

CAT Sample Paper 3

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Section I (Verbal Ability & Reading Comprehension)

Directions to Solve questions 1 to 5:

Read the each sentence to find out whether there is any grammatical error in it. The error, if any will be in one part of the sentence. The letter of that part is the answer. If there is no error, the answer is 'D'. (Ignore the errors of punctuation, if any).

Q.1. Solve as per above directions:

- A. We discussed about the problem so thoroughly
- B. on the eve of the examination
- C. that I found it very easy to work it out.
- D. No Error

Q. 2. Solve as per above directions:

- A. An Indian Flag
- B. laden with merchandise
- C. got drowned in the Pacific Ocean.
- D. No error

Q. 3. Solve as per above directions:

- A. I could not put up in a hotel
- B. because the boarding and lodging charges
- C. were exorbitant.
- D. No Error

Q. 4. Solve as per above directions:

- A. The Indian radio
- B. which was previously controlled by the British rulers
- C. is free now from the narrow vested interests.
- D. No Error

Q. 5. Solve as per above directions:

- A. If I had known
- B. this yesterday
- C. I will have helped him.
- D. No Error

In questions below (6 to 10) each passage consists of six sentences. The first and sixth sentences are given in the beginning. The middle four sentences in each have been removed and jumbled up. These are labeled as P, Q, R and S. Find out the proper order for the four sentences.

Q.6. S1: In the middle of one side of the square sits the Chairman of the committee, the most important person in the room.

P : For a committee is not just a mere collection of individuals.

Q: On him rests much of the responsibility for the success or failure of the committee.

R : While this is happening we have an opportunity to get the 'feel' of this committee.

S : As the meeting opens, he runs briskly through a number of formalities.

S6: From the moment its members meet, it begins to have a sort nebulous life of its own.

The Proper sequence should be:

A.RSQP

B.PQRS

C.SQPR

D.QSRP

Q. 7.S1: A force of exists between everybody in the universe.

P : Normally it is very small but when the one of the bodies is a planet, like earth, the force is considerable.

Q : It has been investigated by many scientists including Galileo and Newton.

R : Everything on or near the surface of the earth is attracted by the mass of earth.

S : This gravitational force depends on the mass of the bodies involved.

S6: The greater the mass, the greater is the earth's force of attraction on it. We can call this force of attraction gravity.

The Proper sequence should be:

A.PRQS

B.PRSQ

C.QSRP

D.QSPR

Q. 8. S1: Calcutta unlike other cities keeps its trams.

P : As a result there horrendous congestion.

Q : It was going to be the first in South Asia.

R : They run down the centre of the road

S : To ease in the city decided to build an underground railway line.

S6: The foundation stone was laid in 1972.

The Proper sequence should be:

A.PRSQ

B.PSQR

C.SQRP

D.RPSQ

Q.9.S1: For some time in his youth Abraham Lincoln was manager for a shop.

P : Then a chance Customer would come.

Q : Young Lincoln way of keeping shop was entirely unlike anyone else's

R : Lincoln would jump up and attend to his needs and then revert to his reading.

S : He used to lie full length on the counter of the shop eagerly reading a book.

S6: Never before had Lincoln had so much time for reading as had then.

The Proper sequence should be:

A.SRQP

B.QSPR

C.SQRP

D.QPSR

Q.10.S1:All the land was covered by the ocean.

P : The leading god fought the monster, killed it and chopped its body in to two halves.

Q : A terrible monster prevented the gods from separating the land from the water.

R : The god made the sky out of the upper part of the body and ornamented it with stars.

S : The god created the earth from the lower part, grew plants on it and populated it with animals.

S6: The god moulded the first people out of clay according to his own image and mind.

The Proper sequence should be:

A.PQRS

B.PQSR

C.QPSR

D.QPRS

In the questions below (11 to 12) the sentences have been given in Active/Passive voice. From the given alternatives, choose the one which best expresses the given sentence in Passive/Active voice.

Q.11. After driving professor Kumar to the museum she dropped him at his hotel.

A. After being driven to the museum, Professor Kumar was dropped at his hotel.

B. Professor Kumar was being driven dropped at his hotel.

C. After she had driven Professor Kumar to the museum she had dropped him at his hotel.

D. After she was driven Professor Kumar to the museum she had dropped him at his hotel.

Q.12. I remember my sister taking me to the museum.

A.I remember I was taken to the museum by my sister.

B.I remember being taken to the museum by my sister.

C.I remember myself being taken to the museum by my sister.

D.I remember taken to the museum by my sister.

In the following the questions (13 to 16) choose the word which best expresses the meaning of the given word.

Q.13. CORPULENT

- A. Lean
- B. Gaunt
- C. Emaciated
- D. Obese

Q.14. EMBEZZLE

- A. Misappropriate
- B. Balance
- C. Remunerate
- D. Clear

Q.15. AUGUST

- A. Common
- B. Ridiculous
- C. Dignified
- D. Petty

Q.16. CANNY

- A. Obstinate
- B. Handsome

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C. Clever

D. Stout

Each question (17 to 18) consist of two words which have a certain relationship to each other followed by four pairs of related words, Select the pair which has the same relationship.

17 .DIVA: OPERA

A. producer:theatre

B. director:drama

C. conductor:bus

D. thespian:play

18. GRAIN:SALT

A. shard:pottery

B. shred:wood

C. blades:grass

D. chip:glass

The passage given below is followed by a set of four questions (19 to 34) Choose the most appropriate answer to each question.

