- 41.** At what angle are the hands of a clock inclined at 45 minutes past 7?
- (a) 47.5°
(b) 27.5°
(c) 35.5°
(d) 37.5°

- 42.** Consider the following statements:
1. In a 12-hour clock the hour, the minute, and the second hands of the clock will coincide 11 times from 6 p.m. of present-day to 6 a.m. of next day.
 2. The minute hand and second hand of a clock cross each other 26 times between 6:15 to 6:41?
- Which of the above statements is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
- 43.** Consider the following statements:
- Statement-1: If May 1 is Saturday, then November month of the same year starts with the same day.
- Statement-2: From 2023 to 2123, there are 25 years in which February has 29 days.
- Which of the above statements is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
- 44.** If today is Tuesday, then which day is it exactly on 100^{100} th day?
- (a) Wednesday
(b) Thursday
(c) Friday
(d) Saturday

45. What was the day on 23rd June 1757?
- (a) Saturday
 - (b) Thursday
 - (c) Friday
 - (d) Wednesday

Direction for the following 2 (two) items:

Consider the following information and answer the two items that follow.

A company provides a total of thirty-nine bonus holidays to its 6 hardworking employees – John, Robin, Kate, Emma, Jack and Tony such that each employee gets at least 4 holidays and no two employees get the same number of holidays.

Some more information is given about the bonus holidays:

1. John gets one and half times the number of holidays that Robin gets.
2. Emma gets exactly 7 holidays.
3. Tony gets more holidays than each of Kate and Robin, but less than that of John.

46. The total number of holidays of Emma and Tony (taken together) is **equal** to the total number of holidays (taken together) of
- (a) Jack and Kate
 - (b) Robin and John
 - (c) Robin and Tony
 - (d) Emma and Kate
47. The total number of holidays of Emma, Robin, Kate and Jack is equal to
- (a) 22
 - (b) 21
 - (c) Either (a) or (b)
 - (d) Can't be determined

48. In 1980, Indian Republic day was celebrated on Saturday. Subhash was born on 5th September in the same year. Arvind is 5 days younger to Subhash while Arunima is 2 days elder to Arvind. Find out on which days of the week were Arvind and Arunima born?
- (a) Wednesday and Monday respectively
 - (b) Saturday and Friday respectively
 - (c) Sunday and Tuesday respectively
 - (d) Tuesday and Sunday respectively

Directions for the following 4 (four) items:

Read the following **two** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

The increased urbanization has changed the land cover types in cities from permeable land to anthropogenic impervious surfaces. In cities, the high degree of coverage of land by buildings has dramatically increased the volumes of water runoff. Impervious surfaces (e.g., constructed surfaces, roofs, roads, parking lots, driveways, sidewalks) alter the natural hydrological conditions by increasing the volume and rate of surface runoff and decreasing groundwater recharge and base flow. This results in more extensive and frequent local flooding and reduced water supplies for urban and suburban areas. Moreover, other direct environmental impacts include the degradation of water resources quality when surface runoff transports nonpoint source pollutants from their source areas to receiving lakes and streams. Pollutants which are either dissolved or suspended in water or are associated with sediment, including nutrients, heavy metals, oil and grease, and hydrocarbons can accumulate and be washed away from impervious surfaces by runoff.

49. Based on the above passage, the following *assumptions* have been made:

1. Conservation of wildlife while urbanising should be ensured for a better human-nature balance.
2. The neglect of principles of sustainable urbanization has caused issues related to water in urban areas.

Which of the above assumptions is/are valid?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

50. Which of the following statements *best reflects the crux* of the passage?

- (a) Disturbance in the natural hydrological cycle caused by humans has led to the decline in the quality of water resources.
- (b) Considering the extensive water pollution, deurbanization is the need of the hour.
- (c) Conversion of impervious surfaces to permeable land is important for restoring the natural hydrological cycle.
- (d) The cities face diverse consequences of rampant urbanization.

Passage – 2

GM crops are plants that have been modified, using genetic engineering, to alter their DNA sequences to provide some beneficial trait. For example, genetic engineering can improve crop yield, resulting in greater production of the target crop. Scientists can also engineer pest-resistant crops, helping local farmers better withstand environmental challenges that might otherwise wipe out a whole season of produce. However, GM seeds are produced primarily by only a few large companies that own the intellectual property for genetic variations. A transition to GM crops would closely align global food production with the activities of a few key companies. From an economic standpoint, that poses a risk to long-term food security by creating the potential for a single-point failure. If that company failed, then the crop it provides would not be available to the people who depend on that crop.

51. Which of the following is/are the *most rational and logical inference/inferences* that can be made from the passage?

