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TEST BOOKLET

C

CSAT APTITUDE TEST– (4296) – 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. Consider the following statement and conclusions.

Statement: If p is divided by 9, it leaves a remainder of 1

Conclusions:

I. p could only be even.

II. p could only be odd.

Which of the above conclusions must be true?

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

2. Consider the following table.

	None	1 to 4	5 or more	Total
Group X	15	28	57	100
Group Y	21	11	68	100
Total	36	39	125	200

The data in the table above were produced by a sleep researcher, studying the number of dreams people can recall. Group X consisted of 100 people with early bedtimes, while Group Y consisted of 100 people with later bedtimes. If a person is chosen at random, what is the probability that the person belonged to Group Y who recalled at least 1 dream?

- (a) $67/100$
(b) $79/100$
(c) $163/200$
(d) $79/200$

3. Ramesh has three different samples of spirit:

Samples	Quantity (in litre)
A	261
B	377
C	435

Find the least possible number of bottles of equal size in which different spirit samples can be filled without mixing.

- (a) 35
(b) 38
(c) 36
(d) 37

Directions for the following 5 (five) 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

In the relationship between religion and political development, there is a wide variety of patterns of interaction ranging from mutual exclusion to total compatibility. Religion has assumed not only positive but also neutral and negative roles in shaping a political system. Religion has also reacted to or counteracted political changes either as a full supporter or a partial partner or at other times as a chief rival or an avowed foe. Consequently, a systematic assessment of this positively supplementing role and negatively undermining the role of religion in politics is an extremely difficult one, if not an impossible one. Since the effects of religion are deeply embedded in the patterns of specific societies, the impact of religion on the development of the political system varies from one nation to another. Nevertheless, there are in the nature and functions of religion and of the political system certain inherent differences and common concerns which enable us to make some permissible generalizations.

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

1. Religion and politics can never function independent of each other.
2. The impact of religion on politics is not consistent across societies.

Which of the above assumptions is/are **invalid**?

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

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

- (a) The interplay of religion and politics shapes the moral compass of a nation.
- (b) Mixing religion and politics should not be allowed because politics is a secular activity.
- (c) Religion-politics interplay can boost divisive tendencies in the society and may even cause public unrest and anarchy.
- (d) The role of religion in politics is debatable and full of complexities.

Passage – 2

Humans started by using fire to cook food and make pots. Now we have machines that help us think, mine metals, and explore other worlds. Despite all the machines and technology, people feel busier than ever. What went wrong? At some point, we feel the urge to get busy, and we know we need to act on it. Work may not make us free, however, it is an integral part of who we are. If we are unproductive for an extended period, it's hard to shake off a feeling of worthlessness. Even when we do have free time, or when indeed we retire, we find hobbies to keep us busy.

6. Which one of the following is *the most logical and rational inference* that can be made from the above passage?

- (a) Technologies have made humans lazy by eliminating manual work.
- (b) It has become essential for many human beings to work or engage in some activity continuously.
- (c) Continuous work has helped in the evolution and wellbeing of human beings.
- (d) Due to huge workload, human beings are unable to take time for leisure.

Passage – 3

India is projected to have the largest working population in the world between 2022 and 2034, with 10 million youth entering the workforce every year. Unleashing the true potential of such a strong workforce demands the employment capacity of the industry. Therefore, rigidities and administrative burdens in the labour regime were required to be addressed through substantive reforms. The passage of three labour codes in Parliament marked a milestone in this process. Successful emerging economies on a development path have leveraged their labour supply for accelerating growth; however, India's labour laws applied to around 80 million workers in the formal sector, leaving the rest of the 500 million-strong workforce out of these benefits.

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

- 1. India can learn from developed countries on how to reform its labour laws.
- 2. Without labour reforms, harnessing the potential of our labour may be difficult.

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

8. Which one of the following is *best implied* in the passage?

- (a) Labour reforms in emerging countries have not met the expectations of the workers.
- (b) Successful labour reforms would help India provide labour to other emerging economies.
- (c) The increasing size of labour force in India complicates the implementation of labour reforms.
- (d) Labour reforms are essential for the growth of the country and benefit of workers in India.

9. Five friends received different percentages of marks in an examination. Anika scored more than Alka but less than Anjali, who scored 70% marks. Anamika scored fewer marks than only Anshika. The one who scored the minimum marks secured 65%, and the one who scored the highest achieved 87%. Who scored the second-lowest marks?
- (a) Alka
(b) Anshika
(c) Anamika
(d) Anika

Directions for the following 3 (three) items:

Read the information given below carefully and answer the 3 (three) items that follow.

Five friends A, B, C, D and E travelled to five different cities P, Q, R, S and T using five different modes of transport – Bus, Train, Aeroplane, Car and Boat from a city where they live.

