
SEM eCAT 05

INSTRUCTIONS

1. This test is divided into three sections, Sections 1, 2 and 3 have 25, 36, 25 questions each. You will be given two and half hours to complete the test.. **Each question carries four marks. Each wrong answer will attract a penalty of one mark.**
3. For each question, five suggested answers are given of which only one is correct. Choose the correct answer option.
4. Multiple answers will be treated as incorrect.
5. Use of calculators, scales and other measuring instruments is not permitted.
6. You will be required to demonstrate adequate competence on every section.
7. Wrong answers carry negative marks. Desist from guessing wildly.

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SECTION 1

This section contains 25 questions

1. Dan smokes a cigarette every day. In order to save money, he smokes a cigarette till it's $\frac{1}{5}$ of its original size, keeps the rest and when he has sufficient number of small ones, joins them and makes a new one. If each cigarette costs Rs. 2, what is Dan's expense on cigarettes in the month of March?

1. 60 2. 62 3. 50 4. 52 5. 45

2. A ladder leans against a vertical wall. The top of the ladder is 12m above the ground. When the bottom of the ladder is pushed 4m further away from the wall the top of the ladder slides down and touches the foot of the wall. If the speed with which the lower end is pushed is 0.5 m/sec, what is the speed of the movement of the top of ladder down? What is the length of ladder?

1. 2 m/sec, 10 m 2. 1.5 m/sec, 20 m 3. 3m/sec ,25m 4. 4m/sec 10 m
5. 2m/sec 20m

3. If a, b, c are the coefficient of a quadratic equation and they are selected by throwing a dice, what is the probability that they have equal roots?

1. $\frac{8}{216}$ 2. $\frac{5}{216}$ 3. $\frac{3}{216}$ 4. $\frac{6}{216}$ 5. $\frac{7}{216}$

4. On Monday I have 658 chocolates which I am putting in N boxes and distributing among x people. At the end, I find that I'm left with a certain number of chocolates. On Tuesday I distributed 439 chocolates which I put in N boxes and distribute them to y people. I'm left with the same number of chocolates. On Wednesday I distribute 804 chocolates which I put in N boxes and distribute them to z people. I'm left with the same number of sweets. How many people did I give chocolates totally?

1.40 2.45 3.50 4.60 5.73

5. How many integer 'n' values are there such that $3^{21} < n^{14} < 2^{63}$?

1. 23 2. 34 3. 11 4. 17 5. 12

6. The function f is defined as $f(x) = [\log_2 x]$ where $[a]$ denotes the greatest integer less than or equal to the real number a . Find the natural number m such that $f(1)+f(2)+\dots+f(m) = 98$.

1. 32 2. 31 3. 30 4. 25 5. None of these

7. Take a number 'x' and follow these steps:

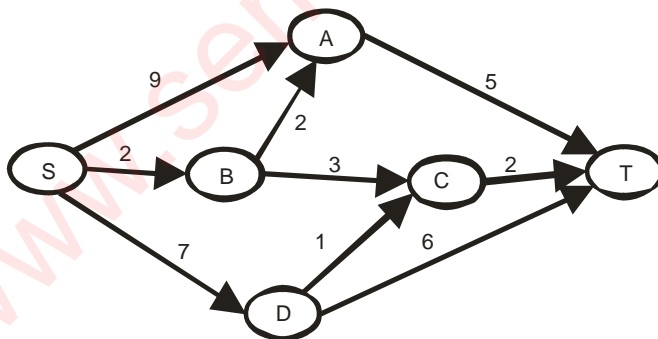
1. Find the sum of its digits.
2. If the sum has only one digit, STOP.
3. Else, go back to step 1 with the new number.

If $x = 1684$, what is the end result?

1. 19 2. 10 3. 1 4. 2 5. None of these

Directions for questions 8 to 12

A significant amount of traffic flows from point S to point T in the one-way street network shown below. Points A, B, C, and D are junctions in the network, and the arrows mark the direction of traffic flow. The fuel cost in rupees for traveling along a street is indicated by the number adjacent to the arrow representing the street.



Motorists travelling from point S to point T would obviously take the route for which the total cost of travelling is the minimum. If two or more routes have the same least travel cost, then

motorists are indifferent between them. Hence, the traffic gets evenly distributed among all the least cost routes.

The government can control the flow of traffic only by levying appropriate toll at each junction. For example, if a motorist takes the route S-A-T (using junction A alone), then the total cost of travel would be Rs 14 (i.e., Rs 9 + Rs 5) plus the toll charged at junction A.

8. If the government wants to ensure that all motorists travelling from S to T pay the same amount (fuel costs and toll combined) regardless of the route they choose and the street from B to C is under repair (and hence unusable), then a feasible set of toll charged (in rupees) at junctions A, B, C and D respectively to achieve this goal is:

1. 2,5,3,2 2. 0,5,3,1 3. 1,5,3,2 4. 2,3,5,1 5. 1,3,5,1

9. If the government wants to ensure that the traffic at S gets evenly distributed along streets from S to A, from S to B, and from S to D, then a feasible set of toll charged (in rupees) at junctions A, B, C, and D respectively to achieve this goal is:

1. 0,5,4,1 2. 0,5,2,2 3. 1,5,3,3 4. 1,5,3,2 5. 0,4,3,2

10. If the government wants to ensure that no traffic flows on the street from D to T, while equal amount of traffic flows through junctions A and C, then a feasible set of toll charged (in rupees) at junctions A, B, C, and D respectively to achieve this goal is:

1. 1,5,3,3 2. 1,4,4,3 3. 1,5,4,2 4. 0,5,2,3 5. 0,5,2,2

11. If the government wants to ensure that all routes from S to T get the same amount of traffic, then a feasible set of toll charged (in rupees) at junctions A, B, C, and D respectively to achieve this goal is

