FREE iCAT 2

Instructions - Please read carefully before proceeding

1. The test has three sections that examine various abilities. In all there are 90 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 4 marks. Negative marking for wrong answers is 1/4th 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 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 Ask-a-Doubt facility.

SECTION I
Number of Questions = 30

Directions for questions 1 to 5: The passage given below is followed by a set of questions. Choose the most appropriate answer to each question.

A critical claim in existentialist thought is that we are always radically free to make choices and guide our lives towards our own chosen goal or 'project'. We cannot escape this freedom, even in overwhelming circumstances. For instance, even an armed mugger's victim possesses choices: to hand over his wallet; to negotiate; to beg; to run; to counter-attack; or to die.

Although we are limited by our circumstances or our facticity, these cannot force us, as radically free beings, to follow one course over another. For this reason, we choose in anguish: we know that we must make a choice, that it will have consequences, and that some choices are better than others. But for Sartre, to claim that one amongst our many conscious possibilities takes undeniable precedence is to assume the role of an object in the world, merely at the mercy of circumstance- a being-in-itself that is only its own facticity.

For Sartre this attitude is manifestly self-deceiving. As human consciousness, we are always aware that we are not whatever we are aware of- we cannot, in this sense, be defined as our 'intentional objects' of consciousness, including our facticity of personal history, character, bodies, or objective responsibility. Thus, as Sartre often repeated, 'human reality is what it is not, and it is not what it is': it can only define itself negatively, as 'what it is not'; but this negation is simultaneously the only positive definition it can make of 'what it is'.

From this we are aware of a host of alternative reactions to our objective situation- i.e., of freedom- since no situation can dictate a single response. Only in assuming social roles and value systems external to this nature as conscious beings can we pretend that these possibilities are denied to us; but this is itself a decision made possible by our freedom and our separation from these things. It is this paradoxical free decision to deny to ourselves this inescapable freedom which is 'bad faith'.

Sartre cites a café waiter, whose movements and conversation are a little too "waiteresque". His voice oozes with an eagerness to please; he carries food rigidly and ostentatiously. His exaggerated behaviour illustrates that he is play acting as a waiter, as an object in the world: an automaton whose essence is to be a waiter. But that he is obviously acting belies that he is aware that he is not merely a waiter, but is rather consciously deceiving himself.

Another of Sartre's examples involves a young woman on a first date. She ignores the obvious sexual implications of her date's compliments to her physical appearance, but

accepts them instead as words directed at her as a human consciousness. As he takes her hand, she lets it rest lifelessly in his, refusing either to return the gesture or to revoke it. Thus she delays the moment when she must choose to either acknowledge and reject his advances, or submit to them. She conveniently considers her hand only a thing in the world, and his compliments as unrelated to her body; thus playing on her dual human reality as a physical being, and as a consciousness separate and free from this physicality.

Sartre tells us that by acting in bad faith, the waiter and the woman are denying their own freedom; but actively using this freedom itself. Thus they manifestly know they are free, but do not acknowledge it. Bad faith is paradoxical in this regard: when acting in bad faith, a person is both aware, and, in a sense, unaware, that they are free.

Sartre tells us that the consciousness with which we generally consider our objective surroundings is different from the consciousness of ourselves being conscious of these surroundings (pre-reflective and reflective consciousness respectively); though neither can properly be called unconsciousness. An example he gives is of running after a bus; one is certainly not unaware of running after it, but only after stopping would one reflect and think 'my god, I was really running there'.

In this sense consciousness always entails being self-aware. Since for Sartre consciousness also entails a consciousness of our separation from the world, and hence freedom, we are also always aware of this. But we can manipulate these two levels of consciousness, so that our reflective consciousness interprets the factual limits of our objective situation as insurmountable, whilst our pre-reflective consciousness remains aware of alternatives.

1. Which of the following will be inconsistent with the claim of existentialist thought about man's freedom to make choices?
   (1) "I cannot risk my life, because I have to support my family".
   (2) "My actions are not determined by forces external to my self".
   (3) "I choose to be a philosopher, though I can very well be a chef".
   (4) "My self is not constant; it is not a thing in the world".
   (5) "My decision to be a manager arises out of the circumstances that I am in".

2. According to Sartre, which of the following attitudes is 'manifestly self-deceiving'?
   (1) Assuming that the circumstances in which one is a wife or a mother are not real.
   (2) Assuming that one's identity as a professor or as a student is merely an intentional object of our consciousness arising out of our personal responsibility.

   (3) Assuming that our social roles do not preclude the possibilities of our own freedom to be separate from these roles.

   (4) Assuming that one's identity as a father or as a son takes undeniable precedence over all other identities one may have.

   (5) Assuming that as father or as a son one has to fulfill all the obligations that are arising out of one's identity as a father or as a son.

3. According to Sartre, identifying oneself completely in which of these roles will NOT be an example of 'bad faith'?

   (1) A waiter in a restaurant.

   (2) A young woman on her first date.

   (3) An adult human being as man.

   (4) An adult human being as a father.

   (5) None of these

4. The various ideas in the passage are best summarized in which of these groups?

   I. (a) Bad faith (b) Intentional consciousness and freedom (c) Sartre's examples (d) Modes of consciousness.

   II. (a) Being in itself as facticity (b) Bad faith (c) Sartre's examples (d) Freedom and consciousness.

   III. (a) Bad faith (b) Sartre's examples (c) Modes of consciousness (d) Consciousness and freedom.

   IV. (a) Facticity (b) Self deception (c) Sartre's examples (d) Intentional consciousness and freedom

   (1) I only

   (2) II only

   (3) I and III only

   (4) III and IV only

   (5) IV only

5. According to the ideas discussed in the passage, the example of a person 'running after a bus' will closely resemble which of the following?

   I. A waiter servicing his customers in a café.

   II. A young woman on her first date.

   III. A priest interpreting sacred scriptures.

   IV. A lawyer interpreting the constitution.

   (1) I and II only

   (2) I, II and III

   (3) II only

   (4) I and IV only

   (5) All of the above

Directions for questions 6 to 8: Each of the questions below has a set of sequentially ordered statements. Each statement can be classified as one of the following:

    A. Facts, which deal with the pieces of information that one has heard, seen or read, and which are open to discovery or verification (the answer option indicates such a statement with an 'F')

    B. Inferences, which are conclusions drawn about the unknown, on the basis of the known (the answer option indicates such a statement with an 'I')

    C. Judgements, which are opinions that imply approval or disapproval of persons, objects, situations and occurrences in the past, the present or the future (the answer option indicates such a statement with a 'J')

Select the answer option that best describes the set of statements.

6.

    A. A provocative book written by a Japanese mathematician has reignited the debate about whether there are specifically 'Asian' values.

    B. As yet untranslated into other languages, The Dignity of a State by Masahiko Fujiwara is an emotional plea for a Japanese 'special path'.

    C. In particular, it argues that liberal democracy is a Western invention that does not fit well with the Japanese or Asian character.

    D. The reasoning is peculiar, and seems to revive a nineteenth-century critique, usually associated with Nietzsche, that Christianity (and Islam) produces an acquiescent or even subservient mentality, in contrast to the heroic virtues of classical antiquity or of warrior societies, such as the world of the Japanese samurai.

    (1) JJIJ

    (2) IJFI

    (3) FFIJ

    (4) JIIF

    (5) IIFJ

7.

    A. Art, in its broadest meaning, is the expression of creativity or imagination.

    B. The word art comes from the Latin word ars, which, loosely translated, means 'arrangement'.

    C. Art is commonly understood as the act of making works which use the human creative impulse and which have meaning beyond simple description.

    D. Art is often distinguished from crafts and recreational hobby activities.

    (1) JFJJ

    (2) IFII

    (3) IIJJ

    (4) JFII

    (5) IJIJ

8.

