

**Directions of Test**

Test Name	CAT - Sample Paper	Total Questions	60	Total Time	120 Mins
Section Name	No. of Questions	Time limit	Marks per Question	Negative Marking	
Verbal Ability	20	0:40(h:m)	3	1/3	
DI & Reasoning	20	0:40(h:m)	3	1/3	
Quantitative Ability	20	0:40(h:m)	3	1/3	

Section : Verbal Ability

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 1

Nobody really likes large-scale organisation: nobody likes to take orders from a superior who takes orders from a superior who takes orders.... Even if the rules devised by bureaucracy are outstandingly humane, nobody likes to be ruled by rules, that is to say, by people whose answer to every complaint is: 'I did not make the rules: I am merely applying them.' Yet, it seems, large-scale organisation is here to stay. Therefore it is all the more necessary to think about it and to theorise about it. The stronger the current, the greater the need for skilful navigation.

The fundamental task is to achieve smallness within large organisation. Once a large organisation has come into being, it normally goes through alternating phases of centralising and decentralising, like swings of a pendulum. Whenever one encounters such opposites, each of them with persuasive arguments in its favour, it is worth looking into the depth of the problem for something more than compromise, more than a half-and-half solution. Maybe what we really need is not either-or but the-one-and-the-other- at-the- same-time.

This very familiar problem pervades the whole of real life, although it is highly unpopular with people who spend most of their time on laboratory problems from which all extraneous factors have been carefully eliminated. For whatever we do in real life, we must try to do justice to a situation which includes all so-called extraneous factors. For we always have to face the simultaneous requirement for order and freedom.

In any organisation, large or small, there must be a certain clarity and orderliness; if things fall into disorder, nothing can be accomplished. Yet orderliness as such, is static and lifeless; so there must also be plenty of elbow-room and scope for breaking through the established order to do the thing never done before, never anticipated by the guardians of orderliness, the new, unpredicted and unpredictable outcome of a man's creative idea. Therefore any organisation has to strive continuously for the orderliness of order and the disorderliness of creative freedom. And the specific danger inherent in large scale organisation is that its natural bias and tendency favour order, at the expense of creative freedom.

We can associate many further pairs of opposites with this basic pair of order and freedom. Centralisation is mainly an idea of order; decentralisation, one of freedom. The man of order is typically the accountant and, generally, the administrator: while the man of creative freedom is the entrepreneur. Order requires intelligence and is conducive to efficiency; while freedom calls for and opens the door to, intuition and leads to innovation.

Excerpted from pages 726-734 of 'Small is Beautiful' by EF Schumacher

Order has been associated with all of the following, except?

- A) Centralisation B) Bean counters C) Entrepreneurs D) Efficiency

Question No. : 2

The central idea of the passage is expressed in which of the following sentences?

- A) Nobody likes to be ruled by rules. B) Large scale organisation's natural bias and tendency favour order.
C) We always have to face the simultaneous requirement of order and freedom.
D) The stronger the current, the greater the need for skilful navigation.



Question No. : 3

The fundamental task is to achieve smallness within large organisation.

This sentence from the passage represents what figure of speech?

- A) Paradox B) Hyperbole C) Irony D) Metaphor

Question No. : 4

Why is breaking an order important in organization?

- A) To become a better administrator. B) To follow bureaucracy C) To become more creative
D) To become more intelligent

Question No. : 5

Why does nobody likes large scale organization?

- A) It gives people freedom B) It makes you an administrator C) Its focus on order
D) Rules of the organisation are the worst



DIRECTIONS for the question : Read the passage and answer the question based on it.

Question No. : 6

When my father was a boy on the family farm, the tasks he and his father did in the fields were gruelling and thankless. But my work – the work we lucky few well-paid professionals do every day, as we co-operate with talented people while solving complex, interesting problems – is fun. And I find that I can devote surprising quantities of time to it.

What is less clear to me, and to so many of my peers, is whether we should do so much of it. One of the facts of modern life is that a relatively small class of people works very long hours and earns good money for its efforts.

Work, in this context, means active, billable labour. But in reality, it rarely stops. It becomes our lives if we are not careful. It becomes us.

As productivity rose across the rich world, hourly wages for typical workers kept rising and hours worked per week kept falling – to the mid-30s, by the 1970s. But then something went wrong. Less-skilled workers found themselves forced to accept ever-smaller pay rises to stay in work. Income gains flowed to those at the top of the income ladder. Willingly or unwillingly, those lower down the ladder worked fewer and fewer hours. Those at the top, meanwhile, worked longer and longer.

Technology and globalisation meant that an increasing number of good jobs are winner-take-most competitions. This relentless competition increases the need to earn high salaries, for as well-paid people cluster together they bid up the price of the resources for which they compete. The dollars and hours pile up as we aim for a good life that always stays just out of reach. For my father, work was a means to an end; it was something you did to earn the money to pay for the important things in life. I think my parents were rather baffled by my determination to find satisfaction in my professional life.

As professional life has evolved over the past generation, it has become much more pleasant. Software and information technology have eliminated much of the drudgery of the workplace.

The fact that our jobs now follow us around is not necessarily a bad thing. Smartphones do not just enable work to follow us around; they also make life easier. Tasks that might otherwise require you to stay late in the office can be taken home. It allows us to focus ever more of our time and energy on doing what our jobs require of us.

There are downsides to this life. It does not allow us much time with newborn children or family members who are ill, and anything that is not intimately connected with professional success.

The option of stepping off the treadmill, however, does not just mean accepting a different vision of one's prospects with a different salary trajectory. It means upending one's life entirely: changing locations, tumbling out of the community, losing one's identity. One reason the treadmill is so hard to walk away from is that life off it is not what it once was. When I was a child, our neighbourhood was rich with social interaction - a world disconnected with work. Today, though our social networks are an interlaced world of work and social life that exposes us to people who do fascinating things, keeping us informed of professional gossip and providing those who have good ideas with the connections to help turn them into reality- *it also traps us.*

.....On a recent visit to my parents place the talk shifted to when I might be planning to return to the east coast of America where they and my extended family still live. As I contemplated I understood why I had trouble communicating to my parents precisely why I wanted to be where I was and why what I was doing appealed to me. *They are asking about a job. I am talking about my life.*

The author means all of the following when she states that " It becomes our lives.... It becomes us", EXCEPT

- A) It follows us home on our smartphones, tugging at us during an evening out or in the middle of our children's bedtime routines.
- B) It makes permanent use of valuable cognitive space, and chooses odd hours to pace through our thoughts, shoving aside whatever might have been there before.
- C) It colonises our personal relationships and uses them for its own ends.
- D) It is something we do to earn the money to pay for the important things in life.

Question No. : 7

What is the paradox mentioned in the passage regarding work?

- A) People who work long hours are dispassionate about the outcome of their work
- B) People at lower levels work fewer hours than those at higher levels
- C) People at lower levels had to accept less pay whereas those at the higher levels were paid more
- D) Hourly wages increased with the increase in the number of hours worked

Question No. : 8

The tone of the passage

- A) Apprehensive yet Objective
- B) Analytical and realistic
- C) Romanticising and prejudiced
- D) Nit-picking yet observant

**Question No. : 9**

Which of these statements if added will not fit with the content of the passage?

- A) Workers in cognitively demanding fields, thinking their way through tricky challenges, would have worked at odd hours too
- B) The bargaining power of the typical blue-collar worker eroded as technology and globalisation handed bosses a whole toolkit of ways to squeeze labour costs.
- C) From the time when my father did gruelling thankless work in fields, the only thing that has changed is the place, now it's offices instead of fields
- D) The shrivelling of civic institutions contributed to, our changing relationship to work: the entry of women into the workforce; the rise of professional ghettos; longer working hours.

Question No. : 10

The author would agree with which of the following statements about work?

