
DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO



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ALL INDIA OPEN MOCK TEST
CSAT PAPER - II

Test Booklet Series



Time Allowed: Two Hours

Maximum Marks: 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST 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. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series A, B, C or D carefully and without any omission or discrepancy at the appropriate place in the OMR Answer Sheet. Any omission/discrepancy will render the Answer Sheet liable for rejection.
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 only 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 the best. 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 directions in the Answer Sheet.
6. **All** items carry equal marks.
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 Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Answer Sheet and examination has concluded, you should hand over to the Invigilator *only the Answer Sheet*. You are permitted to take with you the Test Booklet.
9. Sheets for rough work are appended in the Test Booklet at the end.
10. **Penalty for wrong answers:**
THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE IN ALL THE QUESTIONS.
 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third** of the marks assigned to that question will be deducted as penalty.
 - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
 - (iii) If a question is left blank, i.e. no answer is given by the candidate, there will be **no penalty** for that question.

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Directions for the following 4 (four) items:

Read the following **four passages** and answer the items that follow.

Passage - 1

Bank depositors in the United States are all financially protected against bank failure because the government insures all individuals' bank deposits. An economist argues that this insurance is partly responsible for the high rate of bank failures, since it removes from depositors any financial incentive to find out whether the bank that holds their money is secure against failure. If depositors were more selective, then banks would need to be financially stable in order to compete for depositors' money.

1. The economist's argument makes which of the following assumptions ?
 - (a) Bank failures are caused when big borrowers default on loan repayments.
 - (b) A significant proportion of depositors maintain accounts at several different banks.
 - (c) The more a depositor has to deposit, the more careful he or she tends to be in selecting a bank.
 - (d) The difference in the interest rates paid to depositors by different banks is not a significant factor in bank failures.

Passage - 2

India's baffling array of state and national labor laws date to the 1940s: one provides for the type and number of spittoons in a factory. Another says an enterprise with more than 100 workers needs government permission to scale back or close. Many Indian businesses stay small in order to remain beyond the reach of the laws. Big firms use temporary workers to avoid them. Less than 15% of Indian workers have legal job security. The new government can sidestep the difficult politics of curbing privileges by establishing a new, simpler labor contract that gives basic protection to workers but makes lay-offs less costly to firms. It would apply only to new hires; the small proportion of existing workers with gold-star protections would keep them.

2. Which of the following options best summarizes the main idea of the paragraph ?
 - (a) More Indian workers can get permanent jobs and legal job security if existing labor laws are reformed.
 - (b) Effective labor law reform can encourage many Indian businesses to grow to more than 100 workers.
 - (c) Outdated Indian labor laws need to be simplified to provide basic protection to workers and curb privileges.
 - (d) The difficult politics of curbing privileges can be avoided if the changes in the labor law only apply to the new hires.

Passage - 3

Oklahoma is not perceived as overpopulated because, in spite of a horrendous drought, it is not facing famine. Famine in Oklahoma is inconceivable because it receives a fair price for its exports, it has not leased its land to foreign countries, the poorest of the poor receive a helping hand from the government, and farmers and ranchers receive federal assistance in times of droughts. It is a lack of these factors in Horn of Africa, plus political insecurity in Somalia, which explain the famine – not overpopulation.

3. Which of the following options best summarizes the main idea of the paragraph ?
 - (a) Hunger is caused by too many people pressing against finite resources.
 - (b) In spite of drought and overpopulation, there is no famine in Oklahoma.
 - (c) Overpopulation and famine are not causally related in the Horn of Africa.
 - (d) Famine in the Horn of Africa is not only due to overpopulation but, more importantly, due to the lack of government assistance and political insecurity.

Passage - 4

Many scientific studies have found links between genius and mental illness, particularly bipolar disorder in which patients have violent mood swings between elation and depression. In one interesting Swedish study, 700,000 Swedes had intelligence tests at age 16 and again 10 years later. Those who scored well were four times more likely than the others to have developed bipolar disorder. The US neurologist James Fallon came up with a convincing argument based on his own findings in the field: the brain area involved in mood swings is the same area where creativity is born. This may explain why some people can draw previously unseen connections among ideas, images, shapes and the like.

4. Which of the following is inferred from the above ?
- Those with bipolar disorder are likely to be highly intelligent.
 - Most people who excel in creativity are likely suffering from a mental problem.
 - Often there is a correlation between mental illness and genius.
 - Mental disorders give birth to genius.
5. A question booklet contains 100 questions for a test. A candidate gets 5 marks for every correct answer, loses 2 marks for every wrong answer, and no mark for a blank answer. Consider the following statements about the marks of a candidate :
- He can score 461 marks.
 - He can score 464 marks.
 - He can score 441 marks.
- Only one statement is correct
 - Only two statements are correct
 - All three statements are correct
 - None of three statements is correct

Direction for the questions 6 and 7 :

Consider the following items, which consists a question and two statements, decide which one/ones are required to answer.