A. On February 17, 2008 Kosovo finally declared its independence, becoming the seventh state to emerge from Yugoslavia that self-destructed in the early 1990s.

B. Had it been a republic in the federation of Yugoslavia, like Croatia or Slovenia, it would no doubt have been independent long ago.

C. But it was a province of Serbia and that difference means Kosovo, for the foreseeable future, will not be a state like the others.

D. Kosovo has about 2m people, of whom 90% are ethnic Albanians.

(1) IJJF
(2) FJJF
(3) FIIF
(4) JIIF
(5) FIII

Directions for questions 9 to 11: Each of the following questions has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

9. The advance of knowledge is often a mixed blessing. Over the past 60 years, nuclear physics has been one obvious example of this truth. Over the next 60 years, genetics may be another. Today, enterprising firms offer, for a fee, to tell you about your genes. They claim that this knowledge will help you live longer and better. You might, for example, have extra checkups to detect early signs of the diseases that you are most at risk of contracting, or you could alter your diet to reduce that risk. If your chances of a long lifespan are not good, you might buy more life insurance. _____.

(1) Or even retire early to have enough time to do what you always wanted to do.
(2) And defenders of privacy have worked, with some success, to prevent insurance companies from requiring genetic testing before issuing life insurance.
(3) But, insurance companies are barred from conducting genetic testing before issuing life insurance.
(4) But as the science improves, the insurance problem will have to be faced.
(5) That is not a future that any of us should approve.

10. Last month Soozlon-acquired Hunksen Transmissions International, a maker of gearboxes for wind turbines, was listed on the London Stock Exchange. Nothing noteworthy about that, you might say, despite the jump in the share price on the first day of trading and the handsome gain since: green technology is all the rage, is it not? But Hunksen exemplifies another trend too, which should prove every bit as durable: the rise of multinational companies from emerging economies. _____.

(1) As a symbol of a shift in economic power, this is hard to match.

(2) Economic theory says that this should not happen.

(3) The world is now replete with Soozlons: global companies from emerging economies buying businesses in rich countries as well as in poorer places.

(4) Its parent is Soozlon, an Indian firm that began life as a textile manufacturer but is now among the world's five leading makers of wind turbines.

(5) Nata Motors has bought two grand old names of British carmaking, Cheetah and Land Hover, from America's enfeebled Afford.

11. By 2100, the world's energy system will be radically different from today's. Renewable energy like solar, wind, hydroelectricity, and biofuels will make up a large share of the energy mix, and nuclear energy, too, will have a place. Humans will have found ways of dealing with air pollution and greenhouse gas emissions. _____.

(1) Indeed, the distant future looks bright, but much depends on how we get there.

(2) After a while, easily accessible supplies of oil and gas probably will no longer keep up with demand.

(3) Whether we arrive safely at our destination depends on the discipline of the drivers and the ingenuity of all those involved in this effort.

(4) New technologies will have reduced the amount of energy needed to power buildings and vehicles.

(5) Much will depend on how attitudes evolve in China, the European Union, India, and the United States.

Directions for questions 12 to 16: The passage given below is followed by a set of questions. Choose the most appropriate answer to each question.

In general, in any country where we find a diminished prolificity a falling off of childbirth unaccompanied by a decrease in the number of marriages occurring at the reproductive ages, we may attribute this decrease to voluntary restriction of childbearing on the part of the married, or in other words, to the prevalence of "birth control." This incidentally, is not a theoretical statement, but one supported by the almost unanimous medical opinion in all countries. Everywhere and especially here in our own United States, we find evidence of the extensive employ of "birth control" measures to prevent that normal development of family life which underlies the vigor and racial power of every nation. These preventive measures which arbitrarily control human birth had long been in use in France with results which, especially since the war, have been frequently and publicly deplored in the press, and have led the French Government to offer substantial rewards to encourage the propagation of large families. From France the preventive practices of "birth control" had spread, after 1870, over nearly all the countries of western Europe, to England and to the United States; though they are not as much apparent in those countries where the Roman Church has a strong

hold on the people. As a general thing, the practice of thus unnaturally limiting families-"unnaturally" since the custom of "birth control" derives from no natural, physical law-prevails, in the first instance, among the well-to-do, who should rather be the first to set the example of protest against it by having the families they are so much better able to support and educate than those less favored with the world's goods. If the evil of voluntary control of human birth were restricted to a privileged class, say one of wealth, the harm done would, perhaps, not be so great. But, unfortunately, in the course of time it filters down as a "gospel of comfort"-erroneous term!-to those whose resources are less. They accept and practice this invidious system of prevention and gradually the entire community is more or less affected.

The whole system of "birth control" is opposed to natural, human and religious law. Nature, in none of her manifestations, introduces anything which may tend to prevent her great reason for being-the propagation of the species. Birth as the natural sequence of mating is her solemn and invariable law. It is in birth and rebirth that nature renews herself and all the life of the animal and vegetable world, and her primal aim is to encourage it. Human law recognizes this underlying law of nature by forbidding man to tamper in a preventive way with her hallowed and mysterious processes for perpetuating the human race. Religious law, based on the divine dispensation of the Scriptures, endorses the law of nature and that of the state. We may take it, then, that "birth control" represents a deliberate and reprehensible attempt to nullify those innate laws of reproduction sanctioned by religion, tradition and man's own ingrained instinct. To say that the human instinct for the perpetuation of his race and family has become atrophied during the flight of time, and that he is therefore justified in denying it, is merely begging the question. The instinct may be denied, just as other higher and nobler instincts are disregarded; but its validity cannot be questioned. Whether those who practice "birth control" are influenced by economic, selfishly personal or other reasons, they are offending in a threefold manner: against the inborn wish and desire which is a priceless possession of even the least of God's creatures, that of living anew in its offspring; against the law of the state, which after all, stands for the crystallization of the best feeling of the community; and against the divine injunction handed down to us in Holy Writ, to "increase and multiply."

"Birth control" is the foe to the direct end and aim of marriage, which, in the last analysis, is childbirth. As an enemy to the procreation of children it is an enemy of the family and the family group. As an enemy of the family, it is an enemy of the state, the community, a foe to the whole social system. Mankind has been able to attain its comparatively recent state of moral and physical advancement without having recourse to the dangerous principle which "birth control" represents. Surely that wise provision of our existing legal code which makes the printing or dissemination of information regarding the physical facts of "birth control" illegal and punishable as an offense, can only be approved by those who respect the Omnipotent will, and the time-hallowed traditions which date back to the very inception of the race.

12. '"Gospel of comfort" -erroneous term' has been mentioned in order to state that:
    (1) Voluntary birth control should be restricted to the wealthy.
    (2) People with lesser resources are mistakenly seduced by the idea of birth control.
    (3) Acceptance and practice of birth control mistakenly consumes the imagination of the entire community.
    (4) "Birth control" is opposed to natural, human and religious law.
    (5) It is in birth and rebirth that nature renews herself and all the life of the animal and vegetable world.

13. According to the passage:
    (1) Marriages are consummated keeping in mind procreation as the real goal.
    (2) Birth Control is the enemy of the family and community, not the state.
    (3) Birth control is a covert attempt to go against religion, tradition and man's own ingrained instinct.
    (4) Those who practice birth control are influenced by economic, selfishly personal and other reasons.
    (5) The divine instruction handed down to us in Holy Writ is, increase and deal with life.

14. It can be inferred from the passage that:
    (1) France can be termed as the beneficiary of birth control.
    (2) The Roman church was responsible for stemming the idea of birth control in France.
    (3) Birth control measures are a deterrent to the vigor and racial power of a country.
    (4) There are reasons to believe that USA has paid a heavy price for incorporating birth control.
    (5) A diminished prolificity with decrease in the number of marriages at reproductive ages can be attributed to birth control.