- A) Work is about identity, community, purpose – the things that provide meaning and motivation.
- B) Work is about working long hours to achieve professional and social goals
- C) Only higher salary and technological support justifies a life that is constantly revolving around work
- D) Work is but an insignificant part of life, a means to fuel the needs of social and spiritual achievement

DIRECTIONS for the question: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out. Choose its number as your answer and key it in.

Question No. : 11

1. Blues and Jazz share the common parentage of the music of African-American communities in the deep South during the Antebellum era.
2. Fittingly, the beginnings of Blues music were anything but happy.
3. Their music echoed key features of the music of their ancestors such as Conversational elements, Complex polyrhythms etc.
4. These slaves had brought with them the rhythms and musical sensibilities of West Africa.
5. The genre originated during the pre-Civil War era in the southern United States, with the field hollers, work songs, and spirituals of African-American slaves, struggling to express their human thoughts and emotions in the midst of subhuman oppression.

(write the answer key)

- A) 1 B) C) D)

DIRECTIONS for the question: The five sentences (labelled 1,2,3,4, and 5) given in this question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentence and key in this sequence of five numbers as your answer.

Question No. : 12

1. A number of studies have found that certain organic molecules, called PAHs, may be present in the nebulae and star systems all over the universe.
2. It turns out that the conditions for life to arise may actually be quite common throughout the universe.
3. At the very least, the building blocks of life as we know it – amino acids, simple sugars, and other organic compounds – seem to show up wherever we point our telescopes.
4. For instance, organic molecules form quite readily in the clouds of dust and gas that hang between and around stars.
5. These molecules, made up of rings of carbon and hydrogen, have structures that might allow them to help RNA strands self-assemble in the oceans of planets.

(write the answer key)

- A) 23415 B) C) D)



DIRECTIONS for the question: The five sentences (labelled 1,2,3,4, and 5) given in this question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentence and key in this sequence of five numbers as your answer.

Question No. : 13

1. The enterprising driver and his jack (the assistant who shoveled coal into the engine furnace) walked towards the girl but she disappeared.
2. But one night not long after the incident, an Anglo-Indian Mail train driver had to suddenly apply engine brakes on seeing a young girl standing right in the middle of the railway track on a moonlit night and pointing to a spot in the distance.
3. The discovery helped the police to catch the murderer and cause the girl to rest in peace thereafter.
4. Even so, they went towards the spot to which she had pointed and there, under a small mound, they discovered a body which was presumably of the girl, whose apparition they had seen.
- 5 Somerville recounts the story of a girl who was murdered in a forest and the police could neither find her body nor any clues to her assailant.

(write the answer key)

- A) 52143 B) C) D)

DIRECTIONS for the question: The five sentences (labelled 1,2,3,4, and 5) given in this question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentence and key in this sequence of five numbers as your answer.

Question No. : 14

1. If words like black and white were involved, instead of the jargon words dead and living, he would see at once that language was being used in an improper way.
2. In certain kinds of writing, particularly in art criticism and literary criticism, it is normal to come across long passages which are almost completely lacking in meaning.
3. When one critic writes, "The outstanding feature of Mr. X's work is its living quality," while another writes, "The immediately striking thing about Mr. X's work is its peculiar deadness," the reader accepts this as a simple difference opinion.
4. Many political words are similarly abused. The word Fascism has now no meaning except in so far as it signifies "something not desirable."
5. Words like romantic, plastic, values, human, dead, sentimental, natural, vitality, as used in art criticism, are strictly meaningless, in the sense that they not only do not point to any discoverable object, but are hardly ever expected to do so by the reader.

(write the answer key)

- A) 25314 B) C) D)

DIRECTIONS for the question: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out. Choose its number as your answer and key it in.

Question No. : 15

1. You approach a person you think saw exactly what happened.
2. Once you engage him in conversation with harmless patter, you switch the focus and ask your main question
3. You don't know if he saw something and is uncooperative, or if he's telling the truth.
4. If you merely ask him, "Did you see anything?" and he responds by saying, "No" and proceeds to walk away, you are pretty much out of options.
5. You're a police officer canvassing a crime scene for witnesses.

(write the answer key)

- A) 2 B) C) D)



DIRECTIONS for question: Four sentences related to a topic are given below. Three of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out. Choose its number as your answer and key it in.

Question No. : 16

1. In conversations, in the ways people I know meet medical challenges, I've noticed not just a discomfort with the unpopular aspects of aging, but something more general: a shrinking from the body itself, a desire to deny that this body is who we are.
 2. Inspired by the generation-defining tome 'Our Bodies, Ourselves', we trained for childbirth without anesthesia, we looked at our cervixes using a speculum, and in general cultivated in ourselves the thought that our own bodies were not sticky, disgusting, and shameful, but dynamic, marvelous, and, more important, just us ourselves.
 3. In the 1970s, we women used to talk about loving our own bodies.
 4. Today, as we boomers age, male and female, what has happened to that love and excitement?
- (write the answer key)

A) 1 B) C) D)

DIRECTIONS for question: Four sentences related to a topic are given below. Three of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out. Choose its number as your answer and key it in.

Question No. : 17

1. Those changes in sensibility and consciousness never correspond exactly with changes in technology, and many aspects of today's digital world were already taking shape before the age of the personal computer and the smartphone.
2. But the digital revolution suddenly increased the rate and scale of change in almost everyone's lives.
3. Every technological revolution coincides with changes in what it means to be a human being, in the kinds of psychological borders that divide the inner life from the world outside.
4. Virginia Woolf's serious joke that "on or about December 1910 human character changed" was a hundred years premature.

(write the answer key)

A) 4 B) C) D)

DIRECTIONS for the question: Identify the most appropriate summary for the paragraph.

Question No. : 18

Two of the top ten campaigns this year are those that have seen success from the smart use of data to drive creative and media strategy. The Economist used a targeted programmatic display campaign to reach new prospects with humorous and accessible tagline ads. The campaign hit 50% of target in 9 days, with a return on investment of over 25:1. In sixth place, a big data campaign for Australian swimming pool builder Narellan Pools took a 'moment marketing' approach. Customers were targeted at the precise times they were most likely to buy a pool, with focused creative motivating purchase decisions. The campaign increased direct leads by 11% and sales by 23% year on year.

- A) The range of alternative approaches used in campaigns— like data-driven 'moment marketing' are capable of customer attention without much consideration on financial returns to the client.
- B) It is more important than ever that ad companies now focus only on data for creativity and ideas to deliver tangible business results for clients.
- C) These alternative approaches used to make creative campaigns build brands and deliver results in the long term as well as at the time of the campaign.
- D) These alternative approaches used in campaigns can open up new and creative media opportunities and are also capable of generating business results.



DIRECTIONS for the question: Identify the most appropriate summary for the paragraph.

Question No. : 19

One of the hallmarks of early hominids and some primates was the fact that pairs of parents would rear and protect any offspring instead of either leaving only one parent to take care of the children or to just let the offspring fend for themselves in the wild. What caused this change in behavior has been debated. Now, however, Professor Garth Fletcher claims it was the feeling and emotion of romantic love that created a stronger pair-bonding experience for those early human ancestors. The bond of this romantic pair translated into a more stable and protective environment for which to raise offspring. The offspring would survive longer and even thrive with this type of life compared to others who were essentially raised by just one parent or the other.

- A) As evidenced from the life of early hominids and primates, the provision of a protective and stable environment, born out of love between the romantic pair, is what helps an offspring survive.
- B) As illustrated from the life of early hominids and primates, a strong romantic pair-bonding experience leading to a more stable and protective environment lead to a longer and better life for the offspring.
- C) As derived from the life forms, it is essential for the offspring that its parent pair should be involved in a romantic pair bonding experience so that it can have a healthier and longer life.
- D) As can be seen from the example of hominids and primates, survival of species is directly linked to the kind of relationship shared by the parents.

DIRECTIONS for the question: Identify the most appropriate summary for the paragraph.