6. What is the principal ?
- The compound interest for second year only is Rs. 1380.
 - Rate of interest is 15% and compounding is being done annually.
- Statement 1 alone is sufficient to answer the question.
 - Statement 2 alone is sufficient to answer the question.
 - Both statements are required to answer the question.
 - Neither 1 nor 2 is sufficient to answer the question.
7. At what time the two trains cross each other ?
- Train A leaves from Kanpur at 5 am and reached Prayagraj at 9 am.
 - Train B leaves from Prayagraj at 7 am and reached Kanpur at 10:30 am.
- Statement 1 alone is sufficient to answer the question.
 - Statement 2 alone is sufficient to answer the question.
 - Both statements are required to answer the question.
 - Neither 1 nor 2 is sufficient to answer the question.
8. Consider the following statement:
All the angles (in degree) of a triangle are prime numbers.
- Such type of triangle is not possible.
 - It can be an isosceles triangle.
 - It can be a scalene triangle.
- Which of the following statements is/are correct ?
- 1 only
 - 2 only
 - 3 only
 - 2 and 3 only

9. How many 3-digit natural numbers N are there such that the sum of digits of N and $(N + 1)$ each is divisible by 8? For example, $N = 107$ doesn't satisfy as the sum of digits of $107 = 1 + 0 + 7 = 8$ is divisible by 8 but the sum of digits of $108 = 1 + 0 + 8 = 9$ is not.
- (a) 0
(b) 5
(c) 7
(d) 10
10. A 2-digit number AB is inserted between its own digits to make it a 4-digit number $AABB$ which is 77 times the original number. What is the sum of the digits of the original number *i.e.*, $A + B$?
- (a) 6
(b) 7
(c) 8
(d) 9
11. The author's conclusion relies on which of the following assumptions?
- (a) The cleanliness of public parks is important in terms of hygiene and the prevention of illnesses.
(b) The Beegappel municipality is determined to reduce the amount of exposed excrement in its parks.
(c) The amount of other forms of garbage dispersed is the same in all the parks of Beegappel.
(d) The cleanliness of public parks is equally important to the residents of differing neighborhoods.

Passage - 2

In a bureaucracy, all decisions are arrived at by a process that involves many people. There is no one person who has the authority to decide whether a project will process or not. As a consequence, in bureaucracies, risky projects are never undertaken.

Directions for the following 4 (four) items:
Read the following **four passages** and answer the items that follow.

Passage - 1

In a public park of the Beegappel metropolitan where biodegradable bags were provided at strategic points, the amount of exposed dog excrement per square foot on average was lower than the average of the same ratio of the metropolitan's parks that did not supply the bags, by almost 7 times. In light of this result, the Beegappel municipality decided to install the same system of provided bags in another three parks in the neighborhood. Residents used the bags and the results were the same as with the experiment in the first park. It is clear that if the bags were supplied in parks in all neighborhoods of the metropolitan, then all the parks would enjoy lower amounts of dog excrement per square foot.

12. Which of the following is the most logical assumption of the above passage?
- (a) All projects in a bureaucracy require risk.
(b) Decisive individuals choose not to work in a bureaucracy.
(c) An individual who has decision-making power will take risks.
(d) The only risky projects undertaken are those for which a single individual has decision-making power.

Passage - 3

Economic considerations color every aspect of international dealings, and nations are just like individuals in that the lender sets the terms of its dealings with the borrower. That is why a nation that owes money to another nation cannot be world leader.

13. Which of the following is the most logical assumption that can be made from the passage given above?
- A nation that does not lend to any other nation cannot be a world leader.
 - A nation that can set the terms of its dealings with other nations is certain to be a world leader.
 - A nation that has the terms of its dealings with another action set by that nation cannot be a world leader.
 - A nation that is a world leader can borrow from another nation as long as that other nation does not set the terms of the dealings between the two nations.

Passage - 4

Early in this century, Alfred Wegener developed the concept of continental drift. His ideas were rejected vehemently because he postulated no identifiable force strong enough to make the continents move. We have come to accept Wegener's theory, not because we have pinpointed such a force, but because new instruments have finally allowed continental movement to be confirmed by observation.

14. The passage best illustrates which one of the following statements about science?
- The aim of science is to define the manifold of nature within the terms of a single harmonious theory.
 - In accepting a mathematical description of nature, science has become far more accurate at identifying underlying forces.
 - The paradox of science is that every improvement in its measuring instruments seems to make adequate theories harder to work out.
 - When the events a theory postulates are detected, the theory is accepted even without an explanation of how those events are brought about.
15. CSAT, CSA and CS are 4-digit, 3-digit and 2-digit numbers respectively where C, S, A and T are distinct digits such that $CSAT + CSA + CS = 2024$. The value of $C + S + A + T$ is
- 15
 - 16
 - 17
 - 18
16. Prithu and Archi had Rs. 144 altogether. Prithu spent 80% of his amount while Archi spent 75% of her amount. After this both had equal amounts. Consider the following statements.
- The initial difference in their amounts was Rs. 48.
 - Prithu had Rs. 48 initially.
- Which of the above statements is/are correct ?
- Both 1 and 2
 - Only 1
 - Only 2
 - Neither 1 nor 2
17. A number N is formed by writing 1 for 77 times. What is the remainder if N is divided by 77 ?
- 1
 - 7
 - 23
 - 76

18. *Question:* For two non-negative real numbers a and b , is $(a + b)$ greater than ab ?