1. The person who travelled to P did not travel by boat.
2. A went to Q by car and B went to R by aeroplane.
3. C travelled by boat, whereas D travelled by train.
4. The city from which the friends started is not connected by bus to S and T.

10. Who travelled by Bus?

- (a) P
(b) Q
(c) R
(d) S

11. C travelled to which city?

- (a) S
(b) T
(c) Either S or T
(d) Neither S nor T

12. Which city is connected by means of Car?

- (a) Q
(b) R
(c) S
(d) T

13. Four cubes each of volume 64 cm^3 are joined end to end. What is the surface area of the resulting figure?

- (a) 356 cm^2
(b) 256 cm^2
(c) 384 cm^2
(d) 288 cm^2

14. Consider the following statement:

$$x > y > 0$$

Both x and y are positive integers.

Which of the following must be true?

- I. $(x+1)/(y+1) > x/y$
II. $(x+1)/(y+1) = x/y$
III. $(x+1)/(y+1) > 1$

- (a) I only
(b) II only
(c) III only
(d) I and III only

15. If 2 is the greatest number that can divide both x and y , what is the greatest number that can divide both $5x$ and $5y$?

- (a) 2
(b) 10
(c) 8
(d) 6

16. In a certain game, a large bag is filled with blue, green, purple, and red chips worth 1, 5, x, and 11 points each, respectively. The purple chips are worth more than the green chips but less than the red chips. A certain number of chips are then selected from the bag. If the product of the point values of the selected chips is 88000, how many purple chips were selected?
- (a) 1
(b) 2
(c) 3
(d) 4

Directions for the following 5 (five) 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

After the Second World War and the extreme abuses of individual rights under the Third Reich, the idea of natural rights was reinvigorated and transformed into the notions of human rights. The founding of the UN and the adoption of the Universal Declaration of Human Rights, by United Nations, point to the central role that human rights played in the establishment of a post-war world order. This order was premised on the individual's primacy over that of the state. The consequence of this principle is that state action must be justified in the light of human rights, while citizens do not need to justify or persuade the state that their human rights, which humans have, need to be respected.

17. Which of the following is/are the **correct inference(s)** that can be made from the passage?

1. The concept of natural rights was invented due to extreme abuses of individual rights during the Second World War.
2. Post-World War world order believes that citizens are bearers of human rights merely by virtue of being human.

Select the correct answer using the code given below.

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

Passage – 2

The post-liberal economy has fuelled aspirations and urbanization. Also, it has witnessed heightened competition for resources, exacerbating pre-existing ethnic tensions. The impact is palpable in the rise of communalism, where economic disparities intersect with ethnic fault lines, leading to social fragmentation. Understanding the delicate balance between acknowledging the positive aspects of economic growth and addressing the socio-cultural challenges, fosters the society's use of the economy for uniform and integrated growth.

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

- (a) Society and the economy have always been interconnected.
- (b) The post-liberal economy has left an indelible mark on ethnic identity and communal dynamics.
- (c) Economic reforms are not the solution to the social tensions and ethnic fault lines.
- (d) Growth in the post-liberal economic reforms has transformed society into an integrated one.

Passage – 3

Microorganisms present a promising avenue for addressing the current fuel shortage through various innovative approaches. Microbial biofuels, such as biodiesel and bioethanol, leverage the metabolic capabilities of microorganisms to convert organic matter into energy-rich compounds. Additionally, microbial fuel cells harness the electron transfer abilities of bacteria to generate electricity from organic substrates. The production of biohydrogen through microbial processes represents another avenue with the potential to alleviate the fuel crisis. Furthermore, microorganisms can play a crucial role in breaking down organic waste materials into biofuels, contributing to waste-to-energy solutions. These diverse applications underscore the versatility of microorganisms in providing sustainable alternatives to conventional fuels, presenting a promising frontier for addressing energy needs while mitigating environmental impacts.

19. Based on the above passage, what are the several ways of meeting the current fuel shortage?
1. Biohydrogen through microbial processes.
 2. Conversion of organic matter into energy-rich compounds.
 3. Increasing species richness and hotspots of microorganisms.

Select the correct answer using the code given below.

- (a) 1 and 3 only
- (b) 3 only
- (c) 1 and 2 only
- (d) 1, 2 and 3

Passage – 4

Discipline is an internal force that comes from within. It is not a thing that can be imposed on you by anyone else. People want to get freedom in a shortcut way, or they hack it. It has been observed that in the quest for freedom, people shun discipline. They perceive that discipline is a hurdle in the way of freedom. They opine it as a negative element in the way of freedom in their lives and others too. Having discipline is a way to handle the situation positively. It enriches the life of every day even in the hardest situation.