15. The author believes that:
     I.   All laws of nature are inviolable and should not be tampered with.
     II. Religious laws sanction state laws.
     III. Human instinct for perpetuation of family has become atrophied.
    (1) Only I
    (2) Only II
    (3) Only III
    (4) Only I and II
    (5) Only II and III

16. Which of the following can be a suitable title to this passage?
    (1) Birth Control-its causes and effects.
    (2) The new social evil-birth control.

(3) Man plays god with birth control.

(4) Reasons for control of birth control.

(5) Proliferation of birth control nullifying established laws.

Directions for questions 17 and 18: Each of the questions below contains a number of sentences. Each sentence has pairs of word(s)/phrases that are highlighted. From the highlighted word(s)/phrase(s), select the most appropriate word(s)/phrase(s) to form correct sentences. Then, from the options given, choose the best one.

17.
1. The National Egg Corporation advertisements try to promote eggs as one of the most **healthy(A) / healthful (B)** foods.
2. After the surveyor **appraises (A) / apprises (B)** the extent of the damage the company will decide the amount to be paid.
3. Reliance offered free bonus shares to the retail investors in order to **alleviate (A) / ameliorate (B)** their losses.
4. The **amiable (A) / amicable (B)** manner in which Rajesh conducts himself makes it a pleasure to be with him.
5. If you can wait **a while (A) / awhile (B)**, I can accompany you to the grocer.
(1) ABABA
(2) BABAB
(3) BAABB
(4) BAAAB
(5) BAABA

18.
1. I am under **continuous (A) / continual (B)** pressure from my brother to get a job.
2. They tried to **devise (A) / device (B)** a clever excuse to avoid criticism.
3. The teacher seemed **disinterested (A) / uninterested (B)** in whatever the student was saying.
4. The company **effected (A) / affected (B)** a closure of its manufacturing activities.
5. Since we lack funds, we should look at the most **economic (A) / economical (B)** solution to this problem.
(1) ABABA
(2) BABAB
(3) BAABA
(4) ABABB
(5) BAAAB

Directions for questions 19 and 20: Each of the questions below contains a passage followed by alternative summaries. Choose the option that best captures the essence of the text.

19. Humans' and other animals' survival is dependent on knowing the important properties of the environment. Without such knowledge we would not be here. But where does this knowledge come from? And how is it represented within us? This is the eternal fundamental question in cognitive psychology which has been discussed throughout the ages. There are two approaches to this problem: The first one, known as Empiricism, claims that knowledge comes from experience. On the contrary, Nativists (also known as rationalism), inspired by rationalist philosophers, suggest that knowledge is based on innate characteristics of the brain.

    (1) Cognitive Psychology approaches the problem of knowledge through either Empiricism or Nativism.
    (2) Cognitive psychology discusses the fundamental question of the origin and the nature of knowledge. Empiricism and Nativism are two approaches to solve this problem.
    (3) The problems of the origin and the nature of knowledge are fundamental to cognitive psychology. Empiricists and Nativists solve these problems differently.
    (4) The problem of the origin and nature of knowledge is fundamental to cognitive psychology. Empiricism and Nativism approach this problem differently.
    (5) The fundamental problem of knowledge is approached in two ways in cognitive psychology, through Empiricism and Nativism.

20. It is not enough in artistic drawing to portray accurately and in cold blood the appearance of objects. To express form, one must first be moved by it. There is in the appearance of all objects, animate and inanimate, what has been called an 'emotional significance', a hidden rhythm that is not caught by the accurate, painstaking, but cold artist. The form significance of which we speak is never found in a mechanical reproduction like a photograph.

    (1) An artist must not just portray how an object looks, but also show what he feels about the object.
    (2) While a photograph is a mechanical reproduction, a drawing is an emotional reproduction and need not be accurate.
    (3) There are two forms in an object-physical as in photographs and emotional as in art.
    (4) An artist who coldly portrays just the accurate image without any emotions, is better off taking up photography.
    (5) Every object has hidden emotions and though it is the duty of an artist to bring it out, he may not always.

Directions for questions 21 and 22: Each of the questions consists of a certain number of sentences. Some sentences are grammatically incorrect or inappropriate. Select the option that indicates the grammatically <u>correct and appropriate</u> sentence(s).

21.
  A. All day Tom was walking up and down on the porch,
  B. or working hard at the apparatus. His eyes were glistening,
  C. his cheeks hectic, and he had all symptoms of high fever.
  D. "Heaven grant that Dick's diagnosis is not correct!" I thought;
  E. and yet, as evening drew near, I found imperceptibly sharing the excitement.

  (1) A, B and D
  (2) B, C and D
  (3) B only
  (4) D and E only
  (5) B and C only

22.
  A. Also on the anvil are a slew of measures.
  B. to make Delhi stations more secure.
  C. These include state-of-art baggage screening devices,
  D. metal detectors, CCTVs, and an explosive detection system.
  E. These will be procured through railway funds or public-private partnership.

  (1) A and D only
  (2) B, C and D
  (3) B, D and E
  (4) E only
  (5) D only

Directions for questions 23 to 27: The passage given below is followed by a set of questions. Choose the most appropriate answer to each question.

Too little has been said about Italy's refusal to join Germany and Austria in their war for world power. During the past five months we have heard German apologists offer the most contradictory arguments to prove, first, that Russia, next, that France and Belgium, and, finally, that England began the struggle. The Kaiser himself, with that disdain of fact which is the privilege of autocrats, declared that the sword was forced into his hands. And all the while the mere abstention of Italy from supporting Germany and Austria gave the lie to the Germanic protestations and excuses. By the terms of the Triple Alliance every member of it is bound to communicate at once to the other members all international diplomatic transactions which concern the alliance. Germany and Austria failed to do this during the earlier stages in July, when they were preparing for the war. Only after they had laid their train so surely that an explosion was almost inevitable did they communicate the documents to Italy and call upon her to take her place in the field

with them. But Italy refused; because, after examining the evidence, she concluded that Germany and Austria were the aggressors. Now, the terms of the Triple Alliance bind its members to stand by each other only in case of attack.

Italy's verdict, therefore, threw the guilt of the war on Germany and Austria. She had testimony before her which does not appear even in the "White Papers" and other official diplomatic correspondence; and all the efforts of German zealots and casuists have not subtracted one iota from the meaning of her abstention. Germany and Austria were the aggressors-that is the Italian verdict which history will confirm. On this side of the water the German apologists made as little as possible of Italy's withdrawal-they were too busy trying to persuade the American public that trivialities like the passage of a French aeroplane or of a French automobile with two French officers in it, across a corner of Belgium, thirty minutes before the German Army invaded Belgium, proved that the French and Belgians began the war. They sneered a little at Italian honor; they implied that scuttling off was all that could be expected of a decadent Latin people; and they hinted that, after the Kaiser had disposed of France, Belgium, England, and Russia, he would punish Italy for her "flight." At Berlin, however, the importance-military, political, and naval-of Italy's withdrawal from the Triple Alliance was appraised at its true value. The German Foreign Office employed alternately threats and blandishments upon her. They warned her that, if she refused to back up her allies, she would be treated without mercy at the end of hostilities. When the policy of terrorizing failed, seductive promises were held out-suggestions of an addition to Italian territory and of a subsidy for military expenses. These also failed. Italy could not be induced to send her million soldiers against the Allies. Then Germany labored to prevent her from actively joining the Allies-and this effort Germany is keeping up at the present moment, under the direction of the sleek Prince von Blow. The Italians, who have in large measure a sense of humor, that clarifying quality which Prussianization has destroyed in the Germans, must have smiled when they heard the German envoys expatiate on the beauties of neutrality, and, although they are a polite people, they must have found it hard to keep from laughing when the agents of Dr. Bethmann-Hollweg, who had just declared that a treaty is only a scrap of paper, to be torn up at pleasure, tried to impress upon Italy the sacredness of the treaty which bound her to the Triple Alliance. Not content with these official, or officious maneuvers, the German Government sent Socialist leaders into Italy to urge the Italian Socialists not to consent to a war in behalf of the Allies; but they, too, seem to have met with a chilly reception. The Italian Socialists, like the rest of the world, wondered why it was that 5,000,000 Socialists in Germany should allow themselves to be commandeered, apparently without a murmur, to uphold a war waged to preserve and extend military despotism. In addition to these direct efforts to win Italy to their side, or at least to keep her from going over to the enemy, the Germans have been busy since early in August with their Press Bureau, which has pursued methods there similar to those they have made us familiar with here. But in Italy they have been more guarded and less truculent, and they have not, like the preposterous Bernstorff and his associates, assumed that the public they were addressing was not only ignorant of the simplest facts of recent European history, but were also morally imbecile.