Passage 1

A remarkable aspect of art of the present century is the range of concepts and ideologies which it embodies. It is almost tempting to see a pattern emerging within the art field – or alternatively imposed upon it a posteriori – similar to that which exists under the umbrella of science where the general term covers a whole range of separate, though interconnecting, activities. Any parallelism is

however – in this instance at least – misleading. A scientific discipline develops systematically once its bare tenets have been established, named and categorized as conventions. Many of the concepts of modern art, by contrast, have resulted from the almost accidental meetings of groups of talented individuals at certain times and certain places. The ideas generated by these chance meetings had twofold consequences.

Firstly, a corpus of work would be produced which, in great part, remains as a concrete record of the events. Secondly, the ideas would themselves be disseminated through many different channels of communication – seeds that often bore fruit in contexts far removed from their generation. Not all movements were exclusively concerned with innovation. Surrealism, for instance, claimed to embody a kind of insight which can be present in the art of any period. This claim has been generally accepted so that a sixteenth century painting by Spranger or a mysterious photograph by A target can legitimately be discussed in surrealist terms. Briefly, then, the concepts of modern art are of many different (often fundamentally different) kinds and resulted from the exposures of painters, sculptors and thinkers to the more complex phenomena of the twentieth century, including our ever increasing knowledge of the thought and products of earlier centuries. Different groups of artists would collaborate in trying to make sense of rapidly changing world of visual and spiritual experience. We should hardly be surprised if no one group succeeded completely, but achievements, through relative, have been considerable.

Landmarks have been established – concrete statements of position which give a pattern to a situation which could easily have degenerated into total chaos. Beyond this, new language tools have been created for those who follow – semantic systems which can provide a springboard for further explorations.

The codifying of art is often criticized. Certainly one can understand that artists are wary of being pigeonholed since they are apt to think of themselves as individuals – sometimes with good reason. The notion of self-expression, however, no longer carries quite the weight it once did; objectivity has its defenders. There is good reason to accept the ideas codified by artists and critics, over the past sixty years or so, as having attained the status of independent existence – an independence which is not without its own value. This time factor is important here. As an art movement slips into temporal perspective, it ceases to be a living organism – becoming, rather, a fossil. This is not to say it becomes useless or uninteresting. Just as a scientist can reconstruct the life of a prehistoric environment from the messages codified into the structure of a fossil, so can an artist decipher whole webs of intellectual and creative possibility from the recorded structure of a ‘dead’ art movement. The artist can match the creative patterns crystallized into this structure against the potentials and possibilities of his own time. AS T.S Eliot observed, no one starts anything from scratch; however consciously you

may try to live in the present, you are still involved with a nexus of behaviour patterns bequeathed from the past. The original and creative person is not someone who ignores these patterns, but someone who is able to translate and develop them so that they confirm more exactly to his – and our – present needs.

Q.19. Many of the concepts of modern art have been the product of

- (A) ideas generated from planned deliberations between artists, painters and thinkers.
- (B) the dissemination of ideas through the state and its organizations.
- (C) accidental interactions among people blessed with creative muse.
- (D) patronage by the rich and powerful that supported art.
- (E) systematic investigation, codification and conventions.

Q.20. In the passage, the word 'fossil' can be interpreted as

- (A) an art movement that has ceased to remain interesting or useful.
- (B) an analogy from the physical world to indicate a historic art movement.
- (C) an analogy from the physical world to indicate the barrenness of artistic creations in the past.
- (D) an embedded codification of pre-historic life.
- (E) an analogy from the physical world to indicate the passing of an era associated with an art movement.

Q.21. In the passage, which of the following similarities between science and art may lead to erroneous conclusions?

- (A) Both, in general, include a gamut of distinct but interconnecting activities.
- (B) Both have movements not necessarily concerned with innovation.

(C) Both depend on collaborations between talented individuals.

(D) Both involve abstract thought and dissemination of ideas.

(E) Both reflect complex priorities of the modern world.

Q.22. The range of concepts and ideologies embodied in the art of the twentieth century is explained by

(A) the existence of movements such as surrealism.

(B) landmarks which give a pattern to the art history of the twentieth century.

(C) new language tools which can be used for further explorations into new areas.

(D) the fast changing world of perceptual and transcendental understandings.

(E) the quick exchange of ideas and concepts enabled by efficient technology.

Passage 2

To summarize the Classic Maya collapse, we can tentatively identify five strands. I acknowledge, however, that Maya archaeologists still disagree vigorously among themselves—in part, because the different strands evidently varied in importance among different parts of the Maya realm; because detailed archaeological studies are available for only some Maya sites; and because it remains puzzling why most of the Maya heartland remained nearly empty of population and failed to recover after the collapse and after re-growth of forests. With those caveats, it appears to me that one strand consisted of population growth outstripping available resources: a dilemma similar to the one foreseen by Thomas Malthus in 1798 and being played out today in Rwanda (Chapter 10), Haiti (Chapter 11), and elsewhere. As the archaeologist David Webster succinctly puts it, "Too many farmers grew too many crops on too much of the landscape." Compounding that mismatch between population and resources was the second strand: the effects of deforestation and hillside erosion, which caused a decrease in the amount of useable farmland at a time when more rather than less farmland was needed, and possibly exacerbated by an anthropogenic drought resulting from deforestation, by soil nutrient depletion and other soil problems, and by the struggle to prevent bracken ferns from overrunning the fields. The third strand consisted of

