

## FREE iCAT 3

### Instructions - Please read carefully before proceeding

1. The test has three sections that examine various abilities. In all there are 75 questions. You need to demonstrate competence in all three sections. Bear this in mind while distributing your time over three sections.
2. Time duration for this test is two hours and 30 minutes
3. Directions for answering the questions are provided before each question type. Read the directions carefully. There is only one correct answer to every question.
4. Each question carries 3 marks. Negative marking for wrong answers is 1/4 of the marks allotted to that question.
5. Do not use calculators, log tables, dictionaries, or any printed or online reference material while taking this test. You may use rough paper for this test.
6. In a real CAT test, any time you take off in the middle of the test is time wasted. Plan your day so that you avoid interruptions during the test. To maximize the usefulness of this test it is strongly advised that you complete it in one sitting.
7. You may take a printout of the answer sheet provided to answer the questions.
8. You can take the test [online](#) at [testfunda.com](http://testfunda.com) after a free registration. After you submit your scores, you will have access to [detailed solutions](#), and [detailed analysis reports](#). You will also have access to the free [Ask-a-Doubt facility](#).

**SECTION I****Number of Questions = 25**

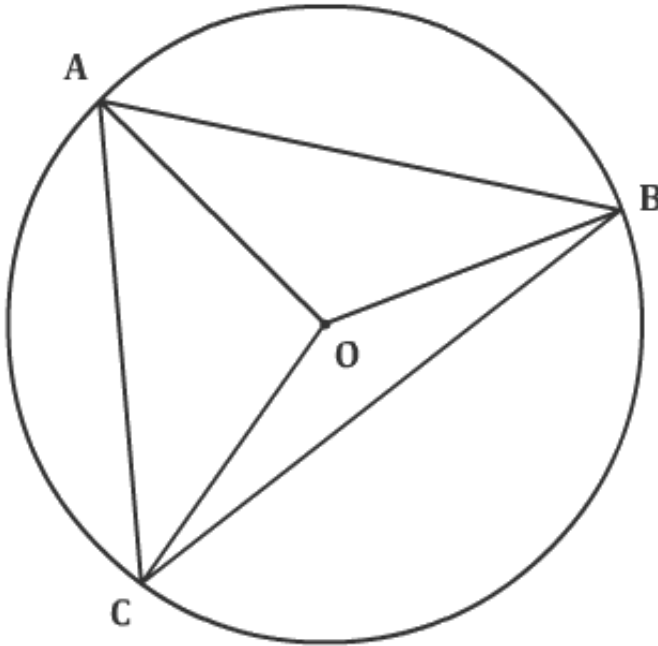
1. What is the sum of all positive integers up to 990, which are divisible by 7 and not by 2?  
(1) 32578  
(2) 31587  
(3) 35287  
(4) 31007  
(5) 33587

**Directions for Questions 2 and 3:** Answer the questions on the basis of the information given below.

It is given that  $15! = 1A0767436BCDE$ , where  $A, B, C, D$  and  $E$  each stand for a single digit.

2. Which of the following sets represents the full collection of all digits which appear exactly twice in the expansion of  $15!$  ?  
(1) 3, 6, 7  
(2) 0, 6, 7  
(3) 1, 3, 6, 7  
(4) 0, 1, 7  
(5) 4, 6, 7
3. What is  $(A + B + C + D + E)$ ?  
(1) 10  
(2) 11  
(3) 12  
(4) 13  
(5) 14
4. Each cell in a  $2 \times 4$  grid is to be tiled with tiles of one of the four colours - red, blue, green and yellow, such that no two squares are tiled with the tiles of the same colour in the same row or in the same column. What is the number of ways to do this?  
(1)  $4! \times 3!$   
(2)  $4! \times 4!$   
(3)  $23 \times 3!$   
(4)  $9 \times 4!$   
(5)  $4 \times 4!$

5. In the diagram, if  $\angle COB = 150^\circ$  and  $\angle AOC = 85^\circ$ , what is the value of  $\angle ACB$ ?



- (1)  $62.5^\circ$
- (2)  $65^\circ$
- (3)  $70^\circ$
- (4)  $72.5^\circ$
- (5)  $75^\circ$

**Directions for Questions 6 and 7:** Answer the questions on the basis of the information given below.

Let  $f(x)$  be such that  $f(xy) = f(x) \times f(y)$

6. If  $f(0) = 4$ , what is the value of  $f(1) + f(2) + f(3) + \dots + f(20)$ ?
- (1) 0
  - (2) 1
  - (3) 10
  - (4) 210
  - (5) 20
7. Given  $f(0) = 0$ ,  $f(1) = 1$  and  $f(P_n) = A_n$ . Here,  $P_n = n^{\text{th}}$  prime number and  $A_n = n^{\text{th}}$  letter of the alphabet. Hence,  $f(2) = a$ ,  $f(3) = b$ , and so on. What is  $f(1^2 + 2^2 + 4^2 + 5^2 + 7^2 + 8^2 + 10^2 + \dots + 26^2)$ ?
- (1)  $abe^2$
  - (2)  $bdek$
  - (3)  $b^2cy$

(4)  $a^2bc$

(5)  $d^2e^2$

8.  $p$ ,  $q$  and  $r$  are odd natural numbers such that  $p + q + r = 19$  and  $p < q < r$ . The number of possible solution sets  $(p, q, r)$  is:

(1) 5

(2) 6

(3) 7

(4) 9

(5) None of these

9. On walking a certain distance at 80 m/min, I was 2 minutes late. However, after running at twice that speed, I was 3 minutes before time. The corresponding distance and the scheduled time was:

(1) 1000 m, 8 min

(2) 800 m, 8 min

(3) 1000 m, 10 min

(4) 800 m, 10 min

(5) None of these

10. In a class of 120 students, for every 2 students taking up Physics there are 4 students taking up Chemistry. Further for every student taking Physics there are 3 students taking up Math as well as 1 student taking up Biology. Then the maximum number of students taking up all the four subjects will be:

(1) 30

(2) 40

(3) 50

(4) None of these

(5) Cannot be determined

11. The value of the decimal fraction 3.04371717171... in the vulgar form is

(1)  $\frac{304371}{99900}$

(2)  $\frac{301328}{99000}$

(3)  $\frac{304371}{99000}$

(4)  $\frac{301328}{99900}$

(5) None of these

12. The average age of Akbar and Birbal is 25. If Chintamani were to replace Akbar, the average age would be 22, and if Chintamani were to replace Birbal, then the

average age would be 21. Find the sum of Akbar's age multiplied by 2, Birbal's age multiplied by 3 and Chintamani's age multiplied by 4.