Statements: 1. $a = b$

2. $a + b$ is greater than $a^2 + b^2$.

- (a) Statement 1 alone is sufficient to answer the question, but statement 2 alone is not.
(b) Statement 2 alone is sufficient to answer the question, but statement 1 alone is not.
(c) Both statements 1 and 2 together are sufficient to answer the question, but neither statement alone sufficient.
(d) Statements 1 and 2 together are not sufficient to answer the question and additional data is needed.
19. How many 4-digit numbers which are less than 3000 can be formed using 2, 2, 3, 3, 3, 4, 4, 4, 4 ?
- (a) 27 (b) 26
(c) 24 (d) 20
20. The number of three English letter words, having at least one consonant, but not having two consecutive consonants, is
- (a) 2205 (b) 3780
(c) 2730 (d) 3360

Directions for the following 4 (four) items:

Read the following **four passages** and answer the items that follow.

Passage - 1

Rhizobium bacteria living in the roots of bean plants or other legumes produce fixed nitrogen which is one of the essential plant nutrients and which for non-legume crops, such as wheat, normally must be supplied by applications of nitrogen-based fertilizer. So if biotechnology succeeds in producing wheat strains whose roots will play host to Rhizobium bacteria, the need for artificial fertilizers will be reduced.

21. What is the most logical assumption that can be made from the passage given above?

- (a) Biotechnology should be directed toward producing plants that do not require artificial fertilizer.
(b) Fixed nitrogen is currently the only soil nutrient that must be supplied by artificial fertilizer for growing wheat crops.
(c) Rhizobium bacteria living in the roots of wheat would produce fixed nitrogen.
(d) There are no naturally occurring strains of wheat or other grasses that have Rhizobium bacteria living in their roots.

Passage - 2

Leachate is a solutions, frequently highly contaminated, that develops when water permeates a landfill site, If and only if the landfill's capacity to hold liquids is exceeded does the leachates escape into the environment, generally in unpredictable quantities, A method must be found for disposing of leachate. Most landfill leachate is send directly to sewage treatment plants, but not all sewage plants are capable of handling the highly contaminated water.

22. Which one of the following can be inferred from the passage?
- (a) If leachate does not escape from a landfill into the environment, then the landfill's capacity to hold liquids has not been exceeded.
(b) If any water permeates a landfill, leachate will escape into the environment.
(c) No sewage treatment plants are capable of handling leachate.
(d) Some landfill leachate is send to sewage treatment plants that are incapable of handling it.

Passage - 3

Several of the world's earliest cities were organised along egalitarian lines. In some regions, urban populations governed themselves for centuries without any indication of the temples and palaces that would later emerge; in others, temples and palaces never emerged at all, and there is simply no evidence of a class of administrators or any other sort of ruling stratum. It would seem that the mere fact of urban life does not, necessarily, imply any particular form of political organization, and never did. Far from resigning us to inequality, the picture that is now emerging of humanity's past may open our eyes to egalitarian possibilities we otherwise would have never considered.

23. Which of the following correctly implies the essence of the passage?
- (a) We now have the evidence in support of the existence of an egalitarian urban life in some ancient cities, where political and civic organisation was far less hierarchical.
 - (b) Contrary to our assumption that urban settlements have always involved hierarchical political and administrative structures, ancient cities were not organised in this way.
 - (c) The lack of hierarchical administration in ancient cities can be deduced by the absence of religious and regal structures such as temples and palaces.
 - (d) The emergence of a class of administrators and ruling stratum transformed the egalitarian urban life of ancient cities to the hierarchical civic organisations of today.

Passage - 4

Called by some the "island that time forgot," Madagascar is home to a vast array of unique, exotic creatures. One such animal is the aye-aye. First described by western science in 1782, it was initially categorized as a member of the order Rodentia. Further research then revealed that it was more closely related to the lemur, a member of the primate order. Since the aye-aye is so different from its fellow primates, however, it was given its own family: Daubentoniidae. The aye-aye has been listed as an endangered species and, as a result, the government of Madagascar has designated an island off the northeastern coast of Madagascar as a protected reserve for aye-ayes and other wildlife.

Long before Western science became enthralled with this nocturnal denizen of Madagascar's jungles, the aye-aye had its own reputation with the local people. The aye-aye is perhaps best known for its large, round eyes and long, extremely thin middle finger. These adaptations are quite sensible, allowing the aye-aye to see well at night and retrieve grubs, which are one of its primary food sources, from deep within hollow branches. However, the aye-aye's striking appearance may end up causing its extinction. The people of Madagascar believe that the aye-aye is a type of spirit animal, and that its appearance is an omen of death. Whenever one is sighted, it is immediately killed. When combined with the loss of large swaths of jungle habitat, this practice may result in the loss of a superb example of life's variety.

24. Based on the information given in the passage, the intended audience would most likely be
- (a) visitors to a natural science museum
 - (b) professors of evolutionary science
 - (c) a third-grade science class
 - (d) students of comparative religions

Direction for the questions 25 and 26:

Consider the following items, which consists a question and two statements, decide which one/ones are required to answer.