increased fighting, as more and more people fought over fewer resources. Maya warfare, already endemic, peaked just before the collapse. That is not surprising when one reflects that at least 5,000,000 people, perhaps many more, were crammed into an area smaller than the state of Colorado (104,000 square miles). That warfare would have decreased further the amount of land available for agriculture, by creating no-man's lands between principalities where it was now unsafe to farm. Bringing matters to a head was the strand of climate change. The drought at the time of the Classic collapse was not the first drought that the Maya had lived through, but it was the most severe. At the time of previous droughts, there were still uninhabited parts of the Maya landscape, and people at a site affected by drought could save themselves by moving to another site. However, by the time of the Classic collapse the landscape was now full, there was no useful unoccupied land in the vicinity on which to begin anew, and the whole population could not be accommodated in the few areas that continued to have reliable water supplies. As our fifth strand, we have to wonder why the kings and nobles failed to recognize and solve these seemingly obvious problems undermining their society. Their attention was evidently focused on their short-term concerns of enriching themselves, waging wars, erecting monuments, competing with each other, and extracting enough food from the peasants to support all those activities. Like most leaders throughout human history, the Maya kings and nobles did not heed long-term problems, insofar as they perceived them. We shall return to this theme in Chapter 14. Finally, while we still have some other past societies to consider in this book before we switch our attention to the modern world, we must already be struck by some parallels between the Maya and the past societies discussed in Chapters 2-4. As on Easter Island, Mangareva, and among the Anasazi, Maya environmental and population problems led to increasing warfare and civil strife. As on Easter Island and at Chaco Canyon, Maya peak population numbers were followed swiftly by political and social collapse. Paralleling the eventual extension of agriculture from Easter Island's coastal lowlands to its uplands, and from the Mimbres floodplain to the hills, Copan's inhabitants also expanded from the floodplain to the more fragile hill slopes, leaving them with a larger population to feed when the agricultural boom in the hills went bust. Like Easter Island chiefs erecting ever larger statues, eventually crowned by pukao, and like Anasazi elite treating themselves to necklaces of 2,000 turquoise beads, Maya kings sought to outdo each other with more and more impressive temples, covered with thicker and thicker plaster—reminiscent in turn of the extravagant conspicuous consumption by modern American CEOs. The passivity of Easter chiefs and Maya kings in the face of the real big threats to their societies completes our list of disquieting parallels.

Q.23. According to the passage, which of the following best represents the factor that has been cited by the author in the context of Rwanda and Haiti?

- (A) Various ethnic groups competing for land and other resources
- (B) Various ethnic groups competing for limited land resources
- (C) Various ethnic groups fighting with each other
- (D) Various ethnic groups competing for political power
- (E) Various ethnic groups fighting for their identity

Q.24. By an anthropogenic drought, the author means

- (A) A drought caused by lack of rains.
- (B) A drought caused due to deforestation
- (C) A drought caused by failure to prevent bracken ferns from overrunning the fields.
- (D) A drought caused by actions of human beings.
- (E) A drought caused by climate changes.

Q.25. According to the passage, the drought at the time of Maya collapse had a different impact compared to the droughts earlier because

- (A) The Maya kings continue to be extravagant when common people were suffering.
- (B) It happened at the time of collapse of leadership among Mayas.
- (C) It happened when the Maya population had occupied all available land suited for agriculture.
- (D) It was followed by internecine warfare among Mayans.

(E) Irreversible environmental degradation led to this drought.

Q.26. According to the author, why is it difficult to explain the reasons for Maya collapse?

(A) Copan inhabitants destroyed all records of that period.

(B) The constant deforestation and hillside erosion have wiped out all traces of the Maya kingdom.

(C) Archaeological sites of Mayas do not provide any consistent evidence.

(D) It has not been possible to ascertain which of the factors best explains as to why the Maya

(E) At least five million people were crammed into a small area.

Passage 3

When I was little, children were bought two kinds of ice cream, sold from those white wagons with the canopies made of silvery metal: either the two-cent cone or the four-cent ice cream pie. The two-cent cone was very small, in fact it could fit comfortably into a child's hand, and it was made by taking the ice cream from its container with a special scoop and piling it on the cone. Granny always suggested I eat only a part of the cone, then throw away the pointed end, because it had been touched by the vendor's hand (though that was the best part, nice and crunchy, and it was regularly eaten in secret, after a pretense of discarding it). The four-cent pie was made by a special little machine, also silvery, which pressed two disks of sweet biscuit against a cylindrical section of ice cream. First you had to thrust your tongue into the gap between the biscuits until it touched the central nucleus of ice cream; then, gradually, you ate the whole thing, the biscuit surfaces softening as they became soaked in creamy nectar. Granny had no advice to give here: in theory the pies had been touched only by the machine; in practice, the vendor had held them against his hand while giving them to us, but it was impossible to isolate the contaminated area. I was fascinated, however, by some of my peers, whose parents bought them not a four-cent pie but two two-cent cones. These privileged children advanced proudly with one cone in their right hand and one in their left; and expertly moving their head from side to side, they licked first one, then the other. This liturgy seemed to me so sumptuously enviable, that many times I asked to be allowed to celebrate it. In vain. My elders were inflexible: a four-cent ice, yes; but two two-cent ones, absolutely no. As anyone can see, neither mathematics nor economy nor dietetics justified this refusal. Nor did hygiene, assuming that in due course the tips of both cones were discarded. The pathetic, and obviously mendacious, justification