20. Which one of the following is *the most logical and rational inference* that can be made from the above passage?
- (a) Discipline and freedom are incompatible with each other.
 - (b) Only discipline can bring freedom in the life of an individual.
 - (c) It may be easier to be free than to be disciplined, in short term.
 - (d) Both (a) and (b)

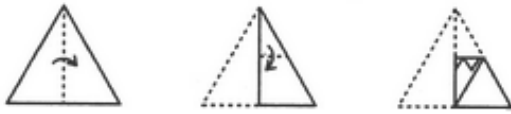
Passage – 5

The story of economic growth is one of many narratives. Over the last 70 years, growth has occurred in all regions of the world, many low-income countries have developed rapidly, and millions of people have been lifted out of poverty. Standard growth theory predicts that poorer countries will tend to grow faster and “catch up” to rich countries. However, relatively few countries have reached high-income status, and income growth across many countries has been variable and volatile. In recent years, policymakers in slower-growing middle-income countries have become preoccupied with the notion that they are stuck in a “middle-income trap.” Much has been debated about this so-called trap—from how it occurs to the types of policies that might help countries escape it.

21. Which of the following statements *best reflects the crux* of the passage?
- (a) Effective policy making to address the reasons behind middle-income trap can only be done after a country has witnessed such a trap.
 - (b) Not all countries face the middle-income trap, but robust policies can help them escape it and become developed.
 - (c) Before becoming developed, every poor country faces the 'middle-income' trap.
 - (d) Escaping the middle-income trap is crucial to address issues like poverty in low-income countries.
22. The digits of a 3-digit number are reversed to form another number. The difference between this number and the original number is always divisible by
- (a) 2
 - (b) 11
 - (c) 6
 - (d) 8
23. If $X = 2891 \times 2892 \times 2893 \times \dots \times 2898 \times 2899 \times 2900$, then what is the remainder when x is divided by 17?
- (a) 0
 - (b) 4
 - (c) 7
 - (d) 14
24. For every positive integer n , the function $h(n)$ is defined to be the product of all the even integers from 2 to n (inclusive). If p is the smallest (prime) factor of $h(100)+1$, then p is
- (a) Between 2 and 10
 - (b) Between 11 and 20
 - (c) Between 21 and 30
 - (d) Greater than 40
25. If the sum of five consecutive positive integers is A , then the sum of the next five consecutive integers must be
- (a) $A + 1$
 - (b) $A + 5$
 - (c) $A + 25$
 - (d) $2A$
26. A rectangular tank is 60 m long and 40 m broad. Water is being flown into it through a square pipe of side 10 cm. What is the speed of water if the level of water in the tank rises by 1 metre in 12 hours?
- (a) 20 km/h
 - (b) 10 km/h
 - (c) 25 km/h
 - (d) 15 km/h
27. If Dennis is one third the age of his father Keith now, and was one fourth the age of his father 5 years ago, then how old will his father Keith be 5 years from now?
- (a) 20 years
 - (b) 45 years
 - (c) 40 years
 - (d) 50 years

28. A piece of paper is folded and cut as shown below in the question figures. From the given answer figures, indicate how it will appear when opened?

Question Figures:



(a)



(b)



(c)



(d)



29. In a certain code 'EASIER' is written as TGKUCG. How would CUTTER be written in that code?

- (a) TWVVGE
- (b) TGWWVE
- (c) TGVVWE
- (d) TVGVWE

30. If in the English alphabet, every alternate letter from B onwards is written in small letters while others are written in capitals (i.e. A b C d E f), then how would the 3rd day from Tuesday be written?

- (a) f r i D A Y
- (b) W E d n E S d A Y
- (c) T H U R S d A Y
- (d) f r I d A Y

31. If some license plates are to be produced that all have the same pattern of three letters followed by three numbers, roughly how many such distinct plates can be made?

- (a) 18 thousand
- (b) 18 million
- (c) 11 million
- (d) 180 million

Directions for the following 4 (four) 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

While national income provides useful information on the structure and performance of the economy, people mistakenly use it as a proxy for human welfare and sustainability. Economic performance and improved well-being depend on more than growth in income and GDP. Inclusive wealth includes a holistic assessment of produced capital (manufacturing output or GDP), human capital and natural capital within a country. It is a multipurpose indicator capable of measuring not only traditional stocks of wealth but also those less tangible and unseen—such as educational levels, skill sets, health care, as well as environmental assets and the functioning of key ecosystem services that form the backbone of human well-being and ultimately set the parameters for sustainable development.

32. Which of the following statements *best reflects the logical inference* from the passage given above?

- (a) GDP represents the quantitative aspect of growth, while the human and natural capital reflects the qualitative aspect.
- (b) Governments should not consider GDP as a parameter for growth.
- (c) Development is meaningless without improvement in natural capital.
- (d) Not only the economic, but human and natural capital should also be the parameters of growth and development.