25. *Question:* How is X related to Y ?

Statements: 1. Z , who has only two kids, X and Y , is the mother-in-law of W , who is sister-in-law of Y .

2. A , the sister-in-law of X , is the daughter-in-law of B , who has only two kids, X and Y .

- (a) Only statement 1 is sufficient to answer the question.
- (b) Only statement 2 is sufficient to answer the question.
- (c) Either statement 1 or statement 2 is sufficient to answer the question.
- (d) Both the statements together are not sufficient to answer.

26. *Question:* How many children does A have ?

Statements: 1. B is the only daughter of C who is wife of A .

2. D and E are brothers of A .

- (a) Only statement 1 is sufficient to answer the question.
- (b) Only statement 2 is sufficient to answer the question.
- (c) Either statement 1 or statement 2 is sufficient to answer the question.
- (d) Both the statements together are not sufficient to answer.

27. Vasudev, Sankarshan, Anirudh and Pradyumn were the only participants of a chess tournament. Some matches have been played among the players. Exactly two of them played in each of the matches. No player played with the same player in more than one match.

Question: What is the total number of matches played among the players ?

Statements: 1. Vasudev played exactly 3 matches.

2. Anirudh and Sankarshan played exactly 1 and 2 matches respectively.

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

- (a) The Question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.
- (b) The Question can be answered by using either Statement alone.
- (c) The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.
- (d) The Question cannot be answered even by using both the Statements together.

28. Ashvath, Balaram and Charu competed in same weight lifting tournament and one of them won. It is also known that weight lifted by Charu was average of weight lifted by Ashvath and Balaram.

Question: Who is the winner ?

Statements: 1. Weight lifted by Ashvath plus weight lifted by Charu is 210 kg.

2. Weight lifted by Charu is 40 kg more than weight lifted by Ashvath.

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

- (a) The Question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.
- (b) The Question can be answered by using either Statement alone.
- (c) The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.
- (d) The Question cannot be answered even by using both the Statements together.

29. Consider two statements are a question in the following questions, read them carefully and choose which one/ones are necessary to answer.

Question: What will be the value of a 3-digit number which is divisible by 7 and has unit digit as 3 ?

Statements: 1. The 3-digit number is divisible by 9.
2. The 3-digit number is divisible by 21.

- (a) Statement 1 alone is sufficient to answer the question.
(b) Statement 2 alone is sufficient to answer the question.
(c) Either statement 1 or statement 2 alone is sufficient to answer the question.
(d) Both statements 1 and 2 together is necessary to answer the question.

30. A man has 1890 candles. After burning, he can make a new candle from 9 stubs left behind. The maximum number of candles that can be made is

- (a) 235 (b) 210
(c) 236 (d) None of these

Directions for the following 4 (four) items:

Read the following **passage** and answer the items that follow.

Passage

We begin with the emergence of the philosophy of the social sciences as an arena of thought and as a set of social institutions. The two characterisations overlap but are not congruent. Academic disciplines are social institutions. . . . My view is that institutions are all those social entities that organise action: they link acting individuals into social structures. There are various kinds of institutions. Hegelians and Marxists emphasise universal institutions such as

the family, rituals, governance, economy and the military. These are mostly institutions that just grew. Perhaps in some imaginary beginning of time they spontaneously appeared. In their present incarnations, however, they are very much the product of conscious attempts to mould and plan them. We have family law, established and disestablished churches, constitutions and laws, including those governing the economy and the military. Institutions deriving from statute, like joint-stock companies are formal by contrast with informal ones such as friendships. There are some institutions that come in both informal and formal variants, as well as in mixed ones. Consider the fact that the stock exchange and the black market are both market institutions, one formal one not. Consider further that there are many features of the work of the stock exchange that rely on informal, noncodifiable agreements, not least the language used for communication. To be precise, mixtures are the norm . . . From constitutions at the top to by-laws near the bottom we are always adding to, or tinkering with, earlier institutions, the grown and the designed are intertwined.

It is usual in social thought to treat culture and tradition as different from, although alongside, institutions. The view taken here is different. Culture and tradition are sub-sets of institutions analytically isolated for explanatory or expository purposes. Some social scientists have taken all institutions, even purely local ones, to be entities that satisfy basic human needs – under local conditions . . . Others differed and declared any structure of reciprocal roles and norms an institution. Most of these differences are differences of emphasis rather than disagreements. Let us straddle all these versions and present institutions very generally . . . as structures that serve to coordinate the actions of individuals. . . . Institutions themselves then have no aims or purpose other than those given to them by actors or used by actors to explain them . . .

Language is the formative institution for social life and for science . . . Both formal and informal language is involved, naturally grown or designed. (Language is all of these to varying degrees.) Languages are paradigms of institutions or, from another perspective, nested sets of institutions. Syntax, semantics, lexicon and alphabet/character-set are all institutions within the larger institutional framework of a written language. Natural languages are typical examples of what Ferguson called ‘the result of human action, but not the execution of any human design’[;] reformed natural languages and artificial languages introduce design into their modifications or refinements of natural language. Above all, languages are paradigms of institutional tools that function to coordinate.