was that a boy concerned with turning his eyes from one cone to the other was more inclined to stumble over stones, steps, or cracks in the pavement. I dimly sensed that there was another secret justification, cruelly pedagogical, but I was unable to grasp it. Today, citizen and victim of a consumer society, a civilization of excess and waste (which the society of the thirties was not), I realize that those dear and now departed elders were right. Two two-cent cones instead of one at four cents did not signify squandering, economically speaking, but symbolically they surely did. It was for this precise reason, that I yearned for them: because two ice creams suggested excess. And this was precisely why they were denied me: because they looked indecent, an insult to poverty, a display of fictitious privilege, a boast of wealth. Only spoiled children ate two cones at once, those children who in fairy tales were rightly punished, as Pinocchio was when he rejected the skin and the stalk. And parents who encouraged this weakness, appropriate to little parvenus, were bringing up their children in the foolish theater of "I'd like to but I can't." They were preparing them to turn up at tourist-class cheek-in with a fake Gucci bag bought from a street peddler on the beach at Rimini Nowadays the moralist risks seeming at odds with morality, in a world where the consumer civilization now wants even adults to be spoiled, and promises them always something more, from the wristwatch in the box of detergent to the bonus bangle sheathed, with the magazine it accompanies, in a plastic envelope. Like the parents of those ambidextrous gluttons I so envied, the consumer civilization pretends to give more, but actually gives, for four cents, what is worth four cents. You will throw away the old transistor radio to purchase the new one, that boasts an alarm clock as well, but some inexplicable defect in the mechanism will guarantee that the radio lasts only a year. The new cheap car will have leather seats, double side mirrors adjustable from inside, and a paneled dashboard, but it will not last nearly so long as the glorious old Fiat 500, which, even when it broke down, could be started again with a kick. The morality of the old days made Spartans of us all, while today's morality wants all of us to be Sybarites.

Q.27. Which of the following cannot be inferred from the passage?

- (A) Today's society is more extravagant than the society of the 1930s.
- (B) The act of eating two ice cream cones is akin to a ceremonial process.
- (C) Elders rightly suggested that a boy turning eyes from one cone to the other was more likely to fall.
- (D) Despite seeming to promise more, the consumer civilization gives away exactly what the thing is worth.
- (E) The consumer civilization attempts to spoil children and adults alike.

Q.28. In the passage, the phrase “little parvenus” refers to

- (A) naughty midgets.
- (B) old hags.
- (C) arrogant people.
- (D) young upstarts.
- (E) foolish kids.

Q.29. The author pined for two-cent cones instead of one four-cent pie because

- (A) it made dietetic sense.
- (B) it suggested intemperance.
- (C) it was more fun.
- (D) it had a visual appeal.
- (E) he was a glutton.

Q.30. What does the author mean by “nowadays the moralist risks seeming at odds with morality”?

- (A) The moralist of yesterday have become immoral today.
- (B) The concept of morality has changed over the years.
- (C) Consumerism is amoral.
- (D) The risks associated with immorality have gone up.

(E) The purist's view of morality is fast becoming popular.

Passage 4

Language is not a cultural artifact that we learn the way we learn to tell time or how the federal government works. Instead, it is a distinct piece of the biological makeup of our brains. Language is a complex, specialized skill, which develops in the child spontaneously, without conscious effort or formal instruction, is deployed without awareness of its underlying logic, is qualitatively the same in every individual, and is distinct from more general abilities to process information or behave intelligently. For these reasons some cognitive scientists have described language as a psychological faculty, a mental organ, a neural system, and a computational module. But I prefer the admittedly quaint term "instinct." It conveys the idea that people know how to talk in more or less the sense that spiders know how to spin webs. Web-spinning was not invented by some unsung spider genius and does not depend on having had the right education or on having an aptitude for architecture or the construction trades. Rather, spiders spin spider webs because they have spider brains, which give them the urge to spin and the competence to succeed. Although there are differences between webs and words, I will encourage you to see language in this way, for it helps to make sense of the phenomena we will explore. Thinking of language as an instinct inverts the popular wisdom, especially as it has been passed down in the canon of the humanities and social sciences. Language is no more a cultural invention than is upright posture. It is not a manifestation of a general capacity to use symbols: a three year old, we shall see, is a grammatical genius, but is quite incompetent at the visual arts, religious iconography, traffic signs, and the other staples of the semiotics curriculum. Though language is a magnificent ability unique to Homo sapiens among living species, it does not call for sequestering the study of humans from the domain of biology, for a magnificent ability unique to a particular living species is far from unique in the animal kingdom. Some kinds of bats home in on flying insects using Doppler sonar. Some kinds of migratory birds navigate thousands of miles by calibrating the positions of the constellations against the time of day and year. In nature's talent show we are simply a species of primate with our own act, a knack for communicating information about who did what to whom by modulating the sounds we make when we exhale. Once you begin to look at language not as the ineffable essence of human uniqueness but as a biological adaptation to communicate information, it is no longer as tempting to see language as an insidious shaper of thought, and, we shall see, it is not. Moreover, seeing language as one of nature's engineering marvels an organ with "that perfection of structure and co-adaptation which justly excites our admiration," in Darwin's words – give us a new respect for your ordinary Joe and the much-maligned English language (or any language). The complexity of language, from the scientist's point of view, is part of our biological birthright; it is not something that parents teach

their children or something that must be elaborated in school – as Oscar Wilde said, “Education is an admirable thing, but it is well to remember from time to time that nothing that is worth knowing can be taught.” A preschooler’s tacit knowledge of grammar is more sophisticated than the thickest style manual or the most state-of-the-art computer language system, and the same applies to all healthy human beings, even the notorious syntax-fracturing professional athlete and the, you know, like, inarticulate teenage skateboarder. Finally, since language is the product of a well-engineered biological instinct, we shall see that it is not nutty barrel of monkeys that entertainer-columnists make it out to be.

Q.31. According to the passage, which of the following does not stem from popular wisdom on language?

- (A) Language is a cultural artifact.
- (B) Language is a cultural invention.
- (C) Language is learnt as we grow.
- (D) Language is unique to Homo sapiens
- (E) Language is a psychological faculty.

Q.32. Which of the following can be used to replace the “spiders know how to spin webs” analogy as used by the author?

- (A) A kitten learning to jump over a wall
- (B) Bees collecting nectar
- (C) A donkey carrying a load
- (D) A horse running a Derby
- (E) A pet dog protecting its owner’s property

Q.33. According to the passage, which of the following is unique to human beings?