Passage – 2

Open defecation is a serious sanitation issue most developing countries are battling with. Defecation is a natural urge; subsequently, everyone will respond to it when needed. There are, however, clear differences in attitudes towards where people defecate. Even when poverty is being reduced and toilet facilities become available, cultural attitudes, social habits, and economic factors may impair people from using or avoiding infrastructure considered safe and hygienic by environmental and health standards. Understanding the sociocultural and economic factors underlying open defecation is therefore crucial for any policy aimed at eradicating the practice. Finally, community-led initiatives that draw on the creativity and capacity of local people to take control of their change processes must be integrated into open defecation intervention programmes.

33. Based on the above passage, consider the following *inferences*:

- 1. There is a need to build the required infrastructure for the eradication of open defecation.
- 2. Open defecation is absent in developed countries.

Which of the above inferences is/are valid?

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

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

- (a) Policies for addressing open defecation must consider socio-economic realities.
- (b) ‘Sanitation for all’ should be a mission to eradicate open defecation.
- (c) Policies, even without community participation, are sufficient to eradicate open defecation.
- (d) Open defecation is considered to be normal in developing societies.

Passage – 3

The all-too-familiar triad of historical periodisation — ancient, medieval, modern — now universal, has rather specific provincial and temporal origins. All societies evolved their modes of dividing their history into periods: dynastic and regnal was the one prevalent in India, Iran, the Turko-Mongol regions, besides Europe. The triad took birth in Europe around the 16th and 17th centuries, first in the history of theology and steadily in society's history, finding its largely evolved form in 1688 at the hands of Cellarius, a German. This was the era when over the past few centuries, Europe had been creating its new self-image of rationality, science and progress, in short, modernity; to reinforce it, the inverse image of its immediate past, the medieval, was also created as one of irrationality, regression, and superstition which were constituted as the synonym of religion/religiosity — in short, the “Dark Age” from which Europe was progressing into Enlightenment.

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

1. Every society has a religious history filled with irrationality, regression and superstition.
2. Europe gave birth to the triad of ancient, medieval, modern.

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

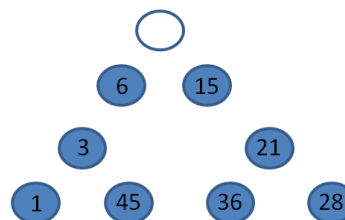
36. The average download speed for Max's computer's Internet connection is 30 megabits per second. Assuming no interruptions in internet service, what is the best estimate for the maximum number of complete video files that Max can download to his computer in a six-hour period if each video file is 4.2 gigabytes in size? [1 megabyte = 8 megabits, and 1 gigabyte = 1,024 megabytes]

- (a) 15
(b) 18
(c) 19
(d) 21

37. After a team of 7 basketball players won a game, each of them high-fived the other players once, how many high-fives did take place?

- (a) 21
(b) 5040
(c) 720
(d) 540

38. Find the number that should come in the white circle in the figure given below:

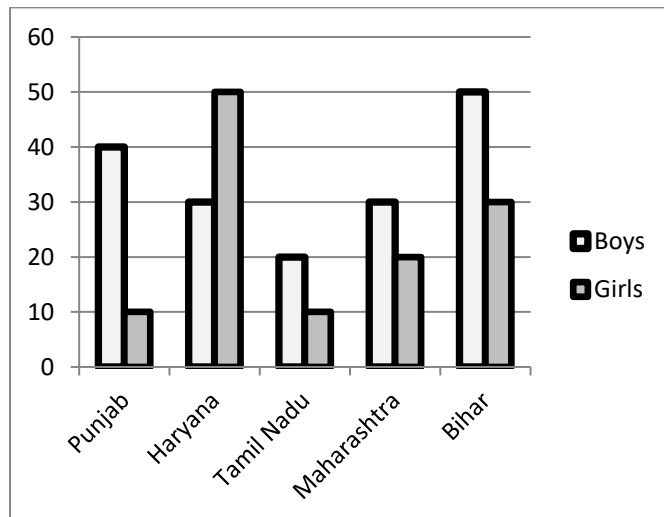


- (a) 10
(b) 12
(c) 23
(d) None of the above

Directions for the following 3 (three) items:

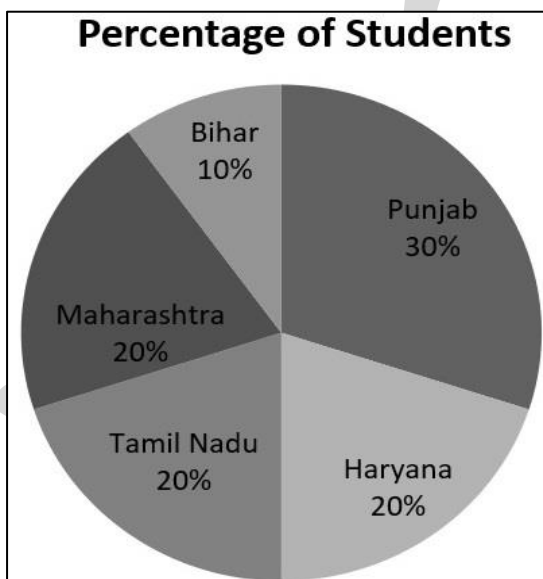
Read the following bar and pie graphs carefully and answer the 3 (three) items that follow.