1. Despite their benefits, too much dependence on GM crops can be risky for food security in future.
2. Considering the ethically sensitive nature of GM crops, they must be handled by people with high morals.

Select the correct answer from the code given below:

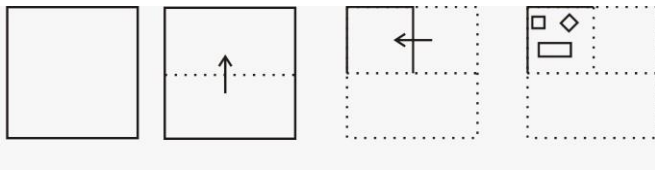
- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

52. With reference to the passage, which one of the following statements is correct?

- (a) Production of GM crop seeds must be done in bulk for minimizing single-point failure in future.
- (b) GM crops can ensure nutrition for people facing malnutrition.
- (c) There is a need for GM crops policy to prevent monopoly and its misuse in the market.
- (d) The extent of the positive impact of GM crops depends on the companies that manufacture their seeds.

53. Age of a woman is the same as her husband's age with the digits reversed. The difference between their ages is one-eleventh of their sum. If the woman is older than her husband, then the sum of the ages of the woman and her husband is:
- (a) 85 years
(b) 89 years
(c) 99 years
(d) 90 years

54. A paper is folded and then cut as shown below.

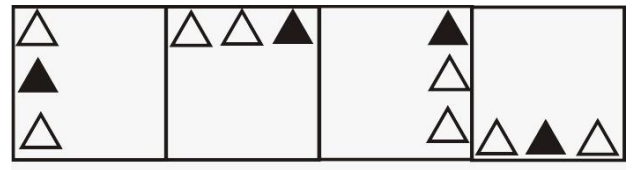


How will it appear when unfolded?

- (a)
- (b)
- (c)
- (d) None of these

55. In an amusement park, exactly 20.25% of the visitors visited the pool section. What must be the minimum number of people who must have visited the amusement park?
- (a) 100
(b) 400
(c) 200
(d) 800

56. Select the answer figure that should come next in the following figure series.



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

57. The letters A, B, C, D, U, V, W, X, Y and Z are substituted by ten integers 1 to 10 but not in that order. U is substituted by 2. The difference between the numerical substitutes for U and Z is 8, and that between the substitutes for Z and A is 4. What is the integer that substituted A?
- (a) 7
(b) 5
(c) 9
(d) 6

Directions for the following 2 (two) items:

Read the following **two** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

Stories hold an important role in the theory and practice of psychoanalysis. Their power derives in part from the fact that humans are biologically programmed for storytelling. Stories foster connection with socialization and identity formation. They are integral to all psychoanalytic theories of therapeutic action, and their telling is therapeutic. A positive outcome of analytic treatment has the individual emerging with an open-ended story that encompasses the past, present, and future. Finally, they can demonstrate how shared stories consolidate group identities, uphold, and perpetuate a group's power over others, and perpetuate racial and ethnic stereotypes.

58. Which one of the following statements **best reflects the crux** of the passage?

- (a) The impact of stories on individuals and society depends on their type and how they're told.
- (b) Healing capacity of stories impacts not only individuals, but also society.
- (c) In the context of social relations, the impact of stories is a double-edged sword.
- (d) Both (a) and (b)

Passage – 2

Electric vehicles are the key technology to decarbonise road transport, a sector that accounts for over 15% of global energy-related emissions. Recent years have seen exponential growth in the sale of electric vehicles together with improved range, wider model availability and increased performance. Passenger electric cars are surging in popularity – it's estimated that 18% of new cars sold in 2023 will be electric. If the growth experienced in the past two years is sustained, CO2 emissions from cars can by 2030 be put on a pathway aligned with the Net Zero Emissions by 2050 (NZE) Scenario. Sales in developing and emerging economies have been slow due to the relatively high purchase price of an electric vehicle and a lack of charging infrastructure availability.

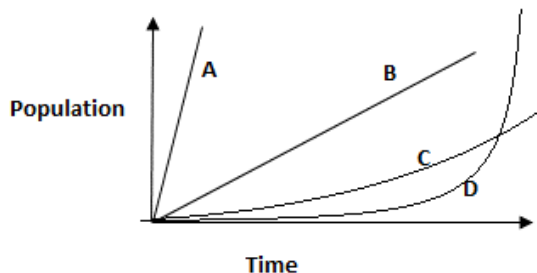
59. Which of the following is/are the **most rational and logical inference/inferences** that can be made from the passage?

- 1. Merely selling electric cars will not solve the issue of carbon emissions.
- 2. Electric vehicles are not yet a viable replacement for traditional fuel vehicles in many countries.