1. 0,5,2,2 2. 0,5,4,1 3. 1,5,3,3 4. 1,5,3,2 5. 1,5,4,2

12. The government wants to devise a toll policy such that the total cost to the commuters per trip is minimized. The policy should also ensure that not more than 70 per cent of the total traffic passes through junction B. The cost incurred by the commuter travelling from point S to point T under this policy will be:

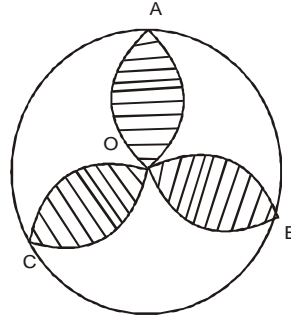
1. Rs. 7 2. Rs. 9 3. Rs. 10 4. Rs. 13 5. Rs. 14

13. If $f(x) = \frac{x^2}{1+x^2}$ find $f\left(\frac{1}{100}\right) + f\left(\frac{2}{100}\right) + f\left(\frac{3}{100}\right) + f\left(\frac{4}{100}\right) + \dots + f\left(\frac{100}{100}\right)$

1. 30 2. 200 3. 0 4. 5000 5. 1000

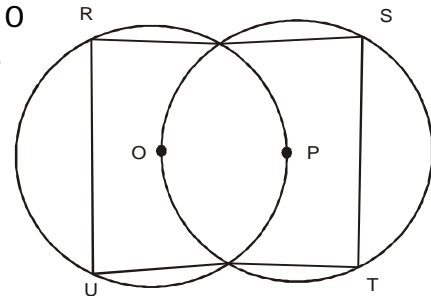
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14. O is the centre of a circle with radius 1 cm. AOB, BOC, and COA are three equal arcs with radius 1 cm and with their centres on the circumference of the circle shown below. Find the area of the shaded area.



1. $\left(\frac{p}{6} - \frac{\sqrt{3}}{4}\right) cm^2$ 2. $\left(p - \frac{3\sqrt{3}}{2}\right) cm^2$ 3. $\left(p - \frac{3\sqrt{3}}{2}\right) cm^2$ 4. $\frac{3\sqrt{3}}{2} p cm^2$
5. $\left(\frac{p}{6} + \frac{\sqrt{3}}{4}\right) cm^2$

15. In the figure below, there are two identical circles with centres O and P as shown in the diagram. RSTU is a quadrilateral, with RS and TU parallel to OP. If the radius of the circles is 'r', what is the area of quadrilateral RSTU?



1. $2r^2$ 2. $3\sqrt{2}r^2$ 3. $\sqrt{3}r^2$ 4. $2\sqrt{3}r^2$
5. $6\sqrt{2}r^2$

Questions 16 – 17 are based on the following

Five women decided to go shopping. They arrived at the designated meeting place in the following order: 1. Archana, 2. Chellamma, 3. Dhenuka, 4. Helen, and 5. Shahnaz. Each woman spent at least Rs 1000. Below are some additional facts about how much they spent during their shopping spree.

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- i. The woman who spent Rs 2234 arrived before the lady who spent Rs. 1193
- ii. One woman spent Rs 1340 and she was not Dhenuka
- iii. One woman spent Rs 1378 more than Chellamma
- iv. One woman spent Rs 2517 and she was not Archana
- v. Helen spent more than Dhenuka
- vi. Shahnaz spent the largest amount and Chellamma the smallest.

16. What was the amount spent by Helen?

1. Rs. 1193 2. Rs. 1340 3. Rs. 2234 4. Rs. 2517 5. Rs.2345

17. The woman who spent Rs 1193 is

1. Archana 2. Chellamma 3. Dhenuka 4. Helen 5. Shanaz

18. Choose the option that arranges the numbers in ascending order

$$\sqrt{\sqrt{2+\sqrt{3}}}; \sqrt{2}; (0.99)^{7/2}; \sqrt{\sqrt{2+\sqrt{3}}}, \sqrt{2}, \sqrt{2+\sqrt{3}}, \sqrt{1+\sqrt{8}}$$

1. $(-1.1)^5, (0.99)^{7/2}, \sqrt{\sqrt{2+\sqrt{3}}}, \sqrt{2}, \sqrt{2+\sqrt{3}}, \sqrt{1+\sqrt{8}}, \sqrt{3+\sqrt{5}}$
2. $(0.99)^{7/2}, (-1.1)^5, \sqrt{2}, \sqrt{\sqrt{2+\sqrt{3}}}, \sqrt{3+\sqrt{5}}, \sqrt{1+\sqrt{8}}, \sqrt{2+\sqrt{3}}$
3. $(0.99)^{7/2}, (-1.1)^5, \sqrt{2}, \sqrt{\sqrt{2+\sqrt{3}}}, \sqrt{2+\sqrt{3}}, \sqrt{3+\sqrt{5}}, \sqrt{1+\sqrt{8}}$
4. $(0.99)^{7/2}, \sqrt{2}, \sqrt{\sqrt{2+\sqrt{3}}}, \sqrt{3+\sqrt{5}}, (-1.1)^5, \sqrt{1+\sqrt{8}}, \sqrt{2+\sqrt{3}}$
5. $(-1.1)^5, (0.99)^{7/2}, \sqrt{2}, \sqrt{\sqrt{2+\sqrt{3}}}, \sqrt{2+\sqrt{3}}, \sqrt{3+\sqrt{5}}, \sqrt{1+\sqrt{8}}$

19. What is the remainder when $7^{73} - 729 \times 17^6$ is divided by 50?

1. 42 2. 6 3. 7 4. 8 5. None of these

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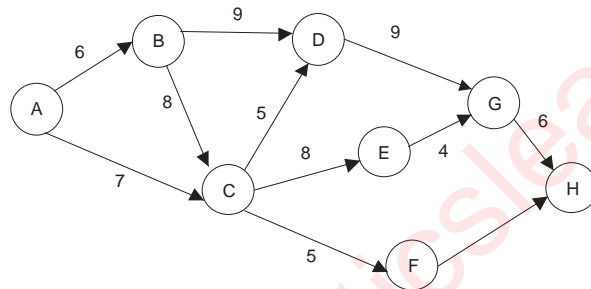
20. There is a square with a side measuring 2 cms. Another square is drawn inside the first one joining the mid points of the four sides of the first one. A third square is drawn inside the second one in the same manner and this process is continued till infinity. The outermost square is numbered 1, the one just inside that 2, the next one 3 and so on. What is the sum of the areas of all the odd number of squares?