Although the Italians are not less susceptible than are other peoples to be swayed by sudden political gusts, they were not at the end of July, 1914, taken by surprise. For a long time past their King and statesmen had deliberated as to what ought to be Italy's course in case Germany should carry out her well-understood purpose of humbling

England. The Italians were not deceived by the increase from year to year of the German Army. They knew perfectly well what the tremendous efforts of the Germans to create a great navy meant. They had no illusions as to the purpose of the strategic railways to the Belgian frontier on the west or to the Russian border on the east. They knew how narrowly a European war was averted during the Balkan cataclysm two years ago. They did not wrong the Kaiser by supposing that the immense fund which he had recently raised from "voluntary" 5 per cent contributions on incomes was to be given to The Hague Tribunal to promote the cause of universal peace. They logically and honorably decided that, if Germany provoked war, Italy would not support her. The bond of the Triple Alliance called for no other action on her part. Germany and Austria provoked the war; Italy stood by her agreement.

23. The author of this passage is most likely to be:
    (1) An American journalist.
    (2) An Italian socialist.
    (3) An English journalist.
    (4) A retired war hero.
    (5) An Italian government official.

24. Which of the following cannot be inferred from the passage?
    (1) Italy knew about Germany's war preparations beforehand.
    (2) The German Socialists were not in favour of the war being waged by the rulers of their country.
    (3) Dr. Bethmann-Hollweg's agents had violated a treaty before this passage was written.
    (4) The citizens of Germany supported the war efforts of her rulers.
    (5) The Germans suspected that they would lose the war if Italy did not join in their efforts.

25. Which option suggests most that Germany and Austria started the war?
    (1) Italy's abstention from supporting Germany and Austria in their bid to wage war.
    (2) Germany had been making major efforts towards building up her army and naval strength for a long time.
    (3) Germany offered Italy additional land-this can only be done by a country that plans to attack and conquer other countries.
    (4) Italy had testimony before her which does not appear even in the 'White Papers' and other official diplomatic correspondence.
    (5) The Kaiser declaring falsely that the sword was forced into his hands.

26. .Which of the following was a not a method employed by Germany to win Italy's support?
    (1) The use of the German Press Bureau to address Italian citizens justifying the cause of war.
    (2) Offering Italy a subsidy in military expenses.

(3) The German foreign office employed threats and blandishments upon Italy.

(4) They sneered at Italian honour implying that they were a decadent group of people.

(5) They reminded Italy that as per the Triple Alliance Pact, Italy was compelled to help them in case of attack.

27. All of these could be agreements as per the Triple Alliance Pact EXCEPT:

(1) The member countries have to provide army and naval assistance to other member countries in case of attack on any of their lands.

(2) The members have to provide monetary assistance to each other for strengthening their war supplies and resources.

(3) The members of the Alliance are not compelled to honour their alliance if they feel that other members are provoking aggression.

(4) Every member of the alliance is bound to communicate at once, to the other members, all international diplomatic transactions which concern the alliance.

(5) All of the above could be valid agreements of the pact.

Directions for questions 28 to 30: Each of the questions below consists of a set of labeled sentences. These sentences, when properly sequenced, form a coherent paragraph. Choose the most logical order of sentences from among the options.

28.

    A. Many prominent economists have criticised the existing global financial institutions like the World Bank and International Monetary Fund and their policies regarding money supply, banks and debt in developing nations.

    B. The debates have been linked to some extent with the valuation of non-traded goods and social outcomes.

    C. While ensuring the independence from government of the central bank or the creation of a currency board are practical monetary reforms that many countries have implemented to combat inflation or currency speculation, many suggest that more radical monetary reform can assist in sweeping economic or social changes.

    D. In recent years debates have focused on improving the use of currency.

    E. Many people also criticize the fact that governments pay interest for the use of their own money. This leaves the state of a nation's economy susceptible to the interests of private bankers who control the issuance of money through fractional reserve banking.

(1) ABCDE

(2) DABEC

(3) CBDAE

(4) ADBEC

(5) DBCAE

29.

    A. Furthermore, unlike other forms of Marxism-Leninism in which large-scale industrial development was seen as a positive force, Maoism made all-round rural development the priority.

    B. The model for this was of course the Chinese communist rural Protracted People's War of the 1920s and 1930s, which eventually brought the Communist Party of China to power.

    C. Unlike the earlier forms of Marxism-Leninism in which the urban proletariat was seen as the main source of revolution, and the countryside was largely ignored, Mao believed that peasantry could be the main force behind a revolution, led by the proletariat and a vanguard Communist party.

    D. Mao felt that the strategy made sense during the early stages of socialism in a country in which most of the people were peasants.

    E. Unlike most other political ideologies, including other socialist and Marxist ones, Maoism contains an integral military doctrine and explicitly connects its political ideology with military strategy.

(1) ECDBA
(2) CBADE
(3) EABCD
(4) CEABD
(5) DEBAC

30.

    A. The creation of the Black Tigers is based on the LTTE's studies of Asymmetric warfare thus using suicide cadres to balance the government's greater resources.

    B. The Black Tigers are believed to be the most effective unit of its kind in the world, as with the rest of the LTTE, it is also secular, not driven by religious fanaticism.

    C. The LTTE are keeping the Black Tiger unit active, as witnessed by their commemoration ceremonies.

    D. They will then be called up if needed, and if so will have a last meal with the LTTE leader Velupillai Prabhakaran.

    E. The Tiger unit get extensive training but are then believed to return to their previous unit, without revealing their new assignment.

(1) CEABD
(2) BCDEA
(3) EDACD
(4) CBAED
(5) BAEDC

SECTION II
Number of Questions = 30

Directions for questions 31 to 35: Answer the following questions based on the information given below.

Five friends - Parag, Qavi, Rachit, Sagar and Tanay - are playing golf on an 18-hole course. The holes are numbered from 1 to 18, and the five friends move together from hole 1 to 18 in order, taking turns at trying to hit the ball into the hole. For every hole, if the ball reaches the hole in exactly 4 shots, the golfer is said to have hit 'par'. If the ball reaches the hole in 1, 2, 3, 5, 6 or 7 shots, it is called a 'hole-in-one', an 'eagle', a 'birdie', a 'bogey', a 'double bogey' or a 'triple bogey' respectively. The number of shots taken by each golfer for every hole are tabulated in the score sheet.

Note:

   I. For each of the five golfers, the number of shots taken for a hole differs by ± 1 from the number of shots taken for the previous hole.
   II. Parag hit exactly 3 eagles, Qavi hit exactly 5 birdies, Rachit hit exactly 5 pars, Sagar hit exactly 3 bogeys and Tanay hit exactly 3 double bogeys respectively.
   III. The only hole-in-one hit on the entire course by anyone was by Rachit.
   IV. No one took more than 7 shots on any hole.