31. Consider the fact that the stock exchange and the black market are both market institutions, one formal one not.” Which one of the following statements best explains this quote, in the context of the passage?
- Market instruments can be formally traded in the stock exchange and informally traded in the black market.
 - The stock exchange and the black market are both organised to function by rules.
 - The stock exchange and the black market are examples of how, even within the same domain, different kinds of institutions can co-exist.
 - The stock exchange and the black market are both dependent on the market to survive.
32. Which of the following statements best represents the essence of the passage?
- The stock exchange and the black market are both market institutions.
 - It is usual in social thought to treat culture and tradition as different from institutions.
 - Institutions are structures that serve to coordinate the actions of individuals.
 - Language is the fundamental formal institution for social life and for science.
33. All of the following inferences from the passage are false, EXCEPT:
- as concepts, “culture” and “tradition” have no analytical, explanatory or expository power, especially when they are treated in isolation.
 - “natural language” refers to that stage of language development where no conscious human intent is evident in the formation of language.
 - the institution of friendship cannot be found in the institution of joint-stock companies because the first is an informal institution, while the second is a formal one.
 - institutions like the family, rituals, governance, economy, and the military are natural and cannot be consciously modified.
34. In the first paragraph of the passage, what are the two “characterisations” that are seen as overlapping but not congruent?
- “the philosophy of the social sciences” and “a set of social institutions”.
 - “individuals” and “social structures”.
 - “an arena of thought” and “academic disciplines”.
 - “academic disciplines” and “institutions”.

35. Consider the following statements:

Assertion (A): $a^0 = 1$, $a \neq 0$.

Reason (R): $a^m \times a^n = a^{m+n}$, m , n being integers.

- (a) both A and R are true and R is the correct explanation of A.
(b) both A and R are true and R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

36. Sixty-four identical cubes are arranged in the form of a large cubical block. This block is placed in the corner of a room so as to touch the three walls on three of its sides. How many cubes do not touch any of the wall ?

- (a) 48 (b) 37
(c) 27 (d) 8

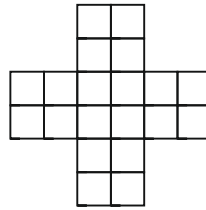
37. Govind wants to number all the doors of his hotel rooms. To do this, he buys some stickers with numbers from 0 to 8, with "6" serving as a stand-in for "9" when flipped. He purchased 20 stickers of each of 9 types for a total of 180 stickers. If Govind starts numbering the doors from 1, then what will be the first number that he cannot form using his stickers ?

- (a) 66 (b) 67
(c) 68 (d) 69

38. A 3-digit number ABC is multiplied by 6 and the resulting number is a 3-digit number with the same digits CCC . Consider the following statements.

- $A + B + C$ is a prime number.
 - $A \times B + C$ is a perfect square.
 - $C - A \times B$ is a perfect cube.
- (a) Only one statement is correct.
(b) Only two statements are correct.
(c) All three statements are correct.
(d) None of three statements is correct.

39.



The number of squares in the above figure is

- (a) 30 (b) 29
(c) 25 (d) 20

40. Each digit of a 10-digit number is 9. It is multiplied by itself. What is the sum of the digits of the resulting number ?

- (a) 64 (b) 81
(c) 90 (d) 100

Directions for the following 4 (four) items:

Read the following **two passages** and answer the items that follow.

Passage - 1

Typewriters are the epitome of a technology that has been comprehensively rendered obsolete by the digital age. The ink comes off the ribbon, they weigh a ton, and second thoughts are a disaster. But they are also personal, portable and, above all, private. Type a document and lock it away and more or less the only way anyone else can get it is if you give it to them. That is why the Russians have decided to go back to typewriters in some government offices, and why in the US, some departments have never abandoned them. Yet it is not just their resistance to algorithms and secret surveillance that keeps typewriter production lines - well one, at least - in business (the last British one closed a year ago). Nor is it only the nostalgic appeal of the metal body and the stout well-defined keys that make them popular on eBay. A typewriter demands something particular: attentiveness. By the time the paper is loaded, the ribbon tightened, the carriage returned, the spacing and the margins set, there's a big premium on hitting the right key. That means sorting out ideas, pulling together a kind of order

and organising details before actually striking off. There can be no thinking on screen with a typewriter. Nor are there any easy distractions. No online shopping. No urgent emails. No Twitter. No need even for electricity - perfect for writing in a remote hideaway. The thinking process is accompanied by the encouraging clack of keys, and the ratchet of the carriage return. Ping!

41. Which one of the following best describes what the passage is trying to do?
- It describes why people continue to use typewriters even in the digital age.
 - It argues that typewriters will continue to be used even though they are an obsolete technology.
 - It highlights the personal benefits of using typewriters.
 - It shows that computers offer fewer options than typewriters.
42. According to the passage, some governments still use typewriters because:
- they do not want to abandon old technologies that may be useful in the future.
 - they want to ensure that typewriter production lines remain in business.
 - they like the nostalgic appeal of typewriter.
 - they can control who reads the document.
43. The writer praises typewriters for all the following reasons except:
- Unlike computers, they can only be used for typing.
 - You cannot revise what you have typed on a typewriter.
 - Typewriters are noisier than computers.
 - Typewriters are messier to use than computers.