1. 8 2. 2.67 3. 3.33 4. 4.67 5. 5.33

For questions 21 to 22 refer to the data given below

The diagram represents the sum of two 4 digit numbers. Each alphabet represents a unique

The network below shows the process of manufacturing a unit of a certain product 'X'



- I. Manufacturing process of each unit of product 'X' begins at A and ends at H.
- II. The network gives details about various stages in the manufacturing process (stages A, B, C ... etc.) and the time required (in minutes) in transition from one stage to the subsequent stage.
- III. At most one unit of product X can be under the process of manufacturing at a given time.

21. What is the maximum time taken to manufacture 25 units of product 'X'?

1. 25 hrs 2. 14 hrs 10 min 3. 18 hrs 5 min 4. 12 hrs 30 min
5. 10hrs

22. What is the difference in the maximum and minimum time taken in the manufacturing process of a unit of product X to transit to stage G from stage A?

1. 7 min 2. 5 min 3. 9 min 4. 10 min 5. 11 min

23. Find the remainder when $(11^{17^{15}} + 13^{11^{15}})$ is divided by 7.

1. 0 2. 1 3. 2 4. 3 5. 6

24. How many integral values of 'x' are possible for which $(2^{70} + 2^{1039} + 2^x)$ equals the square of a whole number?

1. 0 2. 1 3. 2 4. 3 5. 5

25. There was a big discount sale at the cake shop . On the first day, 1 cake plus $\frac{1}{7}$ th of the remaining

cakes were sold. On the second day, 2 cakes plus $\frac{1}{7}$ th of the remaining cakes were sold. A

similar pattern continued till the kth day, when 'k' cakes were sold and no cake was left after that. If the sale ran for exactly k days ($k > 1$), then what is the minimum number of cakes sold during the exhibition?

1. 36 2. 42 3. 99 4. 100 5. 50

SECTION 2

This section contains 36 questions

Directions for questions 26 to 30: *In each of the following questions there are sentences that form a paragraph. Identify the sentence(s) or part(s) of sentence(s) that is/are correct in terms of grammar and usage (including spelling, punctuation and logical consistency). Then, choose the most appropriate option.*

26. A. All things in their fundamental nature are not explicable and hence

B. it cannot be adequately expressed in any form of language.

C. The mystics insist no single phenomenon can be explained since everything is connected to everything else.

D. The Eastern sages are, therefore, not interested in explaining things, but rather to obtain a direct non-intellectual experience of the unity of all things.

1. B only 2. A and D 3. B and D 4. A only 5. A and C

27. A. The dilemmas of the film are in its position and willingness to support liberalization, success at any cost and end justify the means.

B. It takes a simple view of liberalization and its critique.

C. The film applauds the street-smart approach of economic growth.

D. In the final defense, the protagonist pulls up a nation that allowed itself to be trapped as an entity with inept and ineffective policies.

1. B and D 2. A and C 3. B only 4. A, B and D 5. B only

28. A. The overall socialist agenda of the government

B. that impelled certain measures do not matter.

C. Its generally recognized that the use of punishment to appease public demand is itself a form of injustice which is inimical to democracy.

D. The recognition of human fallibility is a fundamental argument for the rule of law.

1. A and B 2. A and D 3. D only 4. C only 5. A and C

29. Due to recession ICICI Bank and HDFC decide to charge to prices of ICICI – HDFC venture if the merging was done a year ago? Assume their new prices is the average of their sale value.

A. There is some evidence to suggest that Neanderthals had brains as large like modern man and

B. developed a culture of their own that included the burying of their dead

C. with a religious ceremonial aspect attached to their custom; They made jewelry like ornaments that demonstrate a sense of creativity and aestheticism.

D. However recent evidence shows that Neanderthals may have slaughtered some of their own numbers.

1. A and C 2. A only 3. C only 4. B and D 5. D only

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Directions for questions 30 to 35: *In each of the questions, a word has been used in sentences in five different ways. Choose the option corresponding to the sentence in which the usage of the word is incorrect or inappropriate.*

30. BOW

1. They bowed us out of their living room as though we were kings.
2. Sita is highly fascinated by bows and wears them whenever she goes out.
3. Rahul was bowed down by sorrow after his friend's demise.
4. The child bowed out of the competition when he saw his opponent.
5. I think I will bow down and leave this job to someone else.

31. OPEN

1. He has got an open mind.
2. If she could be open with me, perhaps I could help her.
3. She opened up on Fred with Alice.
4. The events of last night opened my eyes .
5. We have to open into the details to get a correct picture.

32. SNAP

1. I realized that someone was following me when I heard branch snap.
2. He tends to snap at his friends when he is in a foul mood.
3. I could hear only a snap of the conversation.
4. It is very difficult to snap Vishal out of his depression.
5. All the best bargains were snapped up within hours.

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33. LOCK

1. The two sides locked into a bitter dispute.
2. Their capital is all locked up in property.
3. The prisoners are locked in at 9 PM for the night.
4. I will not rest until the murderer is on lock any key.
5. The company's headquarters in Noida had a virtual lock on the entire domestic sales.