Hole	Parag	Qavi	Rachit	Sagar	Tanay
1		3			
2				5	
3			4		
4					6
5					
6	2				6
7					
8				5	
9		3	4		
10					
11		3			
12				5	
13			4		
14	2				6
15		3	4		
16					
17		3	4		
18	2				
Total	71	73	69	75	77

31. If Qavi hits exactly one 'triple bogey', then how many 'eagles' did he hit?

(1) 2

(2) 3

(3) 4

(4) 5

(5) Cannot be determined

32. On which of the following holes did Parag not hit par?

(1) 4th

(2) 8th

(3) 12th

(4) 16th

(5) None of these

33. Who is the only golfer for whom the complete sequence of the number of shots taken on each of the 18 holes can be exactly determined?

(1) Parag

(2) Qavi

(3) Rachit

(4) Sagar

(5) Tanay

34. Who was leading (had the minimum total number of shots) after hole 17?

(1) Parag

(2) Qavi

(3) Rachit

(4) Sagar

(5) Tanay

35. On which hole was the 'hole-in-one' hit?

(1) 1st

(2) 6th

(3) 11th

(4) 16th

(5) None of these

Directions for questions 36 to 40: Answer the following questions based on the information given below.

The food critic, Mr. Jughead Jones visits 5 different restaurants - Adam's Joint, Barney's Point, Charlie's Corner, Derek's Den and Ed's Place - in Riverdale City. He assesses food standard by ordering the following five dishes in each restaurant: Apple Pie, Banana Shake, Caramel Custard, Duck Roast and Egg Sandwich. The following trends are observed about the sequence of the dishes in his food order:

   I. The sequence in which the dishes are ordered is unique to each restaurant. Each dish is ordered at a particular position (First to Fifth) only once.

  II. Caramel Custard is always ordered immediately after the Banana Shake in all the restaurants excepting Charlie's Corner.

III. The first dish ordered is Apple Pie in Barney's Point and Egg Sandwich in Adam's Joint.

IV. Apple Pie, Banana Shake and Caramel Custard are ordered one after another in Derek's Den.

V. Apple Pie is never ordered immediately after the Duck Roast.

VI. Duck Roast was not the last dish ordered in Barney's Point or Ed's Place.

VII. The second dish ordered in Charlie's Corner is same as the fourth dish ordered in Adam's Joint.

36. In which restaurant is Duck Roast ordered as the first dish?
   (1) Adam's Joint
   (2) Barney's Point
   (3) Charlie's Corner
   (4) Derek's Den
   (5) Ed's Place

37. Which is the second dish ordered in Ed's Place?
   (1) Apple Pie
   (2) Banana Shake
   (3) Caramel Custard
   (4) Duck Roast
   (5) Egg Sandwich

38. The third dish ordered in Adam's Joint is the same as the fourth dish ordered in _____.
   (1) Adam's Joint
   (2) Barney's Point
   (3) Charlie's Corner
   (4) Derek's Den
   (5) Ed's Place

39. In which restaurant is Duck Roast the second dish ordered?
   (1) Adam's Joint
   (2) Barney's Point
   (3) Charlie's Corner
   (4) Derek's Den
   (5) Cannot be determined

40. Which is the fourth dish ordered in Charlie's Corner?

(1) Apple Pie

(2) Banana Shake

(3) Caramel Custard

(4) Duck Roast

(5) Cannot be determined

Directions for questions 41 to 45: Answer the following questions based on the information given below.

The market share of three commercial vehicle manufacturers, A, B and C, for the last four financial years is shown in the given bar graph. The product-wise breakup (in terms of percentage) of the vehicles sold by A, B and C every year, is shown in the given pie charts.
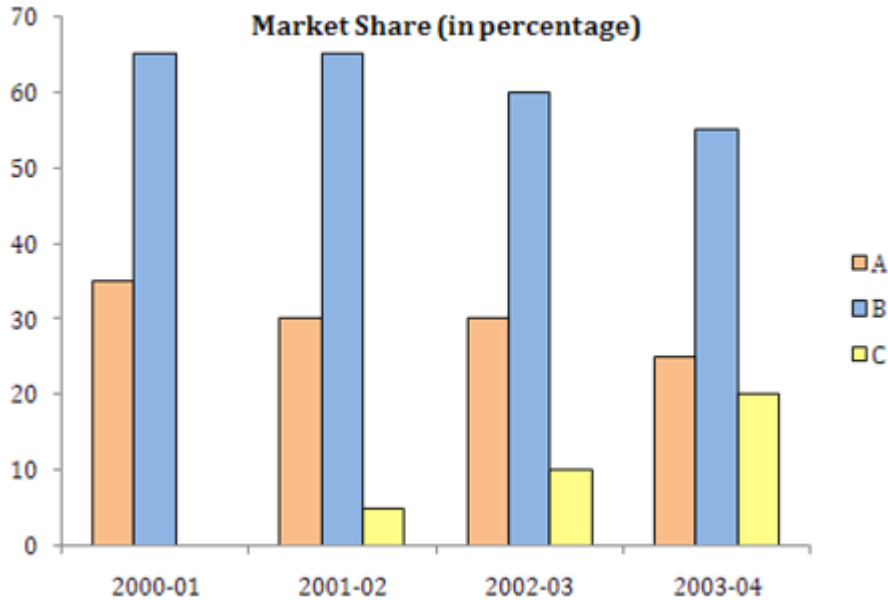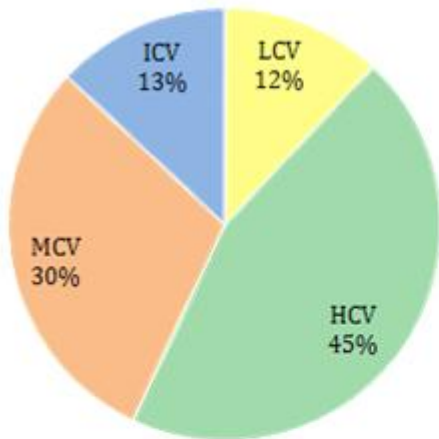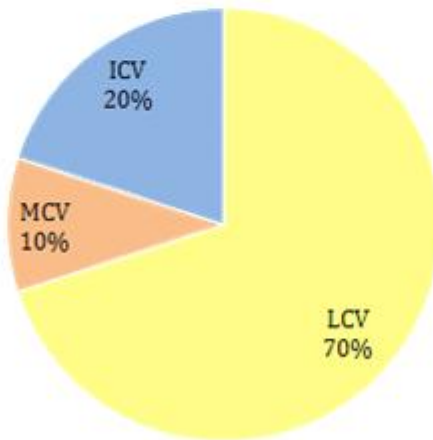
Company A
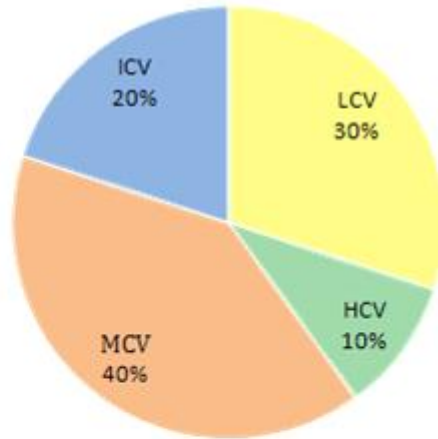
Company B

Company C

41. If the total number of vehicles sold in the year 2000–01 was 90000, then approximately how many more MCVs did B sell as compared to A, that year?
   (1) 12,000
   (2) 13,000
   (3) 14,000
   (4) 15,000
   (5) 16,000

42. What is the market share of company C in the ICV segment in the year 2003–04, if 1,50,000 vehicles in all were sold that year?
   (1) 19%
   (2) 20%
   (3) 21%
   (4) 22%
   (5) 23%

43. If A stops production of LCVs in the year 2003–04 and C supplies A's share in addition to its own, then what is the new market share of C in the LCV segment in the year 2003–04? Take necessary data from previous questions.
(1) 45%
(2) 50%
(3) 55%
(4) 60%
(5) Cannot be determined

44. If in the year 2003–04, C gains another 5% share in the total sales purely due to increased sales of MCVs, and these increased sales are at the cost of A & B, with both losing an equal number of MCVs, then what is the new market share of B in the MCV segment? Take necessary data from previous questions.
(1) 55%
(2) 58%
(3) 62%
(4) 64%
(5) 65%

45. If the total sale of commercial vehicles increases every year by 20%, then in the year 2002–03, approximately how many LCVs were sold in all? Take data from the first question if necessary.
(1) 33,000
(2) 34,000
(3) 35,000
(4) 36,000
(5) 37,000

Directions for questions 46 to 50: Answer the following questions based on the information given below.