Passage - 2

The average family income in the metros has increased today as compared to earlier, as in most families these days husbands and wives both are working.

44. Which of the following inferences cannot be drawn from the above statement?
- Wives earn more than their husbands today.
 - It was less prevalent for the spouse to work earlier than today.
 - The family income level was lower a few years ago.
 - More husbands and wives are working today as compared to last few years.
45. 2 footballers and 5 cricketers went for an award ceremony, where they need to sit around a circular table. In how many ways they can sit, so that two footballers are never together ?
- 720
 - 360
 - 240
 - 480
46. There are eight pairs of Brown shoes and five pairs of Black shoes. They all are put into a box and shoes are drawn one at a time. To ensure that at least one pair of Brown shoes are taken out, what is the number of shoes required to be drawn out ?
- 12
 - 13
 - 18
 - 19

47. Whenever a positive integer is entered into a special machine, the machine adds the number to its replica, but the last digit of the replica is removed before the addition. The machine then outputs the sum to the user. For example, if you enter 2024, the output is $2024 + 202 = 2226$. Consider the following statements.

1. The smallest 3-digit number that cannot be obtained as an output from machine is 109.
2. The greatest 3-digit number that cannot be obtained as an output from machine is 989.

Which of the above statements is/are correct ?

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

Direction for the question 48 :

Consider the following item, which consists a question and three statements, decide which one/ones are required to answer.

48. **Question:** What is Megha's rank from the top in a class of forty students?

- Statements:** 1. Megha is 3 ranks below Sunil from the top.
2. Sunil's rank from the bottom is 23.
3. Megha is 3 ranks above Sunil from the bottom.

- (a) Only 1 and 2
(b) Only 2 and 3
(c) All 1, 2 and 3
(d) 1 and 2 or 2 and 3

49. Jalaj takes thrice the time taken by Neeraj and Pankaj to finish a task. Neeraj takes twice the time taken by Jalaj and Pankaj to finish the same task.

Question: In how many days Pankaj can finish the same task working alone ?

- Statements:** 1. Together all the three can finish the same task in 5 days.
2. Jalaj takes 5 more days to finish the task working alone than the time taken by Neeraj to finish the same task working alone.

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

- (a) The Question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.
(b) The Question can be answered by using either Statement alone.
(c) The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.
(d) The Question cannot be answered even by using both the Statements together.

50. Kishori's Piggy bank broke and all the coins contained in it is 73 coins of 1 rupee each, 54 coins of 2 rupees each, 38 coins of 5 rupees each, 13 coins of 10 rupees each and 9 coins of 20 rupees each fell on the ground. Consider the following statements.

1. The smallest number of coins "m" that, if picked randomly from the ground, must contain all the coins of at least one denomination is 182.
2. The smallest number of coins "n" that, if picked randomly from the ground, must contain at least one coin of each of the denominations is 178.

Which of the above statements is/are correct ?

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

Directions for the following 2 (two) items:

Read the following **two passages** and answer the items that follow.

Passage - 1

By killing transparency and competition, crony capitalism is harmful to free enterprise, opportunity and economic growth. Crony capitalism, where rich and the influential are alleged to have received land and natural resources and various licences in return for payoffs to venal politicians, is now a major issue to be tackled. One of the greatest dangers to growth of developing economies like India is the middle income trap where crony capitalism creates oligarchies that slow down the growth.

51. Which among the following is the most logical corollary to the above passage?
- Launching more welfare schemes and allocating more finances for the current schemes are urgently needed.
 - Efforts should be made to push up economic growth by other means and provide licences to the poor.
 - Greater transparency in the functioning of the government and promoting the financial inclusion are needed at present.
 - We should concentrate more on developing manufacturing sector than service sector.

Passage - 2

Many pathogens that cause foodborne illnesses are unknown. Food contamination can occur at any stage from farm to plate. Since most cases of food poisoning go unreported, the true extent of global foodborne illnesses is unknown. Improvements in international monitoring have led to greater public awareness, yet the rapid globalization of food production increases consumers' vulnerability by making food harder to regulate and trace. "We have the world on our plates", says an official of WHO.

52. Which of the following is the most logical corollary to the above passage?
- With more options for food come more risks.
 - Food processing is the source of all foodborne illnesses.
 - We should depend on locally produced food only.
 - Globalization of food production should be curtailed.
53. Arjun wants Bhim to guess a 4-digit code which uses all the four digits from 1 to 4. Bhim guesses the code as 1234, 2143 and 3124 one by one. According to the responses provided by Arjun, in each of the three attempts, exactly two digits were in the right position. What are the middle two digits of the code ?
- 13
 - 21
 - 24
 - 34
54. A does half as much work as B in $\frac{3}{4}$ th of the time as B . If together they take 18 days to complete the work. B alone can finish this work in
- 45 days
 - 30 days
 - 50 days
 - 40 days
55. It takes 5 days for a steamboat to travel from A to B along a river. It takes 7 days to return from B to A . How many days will it take for a raft to drift from A to B (all speeds stay constant)?
- 13
 - 35
 - 6
 - 12
56. "My friend Raju has more than 1000 books", said Ram. "Oh no, he has less than 1000 books", said Shyam. "Well, Raju certainly has at least one book", said Geeta. If only one of these statements is true, how many books does Raju have?
- 1
 - 1000
 - 999
 - 1001