34. INTEREST

1. Relationship between local government and business interests were conflicting.
2. He was persuaded into an interesting argument.
3. Do your parents take an interest in your friends?
4. Organizations have an interest in ensuring that employee morale is high.
5. Rita was acting entirely in her own interests.

35. HARD

1. It's hard to see how they can lose.
2. Small businesses have been hard hit by the recession.
3. She has every reason to be hardened by – her parents have given her nothing.
4. Turn hard right at the next junction.
5. The recent article about the murder of Laurence Washington was based on hard facts.

Direct ions for questions 36 to 38: *Each of the following questions has a paragraph from which the last sentence has been deleted. From the given options, choose the sentence that completes the paragraph in the most appropriate way.*

36. Ocean water plays an indispensable role in supporting life. The great ocean basins hold about 300 million cubic miles of water. From this vast amount, about 80,000 cubic miles of water is sucked into the atmosphere each year by evaporation and returned by precipitation and drainage to the ocean. More than 24,000 cubic miles of rain descend annually upon the continents. This vast amount is

required to replenish the lakes and streams, springs and water tables on which all flora and fauna are dependent.

1. As a result, water has properties unlike those of any other liquid.
2. Thus, the ocean can absorb can store vast quantities of heat.
3. Consequently, the ocean is capable of stalling climate extremes.
4. Thus, the hydrosphere permits organic existence.
5. By contrast, the hydrosphere has strange characteristics.

37. A technique called 'brain fingerprinting', which seeks to probe whether a suspect has specific knowledge of a crime, could become a powerful weapon in national security. Lawrence Farwell, the inventor believes the technique could emerge as the next big thing in law enforcement and intelligence. From a scientific perspective, we can definitively say that brain fingerprinting could have substantial benefits in identifying terrorists or in exonerating people accused of being terrorists. But the controversial technique must overcome the skepticism of some experts who are reluctant to embrace it.

1. There should emerge some reliable mechanism to reduce the discrepancies in the use of the technique.
2. There are other reliable mechanisms to detect crime.
3. Many people are wrongly confined in crime cells for lack of scientific methods o detect crime.
4. National security cannot be ensured unless crime is controlled.
5. Detecting crime with higher success rate requires scientific methods.

38. Negative thinking is good sometimes. Trying to get people to think more positively can actually have the opposite effect. When people get feedback which they believe was excessively positive, they actually felt worse, not better. Defensive pessimism is not related to depression and it may even be protective. Defensive pessimists have some confidence in the possibility that they can do what needs to be done as long as they've prepared for all the bad that are likely.

1. Pessimists can think of plenty of ways in which things can go wrong.
2. Positive thinkers fail to gauge the ramifications of their approach.
3. Positive thinking is good all times.
4. Positive thinking doesn't help look at things critically.
5. Negative thinkers outnumber optimists.

Directions for questions 39 -42: *Each of the following questions has a sentence with one or two blanks. Given below each question are five pairs of words. Choose the pair that best completes the sentence.*

39. After having worked in the refuge camp feeding the hungry, the volunteer began to see her own good fortune as ----- and her difference from the -----as chance rather than destiny.

- | | |
|------------------------------|---------------------------------|
| 1. a rewardhomeless | 2. an augury impoverished |
| 3. a flukedestitute | 4. an imprecationaffluent |
| 5. a threatimpecunious | |

40. ----- by her parent's shabby, working class appearance, jean felt their visit to his school would bring her -----

- | | |
|---------------------------------|--------------------------------|
| 1. disappointedbitterness | 2. appalled exacerbation |
| 3. embarrassedchagrin | 4. nettled satisfaction |
| 5. bewildered suspicion | |

41. Though money plays a common role in daily life there is a-----about it that is -----

- | | |
|----------------------------|--------------------------|
| 1. charm.....appealing | 2. paradox vexing |
| 3. obscurity irksome | 4. enigma tempting |
| 5. mystique baffling | |

42. Ryan is -----, having excessive concern for insignificant rules.

- | | | | | |
|---------------|-------------|-------------|-----------|---------------|
| 1. lachrymose | 2. moribund | 3. pedantic | 4. rustic | 5. tyrannical |
|---------------|-------------|-------------|-----------|---------------|

Directions for questions 43 -46: In each question, there are five sentences. Each sentence has a pair of words that are italicized and highlighted. From the italicized and highlighted words, select the most appropriate words (A or B) to form correct sentences. The sentences are followed by options that indicate the words, which may be selected to correctly complete the set of sentences. From the options given, choose the most appropriate one.

43. (a) Piped piper was always surrounded by a *beeves* / *bevy* of children.

(A) (B)

(b) I had to *scout* / *scour* my cupboard high and low for the book I had misplaced.

(A) (B)

(c) The weather report says that we can expect *hail* / *hale* storms next week.

(A) (B)

(d) The actress essayed a *meaty* / *mealy* role with aplomb.

(A) (B)

1. AAAB 2. BABB 3. BBAA 4. ABAB 5. BABA

44. (a) Certain regions of south Africa are yet to be *chartered* / *charted* by the explorers.

(A) (B)

(b) They had to wait an *unconscionable* / *unconscious* time to get a table at the restaurant.

(A) (B)

(c) We should never let jealousy *perverse* / *pervade* our work life.

(A) (B)

(d) Nothing can *ruffle* / *deter* Reema from working towards her goal.

(A) (B)

1. ABBA 2. BAAA 3. BABB 4. ABAB 5. ABAA

45. (a) A sunken fence doesn't *interrupt* / *intersect* the view across the fields.