The 'Octanacia' residential complex with eight row houses was built in 1998. Eight couples A, B, C, D, E, F, G and H occupied the houses in 1999. Couple A had a baby in 1999, couple B in 2000, couple C in 2001 and so on. All babies were born before 31st December of their respective birth years.

Every alternate year, starting from 2000, one couple with their one-year old child, shifted to another city, leaving their row house vacant.

No one had his/her birthday on 31st December. The ages considered are integers corresponding to the completed number of years.

The sums of the ages of all residents of the complex on 31st December in the years 1999 to 2006 were as follows:

Year	1999	2000	2001	2002	2003	2004	2005	2006
Sum of ages	464	418	433	380	394	328	341	300

46. Find the sum of the ages of couple G in 1999.
    (1) 53
    (2) 62
    (3) 40
    (4) 60
    (5) Cannot be determined

47. If the wife in couple E was 35 in 1999, how old was her husband then?
    (1) 32
    (2) 33
    (3) 34
    (4) 35
    (5) 36

48. How many residents did the Octanacia complex have on 31st December 2004?
    (1) 13
    (2) 14
    (3) 15
    (4) 16
    (5) 17

49. The wife in couple C was younger than the wife in couple A by 2 years. What was the difference in the ages of their respective husbands?
    (1) 4
    (2) 0
    (3) 3
    (4) 5
    (5) Data insufficient

50. How old was the oldest kid in the complex in 2005?
    (1) 7
    (2) 6
    (3) 5
    (4) 4
    (5) 3

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

A prank is played on the participants of a reality television show on the 1st of April. Each participant is given a faulty watch set correctly at 12:00:00 a.m. (midnight between 31st March and 1st April). Every participant is asked to strike a bell at a fixed time (appointment time) on 1st April, failing which they face disqualification from the show. All participants miss the appointment and are disqualified from the show as a prank as they are oblivious of the fact that the watches are faulty. All participants get the watches before their appointments.

The following table gives some details about the faults in the watches and the appointment times:

Participant	Actual time of appointment	Watch Loses	Watch Gains
Manoj	10:30:00 a.m.	1 minute per hour	
Vasu	11:15:00 p.m.		
Saurabh		21 seconds per hour	
Bibek	8:33:00 a.m.	90 seconds every 30 minutes	
Atmaram	7:40:00 a.m.		8 seconds per minute

51. What time does Manoj's watch show when the actual time is 10:30:00 a.m.?
   (1) 10:19:30 a.m.
   (2) 10:41:30 a.m.
   (3) 10:11:30 a.m.
   (4) 10:49:30 a.m.
   (5) 10:51:30 a.m.

52. At what actual time does Bibek strike the bell?
   (1) 8:18:45 a.m.
   (2) 9:45:30 a.m.
   (3) 9:11:15 a.m.
   (4) 9:00:00 a.m.
   (5) None of these

53. Vasu strikes the bell at 10:30:00 p.m. (actual time). What is the fault with his watch?
   (1) Loses 3 minutes per hour

(2) Gains 2 minutes per hour
(3) Gains 3 minutes per hour
(4) Gains 2 seconds per hour
(5) Loses 4 seconds per hour

54. At the actual time of Saurabh's appointment, his watch shows 9:12:32 p.m. What time is Saurabh's appointment?
(1) 9:20:00 p.m.
(2) 9:15:00 p.m.
(3) 9:14:32 p.m.
(4) 9:22:00 p.m.
(5) 9:22:32 p.m.

55. How much time after Bibek does Vasu strike the bell? [Assume data from previous questions, if necessary.]
(1) 12 hrs 2 minutes 30 seconds
(2) 11 hrs 2 minutes
(3) 11 hrs 40 minutes 22 seconds
(4) 13 hrs 11 minutes 15 seconds
(5) 13 hrs 30 minutes

Directions for questions 56 to 60: Each question is followed by two statements, I and II. Answer each question using the following instructions:

Mark (1) if the question can be answered by using the statement I alone but not by using the statement II alone.
Mark (2) if the question can be answered by using the statement II alone but not by using the statement I alone.
Mark (3) if the question can be answered by using either of the statements alone.
Mark (4) if the question can be answered by using both the statements together but not by either of the statements alone.
Mark (5) if the question cannot be answered on the basis of the two statements.

56. 'x' and 'y' are the corresponding sides of the outer and inner triangles in the diagram.
Find the value of $\dfrac{x}{y}$

   I. Radius of the given circle is 12 cm.
   II. Both the triangles are equilateral triangles.
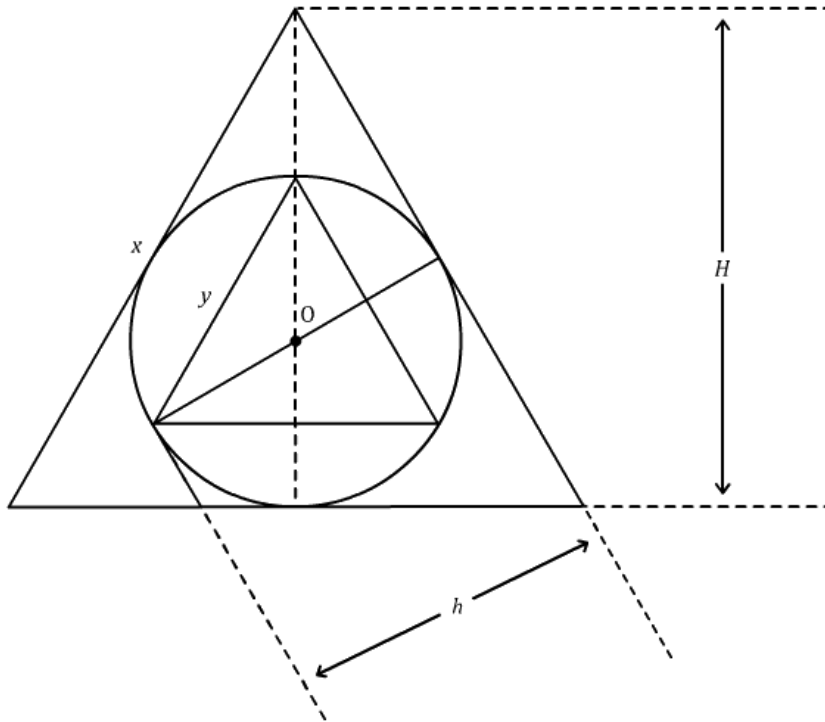
57. From a group of 10 teachers, a committee of x teachers has to be formed. What is the value of x?
    I. There are 120 ways to form the required committee.
    II. If the group had 2 more teachers, there would have been 220 ways to form the required committee.

58. x and y are real numbers.
    I. $\frac{3}{5}x > \frac{5}{8}y$
    II. $\frac{3}{7}x > \frac{7}{13}y$
    Is $x > y$?