Question No. : 20

If one thing's for sure, it's that I decided what breakfast cereal to eat this morning. I opened the cupboard, I perused the options, and when I ultimately chose the Honey Bunches of Oats over the Kashi Good Friends, it came from a place of considered judgment, free from external constraints and predetermined laws. Or did it? This question—about how much people are in charge of their own actions—is among the most central to the human condition. Do we have free will? Are we in control of our destiny? Do we choose the proverbial Honey Bunches of Oats? Or does the cereal—or some other mysterious force in the vast and unknowable universe—choose us? The Greek playwright Sophocles seemed convinced that people have no real control over their fortunes. The character Oedipus, for example, tries desperately to buck the prophesy that he will kill his father and marry his mother, only to end up doing just that.

- A) The author expounds on the subject of free will and uses the examples of breakfast cereal and a Greek playwright to highlight his take on the matter
 - B) The author explores the mysterious aspect of free will and goes on prove that we in fact have very little control over our destinies
 - C) The author skillfully uses the example of cereals and Sophocles' play in order to highlight the conundrum posed by the matter of free will and whether it exists
 - D) The author adroitly evades answering the question regarding the existence of free will by using the example of the box of cereals and Sophocles' play
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**Section : DI & Reasoning**

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Question No. : 21

A study was conducted to ascertain the relative importance that employees in five different countries assigned to five different traits in their Chief Executive Officers. The traits were compassion (C), decisiveness (D), negotiation skills (N), public visibility (P), and vision (V). The level of dissimilarity between two countries is the maximum difference in the ranks allotted by the two countries to any of the five traits. The following table indicates the rank order of the five traits for each country.

Rank	Country				
	India	China	Japan	Malaysia	Thailand
1.	C	N	D	V	V
2.	P	C	N	D	C
3.	N	P	C	P	N
4.	V	D	V	C	P
5.	D	V	P	N	D

Three of the following four pairs of countries have identical levels of dissimilarity. Which pair is the odd one out?

- A) Malaysia & China B) China & Thailand C) Thailand & Japan D) Japan & Malaysia

Question No. : 22

Which amongst the following countries is most dissimilar to India?

- A) China B) Japan C) Malaysia D) Thailand

Question No. : 23

Which of the following countries is least dissimilar to India?

- A) China B) Japan C) Malaysia D) Thailand

Question No. : 24

Which of the following pairs of countries are most dissimilar?

- A) China & Japan B) India & China C) Malaysia & Japan D) Thailand & Japan



DIRECTIONS for the question: Read the information given below and answer the question that follows.

Question No. : 25

Guddu, Yuvi, Chunnu, Munnu and Buvi are five friends living in five different cities named Kurukshetra, Jaipur, Varanasi, Bahadurgarh and Palampur, not necessarily in that order. Their salaries are 700000, 800000, 900000, 1100000, 1300000 (INR per annum), in no particular order. Further, the following information is given about them:

1. Munnu, who does not live in Bahadurgarh, earns a salary that is a prime multiple of 100000.
2. The person, who lives in Palampur, is not the one who earns the minimum amongst these five friends.
3. The difference between salaries of Munnu and Chunnu is the same as the difference between salaries of Guddu and Buvi.
4. Yuvi made a call to one of his four friends living in Palampur who was earning a perfect square multiple of 100000 INR in salary.
5. Chunnu's salary is 100000 INR more than the average salary of Munnu and Guddu
6. Yuvi lives in the city, which has the shortest name amongst the above cities.

If Munnu lives in Varanasi, then what is the average salary of the persons living in Bahadurgarh and Kurukshetra?

- A) Rs.9 lakh B) Rs.10 lakh C) Rs.12 lakh D) Data Insufficient

Question No. : 26

Guddu, Yuvi, Chunnu, Munnu and Buvi are five friends living in five different cities named Kurukshetra, Jaipur, Varanasi, Bahadurgarh and Palampur, not necessarily in that order. Their salaries are 700000, 800000, 900000, 1100000, 1300000 (INR per annum), in no particular order. Further, the following information is given about them:

1. Munnu, who does not live in Bahadurgarh, earns a salary that is a prime multiple of 100000.
2. The person, who lives in Palampur, is not the one who earns the minimum amongst these five friends.
3. The difference between salaries of Munnu and Chunnu is the same as the difference between salaries of Guddu and Buvi.
4. Yuvi made a call to one of his four friends living in Palampur who was earning a perfect square multiple of 100000 INR in salary.
5. Chunnu's salary is 100000 INR more than the average salary of Munnu and Guddu
6. Yuvi lives in the city, which has the shortest name amongst the above cities.

Who stays in Palampur?

- A) Guddu B) Buvi C) Yuvi D) Chunnu

Question No. : 27

Guddu, Yuvi, Chunnu, Munnu and Buvi are five friends living in five different cities named Kurukshetra, Jaipur, Varanasi, Bahadurgarh and Palampur, not necessarily in that order. Their salaries are 700000, 800000, 900000, 1100000, 1300000 (INR per annum), in no particular order. Further, the following information is given about them:

1. Munnu, who does not live in Bahadurgarh, earns a salary that is a prime multiple of 100000.
2. The person, who lives in Palampur, is not the one who earns the minimum amongst these five friends.
3. The difference between salaries of Munnu and Chunnu is the same as the difference between salaries of Guddu and Buvi.
4. Yuvi made a call to one of his four friends living in Palampur who was earning a perfect square multiple of 100000 INR in salary.
5. Chunnu's salary is 100000 INR more than the average salary of Munnu and Guddu
6. Yuvi lives in the city, which has the shortest name amongst the above cities.

If Yuvi and Chunnu live in cities with names starting with consecutive alphabets, then who lives in Varanasi?

- A) Guddu B) Yuvi C) Buvi D) Munnu

**Question No. : 28**

Guddu, Yuvi, Chunnu, Munnu and Buvi are five friends living in five different cities named Kurukshetra, Jaipur, Varanasi, Bahadurgarh and Palampur, not necessarily in that order. Their salaries are 700000, 800000, 900000, 1100000, 1300000 (INR per annum), in no particular order. Further, the following information is given about them:

1. Munnu, who does not live in Bahadurgarh, earns a salary that is a prime multiple of 100000.
2. The person, who lives in Palampur, is not the one who earns the minimum amongst these five friends.
3. The difference between salaries of Munnu and Chunnu is the same as the difference between salaries of Guddu and Buvi.
4. Yuvi made a call to one of his four friends living in Palampur who was earning a perfect square multiple of 100000 INR in salary.
5. Chunnu's salary is 100000 INR more than the average salary of Munnu and Guddu
6. Yuvi lives in the city, which has the shortest name amongst the above cities.

If person from Bahadurgarh does not earn the maximum or the minimum salary, then what is the average salary (in lakhs) of persons living in Kurukshetra and Varanasi? (Rs. in lakh)

- A) 10 B) C) D)

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Question No. : 29

The courses for the DP1 students at an IB school are classified as Higher Level (HL) and Standard Level (SL). English(HL) is a compulsory course for all DP1 students. Besides English(HL), the students need to choose five more courses from amongst Mathematics HL and SL, Physics HL and SL, Chemistry HL and SL and Biology HL and SL. Students can choose these five courses on the basis of their scores in the 10th grade examinations. The 10th grade examination is comprised of six courses - two languages, Mathematics, Physics, Chemistry and Biology – each with a maximum of 100 marks. The 10th grade scores are classified as Distinction (75% to 100%), First Class (60% to 75%) and Second Class (35% to 60%).

The school counsellor permits the students to choose courses subject to the following conditions:

- Students with a Distinction in their 10th grade examinations may choose any five courses.
- Students with a First Class in their 10th grade examinations cannot choose Mathematics(HL).
- Students with a Second Class in their 10th grade examinations cannot choose Mathematics(HL), Mathematics(SL) or Physics(HL).
- A student who has overall distinction but does not have a Distinction in Chemistry in the 10th grade examinations cannot choose Chemistry(HL).
- A student who has overall distinction but does not have a Distinction in Biology in the 10th grade examinations cannot choose Biology(HL).