(A) (B)

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(b) The key to happiness is to *ensue* / *eschew* extremities in life and tread the middle path. (A) (B)

(c) The books on physics were placed on the second *rack* / *rake* of the shelf. (A) (B)

(d) The foreigners couldn't bear the *seering* / *searing* heat. (A) (B)

1. BABA 2. ABAB 3. AABA 4. BABA 5. BBAA

46. The percentage increase in the demand for petroleum products was minimum in the year:

(a) *Commercialism* / *Commercialization* has enabled budding entrepreneurs to venture (A) (B)

into common businesses.

(b) Water has become a scarce *commadore* / *commodity* these days. (A) (B)

(c) The player's *complaisance* / *complacence* was the reason for his downfall. (A) (B)

(d) We could hear the *tolling* / *towing* of bells at the temple. (A) (B)

1. BABB 2. ABBA 3. BAAB 4. ABAA 5. BABA

Directions for questions 47 to 50: *Read the passage and answer the questions based on what is stated or implied in the passage.*

Passage 1

There are historical lessons in Daruwalla's fiction. Gama's voyage to India was marked by a series of conflicts, often borne out of cultural misunderstandings. The Portuguese's unfamiliarity with the culture and customs of East Africa and also of those of the Malabar was often at the root of this. The Portuguese arrived at the Malabar to customs and intricate political relationships that they couldn't comprehend. The kingdoms of Kerala had complex political and commercial relationships with each other, and also with the Muslim traders who had dominated Indian Ocean trade up until the arrival

of the Portuguese. Their coming drastically changed these equations, and also shaped future colonial experiences of India. Their negative experiences in Africa gave the Portuguese a distrust of the 'Moors.'

The arrival of the Portuguese also brought a scale of violence that the Indian Ocean hadn't seen before. Daruwalla's novel ends with Vasco de Gama's brutal attack on the Miri, a ship mostly carrying women and children, in his second voyage, presumably to extract revenge for the attacks on his compatriot Cabral's voyage in 1501. But there was, also, some humour in these cultural interactions, as Daruwalla tries to show in his story. Asked by the Arab navigator Ibn Majid what the objective of their mission was, the Portuguese Captain-Major of Gama's fleet naively declares his grand mission 'to discover India.'

Daruwalla says he tried to stay true to history in telling his story. Historical accounts, such as the well-known anonymous account of Gama's journey told by one of the companions on his fleet, do inform his narrative, but are no more than props to his story. It is, in the end, the story of Ehtesham, the imagined conversations between the religious Portuguese Brother Figuero and Ibn Majid in a Mombasa café and the snapshots of life under the Zamorin in Calicut that make his story so engaging and give us a very different and rich perspective into the fascinating world of the 15th century.

47. What caused cultural conflicts with the arrival of Vasco de Gama?

1. The invasion of Malabar by the Portuguese.
2. The attack of the Portuguese on Malabar merchants.
3. The Portuguese' domination in trade in the Indian Ocean.
4. The intolerance of the Portuguese towards Muslims.
5. The Portuguese's lack of familiarity with the cultural terrain of Malabar.

48. Which of the following groups were referred to as the 'Moors'?

- 1.Africans 2.Portuguese 3.Indians 4.Muslims 5.Keralites

49. The author admires Daruwalla's book primarily for its

1. narrative humor 2. revolutionary intent 3. poignant style 4. slice of history
5. 'bare all' approach

50. 'Their coming drastically changed these equations.' the equations here refer to

1. The nature of rapport that the Portuguese built with the local merchants.
2. The political and commercial relationships between among rulers and between rulers and traders.
3. The conflicting religious relationship that the Arab Muslim traders and the Portuguese Christians shared.
4. the religious harmony that prevailed in the Malabar region till then.
5. the trade networks that existed between certain Arab countries and Indian subcontinent.

Directions for questions 51 to 54: *read the passage and answer the questions based on what is stated or implied in the passage.*

Passage 2

Once upon a time, Adi Shankaracharya fought a verbal duel with a formidable scholar named Mandana Mishra in the ancient town of Mithila in Bihar. Mandana Mishra was a follower of Karma Mimamsa and ardently believed in the Big Bang Theory of Language called Sphota. After his defeat, however, he got converted to Advaita and became known as Sureshvaracharya. During the debate Adi Shankara is said to have told the following story to his learned rival.

'During my discourse in Banaras, an elephant ran amok and began to gore and trample down people. I was passing by that street on my way to bathing ghats of the Ganga with my disciples. Seeing the elephant charging towards us, all of us ran for our dear lives. A Pandit who saw the incident from the safety of his mansion prodded me about this incident during my talk that evening: 'O Master, if the entire world is maya as you say and the soul alone is real and indestructible, why did you, a self-realised one, run for safety seeing that elephant of Maya running wildly?' I replied. 'The elephant was maya, as you say, and so was my running!'

A modern version of that famous repartee is told by Yogacharya Nimbalkar in his Pearls of Wisdom: After Communists took over China, the cult of the Great Helmsman, MaoTse-tung, became the new religion of the masses. The belief quickly gained ground that Mao was God incarnate and his name, if chanted with sufficient reverence, could work wonders. That was when a communist activist spotted a farmer sitting idly by his farm, enjoying the breeze. The activist went up to the farmer and asked if he knew the power of Mao's name. 'Surely, Sir!' replied the farmer quaking with fear in his boots. 'I chant his name every morning as I plant my turnips. And to my surprise the turnips grow quickly to reach Heaven.'

Although he was secretly pleased with the seemingly stupid farmer's answer, the activist still admonished him by saying that Heaven was anathema to Communist ideology because it was often misused by the bourgeoisie to hoodwink the proletariat.

51. What can we fathom from the saint's witty repartee to the pandit?

1. He was intimidated by the elephant and fled for his life.
2. He stood rooted to the ground knowing well that the elephant was approaching him.
3. He is a spiritual being has supernatural powers.
4. Whatever we see is a mirage.
5. He had renounced his worldly pleasures to attain nirvana.