- (1) 198
- (2) 187
- (3) 168
- (4) 182
- (5) None of these

**13.** Mukesh finds some torn pieces of an old calendar, which tell him that in the year 1985, there were exactly four Mondays and four Fridays in the month of October. Mukesh was born on the 7<sup>th</sup> of October, 1985. On what day of the week was he born?

- (1) Sunday
- (2) Monday
- (3) Wednesday
- (4) Tuesday
- (5) Friday

**14.** ABC is a triangle with  $m\angle ABC = 90^\circ$ ,  $AC = 25$  cm and  $BC = 15$  cm. A circle is inscribed in this triangle. What is the ratio of the area of the circle to the area of the triangle?

- (1)  $\frac{\pi}{2}$
- (2)  $\frac{\pi}{3}$
- (3)  $\frac{\pi}{4}$
- (4)  $\frac{\pi}{5}$
- (5)  $\frac{\pi}{6}$

**15.** A wire of length 10 m is divided into two parts such that when each of the two parts is bent to form a square, the sum of the areas of the squares is 5 sq. m. What are the lengths of the two parts?

- (1) 5, 5
- (2) 6, 4
- (3)  $5 + \sqrt{5}, 5 - \sqrt{5}$
- (4)  $5 + \sqrt{10}, 5 - \sqrt{10}$
- (5) None of these

**16.** The inhabitants of planet Tristan do not have 10 fingers like us humans. Hence, they do not use the decimal system, but some other base which is equal to the

number of fingers they have. When astronaut Yuri goes to Tristan, he finds that 4994 in the decimal system is represented as 3830 in the base system used on Tristan. How many fingers do the inhabitants of Tristan have?

- (1) 7
- (2) 11
- (3) 12
- (4) 13
- (5) None of these

**17.** Sharmaji purchases 5 horses and 10 cows for Rs. 1,00,000. He sells the horses at 15% profit and cows at 10% loss. Thus, he gets Rs. 3,750 as profit. Find the cost of a horse and a cow.

- (1) Rs. 8,000, Rs. 6,000
- (2) Rs. 9,000, Rs. 5,500
- (3) Rs. 10,000, Rs. 5,000
- (4) Rs. 11,000, Rs. 4,500
- (5) Cannot be determined

**18.** What is the value of  $\log_{\sqrt{y}} x^2 y^2$ ,

if  $\log_4 256^x + \log_8 4096^{2y} = 84$  and  $\log_{y-x+1} 2401 = 4$ ?

- (1) 4
- (2) 7
- (3) 8
- (4) 6
- (5) None of these

**19.** Leander and Mahesh are playing a tennis match against each other. The match consists of five sets, and whoever wins three sets wins the match.

The probability of Leander winning the first set is  $\frac{1}{2}$ .

The probability of him winning any set after losing the previous one is  $\frac{1}{3}$ .

The probability of him winning any set after winning the previous one is  $\frac{2}{3}$ .

There are no ties in any set. What is the probability that Leander wins the match?

- (1)  $\frac{1}{3}$
- (2)  $\frac{2}{3}$
- (3)  $\frac{5}{9}$
- (4)  $\frac{1}{2}$

(5) None of these

**20.** Two explorers are at the North and South Pole of the Earth respectively. They use a revolutionary new super jet to travel towards each other, both travelling along the same meridian of longitude. The speed of the one at the North Pole initially is 1884 km/hr, and the speed of the other is 1256 km/hr. They meet in one-fourth of a day. What is the approximate diameter of the Earth (in kilometres)?

- (1) 6000
- (2) 8000
- (3) 10000
- (4) 11000
- (5) 12000

**21.** 465 tiles on a wall are to be painted. All the tiles are in a straight line, one after the other. Only three colours are to be used for the painting; brown, black and blue. Between any two tiles painted brown, there should be at least one tile of a different colour. Between any two tiles painted black, there should be at least two tiles of different colours. Between any two tiles painted blue, there should be at least three tiles of different colours. What is the maximum number of tiles on the wall that can be coloured blue?

- (1) 116
- (2) 117
- (3) 118
- (4) 119
- (5) 120

**22.** The difference in the areas of circumscribing and inscribing circles of the region bounded by the curves  $y = -|x| + 12$  and  $y = |x| + 4$  will be:

- (1)  $4\pi$
- (2)  $8\pi$
- (3)  $10\pi$
- (4)  $12\pi$
- (5)  $6\pi$

**23.** There are three families - the Khans, the Sharmas and the Rais. Each family owns a different type of car out of the 3 types MUV, sports car and coupe. The families spend Sundays in different ways - one family watches TV, one goes on a picnic and one spends Sunday with relatives. The families have 3, 4 and 5 members, not necessarily in the same order.

The following facts are known:

1. The family which owns a coupe has 3 members.

2. The Khans have more than 3 members, and watch TV on Sunday.
3. The Rais visit relatives on Sunday.
4. The Sharmas do not have 4 members.

Assuming that the Sharmas own a sports car, which of these sets correctly corresponds to the set {Car owned by the Khans, Total number of members in the Khan and Sharma families}?

- (1) {MUV, 8}
  - (2) {MUV, 5}
  - (3) {MUV, 9}
  - (4) {MUV, 4}
  - (5) {Sports Car, 9}
- 24.**  $Y$  and  $X$  are two 2-digit numbers. In the decimal system,  $Y = 2(X + 1)$ . In the octal system,  $Y = 2X$ . The unit digits of  $X$  and  $Y$  are 5 and 2 respectively. What is the value of  $X + Y$  in the decimal system?
- (1) 45
  - (2) 46
  - (3) 47
  - (4) 48
  - (5) Cannot be determined
- 25.** Let  $A_n$  be the area of a regular polygon with  $n$  sides. It is given that  $A_{1000}$  is approximately equal to  $314 \text{ cm}^2$ . Also, the vertices of this 1000 sided polygon are numbered clockwise in order, from 1 to 1000. What is the approximate distance between the vertices 1 and 501?
- (1) 15.7 cm
  - (2) 18.1 cm
  - (3) 20 cm
  - (4) 21.6 cm
  - (5) 22 cm



## SECTION II

Number of Questions = 25

**Directions for questions 26 to 29: Each of the questions below consists of a set of labelled sentences. These sentences, when properly sequenced, form a coherent paragraph. Choose the most logical order of sentences from among the options.**

26.

- A. This makes the individual chromosomes visible, and they form the classic four arm structure, a pair of sister chromatids attached to each other at the centromere.
- B. Chromosomes cease to function as accessible genetic material (transcription stops) and become a compact transportable form.
- C. The shorter arms are called p arms and the longer arms are called q arms.
- D. In the early stages of mitosis or meiosis, the chromatin strands become more and more condensed.
- E. This is the only natural context in which individual chromosomes are visible with an optical microscope.