57. Anshika is on 13th position from the starting and on 17th position from the end in her class. She is on 8th position from the starting and on 13th position from the end among the students who have passed the exam. Number of failed students is
- (a) 7
(b) 8
(c) 9
(d) Cannot be determined
58. In a class with boys and girls, a chess competition was played wherein every student had to play one game with every other student. It was observed that in 36 matches, both the players were boys and in 66 matches both were girls. What is the number of matches in which 1 boy and 1 girl play against each other ?
- (a) 108
(b) 189
(c) 210
(d) 54
59. How many 4-digit UPI PIN are possible where at least one digit is repeated ?
- (a) 4960
(b) 4536
(c) 5464
(d) None of these
60. A marksman had four successes in six attempts. What is the probability that he had three consecutive successes ?
- (a) $\frac{9}{15}$ (b) $\frac{12}{15}$
(c) $\frac{13}{15}$ (d) $\frac{6}{15}$

Directions for the following 2 (two) items:

Read the following **two passages** and answer the items that follow.

Passage - 1

The Arctic's vast reserves of fossil fuel, fish and minerals are now accessible for a longer period in a year. But unlike Antarctica, which is protected from exploitation by the Antarctic Treaty framed during the Cold War and is not subject to territorial claims by any country, there is no legal regime protecting the Arctic from industrialization, especially at a time when the world craves for more and more resources. The distinct possibility of ice-free summer has prompted countries with Arctic coastline to scramble for great chunks of the melting ocean.

61. Which one of the following is the most important implication of the passage?
- (a) India can have territorial claims in the Arctic territory and free access to its resources.
(b) Melting of summer ice in the Arctic leads to changes in the geopolitics.
(c) The Arctic region will solve the world's future problem of resource crunch.
(d) The Arctic region has more resources than Antarctica.

Passage - 2

India is at once among the fastest growing global economies and home to the largest number of malnourished children in world. There are regions where malnutrition is not the exception but the norm. And across the country, malnutrition is the cause of death for roughly half the 1.3 million children who die before their fifth birthday each year. Even those children who survive suffer permanently from the damage that has already been done to their bodies and minds from not getting enough of the right foods and nutrients. Around 44 million children under 5 are stunted. That makes it harder for them to learn in school and subsequently earn a living as adults. Their lifetime earnings potential is almost a quarter less than of their healthy peers.

62. With reference to the above passage, which of the following is/are the **most rational and practical implication/implications?**

1. India's Public Distribution System should be monitored by the Union Government.
2. Girls should be encouraged to delay marriage and first pregnancy.
3. Mothers should be encouraged to breastfeed their children immediately after birth.
4. The supply of safe drinking water and proper sanitation facilities to all should be ensured.
5. Authorities should ensure the vaccination should ensure the vaccination as prescribed.

Select the correct answer using the code given below.

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

Direction for the questions 63 and 64:

Consider the following questions which consists a question and two statements, decide which one/ones are required to answer.

63. **Question:** What is the circumference of the circle?

Statements: 1. Area of the circle is the half of area of a square.

2. The ratio of the perimeters of square and circle is 2:1.

- (a) Only statement 1 is sufficient to answer the question.
- (b) Only statement 2 is sufficient to answer the question.
- (c) Both the statements together are sufficient to answer.
- (d) Neither statement 1 nor statement 2 is sufficient to answer the question.

64. **Question:** Is the average of the largest and the smallest of four given numbers greater than the average of the four numbers?

Statements: 1. The difference between the largest and the second largest numbers is greater than the difference between the second smallest and the smallest numbers.

2. The difference between the largest and the second largest numbers is less than the difference between the second largest and the second smallest numbers.

- (a) Statement 1 alone is sufficient to answer the question, but statement 2 alone is not.
- (b) Statement 2 alone is sufficient to answer the question, but statement 2 alone is not.
- (c) Both statements 1 and 2 together are sufficient to answer the question, but neither statement alone sufficient.
- (d) Statements 1 and 2 together are not sufficient to answer the question and additional data is needed.

65. Four persons came out of a meeting hall and put on their overcoats randomly. Consider the following statements.

1. It is possible that exactly one person has put on a wrong overcoat.
2. There are exactly 8 ways when exactly three persons have put on a wrong overcoat.

Which of the above statements is/are correct ?

