
SEM eCAT 02

INSTRUCTIONS

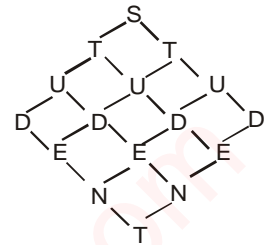
1. This test is divided into three sections, Sections 1, 2 and 3 have 25 questions each. You will be given two and half hours to complete the test. **Each section carries 100 marks. Each question carries four marks. Each wrong answer will attract a penalty of one mark.**
3. For each question, five suggested 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. From the diagram, in how many ways can one spell 'student' if a person starts from the topmost S and moves downwards along the lines to the bottommost T?



- j** 20 **k** 30 **l** 15 **m** 16 **n**10

2. In the reality show 'who wants to be a millionaire' Mr. Sandeep was asked to find out the number of trailing zeroes in the number obtained in $1^1 \times 2^2 \times 3^3 \times \dots \times 25^2$. Sandeep's answer was

- j** 50 **k**100 **l** 150 **m** 200 **n**250

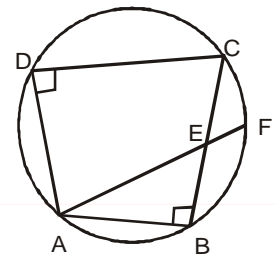
3. What is the remainder when $\left(\left(\left(7^{12}\right)^{13}\right)^{14}\right)$ is divided by 4?

- j** 1 **k**3 **l** 2 **m**4 **n**0

4. The Indian government passed a bill to set up a committee for curbing terrorism. The members eligible for the committee were 4 MPs from communist party, 2 MPs from Forward Block and 3 MPs from Samajwadi party. What is the maximum number of distinct groups that can be formed if all groups have at least one member of each party and none of the groups have all the members of the same party?

- j** 110 **k**125 **l** 168 **m**150 **n**175

5. In the given figure, ABCD is a cyclic quadrilateral, where AB = 15 cm, BC = 20 cm and $\angle ADC = 90^\circ$. If E is the mid point of BC, the length of the chord AF approximately is



- j** 23.57 cm **k**17.8 cm **l** 19.2 cm **m** 22.2 cm **n**20 cm

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6. Find x if $(405)_x + (151)_x = (1000)_x$

- j** 3 **k** 6 **l** 5 **m** 7 **n** 8

7. There are 10 numbers A, B, C, D, E, F, G, H, I and J. Values of five of these numbers are +1 and the rest are -1. The 10 numbers are split into two groups, one having five +1s and the other having five (-1)s. All possible pairs of numbers were formed. The numbers in each pair were multiplied and the resultant products were summed together. Find that sum.

- j** -25 **k** 10 **l** -5 **m** 0 **n** None of these

8. A tunnel is drilled into a sphere of diameter 10cm at two points which are positioned 90° apart. The diameter of the first hole is 2 cm and the second one is 1 cm. What is the minimum possible percentage reduction in the volume of the sphere due to the drilling of the two tunnels?

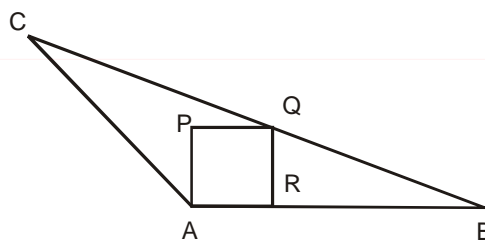
- j** 7% **k** 8% **l** 9% **m** 10% **n** 12%

9. A test with 10 questions was administered to students of a class. Answer to a question could be either Yes or No. For each question attempted correctly, +2 marks was awarded whereas 1 mark was deducted for each incorrect answer. No marks was awarded or deducted for not attempting any question. The aggregate of marks in all 10 questions, as attempted by any student on his answer sheet, became the score of that student.

How many different scores can possibly be obtained by a student of the class?

- j** 41 **k** 40 **l** 39 **m** 38 **n** 50

10. ABC is a field in the form of an isosceles triangle in which $AB = AC = 8$ m and $\angle CAB = 120^\circ$. A square plot APQR is fenced out within that field as shown in the figure given below. Find the area of the triangular field excluding the square plot.