- (1) BACED
- (2) DBACE
- (3) BACDE
- (4) DEACB
- (5) CADBE

27.

- A. This increased capacity per unit area can be used to decrease cost and/or increase functionality.
- B. But, since the speed and power consumption gains are apparent to the end user, there is fierce competition among the manufacturers to use finer geometries.
- C. In general, as the feature size shrinks, almost everything, including functionality improves - the cost per unit and the switching power consumption go down, and the speed goes up.
- D. ICs have consistently migrated to smaller feature sizes over the years, allowing more circuitry to be packed on each chip.
- E. ICs with nanometer-scale devices are not without their problems, principal among which is leakage current.

- (1) EBCDA
- (2) DEACB
- (3) EDBAC
- (4) DACEB
- (5) CDABE

28.

- A. There are exceptions: In Senegal, for example, nearly 47 percent of marriages are multiple.
- B. To take on more than one wife often requires considerable resources.
- C. Even within societies which allow polygyny, the actual practice of polygyny occurs relatively rarely.
- D. Such appears the case in many traditional Islamic societies, and in Imperial China.
- E. This may put polygamy beyond the means of the vast majority of people within those societies.

- (1) BDAEC
- (2) CABED
- (3) BDECA
- (4) BACDE
- (5) CEDAB

29.

- A. One of the hypothesis proposes that warming may be the result of variations in solar activity.
- B. The detailed causes of the recent warming remain an active field of research, but the scientific consensus identifies elevated levels of greenhouse gases due to human activity as the main influence.
- C. The Earth's climate changes in response to external forces, including variations in its orbit around the Sun (orbital forcing), volcanic eruptions, and atmospheric greenhouse gas concentrations.
- D. This attribution is clearest for the most recent 50 years, for which the most detailed data are available.
- E. Some other hypotheses departing from the consensus view have been suggested to explain the observed increase in mean global temperature.

- (1) BCDAE
- (2) CBDEA
- (3) BDAEC
- (4) BAECD
- (5) CDBAE

**Directions for questions 30 to 33:** Answer the question based on the information given in the passage.

30. There have been, indeed, in all ages great minds who endeavoured to find a fifth road to wisdom, incomparably more sure and elevated than the other four. The path they essayed was the search of first causes and true principles, from which

might be deduced the reasons of all that can be known by man; and it is to them the appellation of philosophers has been more especially accorded.

As per the passage, which of the following can be an assumption?

- (1) The path essayed by the seekers of other four roads to wisdom was the search first of deduction of reasons from which the causes and true principles can be known.
- (2) The path essayed by the seekers of other four roads to wisdom was the search first of the causes and true principles from which deduction of reasons can be known.
- (3) Great minds have endeavoured to find wisdom through other means.
- (4) The appellation of philosophers has been accorded to the great minds.
- (5) The great minds who endeavoured to find a fifth road to wisdom were wiser than any of their predecessors.

- 31.** When we approve of any reason which we do not apprehend, we are either deceived, or, if we stumble on the truth, it is only by chance, and thus we can never possess the assurance that we are not in error.

The reasoning provided above is analogous to which of the following:

- (1) Jacqueline accepts the truths taught by her parents and is in doubt about its veracity, when she meets Jamie at Disneyland who convinces her otherwise.
- (2) When Romeo goes ahead and proposes Juliet with his feelings of undying love, he is fooled by the fleeting wave of emotions which may eventually prove to be a mistake.
- (3) When the Russian populace vetoed President Putin from power, they did not realize how they would err on the side of extremism, until the Western media came to their rescue.
- (4) US approved of strike on Iraq without fully understanding the implications of global response; it was acting on limited information.
- (5) An NGO realizes that it is fighting for a lost cause and the people misunderstand their intentions in spite of repeated acceptance.

- 32.** Empedocles of Agrigentum, a sort of magician and high-priest, almost a deity, whose life and death are but little known, appears to have possessed an encyclopaedic brain. From him is derived the doctrine of the four elements, for whereas the philosophers who preceded him gave as the sole source of things - some water, others air, others fire, others the earth, he regarded them all four equally as the primal elements of everything. He believed that the world is swayed by two contrary forces - love and hate, the one desiring eternally to unite, the other eternally to disintegrate. Amid this struggle goes on a movement of organization, incessantly retarded by hate, perpetually facilitated by love; and from this movement have issued - first, vegetation, then the lower animals, then the higher animals, then men.

It can be inferred from the passage that:

- (1) Darwin's theory of evolution should give credit to Empedocles.
- (2) Freud's psycho-analysis has a lot to learn from Empedocles.
- (3) Plato's Republic has had a profound impact on Empedocles.
- (4) Vedic belief in space as the fifth element was not proposed during those times.
- (5) Einstein's theory of relativity is based on the crude work done by Empedocles.

33. The Sophists descend from Parmenides and Zeno of Elea; Gorgias was the disciple of the latter. By dint of thinking that all is semblance save the Supreme Being, who alone is real, it is very easy to arrive at belief in all being semblance, including that Being; or at least what is almost tantamount, that all is semblance, inclusive of any idea we can possibly conceive of the Supreme Being. To believe nothing, and to demonstrate that there is no reason to believe in anything, is the cardinal principle of all the Sophists.

Which one of the following is a contradiction presented in the passage?

- (1) The Sophists' belief that the Supreme Being is real and all the other beings are semblance.
- (2) The Sophists' philosophy that all the other beings being semblance makes the Supreme Being real.
- (3) The Sophists' belief that only the Supreme Being is real and the thought of believing in Supreme Being being semblance.
- (4) The Sophists' philosophy of believing in nothing including that statement.
- (5) The Sophists' belief that the Supreme Being is unreal and the thought of believing in Supreme Being being semblance.

**Directions for questions 34 to 42: The passage given below is followed by a set of questions. Choose the most appropriate answer to each question.**

Wherever the will to power begins to decline, in whatever form, there is always an accompanying decline physiologically, a decadence. The divinity of this decadence, shorn of its masculine virtues and passions, is converted perforce into a god of the physiologically degraded, of the weak. Of course, they do not call themselves the weak; they call themselves "the good". No hint is needed to indicate the moments in history at which the dualistic fiction of a good and an evil god first became possible. The same instinct which prompts the inferior to reduce their own god to "goodness-in-itself" also prompts them to eliminate all good qualities from the god of their superiors; they make revenge on their masters by making a devil of the latter's god. The good god and the devil like him - both are abortions of decadence. How can we be so tolerant of the naiveté of Christian theologians as to join in their doctrine that the evolution of the not become a proud heathen god concept of god from "the god of Israel," the god of a people, to the Christian god, the essence of all goodness, is to be described as progress?