How many different combinations of subjects can a student with a Distinction in the 10th grade examinations have?

- A) 56 B) C) D)

Question No. : 30

How many different combinations of subjects can a student with a First Class in the 10th grade examinations have?

- A) 21 B) C) D)

Question No. : 31

How many different combinations of subjects can a student with a Second Class in the 10th grade examinations have?

- A) 1 B) C) D)



Question No. : 32

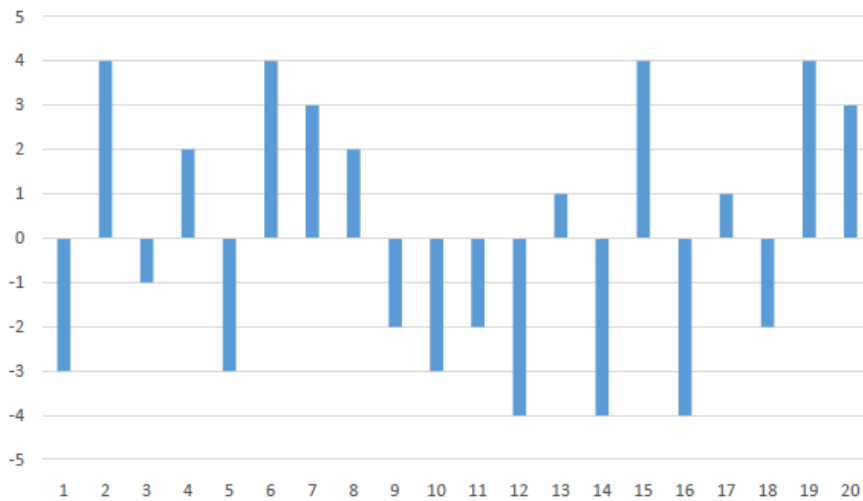
A student with a Distinction in the 10th grade examinations has 70% in Biology. How many different combinations of subjects can the student have?

- A) 21 B) C) D)

DIRECTIONS for the question: Study the following information carefully and answer the given question.

Question No. : 33

Kushdeep conducted a survey on the latest mobile Xeon with twenty people. Each person have to give a rating from 0 to 10 and each rating was an integer. The bar graph given below provides, for each person, the value of the average rating given by the twenty people in the survey minus the rating of that person in the survey.



Which of the following can be the number of person who have given exactly 5 ratings in the survey?

- A) 0 B) 1 C) 2 D) All of the above

Question No. : 34

How many persons definitely gave at least 6 rating in the survey?

- A) 7 B) 8 C) 9 D) 10

Question No. : 35

If the number of persons who gave rating exactly 6 is four less than the number of persons who gave rating exactly 2, what is the average rating of the persons in the survey.

- A) 4 B) 5 C) 6 D) Cannot be determined

Question No. : 36

If only the number of persons who gave rating above 6 are considered, what can be the maximum number of such persons?

- A) 10 B) 11 C) 12 D) 13



DIRECTIONS for the question: Read the information given below and answer the question that follows.

Question No. : 37

Mr. Ali, Mrs. Bali, Mr. Chopra, Mr. Dogra, Mrs. Emily, Mr. Farhan, Mr. Gupta, Mr. Honda, Ms. Iva and Mr. Jacob, all went to Mr. Kamat's house for a party, each individual by her/his car.

There are eleven parking slots in a straight line one behind the other from east to west in front of Mr. Kamat's house. Mr. Kamat's car was parked in slot no. 6 facing east. The cars in the middle couldn't come out unless the slot at the front or back is empty. Cars had to be parked in the same direction and had to proceed in that direction only, but they could be reversed in the parking lane itself if need be and if there is enough space behind. It was decided that they all would park the cars in a way that no one else had to move his or her car for giving way to the other while departing. Also there is enough space behind 11th parking slot for reversing the car and in front of the 1st parking slot for movement of the car.

Further information is as follows:

1. Ms. Iva, Mrs. Bali and Mrs. Emily had to leave early. So the three ladies would be the first to leave.
2. Ms. Iva doesn't know how to reverse the car.
3. Mr. Honda owns a small car which can be parked perpendicular to the road so that he can leave without moving forward or backward.
4. Mr. Chopra is the last one to leave

If the first three parking slots are occupied by Ms. Iva, Mrs. Bali and Mrs. Emily (in whatever order) and the ninth slot is occupied by Mr. Honda, which one of the following should be the best choice for Mr. Chopra so that the others can take out their cars without any hassles irrespective of the order they come out?

- A) Slot No. 4 B) Slot No. 7 C) Slot No. 10 D) Slot No. 11

Question No. : 38

Mr. Jacob and Mr. Gupta will leave together after Ms. Iva, Mrs. Bali and Mrs. Emily leave.

Mr. Gupta parks his car in fourth parking slot and Mr Jacob parks in the eleventh slot.

If Mr. Honda was to leave immediately after Mr. Gupta and Mr. Jacob, and if Mr. Farhan parks his car in slot 9, in which parking should Mr. Honda park his car, given that anyone remaining can be the next to leave?

- A) Slot No. 5 B) Slot No. 8 C) Slot No. 10 D) Can't say

Question No. : 39

Referring to the previous question, which of the following pair or pairs can interchange their positions?

- I. Mrs. Bali and Mrs. Emily
- II. Mr. Jacob and Mr. Gupta
- III. Mr. Ali and Mr. Dogra

- A) I and II B) II and III C) I and III D) All of these

Question No. : 40

If information of previous question is valid then in which of the parking slot Mr. Ali can park his car?

- A) 5 B) 7 C) 10 D) Any of the first three options

Section : Quantitative Ability

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 41

10% of a vessel full of milk is drawn off and replaced with water. Then 10% of this mixture is drawn off and replaced with milk. 10% of the mixture is again drawn off and replaced with water. If the vessel now contains 199.1 litres of water, what is the volume of the vessel? (in litres)

- A) 1100 B) C) D)



DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 42

p and q are the roots of $x^2 - x - 6 = 0$. Form the equation whose roots are $(2p + 1)$ and $(2q + 1)$.

- A) $x^2 + 4x + 21 = 0$ B) $x^2 - 4x - 21 = 0$ C) $x^2 + 4x - 21 = 0$ D) $x^2 - 4x + 21 = 0$

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 43

ΔABC is a right angled triangle of area 20. If the legs of the right angle are x and y and the hypotenuse is 10, what is the value of $(x + y)^2$? (in numerical value)

- A) 180 B) C) D)

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 44

The side of the rhombus is 8 cm each and the difference between two adjacent angles is 90 degrees. Find the area of rhombus.

- A) $8\sqrt{2}$ B) 16 C) $16\sqrt{2}$ D) None of these

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 45

Raman Pasha purchased a bicycle for Rs.7000. Each year it depreciated by $1/7^{\text{th}}$ of its value. He sold the bicycle after four years at a profit of 20%. What was the approximate selling price of the bicycle?

- A) 4500 B) 3500 C) 5400 D) 4300

DIRECTIONS for the question : Solve the following question and mark the best possible option.

Question No. : 46

$$\text{Log}_4(x - 1) = \text{Log}_2(x - 3)$$

Find the number of solutions? (in numerical value)

- A) 1 B) C) D)

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 47

Find the minimum value of $\frac{a^2 - a + 1}{a^2 + a + 1}$, given a is real.

- A) $1/3$ B) 1 C) 0 D) $1/2$



DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 48

Anil takes a loan of Rs. 15000 from a merchant. The merchant offers him two options for repayment of the loan: either he has to repay the loan with 11% interest compounded annually within two years or with 8% simple interest within three years. Anil selects the second option. Compared to the first option, find the gain or loss of the merchant because of Anil's choice? (write the ans key)

1. Gain, Rs.450 2. Loss, Rs.118.5 3. Gain, Rs.118.5 4. Loss, Rs.450
A) 3 B) C) D)

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 49

The average weight of 18 students is 15 kg. One student left the class due to which average drops by one kg. Find the weight of the student who left the class.