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

66. Let ABC, BCA, CAB be 3-digit numbers such that $ABC + BCA + CAB = 1DD1$ which is a 4-digit number starting and ending in 1. What is the value of $A + B + C + D$?
- (a) 11
(b) 12
(c) 13
(d) 23
67. Raju and Lalitha originally had marbles in the ratio 4:9. Then, Lalitha gave some of her marbles to Raju. As a result, the ratio of the number of marbles with Raju to that with Lalitha became 5:6. What fraction of her original number of marbles was given by Lalitha to Raju ?
- (a) $\frac{7}{33}$
(b) $\frac{6}{19}$
(c) $\frac{1}{4}$
(d) $\frac{1}{5}$
68. How many integers, greater than 999 but not greater than 4000, can be formed with the digits 0, 1, 2, 3 and 4, if repetition of digits is allowed ?
- (a) 499
(b) 500
(c) 375
(d) 376
69. How many positive integers having at least 2 digits can be formed by rearranging the digits 1, 2, 3, 4 such that all the digits are in increasing order ?
- (a) 6
(b) 10
(c) 11
(d) 12
70. Three boys and three girls are walking in a row to get movie ticket. Whenever any two boys are together, they start fighting. To avoid this situation, the girls have decided to not allow any of the boys to be together. In how many ways can all these boys and girls walk in the row ?
- (a) 36
(b) 72
(c) 108
(d) 144
71. In the scheme of compound interest, a certain sum amounts to Rs. 7350 in 2 years and to Rs. 8575 in 3 years. The given information is sufficient to find which parameters ?
1. Rate of interest
 2. Principal
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

72. A positive integer N , when divided by 31, the quotient and remainder are same. How many values of N are possible ?

- (a) 33
(b) 32
(c) 31
(d) 30

73. Consider the three relationships given below:

1. $13^{31} > 31^{13}$
2. $10^{100} < 100^{10}$
3. $2^{32} < 32^2$

- (a) None of them is correct.
(b) All of them are correct.
(c) Two of them are correct.
(d) Only one of them is correct.

74. If $p = \sqrt{2}$, $q = \sqrt[3]{3}$ and $r = \sqrt[4]{4}$, then which of the relation is correct ?

- (a) $p > q > r$ (b) $p > q = r$
(c) $p = r < q$ (d) None of them

75. When digits of a number are reversed, the resulting number is called reversed of the original number. For example, 143 and 341 are mutually reversed numbers. Consider the following statements.

1. There are 7 numbers which are 18 less than their reversed number.
2. There are 8 numbers which are 99 less than their reversed number.

Which of the above statements is/are correct ?

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

Direction for the following 1 (one) item:

Read the following **passage** and answer the item that follow.

Passage

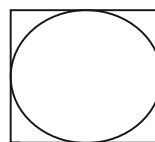
Modern physicians often employ laboratory tests, in addition to physical examinations, in order to diagnose diseases accurately. Insurance company regulations that deny coverage for certain laboratory tests therefore decrease the quality of medical care provided to patients.

76. Which one of the following is an assumption that would serve to justify the conclusion above?

- (a) Physical examinations and the uncovered laboratory tests together provide a more accurate diagnosis of many diseases than do physical examinations alone.
(b) Many physicians generally oppose insurance company regulations that, in order to reduce costs, limit the use of laboratory tests.
(c) Many patients who might benefit from the uncovered laboratory tests do not have any form of health insurance.
(d) There are some illnesses that experienced physicians can diagnose accurately from physicians examination alone.

77. What does the diagram below establish ?

Note: The diagram is a circle inside a square.



- (a) $\pi > 3$
(b) $\pi \geq 2\sqrt{2}$
(c) $\pi < 4$
(d) π is closer to 3 than to 4

Directions for the following 3 (three) items:

Read the following **passage** and answer the items that follow.

Passage

It was not until sometime after having passed through the course of training in two of our chief schools of art that the author got any idea of what drawing really meant. What was taught was the faithful copying of a series of objects, beginning with the simplest forms, such as cubes, cones, cylinders, &c. (an excellent system to begin with at present in danger of some neglect), after which more complicated objects in plaster of Paris were attempted, and finally copies of the human head and figure posed in suspended animation and supported by blocks, &c. In so far as this was accurately done, all this mechanical training of eye and hand was excellent; but it was not enough. And when with an eye trained to the closest mechanical accuracy the author visited the galleries of the Continent and studied the drawings of the old masters, it soon became apparent that either his or their ideas of drawing were all wrong. Very few drawings could be found sufficiently "like the model" to obtain the prize at either of the great schools he had attended. Luckily there was just enough modesty left for him to realise that possibly they were in some mysterious way right and his own training in some way lacking. And so he set to work to try and climb the long uphill road that separates mechanically accurate drawing from artistically accurate drawing.

78. It can be inferred from the passage that the "great schools of art" the author had attended
- effectively taught the true essence of drawing.
 - included trips to see the works of the old masters.
 - neglected to teach drawing the human form.
 - held drawing contests or other assessments to judge drawings' accuracy.
79. The author would likely agree with the following statements EXCEPT:
- It is important to learn to draw simple forms such as cones and cylinders.
 - The painters represented in the galleries of the Continent produced works of great mechanical accuracy.
 - Artistically accurate drawing can only be learned from the schools of art such as the ones attended by the author.
- (a) 1 only (b) 2 only
(c) 3 only (d) 2 and 3 only
80. The author would be most likely to advise a beginning art student to
- avoid copying cubes, cones, and cylinders to begin with.
 - understand that the ideas of drawing of the artists represented in the galleries of the Continent are all wrong.
 - develop both mechanically accurate and artistically accurate drawing skills.
 - attend at least two great schools of art.

SPACE FOR ROUGH WORK

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