But even Renan does this. As if Renan had a right to be naive! The contrary actually stares one in the face. When everything necessary to ascending life; when all that is strong, courageous, masterful and proud has been eliminated from the concept of a god; when he has sunk step by step to the level of a staff for the weary, a sheet-anchor for the drowning; when he becomes the poor man's god, the sinner's god, the invalid's god par excellence, and the attribute of "saviour" or "redeemer" remains as the one essential attribute of divinity - just what is the significance of such a metamorphosis? What does such a reduction of the godhead imply? To be sure, the "kingdom of God" has thus grown larger. Formerly he had only his own people, his "chosen" people. But since then he has gone wandering, like his people themselves, into foreign parts; he has given up settling down quietly anywhere; finally he has come to feel at home everywhere, and is the great cosmopolitan - until now he has the "great majority" on his side, and half the earth. But this god of the "great majority," this democrat among gods, has: on the contrary, he remains a Jew, he remains a god in a corner, a god of all the dark nooks and crevices, of all the noise some quarters of the world!... His earthly kingdom, now as always, is a kingdom of the underworld, a souterrain kingdom, a ghetto kingdom... And he himself is so pale, so weak, so decadent... Even the palest of the pale is able to master him - messieurs the metaphysicians, those albinos of the intellect. They spun their webs around him for so long that finally he was hypnotized, and began to spin himself, and became another metaphysician. Thereafter he resumed once more his old business of spinning the world out of his inmost being sub-specie Spinozae; thereafter he became ever thinner and paler - became the "ideal," became "pure spirit," became "the absolute," became "the thing-in-itself."... The collapse of a god: he became a "thing-in-itself."

The Christian concept of a god - the god as the patron of the sick, the god as a spinner of cobwebs, the god as a spirit - is one of the most corrupt concepts that has ever been set up in the world: it probably touches a low-water mark in the ebbing evolution of the god-type. God degenerated into the contradiction of life. Instead of being its transfiguration and eternal Yea! In him war is declared on life, on nature, on the will to live! God becomes the formula for every slander upon the "here and now," and for every lie about the "beyond"! In him nothingness is deified, and the will to nothingness is made holy!

The fact that the strong races of northern Europe did not repudiate this Christian god does little credit to their gift for religion and not much more to their taste. They ought to have been able to make an end of such a moribund and worn-out product of the decadence. A curse lies upon them because they were not equal to it; they made illness, decrepitude and contradiction a part of their instincts and since then they have not managed to create any more gods. Two thousand years have come and gone and not a single new god! Instead, there still exists, and as if by some intrinsic right, as if he were the ultimatum and maximum of the power to create gods, of the creator spiritus in mankind this pitiful god of Christian monotono-theism! This hybrid image of decay,

conjured up out of emptiness, contradiction and vain imagining, in which all the instincts of decadence, all the cowardices and wearinesses of the soul find their sanction!

In my condemnation of Christianity I surely hope I do no injustice to a related religion with an even larger number of believers: I allude to Buddhism. Both are to be reckoned among the nihilistic religions. They are both decadent religions but they are separated from each other in a very remarkable way. For the fact that he is able to compare them at all the critic of Christianity is indebted to the scholars of India. Buddhism is a hundred times as realistic as Christianity; it is part of its living heritage that it is able to face problems objectively and coolly; it is the product of long centuries of philosophical speculation. The concept, "god," was already disposed of before it appeared. Buddhism is the only genuinely positive religion to be encountered in history, and this applies even to its epistemology (which is a strict phenomenalism). It does not speak of a "struggle with sin," but, yielding to reality, of the "struggle with suffering." Sharply differentiating itself from Christianity, it puts the self-deception that lies in moral concepts behind it; it is, in my phrase, beyond good and evil. The two physiological facts upon which it grounds itself and upon which it bestows its chief attention are: first, an excessive sensitiveness to sensation, which manifests itself as a refined susceptibility to pain, and secondly, an extraordinary spirituality, a too protracted concern with concepts and logical procedures, under the influence of which the instinct of personality has yielded to a notion of the "impersonal." (Both of these states will be familiar to a few of my readers, the objectivists, by experience, as they are to me). These physiological states produced a depression, and Buddha tried to combat it by hygienic measures. Against it he prescribed a life in the open, a life of travel; moderation in eating and a careful selection of foods; caution in the use of intoxicants; the same caution in arousing any of the passions that foster a bilious habit and heat the blood; finally, no worry, either on one's own account or on account of others. He encourages ideas that make for either quiet contentment or good cheer; he finds means to combat ideas of other sorts. He understands good, the state of goodness, as something which promotes health. Prayer is not included, and neither is asceticism. There is no categorical imperative nor any disciplines, even within the walls of a monastery (it is always possible to leave). These things would have been simply means of increasing the excessive sensitiveness above mentioned. For the same reason he does not advocate any conflict with unbelievers; his teaching is antagonistic to nothing so much as to revenge, aversion, resentment ("enmity never brings an end to enmity": the moving refrain of all Buddhism...) And in all this he was right, for it is precisely these passions which, in view of his main regiminal purpose, are unhealthful. The mental fatigue that he observes, already plainly displayed in too much "objectivity" (that is, in the individual's loss of interest in himself, in loss of balance and of "egoism"), he combats by strong efforts to lead even the spiritual interests back to the ego. In Buddha's teaching egoism is a duty. The "one thing needful", the question "how can you be delivered from suffering" regulates and determines the whole spiritual diet (Perhaps one will here recall that

Athenian who also declared war upon pure "scientificity," to wit, Socrates, who also elevated egoism to the estate of a morality).

- 34.** All of the following are true according to the passage except:
- (1) God has become another metaphysician.
  - (2) God essentially remains someone ethnic to Israel.
  - (3) The kingdom of god has become more powerful.
  - (4) God leads the underworld into doing all the crimes of today.
  - (5) God has essentially become cosmopolitan.
- 35.** By stating 'those albinos of the intellect', the author has:
- (1) Shown his concern for people who suffer from the disease.
  - (2) Shown his appreciation of those who were able to give new meaning to God.
  - (3) Shown his displeasure at how some thin and pale people were able to master God's metaphysics.
  - (4) Shown his scorn at the derivation of the meaning of God by even the most unable people.
  - (5) Shown his discontent at how people with less ability are at the forefront of proving God's metaphysics.
- 36.** The dualistic fiction of a good and an evil god mentioned in the passage suggests:
- (1) The mistaken belief that God can be good and bad at the same time.
  - (2) The mistaken belief that there can be two different Gods - one symbolizing good and the other evil.
  - (3) The mistaken belief that God can be good and evil depending on the worshipper's depth of faith.
  - (4) The mistaken belief that people have - what in reality is a work of fiction?
  - (5) The mistaken belief that people have - what in fiction is a work of reality?
- 37.** The author probably:
- (1) Disagrees with the tenets of Christianity and proposes banning the Christian concept of God.
  - (2) Is furious with those who ridicule the Pagan concept of God.
  - (3) Condemns the lowliness equated to Christianity in all walks of life.
  - (4) Believes that it would be better to give up on life rather than giving up on ideals proposed by Christianity.
  - (5) Believes that it would be better to give up on Christianity rather than giving up on life.
- 38.** The author strongly believes that:
- (1) God is a figment of imagination of strong races of Northern Europe.