- A) 29 B) 32 C) 28 D) 30

DIRECTIONS for the question: Mark the best option:

Question No. : 50

In an election, the winning candidate received 64000 votes which represented 80% of the electorates. The number of electorates are

- A) 80000 B) 85000 C) 75000 D) 90000

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 51

In an examination, a candidate wrote seven papers all having equal maximum possible marks. If the marks he secured in these seven papers are in the ratio 4 : 5 : 6 : 7 : 8 : 9 : 10, and the average of his highest and lowest scores is 60%, find the number of papers in which he scored not less than 75%. (in numerical value)

- A) 2 B) C) D)

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 52

How many five lettered words which starts with 'S', that can be formed using the letters of the word RATIOS ? Repetition is not allowed.

- A) 5 B) 5⁴ C) 5! D) None of these

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 53

A and B started a business by investing Rs. 3,50,000 and Rs. 1,40,000 respectively. A gets 20% of the yearly profit for managing the business. There after the profit is divided in the ratio of the capital. If A receives totally Rs. 38,000 more than B at the end of a year, then the profit is

- A) Rs. 28,000 B) Rs. 2,80,000 C) Rs. 1,05,000 D) Rs. 70,000



DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 54

$$\sqrt{12\sqrt{12\sqrt{12\cdots\infty}}} = x, \text{ Find } x^3.$$

(It is known that x is not equal to 0)

- A) 1728 B) C) D)

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 55

For how many odd integers is the cube greater than -10 and the square less than 70?

- A) 3 B) 5 C) 7 D) Can't say

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 56

If p is a prime number and a, b, c and d are consecutive natural numbers, then $(a + b + c + d)^P - a^P + b^P + c^P + d^P$ is always divisible by

- A) 6 B) (a + b + c + d) C) p D) None of these

DIRECTIONS: Solve the following question and mark the best possible option

Question No. : 57

The price of sugar is increased by 25%. Find by how much percent the consumption of sugar be decreased so as not to increase the expenditure?

- A) 25% B) 40% C) 20% D) 30%

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 58

If 2 men can do a work in the same time as can 3 women or 4 children, how many days will it take for 3 men, 4 women and 5 children to do a job which four men take 98 days to complete?

- A) 12 B) 72 C) 49/6 D) None of these

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 59

The value of $\frac{1}{20} + \frac{1}{30} + \frac{1}{42} + \frac{1}{56} + \frac{1}{72} + \frac{1}{90}$ is

- A) $\frac{1}{10}$ B) $\frac{3}{5}$ C) $\frac{3}{20}$ D) $\frac{7}{20}$



DIRECTION for the question: Solve the following question and mark the best possible option.

Question No. : 60

The population of a bacteria culture increases by 10% per hour for the first two hours and then decreases by 10% per hour for the next one hour. After that, the population increases by 5% per hour for the next two hours. If the initial population of the culture was 400,000, what will be the population at the end of 5 hours?

- A) 576,000 B) 527,076 C) 518,400 D) 480,249

QNo:- 1 ,Correct Answer:- C

Explanation:- Refer to the last paragraph - Centralisation is mainly an idea of order; decentralisation, one of freedom. The man of order is typically the accountant and, generally, the administrator: while the **man of creative freedom is the entrepreneur**. Order requires intelligence and is conducive to efficiency; while freedom calls for, and opens the door to, intuition and leads to innovation.

Note that bean counter means a Finance guy.

QNo:- 2 ,Correct Answer:- C

Explanation:- The passage is arguing that there is always a struggle between order and creativity, yet both are important. This is what is said by **option C**.

A – is biased towards creativity.

B – is just a statement of fact about large organizations; does not contain the author's opinion.

D – is a specific warning about the dangers of 'excessive' order in the case of big organizations.

QNo:- 3 ,Correct Answer:- A

Explanation:- A **paradox** is a statement which seems at first look to be combining opposites – counterintuitive, but on a closer scrutiny – contains some truth in it. Big and Small are opposites. But searching for smallness inside bigness is not all that futile an exercise – as discussed by the passage.

B – A hyperbole is an exaggeration.

C – An Irony is when you expect something, and something totally different happens

D – A metaphor is an implied comparison.

QNo:- 4 ,Correct Answer:- C

Explanation:- Refer paragraph 4: Yet orderliness as such, is static and lifeless; so there must also be plenty of elbow-room and scope for breaking through the established order to do the thing never done before, never anticipated by the guardians of orderliness, the new, unpredicted and unpredictable outcome of a man's creative idea. Therefore any organisation has to strive continuously for the orderliness of order and the disorderliness of creative freedom. **And the specific danger inherent in large scale organisation is that its natural bias and tendency favour order, at the expense of creative freedom.**

Option A is wrong as mentioned - The man of order is typically the accountant and, generally, the administrator: while the man of creative freedom is the entrepreneur."

Similarly Option B is wrong.

Option D does not find any support in the passage.



QNo:- 5 ,Correct Answer:- C

Explanation:- Refer to paragraph 1:

Nobody really likes large-scale organisation: nobody likes to take orders from a superior who takes orders from a superior who takes orders.... Even if the rules devised by bureaucracy are outstandingly humane, nobody likes to be ruled by rules, that is to say, by people whose answer to every complaint is: 'I did not make the rules: I am merely applying them.'

The focus on order creates problem.

Becoming an administrator is not an issue but the focus on order is an issue.

Option D is extreme.

QNo:- 6 ,Correct Answer:- D

Explanation:- The author states that work rarely stops and overpowers our lives and the way we lead them.

The other three options give these instances, whereas **option D** states that work is something which is secondary to other important things in life.

QNo:- 7 ,Correct Answer:- B

Explanation:- The passage states that those down the ladder worked fewer hours and those at the top worked longer hours. This is a paradox given at end of para 4. **Option B** is the answer.

Option C isn't paradoxical

Option D is opposite of what's stated in 1st line of para 4

Option A is incorrect as it's not given that the author is dispassionate. Author finds his work fun . Refer para 1 and last line of passage

QNo:- 8 ,Correct Answer:- B

Explanation:- The author is **analysing** the way work is viewed by her father and herself. At the same time though she finds that her view is appropriate for her, she looks at the other side too. Hence **option B** is correct.

Option A is incorrect as she enjoys her work, it appeals to her, so apprehensive would be incorrect

Option C is incorrect because of word - prejudiced. though she finds that her view is appropriate for her, she looks at the other side too- her father's view point

Option D is incorrect as nit-picking doesn't fit the bill

QNo:- 9 ,Correct Answer:- C

Explanation:-

Option C talks about only place of work changing rest remaining the same, which is incorrect.

In the 1st para itself, author describes his father's work as gruelling and thankless while his work as fun. so, the nature of work has changed too.

The author talks of work filling up a large portion of time. So option A could fit in.

Option B talks about bargaining power and squeezing labour costs which could explain why the lower levels could not improve their standard of living. It's in line with para 4

Option D 'civic institutions' is in line with penultimate para



QNo:- 10 ,Correct Answer:- A

Explanation:-

The author doesn't consider work to be a job but rather a life, so **option A** is correct.

Option B is incorrect as it isn't about working long hours being primary. Author spends long hours because she finds her work fun

Option C is incorrect as it's extreme because of use of word 'only'

Option D is incorrect because author doesn't see work as an 'insignificant part of life'

QNo:- 11 ,Correct Answer:- 1

Explanation:- Correct sequence is 2543

Theme is:- History of Blues music.

Sentence 1 is making a comparison between Blues and Jazz music which is not linked to the major theme nor does this sentence make a pair with any other sentence.