59. If $pq = 529$, what is the value of $[(p - q) \times q/2]$ where p and q are real numbers.
    I. $p > q$
    II. $p \neq 1$

60. A is running along the circumference of a circle whereas B is running along the sides of a regular polygon and both of them make equal rounds. Who runs the higher distance?
    I. The polygon is inscribed in the circle.
    II. Area of the circle = Area of the polygon

SECTION III
Number of Questions = 30

61. If $a_n = a_{n+1} - a_{n-1}$, $a_0 = 0$ and $a_2 = 1$, then $a_{12} = ?$
   (1) 12 + 1
   (2) 12 × 12
   (3) (12 × 7) – 5
   (4) (12 × 8) – 7
   (5) (12 × 5) – 5

62. What is the remainder when $16^3 + 17^3 + 18^3 + 19^3 + 20^3$ is divided by 330?
   (1) 1
   (2) 240
   (3) 0
   (4) 120
   (5) 329

Directions for questions 63 and 64: Answer the following questions based on the information given below.

In a 5 lap race, A covers the first three laps at 10 m/s, fourth lap at 15 m/s and fifth lap at 20 m/s. B covers the first lap at 8 m/s, the next two laps at 10 m/s and the fourth lap at 15 m/s. Each lap is 480 m in length.

63. What should be the speed of B in the final lap so that A and B finish together?
   (1) 40 m/s
   (2) 40.76 m/s
   (3) 41.81 m/s
   (4) 42.43 m/s
   (5) 43.43 m/s

64. For the first 45 m of the last lap, B did not realise that it was the final lap. Hence, he was cycling at 15 m/s, i.e. the same speed as in the fourth lap. After realising his mistake, at what minimum speed should B pedal so that he does not lose the race?
   (1) 45.3 m/s
   (2) 46.2 m/s
   (3) 47.22 m/s
   (4) 48.33 m/s
   (5) 49 m/s

65. How many sets of the form S_i = {i − 3, i − 2, i − 1, i, i + 1, i + 2, i + 3} do not contain 8 or any integral multiple of 8, where i is a natural number such that i ≤ 100?
   (1) 12
   (2) 13
   (3) 14
   (4) 15
   (5) 16

66. Of the 200 candidates who were interviewed for admission into a college, 100 had an Ipod, 70 had a camera and 140 had a mobile phone. 40 of them had both, an Ipod and a camera, 30 had both, a camera and a mobile phone and 60 had both, an Ipod and mobile phone and 10 had all three. How many candidates had none of the three?
   (1) 0
   (2) 10
   (3) 18
   (4) 20
   (5) 25

67. A circle is inscribed inside a regular hexagon with each side measuring 10 cm, and a square is inscribed inside this circle. The area of the square must be:
   (1) 150 cm^2
   (2) 75 cm^2
   (3) 300 cm^2
   (4) 37.5 cm^2
   (5) None of these

68. Four buffaloes are tied at four corners of a square field of side 14 m in such a way that any of them can just reach only two other buffaloes. Calculate the area that remains ungrazed.
   (1) 154 m^2
   (2) 42 m^2
   (3) 38.5 m^2
   (4) 10.5 m^2
   (5) None of the above

69. Given that $a^3 + b^3 + c^3 = d^3$ (where a, b, c, d are positive integers) and $a^3 + b^3 = 217$, what is the value of ($a + b + c + d$)?
   (1) 23

(2) 24

(3) 25

(4) 26

(5) 27

70. The sum of all the terms of an infinite geometric progression is 30. The sum of the squares of all the terms of that progression is 300. What is the sum of the first two terms of the progression?

(1) 15

(2) $\dfrac{45}{2}$

(3) $\dfrac{15}{2}$

(4) 10

(5) None of these

71. Ajay wants to celebrate his 12$^{\text{th}}$ birthday by distributing chocolates to his classmates. There are 60 students in the class besides Ajay, but he doesn't want to give chocolates to 4 of them. Also, Ajay loves the number 12 and hates the number 13, and so he wants to give chocolates only in multiples of 12, but not in multiples of 13. He also wants to ensure that every student gets a different number of chocolates. What is the minimum number of chocolates Ajay will distribute in all?

(1) 17592

(2) 20400

(3) 21960

(4) 23400

(5) 19152

72. Consider a 99 digit number created by writing successively all the natural numbers beginning with 1 as follows: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15... If this number is divided by 8, the remainder will be:

(1) 2

(2) 1

(3) 3

(4) 4

(5) 5

73. In a circle with centre O, the radius is 12 cm. AD is the diameter and AB is the tangent to the circle at point A. [Figure not drawn to scale]
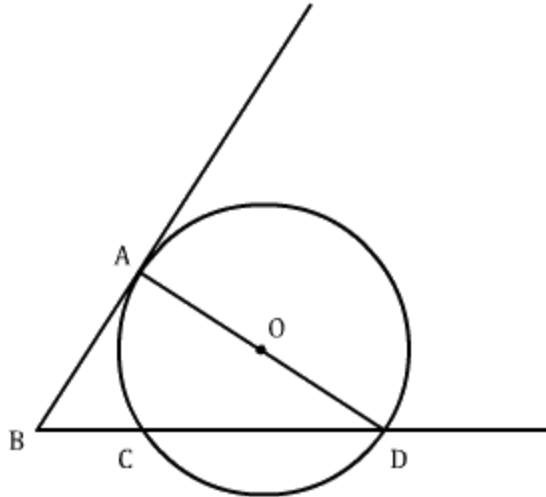
If $\dfrac{BC}{BD} = \dfrac{1}{4}$, what is CD?

(1) $12\sqrt{2}$ cm
(2) $12\sqrt{6}$ cm
(3) $12\sqrt{3}$ cm
(4) $8\sqrt{6}$ cm
(5) $6\sqrt{6}$ cm

74. In ΔABC, AB = 20 cm, AC = 11 cm and BC = 13 cm. Find the diameter of the semicircle inscribed in ΔABC, given that its diameter lies on AB, and the semicircle is tangent to AC and BC.
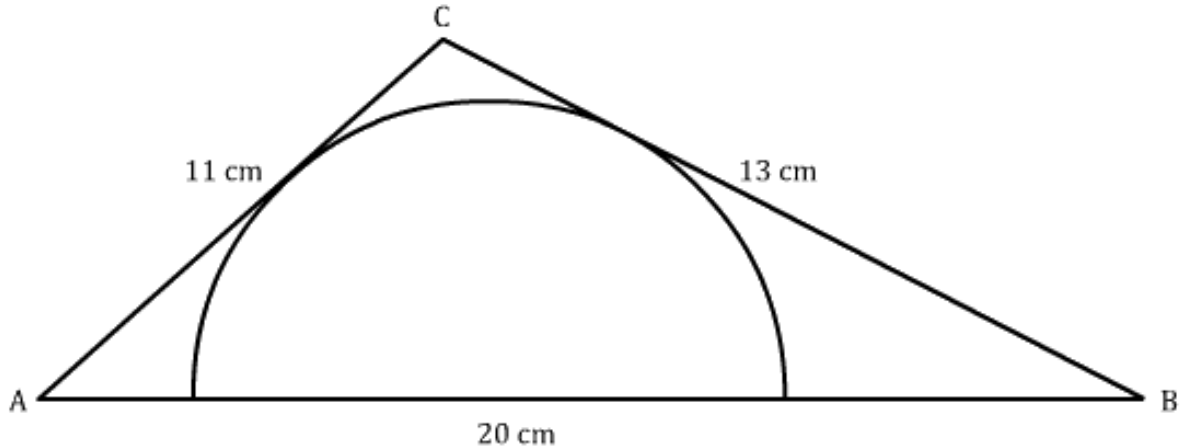
(1) $\dfrac{11}{2}$

(2) $\dfrac{13}{2}$

(3) 10

(4) 11

(5) 13

75. A real valued function f is such that $f(a + b) = a + f[f(b)]$. Find the value of $f(9)$.
   (1) 0
   (2) 3
   (3) 6
   (4) 9
   (5) 12

76. Consider $x = k^2 - \dfrac{2k}{3} + \dfrac{1}{2}$

If −1 < k < 1 and k is real, then find the difference between the maximum and minimum values of x.