- (A) Ability to use symbols while communicating with one another.
- (B) Ability to communicate with each other through voice modulation.
- (C) Ability to communicate information to other members of the species.
- (D) Ability to use sound as means of communication.
- (E) All of the above.

Q.34. According to the passage, complexity of language cannot be taught by parents or at school to children because

- (A) children instinctively know language.
- (B) children learn the language on their own.
- (C) language is not amenable to teaching.
- (D) children know language better than their teachers or parents.
- (E) children are born with the knowledge of semiotics.

Section II (Quantitative Aptitude)

Q.35: There are two examinations rooms A and B. If 10 students are sent from A to B, then the number of students in each room is the same. If 20 candidates are sent from B to A, then the number of students in A is double the number of students in B. The number of students in room A is:

A.20

B.80

C.100

D.200

Q. 36: If $a - b = 3$ and $a^2 + b^2 = 29$, find the value of ab .

A.10

B.12

C.15

D.18

Q.37. One-third of Rahul's savings in National Savings Certificate is equal to one-half of his savings in Public Provident Fund. If he has Rs. 1,50,000 as total savings, how much has he saved in Public Provident Fund ?

A.Rs. 30,000

B.Rs. 50,000

C.Rs. 60,000

D.Rs. 90,000

Q.38. To fill a tank, 25 buckets of water is required. How many buckets of water will be required to fill the same tank if the capacity of the bucket is reduced to two-fifth of its present ?

A.10

B.35

C.62.5

D. Cannot be determined

E. None of these

Q.39. Alfred buys an old scooter for Rs. 4700 and spends Rs. 800 on its repairs. If he sells the scooter for Rs. 5800, his gain percent is:

A.32/7

B.60/11

C.10%

D.12%

Q.40. In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?

A.30%

B.70%

C.100%

D.250%

Q.41. Sam purchased 20 dozens of toys at the rate of Rs. 375 per dozen. He sold each one of them at the rate of Rs. 33. What was his percentage profit?

A.3.5

B.4.5

C.5.6

D.6.5

Q.42. Some articles were bought at 6 articles for Rs. 5 and sold at 5 articles for Rs. Gain percent is:

A.30%

B.100/3

C.35%

D.44%

Q.43. From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there on the committee. In how many ways can it be done?

A.564

B.645

C.735

D.756

E. None of these

Q.44 Out of 7 consonants and 4 vowels, how many words of 3 consonants and 2 vowels can be formed?

A.210

B.1050

C.25200

D.21400

E. None of these

Q.45 How many 3-digit numbers can be formed from the digits 2, 3, 5, 6, 7 and 9, which are divisible by 5 and none of the digits is repeated?

A.5

B.10

C.15

D.20

Q.46 A box contains 2 white balls, 3 black balls and 4 red balls. In how many ways can 3 balls be drawn from the box, if at least one black ball is to be included in the draw?

A.32

B.48

C.64

D.96

E. None of these

Q.47 A vessel is filled with liquid, 3 parts of which are water and 5 parts syrup. How much of the mixture must be drawn off and replaced with water so that the mixture may be half water and half syrup?

A. $\frac{1}{3}$

B. $\frac{1}{4}$

C. $\frac{1}{5}$

D. $\frac{1}{7}$

Q.48 Tea worth Rs. 126 per kg and Rs. 135 per kg are mixed with a third variety in the ratio 1 : 1 : 2. If the mixture is worth Rs. 153 per kg, the price of the third variety per kg will be:

A. Rs. 169.50

B. Rs. 170

C. Rs. 175.50

D. Rs. 180

Q.49 A milk vendor has 2 cans of milk. The first contains 25% water and the rest milk. The second contains 50% water. How much milk should he mix from each of the containers so as to get 12 litres of milk such that the ratio of water to milk is 3 : 5?

A. 4 litres, 8 litres

B. 6 litres, 6 litres

C.5 litres, 7 litres

D.7 litres, 5 litres

Q.50. In what ratio must a grocer mix two varieties of tea worth Rs. 60 a kg and Rs. 65 a kg so that by selling the mixture at Rs. 68.20 a kg he may gain 10%?

A.3 : 2

B.3 : 4

C.3 : 5

D.4 : 5

Q.51 Three pipes A, B and C can fill a tank from empty to full in 30 minutes, 20 minutes, and 10 minutes respectively. When the tank is empty, all the three pipes are opened. A, B and C discharge chemical solutions P, Q and R respectively. What is the proportion of the solution R in the liquid in the tank after 3 minutes?

A.5/11

B.6/11

C.7/11

D.8/11

Q.52 A pump can fill a tank with water in 2 hours. Because of a leak, it took $2\frac{1}{3}$ hours to fill the tank. The leak can drain all the water of the tank in:

A.13/3 hours

B.7 hours

C.8 hours

D.14 hours

Q.53 If $\log 2 = 0.3010$ and $\log 3 = 0.4771$, the value of $\log_5 512$ is:

A.2.870

B.2.967

C.3.876

D.3.912

Q.54 $\log 8 / \log 8$ is equal to

A.1/8

B.1/4

C.1/4

D.1/3

Q.55. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?

A.1/2

B.2/5

C.8/15

D.9/20

Q.56 What is the probability of getting a sum 9 from two throws of a dice?

A. $\frac{1}{6}$

B. $\frac{1}{8}$

C. $\frac{1}{9}$

D. $\frac{1}{12}$

Q.57. Three unbiased coins are tossed. What is the probability of getting at most two heads?