QNo:- 12 ,Correct Answer:- 23415

Explanation:- Statements 2 and 3 are linked by "may actually be quite common throughout the universe." in 2 with "show up wherever we point our telescopes." in 3

The word **these** in 5 talks about the molecules mentioned in statement 1, so 1 and 5 are also linked.

4,5 and 1 are together. Because for instance is used in 4, and the order needs to be 415,

Statement 4 cannot be the first sentence.

So the correct order is **23415**.

QNo:- 13 ,Correct Answer:- 52143

Explanation:- As we read the sentences, we realize statement 1 can't be the opening because of its use of 'the' with the driver and girl implying both have been introduced elsewhere.

Use of 'an' with train driver in statement 2 helps us figure that this statement introduces the driver.

Hence 2-1 is a pair.

3 talks about 'the discovery' which is specified in 4 'discovered a body'.

Hence 4-3 is also a pair.

5 and 2 are linked as 'the incident' being talked about in 2 is specified in 5. Hence 5-2 is another pair.

Therefore the final sequence is **52143**

QNo:- 14 ,Correct Answer:- 25314

Explanation:-

The paragraph talks about writing in particular art criticism and literary criticism and the complete lack of meaning to the passages found therein.

Hence 2 will be the first statement.

2 and 5 are pair due to word 'criticism'.

5 introduces 'reader' into the paragraph and

3 takes it forward.

The living and deadness in 3 is referred to once again in 1.

Improper way used in 1 is further clarified in 4 by giving an example of a political word. Fascism.

Hence the final arrangement is **25314**



QNo:- 15 ,Correct Answer:- 2

Explanation:-

5-1-4-3

After reading once 512 looks like a possible partial rearrangement but then 2 should be followed by the main question which isn't given in remaining statements 3 and 4

So taking a step back, 51 can now be followed by 3 or 4.

But 513 doesn't make sense as there's gap between 1 and 3.

3 fits after 4 as "if he's telling the truth" in 3 should come after his reply which is given in 4.

Hence 5143

Line 2 looks related but **doesn't fit** in the para hence is a misfit

QNo:- 16 ,Correct Answer:- 1

Explanation:-

In this case, statements 3-2-4 form a pair of connected statements.

These sentences talk about how we used to view our bodies and how that element has changed now.

Line 3 and 2 specifically relate to women.

But lines 4 and 1 talk about both males and females.

Line 4 can come after 2 as it introduces males which 1 misses out on.

Statement 1, though related to the context, **does not fit** with any of sentences and does not follow or precede any sentence.

QNo:- 17 ,Correct Answer:- 4

Explanation:-

In the given context, statements 3-1-2 form a set of connected statements.

These statements provide a generic introduction to the given subject and highlight the given context.

Statement 4 does not fit in the given scheme of things as it talks about a specific quote of a specific person which fits a specific context. Clearly this information is missing in the given context and this makes **statement 4** the odd one out.

QNo:- 18 ,Correct Answer:- D

Explanation:- The passage talks of how using pragmatic techniques in campaigning helped them achieve new prospects as well as business results. **Option D** conveys this idea.

Option A- It can be eliminated because it says...without much consideration to financial returns, which is in fact contradicting the facts in the passage.

Option B- It can be eliminated as it states that ad companies should focus "only on data" which is not what is conveyed in the passage. It generalises the conclusion

Option C- This option talks that techniques deliver results in long term and at the time of campaign. The passage does not talk about the future gains. It's only talking of present gains. Hence it can be eliminated

QNo:- 19 ,Correct Answer:- B

Explanation:-

Option B brings in the correct gist of the given paragraph.

Option A is incorrect as it's not just about survival "the offspring would survive longer and even thrive "

Option C is incorrect as it is not from the earlier **life forms, rather** early hominids and some primates

Option D is incorrect as it is not 'survival of species' rather survival and growth of offspring



QNo:- 20 ,Correct Answer:- C

Explanation:-

In the given case, the author of the passage delves into the subject of free will and goes on raising questions pertaining to it. He does not conclusively answer the question whether free will exists and simply quotes a couple of examples (cereals and Sophocles' play) in order to showcase his thoughts.

*This makes **option C** the best answer in the given case.*

Let's evaluate the other options as well:

Option A: The author does not provide his take on the matter.

Option B: The author does not prove that we have very little control over our destinies.

Option D: The author most definitely does not avoid answering questions pertaining to free will.

QNo:- 21 ,Correct Answer:- D

Explanation:-

Leaving Japan & Malaysia, rest all show maximum dissimilarity.

QNo:- 22 ,Correct Answer:- B

Explanation:-

Among the options in Japan, D has been ranked first compared to its rank 5th under India. That is the maximum difference. Hence Japan.

QNo:- 23 ,Correct Answer:- A

Explanation:-

Leaving China rest all countries at least show a dissimilarity difference of 3 in at least one trait.

QNo:- 24 ,Correct Answer:- D

Explanation:-

Again in the countries Thailand & Japan, D has been ranked 5th and 1st respectively.

**QNo:- 25 ,Correct Answer:- D****Explanation:-** Since Yuvi lives in the city which has the shortest name amongst the above cities. So, Yuvi lives in jaipur.From 4th direction, there is one friend who lives in palampur and earns 9 lakhs.From 1st direction, Munnu earns 7/11/13 lakhs.From 5th direction, following cases are possible:

Munnu(M)	Guddu(G)	Chunnu (C) $\frac{M+G}{2} + 1$
7	13	11
11	Not possible	
13	7	11

So, we can consolidate all the information in following table:

Names	cities	earning
G	B/K/V	13/7
Y	J	8
C	B/K/V	11
M	K/V	7/13
B	P	9

Data insufficient

QNo:- 26 ,Correct Answer:- B**Explanation:-** Since Yuvi lives in the city which has the shortest name amongst the above cities. So, Yuvi lives in jaipur.From 4th direction, there is one friend who lives in palampur and earns 9 lakhs.From 1st direction, Munnu earns 7/11/13 lakhs.From 5th direction, following cases are possible:

Munnu(M)	Guddu(G)	Chunnu (C) $\frac{M+G}{2} + 1$
7	13	11
11	Not possible	
13	7	11

So, we can consolidate all the information in following table:

Names	cities	earning
G	B/K/V	13/7
Y	J	8
C	B/K/V	11
M	K/V	7/13
B	P	9

B stays in palampur.



QNo:- 27 ,Correct Answer:- D

Explanation:- Since Yuvi lives in the city which has the shortest name amongst the above cities. So, Yuvi lives in jaipur.

From 4th direction, there is one friend who lives in palampur and earns 9 lakhs.

From 1st direction, Munnu earns 7/11/13 lakhs.

From 5th direction, following cases are possible:

Munnu(M)	Guddu(G)	Chunnu (C) $\frac{M+G}{2} + 1$
7	13	11
11	Not possible	
13	7	11

So, we can consolidate all the information in following table:

Names	cities	earning
G	B/K/V	13/7
Y	J	8
C	B/K/V	11
M	K/V	7/13
B	P	9

If Yuvi and Chunnu live in cities with names starting with consecutive alphabets,so they live in J/K then, M lives in Varanasi.

QNo:- 28 ,Correct Answer:- 10

Explanation:- Since Yuvi lives in the city which has the shortest name amongst the above cities. So, Yuvi lives in jaipur.

From 4th direction, there is one friend who lives in palampur and earns 9 lakhs.

From 1st direction, Munnu earns 7/11/13 lakhs.

From 5th direction, following cases are possible:

Munnu(M)	Guddu(G)	Chunnu (C) $\frac{M+G}{2} + 1$
7	13	11
11	Not possible	
13	7	11

So, we can consolidate all the information in following table:

Names	cities	earning
G	B/K/V	13/7
Y	J	8
C	B/K/V	11
M	K/V	7/13
B	P	9

10 lakhs

QNo:- 29 ,Correct Answer:- 56

Explanation:- A student with a distinction in the 10th grade examinations may choose any five subjects. So, the total number of combinations that can be chosen is

$${}^8C_5 = \frac{8!}{3!5!} = \frac{8 \times 7 \times 6}{3 \times 2} = 56.$$



QNo:- 30 ,Correct Answer:- 21

Explanation:- A student with a First Class in the 10th grade examinations cannot choose Mathematics(HL). So, the student can choose any five of the remaining seven subjects.