52. The term 'anathema' is closest in meaning to

1. Detested thing
2. A ploy
3. Uncanny
4. Congruous
5. Mauling

53. Why did the activist rebuke the farmer?

1. The farmer's frivolity irritated him.
2. The farmer had an unswerving faith in God.
3. The farmer was disrespectful to the activist.
4. The farmer had uttered words condemned by the communists.
5. The farmer had lied to the activist.

54. Which of the following can be inferred from the passage about communist ideology?

1. It curbs religious freedom
2. It fails to accommodate the complexities of life
3. It doesn't encourage blind faith
4. It uses political propaganda
5. It propounds religious neutrality

Directions for questions 55 to 57: *read the passage and answer the questions based on what is stated or implied in the passage.*

Passage 3

India's vanishing tigers are a tragedy of the commons. They get killed because they belong to nobody. They are state property. Their killing will end if our game sanctuaries are privatised and leased to foreign wildlife companies.

These firms will be able to save the tiger for two reasons. One, they have experience in wildlife preservation and management. And two, more tigers will attract more wildlife tourists for them, unlocking the Indian tiger's value as an economic asset. Right now, this magnificent animal is a wasted resource. A tiger's killing fetches poachers just a couple of lakhs. The same tiger can become a source of revenue for India and turn the country into a destination for wildlife tourism. India can take a leaf or two out of Kenya's books – as much as 95 per cent of the African nation's tourism revenues comes from wildlife tourism.

Indeed, large parts of Africa have managed to save endangered species, and earn handsomely out of them, by privatizing game reserves. The process was championed by Nelson Mandela, who acknowledged that his poor, AIDS-stricken continent didn't have the resources to save its priceless wildlife. Today, four of South Africa's game reserves are run by Africa Parks, a private company owned by a Dutch nature conservationist. The experiment has been so successful that the company has been approached by several other African nations to run their game parks.

It's time India acted. It would suggest that tighter the state control, the closer they get to extinction. The trend is reverse in private game sanctuaries. In privatised game reserves of Africa, animals have become so abundant that countries in Africa are allowing hunting and earning revenues from it.. This income is ploughed back into the local economy. So, local people see their wildlife as an economic resource and protect it from poachers.

If the private sector can run India's phones, airlines and high-tech hospitals, why can't it run game sanctuaries? All that the government needs to do is float a global tender. The tender would arouse the interest of the world's top wildlife companies, which could give sound, time-tested business proposals to save our tigers. The problems are huge. But one has to realise that wildlife thrives only when locals benefit from its presence. There is an African saying: 'If it pays, it stays.' This sums up the sentiment.

The world's rich wildlife tourists don't prefer India because of poor infrastructure in its sanctuaries. So, in the dearth of tourists, tigers are reduced to a mere threat to the lives of the locals. This tradition can be broken with adequate investment in quality resorts and hotels inside our sanctuaries. The people living in the vicinity, who gain immensely from the inflow of tourists, will go on anti-poaching patrols just as those surrounding sanctuaries in Africa.

55. A suitable title for the passage would be

1. Privatisation of national assets.
2. Reviving the plummeting wildlife tourism industry.
3. Extinction of Tigers- Causes.
4. Wildlife- A valuable social asset.

5. Denationalisation of wildlife: A means to save tigers.

56. What do you decipher from the line 'If it pays, it stays'?

1. When tourism flourishes by leaps and bounds, wild life declines.
2. When the government puts conscious efforts to protect of wildlife, the results are good.
3. Measures to improve wildlife sanctuaries will enable the tourism industry to flourish.
4. Public participation can be expected when people are benefitted.
5. Dearth of foreign money emphasizes on the need for protection of wildlife.

57. Which of the following can be inferred from the passage?

1. The value of the Indian Tigers is its potential social equivalent.
2. The Indian wildlife management has failed to preserve many rare species of animals owing to poor management.
3. Poaching of wildlife in India is proposed to be legalized in an attempt to boost the local economy.
4. Nelson Mandela championed the privatization of wildlife sanctuaries.
5. Tigers of Indian sanctuaries are far more protected than those elsewhere in Asia.

Directions for questions 58 to 60: *read the passage and answer the questions based on what is stated or implied in the passage.*

Passage 4

Till recently, it might have been supposed that the English novel was not what the French call disputable. It had no air of having a theory, a conviction, a consciousness of itself behind it - of being the expression of an artistic faith, the result of choice and comparison. I do not say it was necessarily the worse for that; it would take much more courage than I possess to intimate that the form of the novel as Dickens and Thackeray saw it had any taint of incompleteness. It was however, naïf (if I may help myself out with a French word); and evidently, if it be destined to suffer in any way for having lost its naivete, it has now an idea of making sure of the corresponding advantages. During the period I have alluded to, there was a comfortable, good-humored feeling abroad that a novel is a novel, as pudding is a pudding, and that our only business with it could be to swallow it. But within a year or two, for some reason or other, there have been signs of returning animation – the era of discussion would appear to have been a certain extent opened.

Art lives upon discussion, upon experiment, upon curiosity, upon variety of attempt, upon the exchange of views and the comparison of standpoints; and there is a presumption that those times when no one has anything particular to say about it, and has no reason to give for practice or

preference, though they may be times of spur and not times of development – are times possibly, even a little of dullness. The successful application of any art is a delightful spectacle, the theory too is interesting; and though there is a great deal of the latter without the former I suspect there has never been a genuine success that has not had a latent core of conviction; discussion, suggestion and speculation. These things are fertilizing when they are frank and sincere. Besant has set an excellent example in saying what he thinks of art; about the way in which it should be published; for his view of the 'art', carried on into an appendix, covers that too. Other laborers in the same field will doubtlessly take up the argument; they will give it the light of their experience, and the effect will surely be to make our interest in the world a little more what it had for some time threatened to fail to be – a serious, active, inquiring interest, under protection of which this delightful study may, in moments of confidence, venture to say a little more than in thinks of itself.