The following bar graph represents the number of students from different states in a college.



A team of 20 students is selected to represent the college in the interstate cultural program in a different college.

The given pie chart gives the percentage of students of various states who constituted the team.



39. What percentage of students of Bihar were selected for the interstate program?
- 2.5%
 - 20%
 - 10%
 - 1.5%

40. If all the students of Maharashtra who were selected for the interstate program were girls, what percentage of girls of Maharashtra were not selected for the interstate program?
- 25%
 - 20%
 - 80%
 - Cannot be determined
41. It is known that half of the students who were selected for the team were girls. It is also known that the girls who were selected were only from two states. Then the girls of which of the following states were definitely not selected in the team?
- Bihar
 - Punjab
 - Haryana
 - Tamil Nadu
42. In the question below some statements followed by some conclusions are given. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follow(s) from the given statements disregarding commonly known facts.
- Statements:**
- Some cities are villages.
 - Only villages are towns.
 - Some countries are cities.
- Conclusions:**
- Some cities being towns is a possibility.
 - Some villages are countries.
- Select the correct answer using the code given below.
- Only conclusion I follows.
 - Only conclusion II follows.
 - Both conclusions I and II follow.
 - Neither conclusion I nor conclusion II follows.

Directions for the following 6 (six) 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

In a world marked by global instability, ‘Reboot Retreaters’ in 2024 seek journeys dedicated to self-improvement. 59% of Indian travellers carve out time for matchmaking holidays (to find a spark with a new partner), 53% opt for heartbreak holidays (providing the healing space needed to overcome past relationships), and 79% plan to travel solo for personal rejuvenation. Agrarian and indigenous lifestyles attract over half of Indian travellers — reflecting a desire for self-sufficiency and harmony with nature. Sleep tourism emerges as a trend, catering to 68% of Reboot Retreaters seeking undisturbed sleep. The 2024 travel predictions reflect the idea that travel is not a means to escape life, but instead a catalyst to live our best lives. From thrilling adventures in a new destination to feeling the pulse of a new culture and every experience in between, travel allows us to become the best version of ourselves.

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

1. Experience, not destination, is the sole criterion for planning holidays in the new trend.
2. According to the recent travel predictions, tourists abhor visiting the same place again.

Which of the above assumptions is/are valid?

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

44. What is the main idea that we can *infer* from the passage?

- (a) Tourism is linked to every aspect of our lives, and helps us rejuvenate.
- (b) The purpose of tourism is not the same for everyone, and varies with life situations.
- (c) Understanding ourselves can help us better enjoy our holiday, and not vice-a-versa.
- (d) Considering the growth potential, governments should encourage the tourism industry through higher investments.

Passage – 2

Healthy and successful relationships are not built over a day — they require patience, quality time and constant effort. Another major factor for relationships to flourish is good communication, without which tensions are bound to rise. All these together will help a relationship stand the test of time. Many times, in relationships, we tend to avoid difficult conversations, thinking that it can lead to either disagreements or fights. But what we forget is that these unresolved and undiscussed conversations result in misunderstandings and conflicts. This is where relationship cold plunges come in. While a lack of proper communication can lead to misinterpreting behaviours, open communication helps bring clarity to a relationship and improve understanding between the couple. It gives a sense of security in the relationship that both partners are comfortable while expressing their emotions. Unlike the traditional cold plunges that involve immersing oneself in freezing waters to improve our health, ‘relationship cold plunges’ are the difficult conversations and choices we need to make while coming out of our comfort zone to ensure the health of our relationships.

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

1. Open communication and healthy relationships are the bedrock of a modern society.
2. A person should know how to discuss the difficult aspects of his/her relationship.

Which of the above assumptions is/are valid?

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

46. Which one of the following statements *best reflects the most critical inference* that can be made from the passage given above?

- (a) To deepen bond with one's partner, 'relationship cold plunges' are the way to go.
- (b) Relationship is not always based on open communication, especially in narrow-minded societies.
- (c) In these modern times where patience and quality time are scarce, building healthy and successful relationships is difficult.
- (d) The comfort zone is not only good for oneself, but also the relationship in the long term.

Passage – 3

Despite the immense potential, the integration of gene and cell therapy into mainstream healthcare in India comes with its own set of challenges. From infrastructure limitations to ethical considerations, the journey is not without hurdles. However, these challenges present opportunities for collaborative efforts - bringing together scientific communities, industries, policymakers, and healthcare providers. Investing in research and development, creating regulatory frameworks that balance innovation with ethical considerations, and fostering a supportive ecosystem for biotechnology are crucial steps. The Biopharmaceutical industry needs a paradigm shift in its business models and strategy to develop and market gene and cell therapy.