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j $16(\sqrt{3}-1)m^2$ **k** $16(3\sqrt{3}-1)m^2$ **l** $8(2\sqrt{3}-1)m^2$
m $8(2\sqrt{3}+1)m^2$ **n** $16(3\sqrt{3}-4)m^2$

11. How many 5-digit numbers can be formed using 1, 2, 3, 4, 5 (with out repetition) with the digit at ten's place greater than that in unit's place.

j 50 **k** 20 **l** 60 **m** 10 **n** 25

12. What is the probability of getting a four digit number that is a multiple of 9 with at least two digits being repeated?

j 162/999 **k** 123/999 **l** 1/2 **m** 150/999 **n** 140/199

13. If $ABCDE \times 4 = EDCBA$ where A,B,C,D and E are single digit numbers from 1 to 9, then what is $4A \times 5D + 6E$ equal to?

j 60 **k** 25 **l** 72 **m** 84 **n** 91

14. In a 7×7 grid how many distinct regular octagons can we plot by joining the vertices?

j 20 **k** 12 **l** 16 **m** 25 **n** 18

15. What are the last two digits of $(707)^{604}$?

j 13 **k** 03 **l** 01 **m** 15 **n** 18

16. In a number system, $32 \times 15 = 543$ and $54 \times 11 = 624$. What is the value of expression 26×43 ?

j 1544 **k** 2154 **l** 2356 **m** 4512 **n** 1245

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17. Find the sum of the first 15 terms of series of $1 + \sqrt{2}, 1 + \frac{1}{\sqrt{2}}, \frac{\sqrt{2} + 1}{2}, \dots$

j $\frac{(\sqrt{2})^2(2^7(\sqrt{2} + 1))}{2^6}$ **k** $\frac{(1 + \sqrt{2})^2(2^7(\sqrt{2} + 1)\sqrt{2})}{2^6}$

l $\frac{(1 + \sqrt{2})2^7(\sqrt{2} + 1)(1 + \sqrt{6})}{2^6}$ **m** $\frac{(1 + \sqrt{2})^2(2^7(\sqrt{2} - 1))}{2^7}$

n $\frac{(1 + \sqrt{2})^2(2^7(\sqrt{2} + 1))}{2^6}$

18. The math teacher asked Raj to write 1 to n numbers. If he misses a number while writing, he has to write that number, (number – 1) times. On completion of the task, the teacher found that Raj made only 1 mistake. After writing the number, (number – 1) times, Raj found that the sum of all the numbers he wrote added to 108. Find the number which he missed?

j 13 **k** 15 **l** 16 **m** 12 **n** 20

19. PQRS is a quadrilateral. If line RS is a tangent to the circle having diameter PQ and line PQ is a tangent to the circle having RS as its diameter, then

j PS is always parallel to RQ **k** PS is always equal to RQ.
l PQ is always equal to RS **m** \angle PQR is always 90° .
n \angle PQR is always 100° .

20. Given, $f(x) = \frac{\{x-1\}}{500} + \frac{\{x-2\}}{500} + \frac{\{x-3\}}{500} + \dots + \frac{\{x-1000\}}{500}$ and $g(x) = [x-f(x)]$ are two functions of x, where [x] denotes the greatest integer less than or equal to x and {x} denotes the fractional part of x. Find the value of $g(1.1) + g(2.2) + g(3.3) + \dots + g(500.500)$

j 124750 **k** 134500 **l** 165501 **m** 115621 **n** 154542

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Answer questions 21 to 25 based on the data given below

The diagram represents the sum of two 4 digit numbers. Each alphabet represents a unique single digit from 0 – 9.

$$\begin{array}{r}
 \text{S L O W} \\
 + \text{N I N E} \\
 \hline
 \text{N A S W S}
 \end{array}$$

21. What is N?

- j** 0 **k**1 **l** 2 **m**4 **n**9

22. What is A?

- j** 7 **k**6 **l** 2 **m**1 **n**0

23. What is E?

- j** 3 **k**9 **l** 1 **m**2 **n**6

24. What is W?

- j** 1 **k**6 **l** 4 **m**5 **n**0

25. What is S-N?

- j** 6 **k**7 **l** 7 **m**4 **n**8

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SECTION 2

This section contains 25 questions

For questions 26 to 30 use the data below:

(F) → Finance, 1. → automobiles, (phr) → pharma (S) → software

(R) → Real estates (O) → others.

Company	Days Close	Prev Close	No of Share	Future Price
ICICI Bank (F)	731.00	714.05	124560	DNP*
MARUTI Suzuki 1.	1066.20	1049.90	296075	DNP
Dr. Reddy's (Ph)	734.85	734.76	26758	739.15
Patni comp (S)	250.30	241.75	4568	DNP
Reliance Infra (R)	1208.35	1262.15	1175670	1206.50
Hero Honda 1.	1474.50	1464.85	76768	1468.25
Everest Kant (O)	208.35	190.85	256301	DNP
Renaiss. Jewl (O)	38.60	32.15	167501	DNP
Piramal HC (O)	295.20	310.15	785432	303.30
Sun Network 5.	236.75	236.75	19432	234.20
Tata power (O)	1107.40	1164.35	015678	DNP
HDFC (F)	2306.30	2291.05	4569	DNP
MTNL (O)	95.45	100.90	500195	DNP
Ashok Leyland 1.	29.55	30.85	495765	DNP

DNP- Data Not Provided.