Thus, there are a total of ${}^7C_5 = \frac{7!}{2!5!} = \frac{7 \times 6}{2} = 21$ combinations of subjects.

QNo:- 31 ,Correct Answer:- 1

Explanation:- A student with a Second Class in the 10th grade examinations cannot choose Mathematics(HL), Mathematics(SL) or Physics(HL). So, the student must choose all of the remaining five subjects. Thus, there is only 1 combination of subjects.

QNo:- 32 ,Correct Answer:- 21

Explanation:- Since the student has a distinction in the 10th grade examinations but not a distinction in Biology, he or she can choose any combination of five subjects except Biology(HL).

Thus, there is a total of ${}^7C_5 = \frac{7!}{2!5!} = \frac{7 \times 6}{2} = 21$ combinations of subjects.

QNo:- 33 ,Correct Answer:- D

Explanation:-

Let the average rating given by all the person = A

So, A – the rating given by each person = the value given in the bar graph for each person

The information given in the bar graph can be gathered as follows-

Rating	Number of persons
A – 4	4
A – 3	2
A – 2	2
A – 1	2
A + 1	1
A + 2	3
A + 3	3
A + 4	3

Option (D) All of the above

Each person gave the rating from 0 to 10.

Also the range of rating varies from A – 4 to A + 4

So, the value of A can be 4, 5 or 6

If A = 4, A + 1 = 5, 1 persons have given rating 5

If A = 5, no person have given rating 5

If A = 6, A – 1 = 5, 2 persons have given rating 5



QNo:- 34 ,Correct Answer:- C

Explanation:-

Let the average rating given by all the person = A

So, A – the rating given by each person = the value given in the bar graph for each person

The information given in the bar graph can be gathered as follows-

Rating	Number of persons
$A - 4$	4
$A - 3$	2
$A - 2$	2
$A - 1$	2
$A + 1$	1
$A + 2$	3
$A + 3$	3
$A + 4$	3

Option (C) 9

Each person gave the rating from 0 to 10.

Also the range of rating varies from $A - 4$ to $A + 4$

Since the minimum value of A can be 4, so the value of $A + 2 = 6$

So total of $3 + 3 + 3 = 9$ people would definitely gave rating atleast 6 in the survey

QNo:- 35 ,Correct Answer:- C

Explanation:-

Let the average rating given by all the person = A

So, A – the rating given by each person = the value given in the bar graph for each person

The information given in the bar graph can be gathered as follows-

Rating	Number of persons
$A - 4$	4
$A - 3$	2
$A - 2$	2
$A - 1$	2
$A + 1$	1
$A + 2$	3
$A + 3$	3
$A + 4$	3

Option (C) 6

Each person gave the rating from 0 to 10.

Also the range of rating varies from $A - 4$ to $A + 4$

So, the value of A can be 4, 5 or 6

If $A = 4$, $A + 2 = 6$, 3 persons have gave rating 6 and $A - 2 = 2$, 2 persons have gave rating 2, the required difference is not 4

If $A = 5$, $A + 1 = 6$, 1 person have gave rating 6 and $A - 3 = 2$, 2 person have gave rating 2, the required difference is not 4

If $A = 6$, no person have gave rating 6 and $A - 4 = 2$, 4 persons have gave rating 2, the required difference is 4



QNo:- 36 ,Correct Answer:- A

Explanation:-

Let the average rating given by all the person = A
So, A – the rating given by each person = the value given in the bar graph for each person
The information given in the bar graph can be gathered as follows-

Rating	Number of persons
A – 4	4
A – 3	2
A – 2	2
A – 1	2
A + 1	1
A + 2	3
A + 3	3
A + 4	3

Option (A) 10

Each person gave the rating from 0 to 10.
Also the range of rating varies from A – 4 to A + 4
So, the value of A can be 4, 5 or 6
To maximize the number of person having rating above 6, the value of A should be = 6, so that
A + 1, A + 2, A + 3 and A + 4, all give values more than 6
which gives the total persons = 1 + 3 + 3 + 3 = 10

QNo:- 37 ,Correct Answer:- B

Explanation:- It is given in the question that Mr. Chopra would be the last one to leave. Thus his car should be parked at the most difficult parking slot. That slot will be 1) in the middle somewhere 2) It should be close to the car of the host on one side. Considering both the points, the slot number 7 is the only suitable place from among the given options.

- 11.
- 10.
- 9.H
- 8.
- 7.C
- 6.K
- 5.
- 4.
- 3.I
- 2.E
- 1.B



Otherwise checking from options, Slot no. 4 and 11 should be straightaway rejected. As the three ladies are going first, the person at the slot number of 4 can leave any time. The car parked at slot no. 11, can leave any time as 11 is the last slot. Out of 7 & 10, the slot number 7 is in the middle and would be a complex slot. Thus slot number 7 will be the answer.

QNo:- 38 ,Correct Answer:- B

Explanation:- Now here Mr. Gupta has parked at slot no. 4 and Mr. Jacob at slot number 11. This means after the first 5 persons leave the slot number 1, 2, 3, 4 and 11 will be empty. Mr. Honda will be the 6th one to leave, moreover he can park his car anywhere, as that can be parked perpendicular to the road. Now the only consideration should be that after that anyone might have to leave, so make all the places feasible after that. Slot no. 10 is ok for all as 11 is empty. 5 is ok for all as 4 is empty. Problem is for slot no. 7, 8 & 9. If he parks at 8 and leaves at position number 6, then both the remaining slots i.e. 7 & 9 would be ok now. Thus answer is 8.

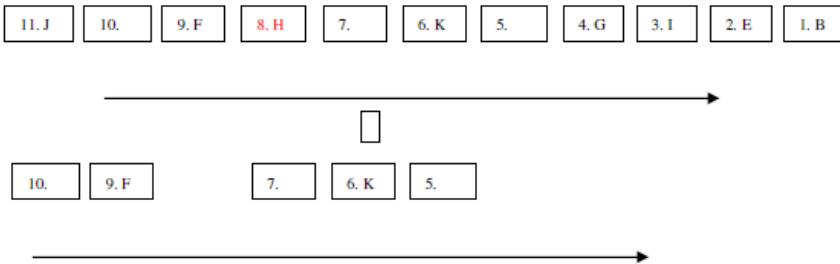
- 11.J
- 10.
- 9.F
- 8.H
- 7.
- 6.K
- 5.
- 4.G
- 3.I
- 2.E
- 1.B





QNo:- 39 ,Correct Answer:- D

Explanation:- Now here Mr. Gupta has parked at slot no. 4 and Mr. Jacob at slot number 11. This means after the first 5 persons leave the slot number 1, 2, 3, 4 and 11 will be empty. Mr. Honda will be the 6th one to leave, moreover he can park his car anywhere, as that can be parked perpendicular to the road. Now the only consideration should be that after that anyone might has to leave, so make all the places feasible after that. Slot no. 10 is ok for all as 11 is empty. 5 is ok for all as 4 is empty. Problem is for slot no. 7, 8 & 9. If he parks at 8 and leaves at position number 6, then both the remaining slots i.e. 7 & 9 would be ok now. Thus Mr. Honda would park his car at slot number 8.



As per I. They can interchange their positions as they are the first to leave.
As per II. They are leaving together and at position numbers 4 & 5, they can interchange their positions.
As per III. As After Mr. Honda s left, all positions are equally good, hence even Mr Ali and Mr. Dogra can interchange their positions.