58. Choose the true statement

1. Application of art is welcome but theories on art are uninteresting.
2. The speaker is in conflict with Besant's views on the functions of art.
3. There are theories on art that are not amenable to application.
4. In art discussion objective analyses are rare.
5. A fully objective appreciation of art is non-existent.

59. Choose the false statement

1. The English novel was seldom subjected to discussion.
2. The English novelists objected to criticism of their work abroad.
3. The English critics found French writing necessarily wanting in imagination.
4. Art thrives on reactions and responses to it.
5. Modern day novels are more debated than those of the Victorian period.

60. Choose the true statement

1. The author seeks open, unbiased debate on art.
2. Impartial discussion of art is more of a French phenomenon than of English.
3. There were no times in literary history when art was accepted as it is.
4. Thackeray's works were criticized for their lack of completeness.
5. English novels have gained more popularity after Dickens.

SECTION 3

This section contains 25 questions

Directions for questions 61 -64: Answer the questions based on the information given below

Coach John sat with the score cards of Indian players from the 3 games in a one day cricket tournament, where the same set of players played for India, and all the major batsmen got out. John summarized the batting performance, one for each game. In each game, he noted the number of runs scored by the three top scorers from India. He also noted the percentage of the total score that was scored by the top three Indian scorers in that game. The top scores in the 3 games were among Kaif, Rahul, Saurav, Virender, and Yuvraj. No two players score the same number of runs in the same game. John also calculated two batting indices for each player based on his score in the tournaments; the R-index of a batsman is the difference between his highest and lowest scores in the 3 games while the M-index is the middle number, if his scores are arranged in a non-increasing order.

Game 1: India vs Pakistan

Yuvraj – 40, Sehwag – 130, Kaif – 28, Score contribution by the above three – 90%

Game 2: India vs South Africa

Kaif - 51, Saurav – 75, Rahul – 40, Score contribution by the above three – 70%

Game 3: India vs Australia

Rahul – 55, Yuvraj – 87, Saurav – 50, Score contribution by the three – 90%

61. For how many Indian players is it possible to calculate the exact M-index?

1. 0 2. 1 3. 2 4. 3 5. More than 3

62. Among the players mentioned, who can have the lowest R-index from the tournament?

1. Kaif, Rahul or Yuvraj 2. Only Kaif or Rahul 3. Only Kaif or Yuvraj 4. Only Kaif
5. only Rahul

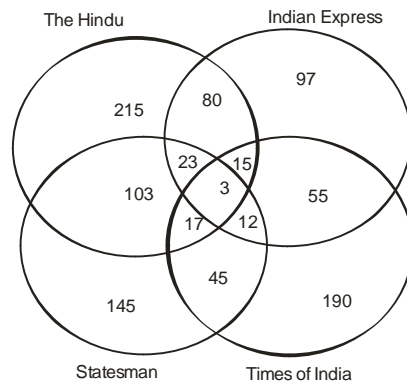
63. How many players among those listed definitely scored less than Yuvraj in the tournament?

1. 0 2. 1 3. 2 4. 3 5. More than 3

64. Which of the players had the best M-index from the tournament?

1. Rahul 2. Saurav 3. Virender 4. Yuvraj 5. kaif

Directions for questions 65 -68: Refer the Venn diagram below that presents the results of newspaper readership survey of 1200 readers in a city.



65. The percentage of people who read at least 2 papers is:

1. 29.5 2. 35.3 3. 61.4 4. 24.5 5. 54

66. What percent of the people surveyed does not read the Times of India?

1. 55 2. 63 3. 72 4. 68 5. 67

67. The percentage of people who read The Statesman but not the Hindu is :

1. 16.8 2. 45.33 3. 24.66 4. 15.83 5. 18

68. Which is the most widely read newspaper?

1. Hindu 2. Times of India 3. Indian Express 4. The statesman
5. Times of India or The Statesman

Directions for questions 69- 72 : Answer the questions based on the information given below

A robot responds to different light signals as follows:

Green – Go North at 20 km/hr

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Red – Go West at 30 km/hr

Yellow – Go East at 40 km/hr

Violet – Go South at 60 km/hr

69. If it is a yellow signal to start with for 45 minutes followed by green and red for 30 minutes each and then green again for 60 minutes and finally violet for 20 minutes, what is the total distance the robot travels?

1. 80 km 2. 75 km 3. 95 km 4. 115 km 5. 100km

70. In the previous question how far is the robot from the starting point?

1. 18 km North East 2. 25 km North East 3. 18 km North West 4. 25 km North West
5. 30 km North East

71. Had there been an error and the robot interprets green as violet, violet as red, red as yellow and yellow as green, what would have been the total distance traveled as for question 69?