A. $\frac{3}{4}$

B. $\frac{1}{4}$

C. $\frac{3}{8}$

D. $\frac{7}{8}$

Q.58. A card is drawn from a pack of 52 cards. The probability of getting a queen of club or a king of heart is:

A. $\frac{1}{13}$

B. $\frac{2}{13}$

C. $\frac{1}{26}$

D. $\frac{1}{52}$

Q.59. A bank offers 5% compound interest calculated on half-yearly basis. A customer deposits Rs. 1600 each on 1st January and 1st July of a year. At the end of the year, the amount he would have gained by way of interest is:

A. Rs. 120

B.Rs. 121

C.Rs. 122

D.Rs. 123

Q.60. The difference between simple and compound interests compounded annually on a certain sum of money for 2 years at 4% per annum is Re. 1. The sum (in Rs.) is:

A.625

B.630

C.640

D.650

Q.61. There is 60% increase in an amount in 6 years at simple interest. What will be the compound interest of Rs. 12,000 after 3 years at the same rate?

A.Rs. 2160

B.Rs. 3120

C.Rs. 3972

D.Rs. 6240

E. None of these

Q.62. The compound interest on Rs. 30,000 at 7% per annum is Rs. 4347. The period (in years) is:

A.2

B.5/2

C.3

D.4

Q.63. A boat running upstream takes 8 hours 48 minutes to cover a certain distance, while it takes 4 hours to cover the same distance running downstream. What is the ratio between the speed of the boat and speed of the water current respectively?

A. 2 : 1

B. 3 : 2

C. 8 : 3

D. Cannot be determined

E. None of these

Q.64. A boatman goes 2 km against the current of the stream in 1 hour and goes 1 km along the current in 10 minutes. How long will it take to go 5 km in stationary water?

A.40 minutes

B.1 hour

C.1 hr 15 min

D.1 hr 30 min

Q.65.A fruit seller had some apples. He sells 40% apples and still has 420 apples. Originally, he had:

A.588 apples

B.600 apples

C.672 apples

D.700 apples

Q.66. If $A = x\%$ of y and $B = y\%$ of x , then which of the following is true?

A.A is smaller than B.

B.A is greater than B

C. Relationship between A and B cannot be determined.

D. If x is smaller than y , then A is greater than B.

E. None of these

Q.67. 1, 4, 9, 16, 20, 36, 49

A.1

B.9

C.20

D.49

Q.68. 835, 734, 642, 751, 853, 981, 532

A. 751

B. 853

C. 981

D. 532

Section III (Data Interpretation & Logical Reasoning)

A good way to figure out the relationship in a given question is to make up a sentence that describes the relationship between the first two words. Then, try to use the same sentence to find out which of the answer choices completes the same relationship with the third word.

Q.69 Odometer is to mileage as compass is to

A. Speed

B. Hiking

C. Needle

D. Direction

Q.70. Marathon is to race as hibernation is to

A. Winter

B. Bear

C. Dream

D. Sleep

In these series, you will be looking at both the letter pattern and the number pattern. Fill the blank in the middle of the series or end of the series.

Q.71.B2CD, _____, BCD4, B5CD, BC6D

A.B2C2D

B.BC3D

C.B2C3D

D.BCD7

Q.72.SCD, TEF, UGH, _____, WKL

A.CMN

B.UJI

C.VIJ

D.IJT

In each question below is given a statement followed by two courses of action numbered I and II. You have to assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing.

Give answer

(A) If only I follows

(B) If only II follows

(C) If either I or II follows

(D) If neither I nor II follows

(E) If both I and II follow.

Q.73. Statement: Severe drought is reported to have set in several parts of the country.

Courses of Action:

A. Government should immediately make arrangement for providing financial assistance to those affected.

B. Food, water and fodder should immediately be sent to all these areas to save the people and cattle.

A. Only I follows

B. Only II follows

C. Either I or II follows

D. Neither I nor II follows

E. Both I and II follow

Q.74.Statement: Since its launching in 1981, Vayudoot has so far accumulated losses amounting to Rs 153 crore.

Courses of Action:

A. Vayudoot should be directed to reduce wasteful expenditure and to increase passenger fare.

B. An amount of about Rs 300 crore should be provided to Vayudoot to make the airliner economically viable.

A. Only I follows

B. Only II follows

- C. Either I or II follows
- D. Neither I nor II follows
- E. Both I and II follow

Each problem consists of three statements. Based on the first two statements, the third statement may be true, false, or uncertain.

Q.75. A. Mara runs faster than Gail.

B. Lily runs faster than Mara.

C. Gail runs faster than Lily.

If the first two statements are true, the third statement is

- A. True
- B. False
- C. uncertain

Q.76. A. Apartments in the Riverdale Manor cost less than apartments in The Gaslight Commons.

B. Apartments in the Livingston Gate cost more than apartments in the The Gaslight Commons.

C. Of the three apartment buildings, the Livingston Gate costs the most.

If the first two statements are true, the third statement is

- A. True
- B. False
- C. Uncertain

Q. 77. Read the question carefully and choose the correct answer.

Four defensive football players are chasing the opposing wide receiver, who has the ball. Calvin is directly behind the ball carrier. Jenkins and Burton are side by side behind Calvin. Zeller is behind Jenkins and Burton. Calvin tries for the tackle but misses and falls. Burton trips. Which defensive player tackles the receiver?

- A. Burton
- B. Zeller
- C. Jenkins
- D. Calvin

In each of the questions below are given three statements followed by three conclusions numbered I, II and III, You have to take the given statements to be true even if they seem to be at variance from the commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Q.78. Statements:

All fruits are vegetables. All pens are vegetables. All vegetables are rains.

Conclusions:

All fruits are rains.

All pens are rains.

Some rains are vegetables.

- A. None follows
- B. Only I and II follow
- C. Only II and III follow

D. Only I and III follow

E. All follow

Q.79. Statements: Some dogs are rats. All rats are trees. Some trees are not dogs.

Conclusions:

Some trees are dogs.