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

1. Inclusive approach increases the challenge of regulation of gene and cell therapy.
2. Following ethical means might compromise innovations in the field of gene and cell therapy.

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

48. Which of the following is **most definitively implied** by the above passage?

- (a) Gene and cell therapy are the most promising future course for healthcare.
- (b) The future of healthcare is incomplete without the integration of biotechnology.
- (c) Gene and cell therapy have more concerns than benefits for the population.
- (d) Without the involvement of different stakeholders, gene and cell therapy may not be able to bring improvement in healthcare.

49. M and T are running for class president. 150 votes have been tallied so far; 88 for M and 62 for T. If 250 students are voting in total, how many more votes must M win in order to defeat T and earn exactly 50% more votes than him?

- (a) 125
- (b) 62
- (c) 77
- (d) 150

50. A freight train and a passenger train start towards each other at the same time from two towns that are 500 miles apart. After 3 hours, the trains are still 80 miles apart. If the average speed of the passenger train is 20 miles per hour more than the average speed of the freight train, what is the average speed, in miles per hour, of the freight train?

- (a) 40
- (b) 45
- (c) 50
- (d) 60

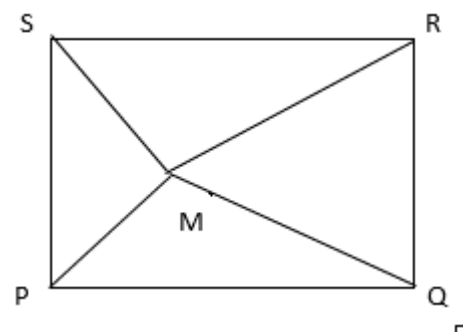
51. A man went on a trip of 120 miles from A to B, traveling at an average of x miles per hour. Several days later he returned over the same route (from B to A) at a speed that was 5 miles per hour faster than his previous speed. If the time for the return trip was one-third of an hour less than the time for the outgoing trip, which equation can be used to find the value of x ?

- (a) $120/(x+5) = 1/3$
- (b) $x/120 = [x+(5/120)] - 1/3$
- (c) $120/[x + (x+5)] = 1/3$
- (d) $120/x = [120/(x+5)] + 1/3$

52. A is the brother of B, B is the brother of C, and D is the father of A. Based on these three statements which of the following statements **cannot** be definitely true?

- (a) B is the brother of A
- (b) B is the son of D
- (c) D is the father of C
- (d) C is the brother of A

53. M is any point inside a rectangle PQRS, as shown below:



If $MS = 5$ cm, $MQ = 6$ cm and $MR = 7$ cm, then $MP = ?$

- (a) $3\sqrt{2}$ cm
- (b) $2\sqrt{2}$ cm
- (c) $3\sqrt{3}$ cm
- (d) $2\sqrt{3}$ cm

54. Consider the matrix given below:

5	35	7
6	48	8
7	63	?

Which of the following numbers would come in place of '?'

- (a) 7
(b) 8
(c) 9
(d) None of the above
55. Select the option that has the letters that, when placed from left to right in the blanks below, will complete the letter series.
A B C _ A _ C C A B _ C _ B _ C
(a) A B B C C
(b) C A B B A
(c) C B C A C
(d) A C C B A
56. The greatest common factor of 16 and the positive integer 'n' is 4, and the greatest common factor of 'n' and 45 is 3. Which of the following could be the greatest common factor of 'n' and 210?
(a) 3
(b) 14
(c) 30
(d) 42
57. A printer numbers the pages of a book starting with 1 and uses 3189 digits in all. How many pages does the book have?
(a) 1074
(b) 1075
(c) 1000
(d) None of these
58. If one-eighth of a pencil is black, half of the remaining is yellow and the remaining 3.5 cm is blue, what must be the total length of the pencil?
(a) 6 cm
(b) 7 cm
(c) 8 cm
(d) 11 cm
59. $x = y + y^2$, wherein y is a negative integer. If y decreases in value, then x
(a) Increases in value
(b) Fluctuates
(c) Decreases in value
(d) Remains the same
60. Susie can buy apples from two stores: a supermarket that sells apples only in bundles of 4 and a convenience store that sells single, unbundled apples. If Susie wants to ensure that the total number of apples she buys is a multiple of 5, then what is the minimum number of apples she must buy from the convenience store?
(a) 0
(b) 1
(c) 2
(d) 3
61. What would be the next term in the sequence 16, 8, 4, 2, 1.... ?
(a) 0
(b) 1
(c) $1/2$
(d) None of the above

Directions for the following 4 (four) 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

Socialization impacts both men and women. It starts very early with the pink or blue blankets we're often wrapped in at birth, to what our parents, teachers, coaches, and friends teach us, to what we absorb from the cartoons, books, magazines, and movies we watch. In many cultures, women are expected to be responsible for things that men are not. It's generally expected that older siblings should take care of younger siblings. However, many Asian, Indian, Hispanic, and Latino cultures believe that girls (even if the youngest) should take care of the males in the family. It's often acceptable for boys to bend the rules whereas girls are expected to follow the rules. This double standard in how we treat boys and girls can restrict girls from speaking their minds, trying new things and fighting for what they want. In addition, an inability to disappoint parents can cause girls to become people-pleasers and followers.