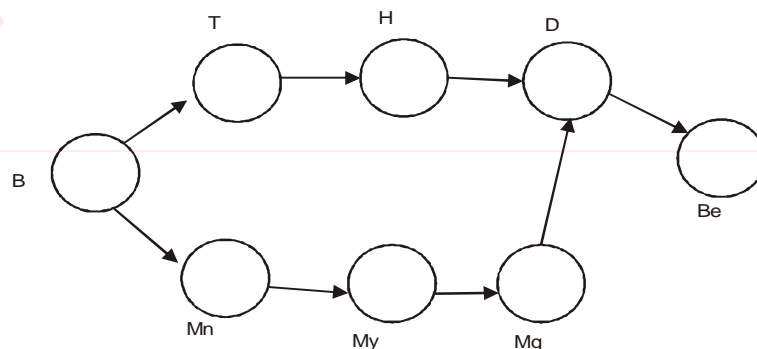
1. 90 2. 115 3. 135 4. 100
5. None of these

72. The position of robot from the starting point had it followed the instructions as in question No.71 would have been?

1. 60 km South West 2. 75 km North East 3. 75 km South East 4. 60 km North East
5. 60 Km South East

Directions for questions 73 -75: *are based on the following information.*

P Roadways is entrusted with the job of carrying rice between the districts in the state. The following sketch of the routes is given:



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Each district has a demand for rice. The demand at T and MS are 250 tonnes each, MN and H 200 each, MG and D 350 tonnes each and BE 100 tonnes. The demand at all locations will be exactly met. The arrow, indicate the only possible direction in which goods can be moved. Further the maximum amount of rice that can be moved between any two districts is 1000 tonnes. It is known that quantity of rice moved from T to H is 500 tonnes.

73. The quantity of rice transported from B to MN is:

1. 800 2. 900 3. 950 4. 100 5. 700

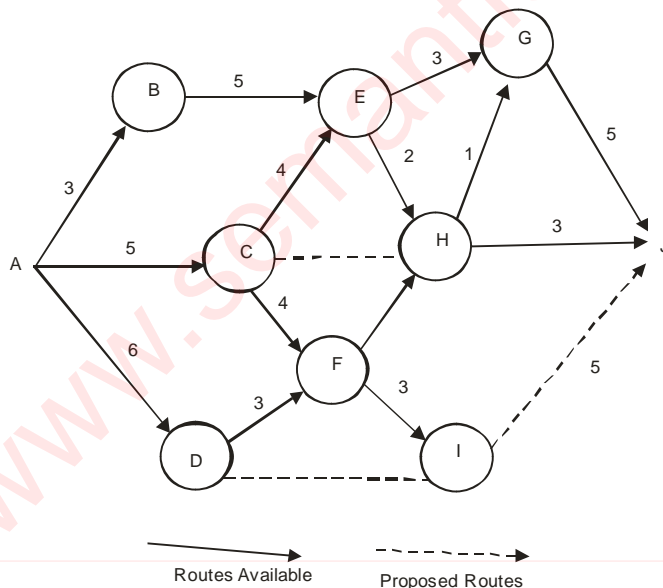
74. The capacity utilization (quantity moved/maximum possible) of B, T sector is:

1. 60% 2. 65% 3. 70% 4. 75% 5. 50%

75. In case of an emergency of D, what is the maximum amount of rice that can reach D, all other conditions remaining the same?

1. 400 2. 500 3. 650 4. 700 5. 800

QUESTIONS 76 TO 80 : Refer the diagram below, and answer the questions that follow. The following diagram shows various routes between cities A to J and the number represents the distance between them in kilometers.



76. Among the routes currently available, which is the shortest route from A to B?

1. ABEGJ 2. ACEHJ 3. ACFHJ 4. ACEGJ 5. None of these

77. Among the routes currently available, the longest route from A to J is :
1. AFIHJ 2. ADFIHGJ 3. ACFHGJ 4. ABEHGJ 5. AEFCHI
78. If the route ACHJ should not be the shortest route from A to J, then what is the minimum distance?
1. 5 km 2. 6 km 3. 7 km 4. 8 km 5. 10km
79. If ADIJ is not the longest route, then what is the maximum possible length of DI? (All proposed routes are completed).
1. 5 km 2. 8 km 3. 9 km 4. 10km 5. Indeterminate
80. If the proposed routes are not made, then which of the following is definitely true of the longest route?
- a. It will pass through G. b. It will pass through H.
c. It will pass through I.
1. a only 2. a and b 3. b and c 4. a b and c
5. a and c
81. Ajay, his wife, son and daughter-in-law are playing a game of tennis where there are two players in each team. Members of the same team stand on one side of the net and the other team on the other side facing the first team. In this group of four there was exactly one best player, one worst player and two average players. The worst player is in the same team as the best player's husband. One of the average players is in the opposite team of his son. Who is the best player?
1. Ajay's wife 2. Ajay's daughter-in-law 3. Ajay's son
4. Ajay 5. Both Ajay and his wife
82. Five athletes, Ajay, Amit, Amol, Ashok and Anil took part in two races. They were given chest numbers from 1 to 5 for either race. No person had the same number in both the races. Neither Ashok nor Amit was given 1 or 5. Ajay and Amit had chest numbers 2 and 3 in the second race and Anil had 4 in the first race. One athlete who had chest number 5 in one race was number 1 in the other. Which of the following statements would enable you to find the ranks of all the athletes in both the races?
1. Anil did not have chest number 2 at all. 2. Amit had number 2 in one of the races.
3. Ashok had number 3 and 4 in the two races. 4. Ajay did not have number 5.

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5. Ajay had number 3.

Directions for questions 83 -85: *Read following data and answer the question below.*

P, Q, R, S, T and U have 4, 10, 12, 15, 18 and 24 coins not necessarily in the same order.

- (i) P has 3 coins less than Q
- (ii) R has 8 coins more than S
- (iii) T has 14 coins less than U

83. Which of the following is true?

- 1. Q has 3 coins less than R
- 2. P has 8 coins more than T
- 3. S has 20 coins less than U
- 4. U has 6 coins more than P
- 5. None of these

84. Who has the least number of coins?

- 1. T
- 2. P
- 3. R
- 4. S
- 5. U

85. Had the total number of coins been 107, instead of 59, how many coins will Q, S and U have together with condition (i), (ii) and (iii) still holding true?

- 1. 58
- 2. 49
- 3. 52
- 4. 64
- 5. 70

Please email urmentor@semanticslearning.com for answer key and solutions