QNo:- 40 ,Correct Answer:- D

Explanation:- Now here Mr. Gupta has parked at slot no. 4 and Mr. Jacob at slot number 11. This means after the first 5 persons leave the slot number 1, 2, 3, 4 and 11 will be empty. Mr. Honda will be the 6th one to leave, moreover he can park his car anywhere, as that can be parked perpendicular to the road. Now the only consideration should be that after that anyone might has to leave, so make all the places feasible after that. Slot no. 10 is ok for all as 11 is empty. 5 is ok for all as 4 is empty. Problem is for slot no. 7, 8 & 9. If he parks at 8 and leaves at position number 6, then both the remaining slots i.e. 7 & 9 would be ok now. Thus Mr. handa must park at slot 8.
From the explanation of previous question it can be understood that Mr. Ali can park his car anywhere irrespective of when he is leaving after Mr. Honda's departure.
Thus he can park his car at any of the remiaining three positions i.e. 5, 7, 10.

QNo:- 41 ,Correct Answer:- 1100

Explanation:-
Suppose the volume of the milk in the vessel is 100 litres.
10 litres is drawn off and replaced with water. The ratio of milk to water in the mixture is now 9 : 1.
When 10 litres of this mixture is drawn off, 9 litres of milk and 1 litre of water are drawn off.
This is then replaced with milk. So, the quantity of milk is now $90 - 9 + 10 = 91$ litres and the volume of water is 9 litres.
When 10 litres of this mixture is drawn off, 9.1 litres of milk and 0.9 litres of water are drawn off. This is then replaced with water.
So the final quantity of milk is $91 - 9.1 = 81.9$ litres and the final quantity of water is $9 - 0.9 + 10 = 18.1$ litres.
We know that the actual quantity of water is 199.1 litres.
So, the actual volume must be $(100 \times 199.1)/18.1 = 1100$ litres.



QNo:- 42 ,Correct Answer:- B

Explanation:-

For $x^2 - x - 6 = 0$, roots come out to be -2, 3. Putting $p = -2$ and $q = 3$ in $(2p + 1)$ and $(2q + 1)$, we get roots of new equation to be -3 and 7. The standard equation is $x^2 - Sx + P = 0$ where $S = 4$ and $P = -21$

$$\Rightarrow x^2 - 4x - 21 = 0$$

QNo:- 43 ,Correct Answer:- 180

Explanation:-

$(x + y)^2 = x^2 + y^2 + 2xy$. Since ΔABC is right-angled, $x^2 + y^2 = 10^2 = 100$. Area $\Delta ABC = \frac{1}{2} \times xy = 20$
 $\Rightarrow xy = 40 \Rightarrow 2xy = 80$. Thus, $(x + y)^2 = 100 + 80 = 180$.

QNo:- 44 ,Correct Answer:- D

Explanation:- Let one angle is x , other angle = $180 - x$

ATQ $180 - x - x = 90$. So $x = 45$. So area of rhombus = $2 \times \frac{1}{2} \times 8 \times 8 \times \sin 45 = 32 \times 2^{1/2}$

QNo:- 45 ,Correct Answer:- A

Explanation:- We get a GP starting with Rs.7000 and a common ratio $6/7$.

The fifth term of this GP (i.e. the final depreciated price of the bicycle) will be 3778.42.

The SP is 120% of this = $120 \times 3778.42/100 = 4534.11 \approx \text{Rs } 4500$

QNo:- 46 ,Correct Answer:- 1

Explanation:- $\log_4(x - 1) = \log_2(x - 3)$

$$(x-1) = (x-3)^2$$

On solving $x = 2, 5$

But $x=2$ is not possible as $\log_2(x - 3)$ will give

$\log_2(-1)$ which is not possible.

So only one solution

QNo:- 47 ,Correct Answer:- A

$$\text{Let } \frac{a^2 - a + 1}{a^2 + a + 1} = k$$

Explanation:-

$$a^2 - a + 1 = k(a^2 + a + 1)$$

$$(1 - k)a^2 - (1 + k)a + (1 - k) = 0$$

If a is real.

Then discriminant ≥ 0

$$(1 + k)^2 - 4(1 - k)^2 \geq 0$$

$$(k - 3)(3k - 1) \leq 0$$

So $1/3 \leq k \leq 3$.

So minimum value of $k = 1/3$



QNo:- 48 ,Correct Answer:- 3

Explanation:- In the first choice, Anil would have payed back an amount = $15000 \left(1 + \frac{11}{100}\right)^2$
= $15000(1.11)^2 = \text{Rs. } 18481.5$.

While in the second choice, Anil paid back the amount = $15000 + \frac{15000 \times 3 \times 8}{100} = 15000 + 3600 = \text{Rs. } 18600$
The merchant gains $18600 - 18481.5 = \text{Rs. } 118.5$ from Anil's choice of repayment of loan.

QNo:- 49 ,Correct Answer:- B

Explanation:- Average weight of 18 students in 15kg

So the total weight of 18 students = $18 \times 15 = 270$

One student left the class, then average will be 17 kg

The total weight of 17 students = $17 \times 14 = 238$

Weight of student who left the class = $270 - 238 = 32$

QNo:- 50 ,Correct Answer:- A

Explanation:-

Let the no of electorates be x .

80% of $x = 64000$. So $x = 80000$.

Hence the answer is option A

QNo:- 51 ,Correct Answer:- 2

Explanation:-

Average of 4 and 10 is 7 which is 60% of total. Hence total is $7/60\%$ and 75% of which is 8.75. So required number of papers is 2.

QNo:- 52 ,Correct Answer:- C

Explanation:- First letter is fixed.

Remaining 4 letters out of R, A, T, I, O can be chosen and arranged in ${}^5P_4 = 5! = 120$ ways

**QNo:- 57 ,Correct Answer:- C****Explanation:-**

Using the formula to calculate % decrease as

$$\frac{R}{(100 + R)} \times 100$$

where $R =$ percentage increase in price,we get, Required % decrease in consumption = $25/125 \times 100 = 20\%$ **QNo:- 58 ,Correct Answer:- D****Explanation:-**

$$2M = 3W = 4C; 4W = \frac{8}{3}M; 5C = \frac{10}{4}M$$

$$\therefore 3M + 4W + 5C = \left(3 + \frac{8}{3} + \frac{10}{4}\right)M = \frac{36 + 32 + 30}{12}M = \frac{98}{12}M$$

$$\text{Now } 4M \rightarrow 98 \text{ days} \Rightarrow \frac{98}{12}M \rightarrow \frac{98 \times 4 \times 12}{98} \text{ days} \Rightarrow 48 \text{ days.}$$

So none of these is the answer

Option D

QNo:- 59 ,Correct Answer:- C**Explanation:-**

we can write it as

$$\frac{1}{4 \times 5} + \frac{1}{5 \times 6} + \frac{1}{6 \times 7} + \frac{1}{7 \times 8} + \frac{1}{8 \times 9} + \frac{1}{9 \times 10}$$

$$= \left(\frac{1}{4} - \frac{1}{5}\right) + \left(\frac{1}{5} - \frac{1}{6}\right) + \left(\frac{1}{6} - \frac{1}{7}\right) + \left(\frac{1}{7} - \frac{1}{8}\right) + \left(\frac{1}{8} - \frac{1}{9}\right)$$

$$+ \left(\frac{1}{9} - \frac{1}{10}\right) = \frac{1}{4} - \frac{1}{10} = \frac{3}{20}$$

So, ans. is option C.

QNo:- 60 ,Correct Answer:- D**Explanation:-**1st hour: Population increases by 40,000 to become $400,000 + 40,000 = 440,000$.2nd hour: Population increases by 44,000 to become $440,000 + 44,000 = 484,000$.3rd hour: Population decreases by 48,400 to become $484,000 - 48,400 = 435,600$.4th hour: Population increases by 21,780 to become $435,600 + 21,780 = 457,380$.5th hour: Population increases by 22,869 to become $457,380 + 22,869 = 480,249$.