Select the correct answer from the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

60. A virus reproduces by dividing itself into two every minute. If the death rate is negligible, then which of the following curves may represent the population growth of the virus?



- (a) A
(b) B
(c) C
(d) D
61. Alisha goes to the market shortly after 7:00 p.m. and observes that the hands of her watch form an angle of 100° . Returning before 8:00 p.m. she notices that again the hands of her watch form an angle of 100° . For how much time has she been away from her home?
(a) 40 minutes
(b) 45 minutes
(c) 32 minutes
(d) 36 minutes
62. Consider the following statements:
1. Between 7:35 hours and 7:38 hours the hands of a clock are together for once.
2. Between 7:24 hours and 7:26 hours the clock shows 65° angle between the two hands for once.
Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

63. A number is divided into 4 parts, all of which are integers. Twice the first part of this number, thrice the second part and four times the third part are equal. It is also given that six times the second part, eight times the third part and five times the last part are equal. Which of the following is *not always true*?
(a) First part is divisible by 6.
(b) The sum of the third and fourth parts is divisible by 13.
(c) Third part is divisible by 4.
(d) The product of the last part and any other part is divisible by 5.
64. A lady is 3 years younger than her husband. Her husband is four times as old as their daughter. If the daughter becomes 15 years old after 3 years, what must be the sum of the present ages of the husband and the wife?
(a) 95 years
(b) 96 years
(c) 90 years
(d) 93 years
65. If 22nd October 2023 is Sunday, then what was the day on 22nd October 1623?
(a) Wednesday
(b) Thursday
(c) Sunday
(d) Saturday
66. The calendar of 2027 will be similar to that of:
(a) 2032
(b) 2034
(c) 2037
(d) 2038

67. In an equation $\# - \$ + @ \div *$ there are four symbols @, #, \$ and * whose values can be 18, 4, 1 and 16 but not in the same order. If the value of $\# - \$ + @ \div *$ is 21, then what can be the value of @?
- (a) 18
(b) 1
(c) 4
(d) 16

68. Consider the two Statements given below regarding a married couple and the Question that follows:

Statement-1: The lady remembers that they got married in the month of February of the year 1955 on a weekend, since she was working on other days from Monday to Friday, but before the 13th of February.

Statement-2: The man remembers that he celebrated his 21st birthday on 3rd February, 1955 as a bachelor and it was a Thursday. He remembers that it was a Sunday when he got married.

Question: On which date in the year 1955 was their wedding held?

Which one of the following is correct in respect of the Statements and the Question?

- (a) Statement-1 alone is sufficient to the answer of the Question
(b) Statement-2 alone is sufficient to answer the Question
(c) Both Statement-1 and Statement-2 are required together to answer the Question
(d) Even Statement-1 and Statement-2 together are not sufficient to answer the Question

69. If 8th September 2005 happens to be a Monday, then what will be the day on 5th June 2095?
- (a) Wednesday
(b) Thursday
(c) Friday
(d) Monday

Direction for the following 2 (two) items:

Consider the following information and answer the two items that follow.

Five friends P, Q, R, S and T are engaged in five different occupations. They are Bank employee, Doctor, Teacher, Shop owner and Engineer, not necessarily in that order. They stay in different cities viz. Shimla, Ranchi, Patna, Bhubaneswar and Dehradun.

R is a Bank employee, staying in Ranchi. Q owns a book shop in Dehradun. P's house is in Shimla, and he is not an Engineer. The teacher, S, lives in Bhubaneswar. The Engineer does not stay in Dehradun.

70. At which of the following places does the Doctor stay?
- (a) Dehradun
(b) Ranchi
(c) Shimla
(d) Bhubaneswar
71. Who among the following stays in Patna ?
- (a) P
(b) Q
(c) S
(d) T

72. 16 years ago Tanya's grandfather was 8 times her age. Her grandfather would be 3 times of her age 8 years from now. 8 years ago, what was the ratio of Tanya's age to that of her grandfather's?

(a) 8:29
(b) 7:29
(c) 29:8
(d) 11:53

73. For the question figure give below, which answer figure will complete the pattern in the question figure?

Question Figure:

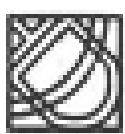


Answer Figures:

(a)



(b)



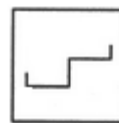
(c)



(d)

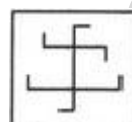


74. From the given answer figures, select the one in which the question figure is hidden/embedded. Question Figure:

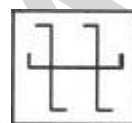


Answer Figures:

(a)



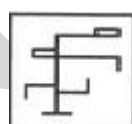
(b)



(c)



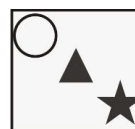
(d)