- (2) Christian monotheism was accepted after much resistance from the Europeans.
- (3) God can and should be manufactured.
- (4) Had the Northern European races revolted, they would not be cursed.
- (5) The concept of God should be used to nullify existing conception of God.

39. The tone of the passage is:

- (1) Informative and Analytical
- (2) Opinionated and Judgmental
- (3) Didactic and Sermonic
- (4) Scholarly and Exploratory
- (5) Narrative and Illustrative

40. What according to the passage is untrue of Buddhism?

- (1) It teaches egoism is not a right.
- (2) It is able to face problems objectively and coolly because of its living heritage.
- (3) It is based on excessive insensitiveness to sensation.
- (4) It does not question the non-believers.
- (5) It encourages ideas that make for good cheer.

41. According to the passage:

- (1) Buddhism has the largest number of believers.
- (2) Socrates proposed that egoism and morality have a lot in common.
- (3) The Athenian declared war on Pure scientific beliefs and wit.
- (4) Christianity is Nihilistic whereas Buddhism is Supreme.
- (5) Presence of Asceticism and Strict rules is what makes Buddhism unique.

42. It can be inferred from the passage:

- (1) The objectivists would find Buddhism the most appealing religion.
- (2) The objectivists are few and far in-between.
- (3) The basic tenets of Buddhism are in the realm of good and evil.
- (4) Buddhism believes "An eye for an eye" would work in real life but not for the monks who have embraced Buddhism.
- (5) Deliverance from sin determines and regulates the spiritual diet of Buddhism.

**Directions for questions 43 to 46: The passage given below is followed by a set of questions. Choose the most appropriate answer to each question.**

France is now rushing to construct the International Thermonuclear Experimental Reactor, (ITER), which is supposed to show that nuclear fusion can be used to power nuclear power stations. ITER is often presented as the long-term solution to the



problem of global warming, because nuclear fusion can provide an infinite and clean source of energy. But ITER will do nothing of the sort.

In the fission reactions that nuclear power generation relies on today, heavy elements such as uranium break into smaller ones, while in nuclear fusion small elements such as hydrogen stick together and form heavier elements (helium). Both fission and fusion produce a lot of energy. Some political leaders explain that nuclear fusion is at work in the sun, and that, thanks to ITER, we will harness it. They often add that, since fusion burns hydrogen, which can be found in seawater, it is an infinite source of energy. Unfortunately, political leaders know little about the scientific issues involved.

That nuclear fusion is a source of energy has been known since the invention of the hydrogen bomb. But its control is still a fundamental challenge for research institutes, not some minor technical difficulty that can be easily overcome. Confining a little sun inside a box is an extremely difficult task for three main reasons. First, the nuclear fuel is not seawater, but a mixture of the two heavy isotopes of hydrogen, deuterium and tritium, a radioactive element that has been produced in small quantities for hydrogen bombs. Any development of fusion reactors would require producing tritium with industrial methods that have yet to be invented.

Second, the deuterium-tritium fusion reaction starts at around 100 million degrees. Achieving this requires using a magnet to accelerate a plasma that is a big flame of deuterium and tritium nuclei. This must be done in a ultra-high vacuum in a large chamber. ITER is not designed to produce electricity, but to study the stability of the flame in the magnet. Since the fusion reactions produce alpha particles, which pollute the plasma, one has to insert a “divertor” inside the flame at 100 million degrees in order to clean it. Nobody has ever accomplished this, but ITER may be able to try around 2030 - that is, if it solves the previous problem.

Third, fusion also emits neutrons that will produce helium gas bubbles inside the wall material, which tend to explode. The supporters of ITER explain that if the walls are porous, the bubbles can escape. But nothing can be both leak-proof and porous, and ITER is not designed to study this contradiction. In the future, a “blanket” should be inserted between the plasma and the walls, with two objectives: to protect the outer walls and to produce tritium from nuclear reactions within a circulating fluid containing lithium. This might work, but the first wall of the blanket will need to be not only leak-proof and porous, but also sufficiently permeable to neutrons, which have to hit the lithium atoms beyond it.

The problem of materials is an entire research field in itself. In order to study it, it has been decided to build the International Fusion Materials Irradiation Facility (IFMIF) in Japan. Some scientists have argued that the neutron irradiation in IFMIF won't be the same as in fusion reactors, but it should be noted that its cost, at one billion Euros, will be one-tenth that of ITER. So why can't we wait for IFMIF's results before building

ITER? It all depends on one's budget. If ITER could really solve the planet's energy problem, €10 billion would be a negligible investment - less than the net profit of the oil company TOTAL (€13 billion in 2006) and equivalent to ten days of waging the war in Iraq. But if fusion is ever to work in industrial power stations, it will take many decades. Even if ITER is successful, and if one solves the tritium and material problems, everything would need to be tested in real size, and only then could a first prototype of an industrial reactor be built. A drastic reduction of CO<sub>2</sub> emissions is an urgent priority, but fusion is unlikely to produce sufficient energy to achieve that goal before the twenty-second century. In fact, ITER is a big instrument for fundamental research, so its

€500 million Euros annual cost needs to be compared with similar scientific initiatives, such as the European Organization for Nuclear Research (CERN), which costs one billion Swiss francs per year. In my opinion, searching for the fundamental structure of particles is far more important than studying the stability of a plasma. In France, the contribution to ITER is more than all the available funding for research projects in all our physics laboratories. So the danger is that ITER will squeeze out funding for other vital research. We already have the bad example of the International Space Station, a waste of \$100 billion that has produced no scientific results.

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ITER will not solve our energy problem. Although it has some scientific interest in plasma physics, the participating countries should clearly state that funding it won't affect the rest of their research efforts. At the same time, the international community should support research on energy saving and storage, and accelerate the development of fourth-generation nuclear reactors, which will use fission and be both clean and durable.

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**43.** The writer is likely to agree with which of the following:

- I. Addressing the problem of emissions and global warming is far more important than the research to generate and use nuclear power.
- II. The huge funds that countries are willing to invest in the research for nuclear energy will be better invested in research on the study of elementary particles.
- III. ITER established in France will squeeze out the funding for important research in other fields internationally.