All dogs are trees.

All rats are dogs.

No tree is dog.

A. None follows

B. Only I follows

C. Only I and II follow

D. Only II and III follow

E. All follow

Find the statement that must be true according to the given information.

Q.80. Vincent has a paper route. Each morning, he delivers 37 newspapers to customers in his neighborhood. It takes Vincent 50 minutes to deliver all the papers. If Vincent is sick or has other plans, his friend Thomas, who lives on the same street, will sometimes deliver the papers for him.

A. Vincent and Thomas live in the same neighborhood.

- B. It takes Thomas more than 50 minutes to deliver the papers.
- C. It is dark outside when Vincent begins his deliveries.
- D. Thomas would like to have his own paper route.

Q.81 Erin is twelve years old. For three years, she has been asking her parents for a dog. Her parents have told her that they believe a dog would not be happy in an apartment, but they have given her permission to have a bird. Erin has not yet decided what kind of bird she would like to have.

- A. Erin's parents like birds better than they like dogs.
- B. Erin does not like birds.
- C. Erin and her parents live in an apartment.
- D. Erin and her parents would like to move.

A good way to approach this type of question is to use the following sentence: "A _____ could not exist without _____."

Find the word that names a necessary part of the underlined word.

Q.82. wedding

- A. love
- B. church
- C. ring
- D. marriage

Read the below passage carefully and answer the questions:

Quinn: Our state is considering raising the age at which a person can get a driver's license to eighteen. This is unfair because the age has been sixteen for many years and sixteen-year-olds today are no less responsible than their parents and grandparents were at sixteen. Many young people today who are fourteen and fifteen years old are preparing to receive their licenses by driving with a learner's permit and a licensed driver, usually one of their parents. It would not be fair to suddenly say they have to wait two more years.

Dakota: It is true that people have been allowed to receive a drivers license at sixteen for generations. However, in recent years, the increase in traffic means drivers face more dangers than ever and must be ready to respond to a variety of situations. The fact that schools can no longer afford to teach drivers education results in too many young drivers who are not prepared to face the traffic conditions of today.

Q.83. What is the point at issue between Quinn and Dakota?

- A. whether sixteen-year-olds should be required to take drivers education before being issued a license
- B. whether schools ought to provide drivers education to fourteen- and fifteen-year-old students
- C. whether the standards for issuing drivers licenses should become more stringent
- D. whether sixteen-year-olds are prepared to drive in today's traffic conditions
- E. whether parents are able to do a good job teaching their children to drive

Q.84. On what does Quinn rely in making her argument?

- A. statistics
- B. emotion
- C. fairness
- D. anecdotes

E. actualities

Directions for Questions (85 to 88)

Answer the following questions based on the information given below:

The following table shows the break-up of actual costs incurred by a company in last five years (year 2012 to year 2016) to produce a particular product:

	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016
Volume of production and sale (units)	1000	900	1100	1200	1200
Costs (Rs.)					
Input Material	50,000	45,100	55,200	59,900	60,000
Manpower	20,000	18,000	22,100	24,150	24,000
Variables	2,000	2,200	1,800	1,600	1,400
Rent	1,000	1,000	1,100	1,100	1,200
Taxes	400	400	400	400	400
Maintenance	800	820	780	790	800
Operational Cost	30,000	27,000	33,500	36,020	36,000

Marketing	5,750	5,800	5,800	5,750	5,800
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The production capacity of the company is 2000 units. The selling price for the year 2016 was Rs. 125 per unit. Some costs change almost in direct proportion to the change in volume of production, while others do not follow any obvious pattern of change with respect to the volume of production and hence are considered fixed. Using the information provided for the year 2016 as the basis for projecting the figures for the year 2017, answer the following questions:

Q.85. What is the approximate cost per unit in rupees, if the company produces and sells 1400 units in THE YEAR 2017?

- A. 104
- B. 107
- C. 110
- D. 115

Q.86. What is the minimum number of units that the company needs to produce and sell to avoid any loss?

- A. 313
- B. 350
- C. 384
- D. 347

Q.87. If the company reduces the price by 5%, it can produce and sell as many units as it desires. How many units the company should produce to maximize its profit?

- A.1400
- B.1600

C.1800

D.2000

Q.88. Given that the company cannot sell more than 1700 units, and it will have to reduce the price by Rs.5 for all units, if it wants to sell more than 1400 units, what is the maximum profit, in rupees, that the company can earn?