75. Select the answer figure that can replace the question mark (?) in the following series.



(a)



(b)



(c)



(d) None of these

Directions for the following 5 (five) items:

Read the following **four** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

Climate change, unlike many other issues, requires a wholesale transformation of our economies and societies. No corner will go untouched – energy, industry, agriculture, transport, institutions, individuals and more will need to make changes to reduce emissions and adapt to climate consequences that are already happening. Having a plan helps countries understand and orchestrate the many different elements required to reduce emissions and adapt to protect lives and livelihoods, as soon as possible. Every bit of warming matters. With urgent and ambitious action, the world will avoid surpassing a threshold of 1.5 degrees Celsius, after which climate impacts would become even worse than they already are. Nationally Determined Contributions (NDCs) factor in the understanding that countries must balance emissions reductions with other critical demands like ending poverty. Further, the biggest emitters need to make the most dramatic and rapid cuts.

76. According to the author, ***the most rational inference*** is:

- (a) With the varied demands of economies and societies, it's difficult to cut emissions in countries like India.
- (b) Every country in the world must work towards the prevention of surpassing the 1.5 degrees Celsius temperature threshold.
- (c) Before finalizing NDCs, every country in the world must come on the same platform to ensure their proper implementation.
- (d) Controlling emissions is critical for addressing climate change as well as poverty alleviation.

Passage – 2

One of the most significant steps in the mitigation of smoking behaviour was the ban on smoking in public places. With that move, an individual choice that had only personal consequences was transformed into a problem with social consequences. A behaviour with implications for society puts an even larger responsibility on the individual to act responsibly. Similarly, such behaviours as over-speeding, driving under the influence of alcohol, etc., that could harm not just the individual driver, but also innocent fellow motorists or pedestrians demand the exercise of greater responsibility by the person at the steering wheel. Any increase in fines for those unlawful driving behaviours that have potential social consequences would have surely received applause from people at large.

77. Which of the following statements ***best reflects what the passage implies?***

- (a) Welfare of individuals can be connected to the welfare of society using external interventions.
- (b) Penalty through an increase in fines will solve the issue of road accidents.
- (c) Social behaviour as per decided norms is critical for social acceptance.
- (d) Any kind of substance abuse done by the youth can be dangerous for social harmony.

Passage – 3

There is always a crucial link between “National Governance” and “Internal Security”. If Internal Security is not maintained Governance cannot be delivered and there would be grave threats to the very unity and integrity of the country. Likewise, Internal Security cannot be safeguarded if Governance is delivered by an inefficient and corrupt administration. In the simplest terms, governance relates to the effective management of national affairs at all levels of functioning – guaranteeing the country’s unity and integrity and securing the safety and overall welfare of its people. For the attainment of these objectives, it would be essential that political, economic, executive and judicial authority is exercised in a manner which ensures that the people are enabled to enjoy their rights, discharge their obligations, and resolve their disputes within the parameters of the Constitution and the Rule of Law.

78. Which of the following statements **best reflects the crux** of the passage?

- (a) People can enjoy their rights and discharge their obligations in India, only when there is a safe and strong government at the centre.
- (b) For a safe and secure environment, there is a need to enhance efficiency and communication in governance.
- (c) Internal security of the nation is not possible without proper governance based on constitutional principles and adherence to the rule of law.
- (d) People must follow the constitution for enjoying their rights and resolve their disputes.

Passage - 4

Migration has been the focus of intense political debate in recent years. While most people have positive perceptions about immigrants, there are misconceptions and concerns. For instance, some think that migrants are a burden on economies. World Economic Outlook looks at the economic impact of migration on recipient countries and finds that migration generally improves economic growth and productivity in host countries. Immigrants in advanced economies increase output and productivity both in the short and medium term. But the pandemic has led to an abrupt stop to migration. While the Great Lockdown was temporary, the pandemic may add to a general sentiment of reticence and disbelief in openness and have longer-term effects on countries’ willingness to receive migrants. Less immigration and high unemployment in destination economies would hurt origin countries, especially poorer ones, that rely significantly on the remittances that migrant workers send back home.

79. Based on the above passage, the following **assumptions** have been made:

- 1. Not only destination economies, but also the origin countries could be severely impacted by the pandemic.
- 2. Labour source nations suffer from challenges of poverty, corruption and brain drain, limiting their growth potential.

Which of the above assumptions is/are valid?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

80. Which of the following statements **best reflects the crux** of the passage?

- (a) Origin and host countries share a symbiotic relationship in the context of migration.
- (b) Immigration, along with boosting the economy, helps transfer the culture of the origin country.
- (c) Migration acts as a double-edged sword for destination and origin countries.
- (d) Origin countries should promote migration for obtaining a high share of remittances.