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

- (a) Culture and women mould each other in every society.
- (b) Values of equality and respect towards girls should be promoted among boys.
- (c) Culture has a deep impact on women as well as men.
- (d) None of the above

Passage – 2

Organic farming yields more nutritious and safe food. The popularity of organic food is growing dramatically as consumers seek organic foods that are thought to be healthier and safer. Thus, organic food perhaps ensures food safety from farm to plate. The organic farming process is more eco-friendly than conventional farming. Organic farming keeps soil healthy and maintains environmental integrity thereby, promoting the health of consumers. Moreover, the organic produce market is now the fastest-growing market worldwide, including India. Organic agriculture promotes the health of consumers of a nation, the ecological health of a nation, and the economic growth of a nation by income generation holistically. India, at present, is the world's largest organic producer and with this vision, we can conclude that encouraging organic farming in India can build a nutritionally, ecologically, and economically healthy nation in the near future.

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

- 1. Only organic farming can solve the present issues of agriculture sector.
- 2. Consumer health is the prime factor behind the promotion of organic farming.

Which of the above assumptions is/are valid?

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

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

- (a) Focus on organic farming would benefit India domestically as well as internationally.
- (b) Considering the advantages of organic farming, the government must invest in its promotion.
- (c) For wider acceptance, farmers should be made aware of the benefits of organic farming.
- (d) The only potential of organic farming is the revenue from exports to international markets.

Passage – 3

The Indian food consumption landscape is changing significantly. Not only will the quantity of food that would be required to feed the growing population increase, but the changing dietary patterns would mandate the discovery of foods that are healthy, safe, and able to meet the nutritional requirements of consumers. While India has successfully managed to be self-sufficient when it comes to the production of several agriculture and horticulture crops, changing demand patterns will need us to explore intensification techniques to address limited agriculture resources sustainably. Significant disruptions would be required at the supply end to manage evolving food demands, to which technology will serve as a key enabler. Additionally, production systems need to be geared towards addressing food safety and ensuring traceability of the product to meet evolved consumer demands.

65. Which of the following statements *best reflects the logical inference* from the passage given above?

- (a) Considering the food and nutritional demands in future, GMO crops are the way to go.
- (b) Food choices in India reflect a total absence of nutritional awareness.
- (c) Technology must not only address the changing food demands, but also ensure food safety.
- (d) Consumer awareness about nutrition, food safety and limited agricultural resources can help deal with the future food crisis.

66. If we add a two digit number (A) to another two digit number (N), the digits of N will get reversed. Now, if we add the same number A to this result, we get a three digit number that has the same digits as N, and in the same order, but with a zero between them. What is the value of A?

- (a) 27
- (b) 36
- (c) 45
- (d) 54

67. Which of the following expressions has the largest value?

- (a) $1876452/1876455$
- (b) $1883446/1883449$
- (c) $1883453/1883456$
- (d) $1883491/1883494$

68. If $\log_{10} p - \log_{10} \sqrt{p} = 2\log_p 10$, then the possible value of 'p' is given by
 (a) 1/10
 (b) 10
 (c) 1/100
 (d) 25
69. Sum of all the internal angles and all the corresponding external angles of a regular polygon is 1440° . Find the number of diagonals of the polygon.
 (a) 20
 (b) 22
 (c) 16
 (d) 18
70. A group of 1260 children are seated in rows for a group photo session. Each row contains four less children than the row in front of it. Which one of the following number of rows is not possible?
 (a) 6
 (b) 5
 (c) 8
 (d) 7
71. P is to the north of Q and S is to the east of P, who is to the south of W. T is to the west of P. W is in which direction with respect to T?
 (a) North
 (b) Northeast
 (c) Southwest
 (d) West
72. The three digits of a number add up to 11. The number is divisible by 5. The leftmost digit is double the middle digit. What is the product of the three digits?
 (a) 40
 (b) 72
 (c) 78
 (d) 88
73. One Amoeba splits into ten Amoeba to form the next generation, but due to the prevailing ecological conditions, only 50% survive. If the number of surviving amoebas in the 6th generation is 3125, what must have been their number in the first generation?
 (a) 3
 (b) 1
 (c) 2
 (d) 5
74. P is 9 m to the south of K. K is 5 m to the east of H. H is 4 m to the north of B. L is 3 m west of B. D is 7 m south of L. G is 8 m east of D. If Z is 5 m to the west of point P, then what is the distance between B and Z?
 (a) 8 m
 (b) 9 m
 (c) 5 m
 (d) 2 m

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

To young people living in democracies, authoritarianism may seem like a long-forgotten part of their country's history. For as long as they can remember, their fellow citizens have had the right to voice their opinions and to organize freely, political parties have competed in meaningful elections, and the legislature and courts have checked their governments' actions. But these experiences are far from universal. Many countries are not democracies, and most countries that are democratic are younger than a lifetime. This means that for most people, life under authoritarianism is either their current experience, or they remember a time when it was.