- (1) I and II
- (2) I and III
- (3) II only
- (4) II and III
- (5) All of the above

**44.** It can be inferred from the passage that:

- I. ITER is an international research and development project that aims to demonstrate the scientific and technical feasibility of fission power.
- II. Scientists have to yet invent methods to produce tritium.
- III. International Fusion Material Irradiation Facility is an international scientific research program designed to test materials for suitability for use in a fusion reactor.

- (1) I only
- (2) II only
- (3) I and II
- (4) III only
- (5) I, II and III

**45.** Why does the writer emphasize that "ITER will do nothing of the sort"?

- (1) Because even if ITER is successful, the promise of clean power through fusion is not going to be a reality before the 22nd century.
- (2) Because strategies for creating fusion reactors are largely dictated by the fact that the temperatures involved in nuclear fusion are far too high to be contained in any material container.
- (3) Because ITER project is not designed to study the contradiction of having a material for the 'wall' something that is at once leak proof and porous.

- (4) Because ITER project aims to study the feasibility of fusion power from deuterium- tritium fusion, and there is no technology known to scientists for large scale production of tritium.
- (5) Because ITER is not designed to produce electricity, but to study the magnetic confinement of the hot plasma by means of magnetic fields.

46. What does the writer mean when he states “confining a little sun inside a box is extremely difficult”?

- (1) Confining the sun- grebe, a rare family of African, Asian, and American tropical birds is an extremely difficult task.
- (2) Attempting to confine the sun that represents or personifies god in various religions is a futile endeavor.
- (3) Nuclear fuel is not sea water where the sun seems to rise and set.
- (4) It is extremely difficult for man to make a reactor based on nuclear fission.
- (5) None of the above

**Directions for questions 47 to 50: Each of the questions below contains a passage followed by alternative summaries. Choose the option that best captures the essence of the text.**

47. Existentialism generally postulates that the absence of a transcendent force (such as God) means that the individual is entirely free, and, therefore, ultimately responsible. It is up to humans to create an ethos of personal responsibility outside any branded belief system. In existentialist views, personal articulation of being is the only way to rise above humanity's absurd condition of much suffering and inevitable death.

- (1) Existentialism values are not absolute. They are based on personal conviction and prejudice.
- (2) In the absence of a transcendent force, the evaluation of Existentialist values falls upon the individual.
- (3) Societal convention and personal preference do not have a fundamental disagreement about what one ought to do in Existentialism.
- (4) Existentialism seeks to discover the ultimate order in the structure of the observed world and thereby seeks to discover universal meaning.
- (5) Existentialism seeks to find the correlation between the ethos of personal responsibility outside any branded belief system and societal convention.

48. Archery has historically been used in hunting and combat and has become a precision sport. The oldest indication for its use in Europe comes from around 9000-8000 B.C. for launching projectiles. Classical civilizations, notably the Persians, Macedonians, Greeks, Indians, Japanese, and Chinese fielded large numbers of archers in their armies. Arrows proved exceptionally destructive

against massed formations, and the use of archers often proved decisive. The advent of firearms in the 18th century eventually rendered bows obsolete in warfare.

- (1) The history of archery can be traced from 9000 B.C. till the modern age.
- (2) Archeological evidence traces archery from 9000 B.C. in Europe to Persia, Greece, India, Japan and China.
- (3) The first evidence of archery dates back to 9000 B.C. in Europe. Many civilizations used archery as a weapon before it lost its popularity.
- (4) Archery was first used in battle probably around 9000 B.C. in Europe. It has been used by Greece, Rome, India, Japan and Korea through the ages.
- (5) Archery, in wide use the world over, has a remarkable history beginning with bows and arrows being used in ancient battles.

**49.** Publication of satire in the Restoration period was done anonymously. There were great dangers in being associated with a satire. On one hand, defamation law was a wide net, and it was difficult for a satirist to avoid prosecution if he were proven to have written a piece that seemed to criticize a noble. On the other hand, wealthy individuals would respond to satire, as often as not, by having the suspected poet physically attacked by ruffians. A consequence of this anonymity is that a great many poems, some of them of merit, are unpublished and largely unknown.

- (1) During the Restoration period, nobles sought to find satire authors and prosecute them, leading to authors working in anonymity.
- (2) Satire, though not the most brilliant read, was pretty popular during the Restoration period in spite of the dangers associated with it.
- (3) Anonymity was the call of the day for people associated with the writing or publishing of a satire.
- (4) Association with a satire was dangerous during the Restoration period which left many poems unclaimed.
- (5) Anonymity was the only option open to writers and publishers of a satire due to the dangers associated with it, resulting in many poems being unknown.

**50.** Art, like life, is apt to languish if it gets too far away from primitive conditions. But, like life also, it is a poor thing and a very uncouth affair if it has nothing but primitive conditions to recommend it. Because there is a decadent art about, one need not make a hero of the pavement artist. But without going to the extreme of flouting the centuries of culture that art inherits, as it is now fashionable in many places to do, students will do well to study at first the early rather than the late work of the different schools, so as to get in touch with the simple conditions of design on which good work is built.

- (1) Both life and art will become weak if they either stray far away from their history or remain embedded in it; students should just study the base to build the foundation and carry on.

- (2) Decadent art takes much pleasure in flouting the foundation art but it is a very uncouth affair.
- (3) Though art students prefer to study the modern works of different schools, it will be wise to stick to the primitive art only as it teaches to build good design.
- (4) The pavement artist is not a hero as he knows nothing about the modern trends in art and is stuck with only the primitive styles and design.
- (5) Primitive art is simple and builds the foundation; so, students should first pursue a study of it.

### SECTION III

**Number of Questions = 25**

**Directions for questions 51 to 55:** Answer the following questions based on the information given below.

The year is 2025 and the World Ten10 Championship of Cricket is on. After a gruelling group stage involving 8 groups with 4 teams each, the top team from each group qualified for the Super Eight stage. In the Super Eight stage, each team had to play every other team once. So far, each team has played six matches in the Super Eight stage, and the points table after these matches is given below. The matches yet to be played are (according to current ranks) Team 1 vs. Team 2, Team 3 vs. Team 4, Team 5 vs. Team 6 and Team 7 vs. Team 8. The only match that ended in a tie so far was England vs. New Zealand, and the only match that had no result was Pakistan vs. South Africa. Australia lost to arch-rival New Zealand, India beat arch-rival Pakistan and England beat South Africa. The only match that the last team (in the current points table) won was against the top team in the table. Sri Lanka beat two of the teams currently ranked above it in the points table.