A.25400

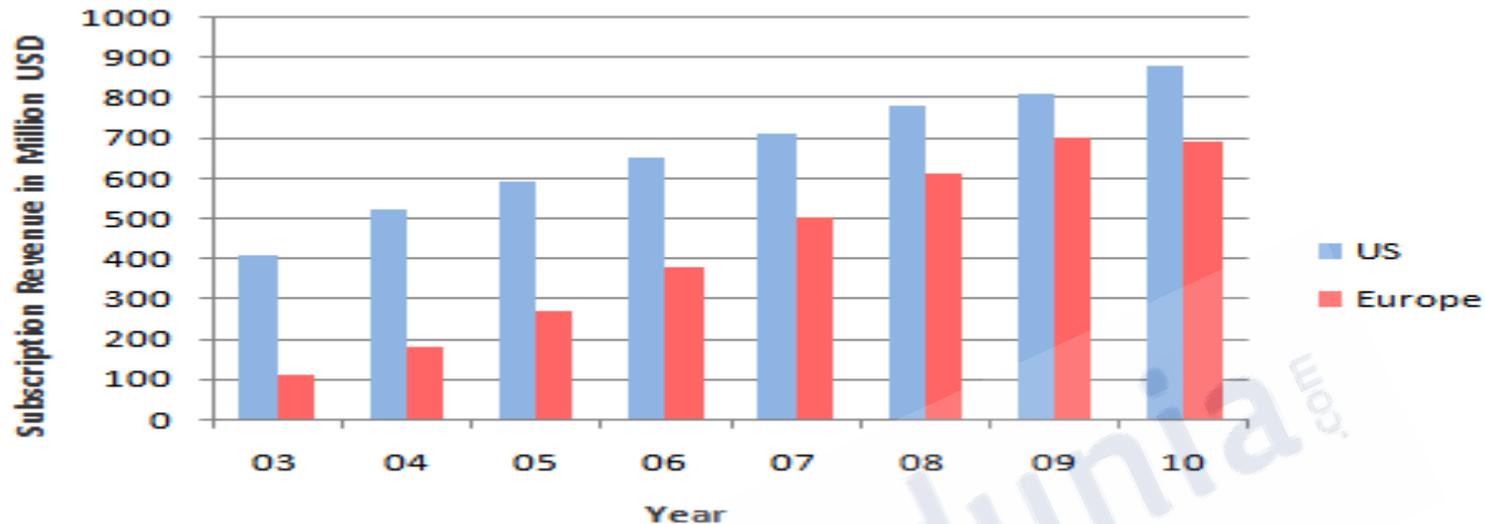
B. 24400

C.31400

D.32900

The bar chart below shows the revenue received, in million US Dollars (USD), from subscribers to a particular Internet service. The data covers the period 2003 to 2007 for the United States (US) and Europe.

The bar chart also shows the estimate revenues from the subscription to this service for the period 2008 to 2010.



Q.89. While the subscription in Europe has been growing steadily towards that of the US, the growth rate in Europe seems to be declining. Which of the following is closest to the percent change in growth rate of 2007 (over 2006) relative to the growth rate of 2005 (over 2004)?

(A) 17 (B) 20 (C) 35 (D) 60 (E) 100

Q.90. The difference between the estimated subscription in Europe in 2008 and what it would have been if it were computed using the percentage growth rate of 2007 (over 2006), is closest to :

(A) 50 (B) 80 (C) 20 (D) 10 (E) 0

Q.91. In 2003, sixty percent of subscribers in Europe were men. Given that woman subscribers increase at the rate of 10 percent per annum and men at the rate of 5 percent per annum, what is the approximate percentage growth of subscribers between 2003 and 2010 in Europe? The subscription prices are volatile and may change each year.

(A) 62 (B) 15 (C) 78 (D) 84 (E) 50

Q.92. Consider the annual percent change in the gap between subscription revenues in the US and Europe. What is the year in which the absolute value of this change is the highest?

(A) 03-04 (B) 05-06 (C) 06-07 (D) 08-09 (E) 09-10

There are 100 employees in an organization across five departments. The following table gives the department-wise distribution of average age, average basic pay and allowances. The gross pay of an employee is the sum of his/her basic pay and allowances.

Department	Number of Employees	Average Age (Years)	Average Basic Pay (Rs.)	Allowances (% of Basic Pay)
HR	5	45	5000	70
Marketing	30	35	6000	30
Finance	20	30	6500	60
Business Development	35	42	7500	75
Maintenance	10	35	5500	50

There are limited numbers of employees considered for transfer/promotion across departments. Whenever a person is transferred/promoted from a department of lower average age to a department of higher average age, he/she will get an additional allowance of 10% of basic pay over and above his/her current allowance. There will not be any change in pay structure if a person is transferred/ promoted from a department with higher average age to a department with lower average age.

Q.93. There was a mutual transfer of an employee between Marketing and Finance departments and transfer of one employee from Marketing to HR. As a result, the average age of Finance department increased by one year and that of marketing department remained the same. What is the new average age of HR department?

(A) 30 (B) 35 (C) 40 (D) 45 (E) cannot be determined

Q.94. What is the approximate percentage change in the average gross pay of the HR department due to transfer of a 40-yr old person with basic pay of Rs. 8000 from the Marketing department?

(A) 9% (B) 11% (C) 13% (D) 15% (E) 17%

Q.95 If two employees (each with a basic pay of Rs. 6000) are transferred from Maintenance department to HR department and one person (with a basic pay of Rs. 8000) was transferred from Marketing department to HR department, what will be the percentage change in average basic pay of HR department?

(A) 10.5% (B) 12.5% (C) 15% (D) 30% (E) 40%

Q.96. What will be the average age of employees working in different departments?

(A) 24 (B)37.4 (C)44 (D)46

Study the following table carefully and answer these questions. Number of candidates appeared and qualified in a competitive examination from different states over the years

Year	1997		1998		1999		2000		2001	
	App.	Qual.								
M	5200	720	8500	980	7400	850	6800	775	9500	1125
N	7500	840	9200	1050	8450	920	9200	980	8800	1020

P	6400	780	8800	1020	7800	890	8750	1010	9750	1250
Q	8100	950	9500	1240	8700	980	9700	1200	8950	995
R	7800	870	7600	940	9800	1350	7600	945	7990	885

Q.97. Combining the states P and Q together in 1998, what is the percentage of the candidates qualified to that of the candidates appeared?

- (A) 10.87% (B) 11.49% (C) 12.35% (D) 12.54%

Q.98. The percentage of the total number of qualified candidates to the total number of appeared candidates among all the five states in 1999 is:

- (A) 11.49% (B) 11.84% (C) 12.21% (D) 12.57%

Q.99. What is the percentage of candidates qualified from State N for all the years together over the candidates appeared from State N during all the years together?

- (A) 12.36% (B) 12.16% (C) 11.47% (D) 11.15%

Q.100. What is the average of candidates who appeared from State Q during the given years?

- (A) 8700 (B) 8760 (C) 8810 (D) 8990