(1) $\dfrac{4}{3}$

(2) $\dfrac{25}{18}$

(3) $\dfrac{5}{6}$

(4) $\dfrac{13}{6}$

(5) $\dfrac{16}{9}$

77. If $X = \{x_i | (x_i)^2 = (x_{i-1} \times x_{i+1})$ and $x_i > 0\}$,

then $\dfrac{1}{\log x_1}, \dfrac{1}{\log x_{21}}, \dots$ will form which sequence?

(1) Arithmetic Progression
(2) Geometric Progression
(3) Harmonic Progression
(4) Arithmetic-Geometric Progression
(5) None of these

78. Let N be the set of the first 999 natural numbers. Now, each of the numbers from the Set N is divided by six. Find the sum of all the resultant remainders.

(1) 2196
(2) 2396
(3) 2496
(4) 2490
(5) None of these

Directions for questions 79 and 80: Answer the following questions based on the information given below.

Tina is interested in buying a post-paid mobile plan for her official calls. She collected the information from two mobile companies, as given in the table. The monthly charge refers to the minimum amount she has to pay every month independent of the number of calls. The free call time refers to the duration of calls upto which she is not charged. The extra charge above free call time limit refers to the charge for additional calls made beyond the free call time. (Assume that a minute of talktime is counted as one call.)

Mobile Service Provider Company	Monthly Charges	Free call time (per month)	Extra charges above free call time limit
Telebond Ltd.	Rs. 460	100 min	Rs. 0.25/min
Cellco Ltd.	Rs. 670	200 min	Rs. 0.10/min

79. In the first month, Tina opts for the Cellco's mobile plan. Not happy with the services of Cellco, she changes to Telebond in the second month. Though she talks for 40 minutes more in the second month, she realizes that she saves Rs. 55. What is the time duration of her calls in the second month?
    (1) 1000 min
    (2) 1040 min
    (3) 960 min
    (4) 880 min
    (5) 600 min

80. Telebond introduces an "Annual Tariff Charge" which is an amount charged to the subscriber per annum. What is this tariff charge if Tina realizes that the two plans are equal in terms of expenditure when compared on a per annum basis? Assume the average talktime per month as 1000 min.
    (1) Rs. 50
    (2) Rs. 660
    (3) Rs. 550
    (4) Rs. 800
    (5) Rs. 600

81. For real x, the number of roots of the equation $x - 9 = \sqrt{x - 3}$ are:
    (1) 1
    (2) 2
    (3) 3
    (4) 4
    (5) Infinity

82. $$\frac{1}{\log_{\frac{x}{27}} 27} + \frac{1}{\log_{\frac{x}{81}} 81} + \frac{1}{\log_{\frac{x}{243}} 243} = -\frac{43}{30}$$
    Find the value of x.
    (1) 3
    (2) 9
    (3) 6
    (4) 27
    (5) None of these

83. If $x^2 + \dfrac{1}{x^2} = 7,$ what is $x^6 - \dfrac{1}{x^6}$ equal to?

(1) $72\sqrt{7}$

(2) $144\sqrt{5}$

(3) $48\sqrt{15}$

(4) $288\sqrt{2}$

(5) $108\sqrt{7}$

84. An MBA college is changing its internet advertisement from a banner format to a pop-up format. The cost of the banner format in dollars is represented by $C(n) = 0.30n + 5.00$ where n is the average number of hits per hour. The cost per hit of the pop-up format will be twice that of the banner format. Which of the following describes the new cost function $D(n)$?

(1) $0.60n + 10.00$

(2) $0.60n + 5.00$

(3) $0.30n + 10.00$

(4) $0.30n + 5.00n$

(5) None of these

85. Find the sum of the squares of all odd numbers from 901 to 999.

(1) 40500000

(2) 4711750

(3) 4666650

(4) 45166650

(5) 40838350

86. Let $x_1, x_2, \dots, x_{100}$ be hundred integers such that the sum of any five of them is 20. Then which of the following is true?

(1) The smallest number is 3

(2) $x_{17} = x_{83}$

(3) The largest number is 7

(4) All of these

(5) None of these

87. In a certain village there are not more than 3 children and not less than 5 adults in any house. If the total number of children is more than the total number of adult females which in turn is more than the total number of adult males in the village, then the minimum number of houses in the village is:

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

88. Given a cube, I pick three random points from among its vertices. Let N be the number of ways in which three points can be selected such that they form a right angled triangle. What is N?

(1) 32
(2) 36
(3) 44
(4) 48
(5) 56

89. All intersections at Vashi station area in Navi Mumbai have crossing signals with timers. Once the signal changes to 'walk', the timer begins at 28 seconds and counts down to show how much time pedestrians have to cross the street. Rina started walking immediately after the signal changes to 'walk' and she counted her steps as she crossed the street. When she reached the opposite side of the street, she had counted a total of 30 steps and had 10 seconds remaining. If x is the average rate of Rina's walk in steps per second, then which of the following is true:

(1) x = {(3 # 5) $ 2}, where (a # b) is the average of a and b, and (a $ b) is the product of a and b.
(2) x = (5 & 2), where (a & b) is the ratio of a and the successor of b.
(3) x = (8 @ 3), where (a @ b) is the ratio of number of diagonals of an (a − b) sided polygon to the minimum possible number of sides of a polygon.
(4) Both 1 and 2
(5) Both 2 and 3

90. A supply package is to be dropped from a Boeing 747 cargo plane to a relief service camp in Afghanistan. The plane's altitude is fixed at 1000 ft, and its horizontal speed is fixed at 235 ft/s. The present angle of depression to the target is 30°. The plane needs to drop the supplies with a certain horizontal speed, when it is at a horizontal distance of 500 ft from the target. How long should the pilot wait before dropping the supply package?

(1) 10.8 sec

(2) 5.2 sec

(3) 12 sec

(4) 3 sec

(5) 7.2 sec

OMR ANSWER SHEET

(Please read the instructions given below before filling up this form)

INSTRUCTIONS

1. Use HB Pencil only on this sheet.
2. Erase completely to change responses.
3. Darken the circles fully.
4. Do not make any stray marks on this sheet.
5. Please fill Side-II before you proceed to attempt to answer the questions.

1. Name of the Candidate (Write your name below, as it appears in your admit card in capital letters)

2. Test Registration No.   3. Test Form No.   4. Test Booklet Serial No.

Barcode

ANSWERS

Answer Key

Section I:

Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.
1	**1**	7	**2**	13	**1**	19	**4**	25	**4**
2	**4**	8	**2**	14	**3**	20	**1**	26	**4**
3	**5**	9	**1**	15	**4**	21	**3**	27	**2**
4	**1**	10	**4**	16	**5**	22	**3**	28	**5**
5	**5**	11	**4**	17	**4**	23	**1**	29	**2**
6	**5**	12	**2**	18	**2**	24	**2**	30	**4**

Section II:

Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.
31	**1**	37	**3**	43	**2**	49	**1**	55	**5**
32	**5**	38	**2**	44	**3**	50	**3**	56	**2**
33	**1**	39	**2**	45	**5**	51	**1**	57	**4**
34	**3**	40	**4**	46	**3**	52	**4**	58	**5**
35	**2**	41	**3**	47	**4**	53	**2**	59	**5**
36	**4**	42	**4**	48	**1**	54	**1**	60	**3**

Section III:

Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.
61	**2**	67	**1**	73	**3**	79	**2**	85	**4**
62	**3**	68	**2**	74	**4**	80	**5**	86	**2**
63	**1**	69	**2**	75	**4**	81	**1**	87	**2**
64	**4**	70	**2**	76	**5**	82	**2**	88	**4**
65	**2**	71	**2**	77	**3**	83	**2**	89	**5**
66	**2**	72	**1**	78	**3**	84	**1**	90	**2**

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