No points were carried forward from the group stage. The points for each match are awarded as follows: If a team wins a match, it gets 4 points, while the losing team gets 0 points. If the match ends in a tie or there is no result due to rain or other factors, both teams get 2 points each. The teams are ranked in descending order of points. If two teams have the same points, the team which won the head-to-head match between them is ranked higher. If that match ended in a tie or no result, or if the teams haven't yet played each other, the team with the higher 'net run rate' is ranked higher. If two teams have the same points AND the same net run rates, the team with more runs scored is ranked higher. If three or more teams have the same points, then the team with most points against the other teams with equal points is ranked higher. For example, South Africa, Pakistan and New Zealand have the same points, but South Africa got 4 points against New Zealand and 2 points against Pakistan, while Pakistan is yet to play New Zealand. So, the teams in descending order of ranks are South Africa, Pakistan and New Zealand. If there is a three-way tie (A beats B, B beats C, C beats A), the team with a higher net run rate is ranked higher.

In the 'runs scored' and 'runs conceded' column, the number in brackets denotes the overs. For example, Australia scored 627 runs in 58.4 overs and conceded 608 runs in 59 overs.



Rank	Team Name	Matches Played	Wins	Losses	Ties	No Results	Points	Runs Scored	Runs Conceded	Net Run Rate
1	Australia	6	4					627(58.4)	608(59)	0.38
2	South Africa	6		2				577(50)	544(49.3)	0.15
3	Pakistan	6					14	523(48)	522(49)	0.24
4	New Zealand	6		2				619(58.4)	624(59.2)	0.03
5	Sri Lanka	6	3					682(60)	653(59.2)	0.36
6	India	6					12	689(59.4)	633(58.3)	0.22
7	England	6						598(57.5)	633(58.4)	-0.45
8	West Indies	6						631(59)	679(58.3)	-0.91

51. Against which teams has India won so far?

- (1) Pakistan, New Zealand and West Indies
- (2) South Africa, Pakistan and West Indies
- (3) Pakistan, New Zealand and England
- (4) Pakistan, England and West Indies
- (5) South Africa, Pakistan and Sri Lanka

52. How many points does England have?

- (1) 4
- (2) 6
- (3) 8
- (4) 12
- (5) 10

53. At the end of all the matches in the Super Eight stage, the top four teams will qualify for the semi-finals. In the current scenario (each team having played six matches each), which team/teams is/are definitely 'in' (has already qualified for) the semi-finals and which team/teams is/are definitely 'out' of the semi-finals?

- (1) IN: Australia, OUT: West Indies
- (2) IN: Australia and South Africa, OUT: England and West Indies
- (3) IN: Australia, OUT: England and West Indies
- (4) IN: Australia and South Africa, OUT: West Indies
- (5) IN: None, OUT: West Indies

54. In the semi-finals, Team 1 will play Team 4, and Team 2 will play Team 3 (according to ranks at the end of the Super Eight stage). Considering all possible



results for the remaining four matches, which of the following is not a possible semi-final line-up?

- (1) Australia vs. England, India vs. Pakistan
- (2) Australia vs. England, Sri Lanka vs. Pakistan
- (3) South Africa vs. New Zealand, Australia vs. Sri Lanka
- (4) South Africa vs. India, Australia vs. New Zealand
- (5) Australia vs. England, India vs. New Zealand

55. Which of the following teams cannot be the top-ranked team at the end of the Super Eight stage?

- (1) South Africa
- (2) New Zealand
- (3) Pakistan
- (4) New Zealand and Pakistan
- (5) None of these

**Directions for questions 56 to 60:** Answer the following questions based on the information given below.

Aakarsh is experimenting with a new device which can help school students understand mathematical functions. This device requires a number to be input by the user. The device consists of six components, which perform six different mathematical functions. These components are connected to each other, so that the output of one component is the input for the next. Thus, the first component performs its respective function on the number input by the user, then the second component performs its function on the output of the first component, and so on. The order in which the components are connected can be changed.

Aakarsh enters a few numbers into the device to test it. He changes the order of the components for each number. For every number, the output after every operation and the final result are tabulated below.

Initial input	2	3	4	5
Intermediate Result # 1	4	2	7	25
Intermediate Result # 2	3	4	6	24
Intermediate Result # 3	6	16	12	6
Intermediate Result # 4	36	4	3	9
Intermediate Result # 5	9	2	9	3
Final Result	3	5	3	6

**56.** Which of the following is not a function performed by any component? ( $x$  is the input for that component)

- (1)  $x + 3$
- (2)  $x - 6$
- (3)  $x - 1$
- (4)  $\sqrt{x}$
- (5)  $2x$

**57.** When 2 is the initial input, what is the function performed by the third component?

- (1)  $2x$
- (2)  $x + 3$
- (3)  $3x - 3$

- (4)  $x^2 - 3$
- (5) None of these

58. When the initial input is 4, what is the function performed by the fifth component?

- (1)  $3x$
- (2)  $x + 6$
- (3)  $x^2$
- (4)  $2x + 3$
- (5) None of these

59. If the initial input is 6, what among the following is the maximum possible final result?

- (1)  $\sqrt{80.75}$
- (2)  $\sqrt{80}$
- (3) 8.5
- (4) 8
- (5)  $\sqrt{56}$

60. In which step(s) does the doubling component ( $2x$ ) never occur?

- (1) First
- (2) Second
- (3) Third
- (4) Fourth
- (5) None of these

**Directions for questions 61 to 65:** Answer the following questions based on the information given below.

The annual Korus Masters chess tournament features the world's eight best chess players, pitted against each other in a double round-robin format.

In this format, each player plays one match against every other player. This match consists of two games, with black pieces for one player and white for the other in one game, and vice versa in the second game. Each player plays exactly one match every day. If a game results in a win, the winner gets one point and the loser gets none. In case of a draw, both players get half a point each.

Given below is a table with each day's matches, and the total points of each player at the end of every day.

Day 5 was a nightmare for Romonevich as he lost both the games scheduled. At the end of Day 7, Tupolev was second in the overall rankings and had more points than Adams.

Given below are a few details about the wins, losses, and draws that occurred in the matches:

1. The only players who won both their games against a particular player were Anand (vs. Romonevich) and Carlson (vs. Leiko).
2. In the match between Kremnik and Levonian, both games were won by the player playing with black pieces.
3. The only other instance of a player winning with black pieces was when Kremnik beat Romonevich after drawing the first game.
4. Leiko won 6 games with white pieces.
5. Adams won with white pieces against Anand and Levonian.
6. There were eight occasions in all when both games between two players ended in a draw.