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

- (a) Democracy is far better than authoritarianism, and is the best political system of governance.
- (b) To value democracy, people should not forget the experience of authoritarianism.
- (c) Presently, some countries are under authoritarian regimes, and some are democracies.
- (d) Authoritarianism must be overthrown to establish democracy for voicing citizens' opinions.

Passage – 2

When people speak about intelligence, they usually mean the “hard” type of skills: problem-solving, verbal skills, use of logic, or cracking numbers. But when it comes to the so-called “soft” skills—such as understanding social roles, reading emotions, comprehending relationships, or effective listening— we rarely see them as part of an intelligence questionnaire. And while the hard skills are very important, it's the soft ones that help us maintain friendships, be satisfied at work, or simply find happiness in life. Since these skills, which we also call social intelligence, are so often neglected in schools, despite a huge body of research revealing their undeniable benefits, it is critical to understand what social intelligence is and how you can reap its benefits.

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

- (a) Mastery in discharging social roles, reading emotions and effective listening makes a charismatic leader socially intelligent.
- (b) Despite their importance, social skills are valued less in society as compared to hard skills.
- (c) Schools should not only focus on hard skills, but also develop social intelligence among students.
- (d) In a connected world, social intelligence is the key that unlocks effective communication.

Passage – 3

Besides, a boom in the insurance industry and an ecosystem push towards the use of new-age technology like AI, big data, etc. is changing the way insurance has traditionally been provided in India. Beyond technology, there is a need for insurance companies to work towards building greater customer trust in the industry and improving access to insurance by rethinking various processes and rules, such as the GST rate for insurance products to boost insurance penetration for the next billion Indian online users. Insurance customers on digital today enjoy better service due to end-to-end digital experiences that leverage technological applications, which, in turn, is expected to drive growth for the industry. The insurance market is expected to reach nearly \$222 billion by fiscal 2026, with new online distribution models such as B2C, B2B, and B2B2C set to be key drivers of growth.

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

1. Digital India programme has improved insurance penetration in India.
2. High GST rates, lack of trust and poor awareness of products are the only reasons for poor insurance penetration.

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

78. Which one of the following is *best implied* in the passage?

- (a) Every citizen of the country must have an insurance to face the challenging times in one's life.
- (b) Improving digital connectivity will improve insurance penetration in the country.
- (c) Higher insurance coverage would reduce the health expenditure of the government.
- (d) Despite huge potential, technology alone cannot solve the issue of poor insurance penetration.

Passage – 4

For ages, prophets and theologians have talked about free will and destiny. Some also argue that the two concepts are incompatible, while others believe they can coexist. Those who argue that free will clashes with destiny typically believe that all events and actions are predetermined by a higher power or fate, and therefore, human choices are ultimately an illusion. On the other hand, those who argue that free will and destiny can coexist believe that while some aspects of our lives may be predetermined, such as the circumstances we are born into, we still can make choices within those predetermined parameters. They may argue that while some events may be inevitable, our response to those events is still a matter of choice.

79. Which one of the following is *the most logical and rational inference* that can be made from the above passage?

- (a) Valuing destiny over free will could breed complacency and laziness.
- (b) The debate of free will versus destiny is an ongoing one.
- (c) It is better to believe in the coexistence of free will and destiny, rather than in their clashes.
- (d) People should focus on their work and not get into the debates of free will and destiny.

Passage – 5

Without action to limit and adapt to climate change, its environmental impact will continue to amplify inequalities and could undermine development and poverty eradication. While inequality refers to differences in income or wealth across the whole range distribution, poverty concerns individuals below a given income threshold or lacking access to basic needs. By hitting the poorest hardest, climate change risks both increasing existing economic inequalities and causing people to fall into poverty.

80. Which one of the following statements *best reflects the crucial message* conveyed by the author of the passage?

- (a) Limiting climate change can help solve the issues of inequalities.
- (b) Climate change is only one of the factors behind rising inequalities and poverty.
- (c) Rapid economic development is a must for poverty eradication, reducing inequalities and limiting climate change.
- (d) Dealing with climate change is crucial for addressing inequalities as well as poverty and development.

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