The following abbreviations are used wherever necessary:

An - Anand

Ad - Adams

C - Carlson

K - Kremnik

Leiko - Leiko

Levo - Levonian

R - Romonevich

T - Tupolev

Day	Table1	Table2	Table3	Table4	An	T	K	Leiko	Ad	C	Levo	R
1	An vs. T	K vs. Ad	Leiko vs. Levo	C vs. R	1.5		1	1		0.5		
2	An vs. Ad	K vs. Leiko	T vs. C	Levo vs. R		2	2		2		1.5	
3	An vs. K	Ad vs. Leiko	T vs. R	C vs. Levo	3.5	3.5			3	1.5		
4	An vs. Leiko	K vs. C	T vs. Levo	Ad vs. R	4	5	4					4.5
5	An vs. R	T vs. K	Leiko vs. C	Ad vs. Levo		6			5			
6	An vs. C	T vs. Ad	K vs. Levo	Leiko vs. R	7	7	6					5
7	An vs. Levo	T vs. Leiko	Ad vs. C	K vs. R				7		6.5	6	5.5

61. On how many days was Anand leading in terms of points?

- (1) Solo lead - 1, Joint lead - 3
- (2) Solo lead - 1, Joint lead - 4
- (3) Solo lead - 2, Joint lead - 3
- (4) Solo lead - 2, Joint lead - 2
- (5) Solo lead - 1, Joint lead - 5

62. Which player increased his points by the same amount every day?

- (1) Tupolev
- (2) Kremnik
- (3) Adams
- (4) Levonian
- (5) None of these

63. In how many matches between two players did one game end in a win and one in a draw?

- (1) 8
- (2) 9
- (3) 10
- (4) 11
- (5) 12

64. How many games did Anand win?

- (1) 4
- (2) 5
- (3) 6
- (4) 7
- (5) None of these

65. Who was leading at the end of the second day's matches?

- (1) Anand
- (2) Tupolev
- (3) Kremnik
- (4) Romonevich
- (5) None of these

**Directions for questions 66 to 70:** Answer the following questions based on the information given below.

Six bands - Pink Floyd, Led Zeppelin, Iron Maiden, Megadeth, Rolling Stones and Black Sabbath - are in the running for the "All Time Greatest Rock Act". The bands are given chart positions in 3 countries - USA, UK and Australia - on the basis of decreasing order of record sales in the respective countries. No two bands got the same chart position and no band got the same chart position in any two countries. The following additional information is also known about the chart positions:

- I. The band that had the highest chart position in USA, had the lowest chart position in Australia.
- II. Sum of the chart positions (in the 3 countries put together) of no two bands is the same.
- III. The sum of the chart positions of Pink Floyd is 14 and that of Black Sabbath is 7.
- IV. Pink Floyd got a better chart position than Black Sabbath in the UK.
- V. Led Zeppelin got a better chart position than Rolling Stones in Australia.
- VI. In each of the 3 countries, the record sales of Iron Maiden, Rolling Stones and Pink Floyd, respectively, were in the descending order.

66. Who got the third chart position in USA?

- (1) Pink Floyd
- (2) Led Zeppelin
- (3) Iron Maiden
- (4) Megadeth
- (5) Rolling Stones

67. What is the sum of the chart positions (in all the 3 countries put together) of Led Zeppelin?
- (1) 15
  - (2) 13
  - (3) 12
  - (4) 11
  - (5) 9
68. Which band has the worst average chart position in UK and Australia put together?
- (1) Pink Floyd
  - (2) Led Zeppelin
  - (3) Iron Maiden
  - (4) Megadeth
  - (5) Rolling Stones
69. The bands are given FINAL chart positions in the increasing order of their total of the chart positions of all the countries put together. Suppose the record sales data from USA is not available - how many FINAL chart positions will now be different from when all three countries are taken into account?
- (1) 0
  - (2) 1
  - (3) 2
  - (4) 3
  - (5) 4
70. Which band has the highest total record sales in all the countries put together?
- (1) Rolling Stones
  - (2) Black Sabbath
  - (3) Iron Maiden
  - (4) Megadeth
  - (5) Cannot be determined

**Directions for questions 71 to 75:** Answer the following questions based on the information given below.

Rakesh is playing a game on his PS2 (Playstation) where numbers have to be placed in the empty cells.

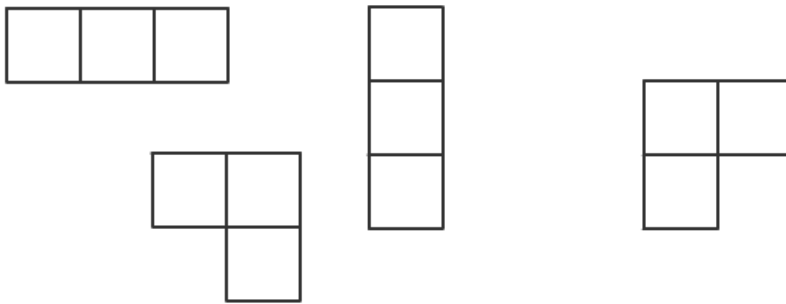
Place numbers in all empty cells according to the following rules.

1. Put numbers into empty cells so the puzzle grid becomes divided into Blocks of cells with the number of cells indicated by the number in the cells.

2. A Block must contain the number of cells indicated by the number in any cells of the Block.
3. A Block cannot touch a similarly sized Block, horizontally or vertically.
4. Cells without numbers may form Blocks necessary to complete the puzzle.

For example:

If we are considering a block of three, then it can be of the forms as shown in the figure:



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

71. What is the sum of the 1<sup>st</sup> row?

- (1) 25
- (2) 26
- (3) 27
- (4) 28
- (5) 24

72. What is sum of the cells (4, 1) and (4, 7)?

- (1) 3
- (2) 4
- (3) 5
- (4) 6
- (5) 7



73. What is the maximum number of 1's that can be used?

- (1) 3
- (2) 4
- (3) 5
- (4) 6
- (5) 1

74. Which number is in (5, 6)?

- (1) 5
- (2) 3
- (3) 4
- (4) 1
- (5) 2

75. After the table is filled according to the rules, what is the sum of all the entries?

- (1) 163
- (2) 165
- (3) 161
- (4) 167
- (5) 169



## Answer Key

### Section I:

Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.
1	3	6	5	11	2	16	2	21	2
2	1	7	3	12	1	17	4	22	2
3	2	8	1	13	2	18	4	23	3
4	4	9	2	14	5	19	4	24	5
5	1	10	2	15	5	20	5	25	3

### Section II:

Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.
26	2	31	1	36	2	41	2	46	5
27	4	32	4	37	1	42	1	47	1
28	2	33	3	38	5	43	4	48	3
29	2	34	4	39	2	44	4	49	5
30	5	35	4	40	3	45	4	50	1

### Section III:

Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.
51	4	56	2	61	2	66	3	71	3
52	5	57	2	62	3	67	2	72	1
53	1	58	3	63	4	68	4	73	3
54	5	59	1	64	2	69	3	74	3
55	5	60	5	65	4	70	5	75	1

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