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26. Which company ranks second in descending order list of having percentage change greater than 1 and less than 5 having no of shares greater than 20,000?

- j** ICICI Bank **k** Ashok Leyland **l** Reliance infra
m Maruthi Suzuki **n** Sun network

27. How many companies specified above showed positive trend? (positive trend is positive % change in the closings)

- j** 9 **k** 8 **l** 10 **m** 7 **n** None of these

28. The future price is predicted for some companies by expert analysts. Which companies show maximum positive change in them?

- j** Dr. Reddy's **k** Reliance Infra **l** Hero Honda
m Piramal Hc **n** Sun Network

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.

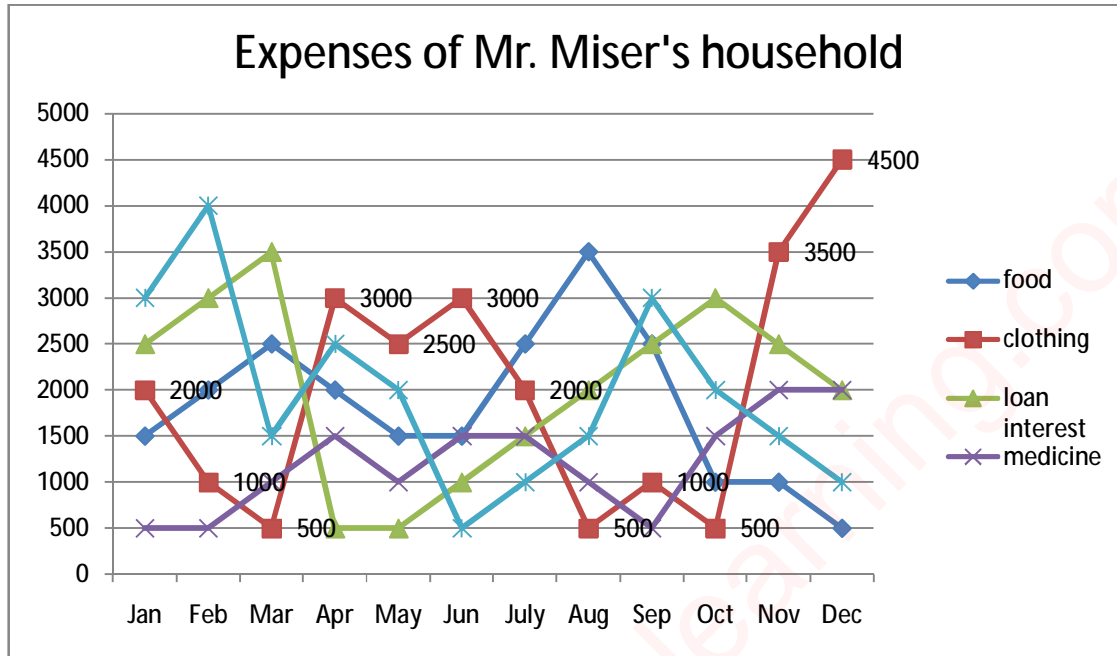
- j** -11.107 **k** -1.107 **l** +11.107 **m** +1.107 **n** None of these

30. What is the difference between the % changes between the automobile field (comprising automobile companies) and the finance sector. (finance companies)?

- j** 3.7 **k** 3.4 **l** +3.6 **m** +3.5 **n** None of these

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For questions 31 to 35 refer the graph below:



31. For how many months in the year at least expense on 3 items of Mr. Miser's household expenses decrease?

- j** 2 **k** 3 **l** 4 **m** 1 **n** None of these

32. For how many months was the expenditure the minimum in Mr. Miser's family?

- j** 1 **k** 2 **l** 3 **m** 4 **n** 0

33. Which item and in which months accounts for the maximum savings in Mr. Miser's expenses?

- j** Others (feb-mar) **k** Food (sep-oct) **l** Other (may-june)
m loan interest (mar – apr) **n** None of these

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34. In the month of March, Mr. Miser saves Rs. 6000. If his salary increases by 33.33% and if the expenses on food, clothing, interest on loan, medicine and others show 2% increase, 10% decrease, 15% increase, 5% increase and 30% decrease respectively, find his savings.

j Rs. 10,725 **k**Rs. 9275 **l** Rs. 10,500 **m**Rs. 9500 **n**Rs.9000

35. If we were to reo the graph in which the month May is removed and the lines are directly joined from April to June, which of the following statements is true?

I The net changes of all the quantities increase

II The net changes of all the quantities decrease

III No change

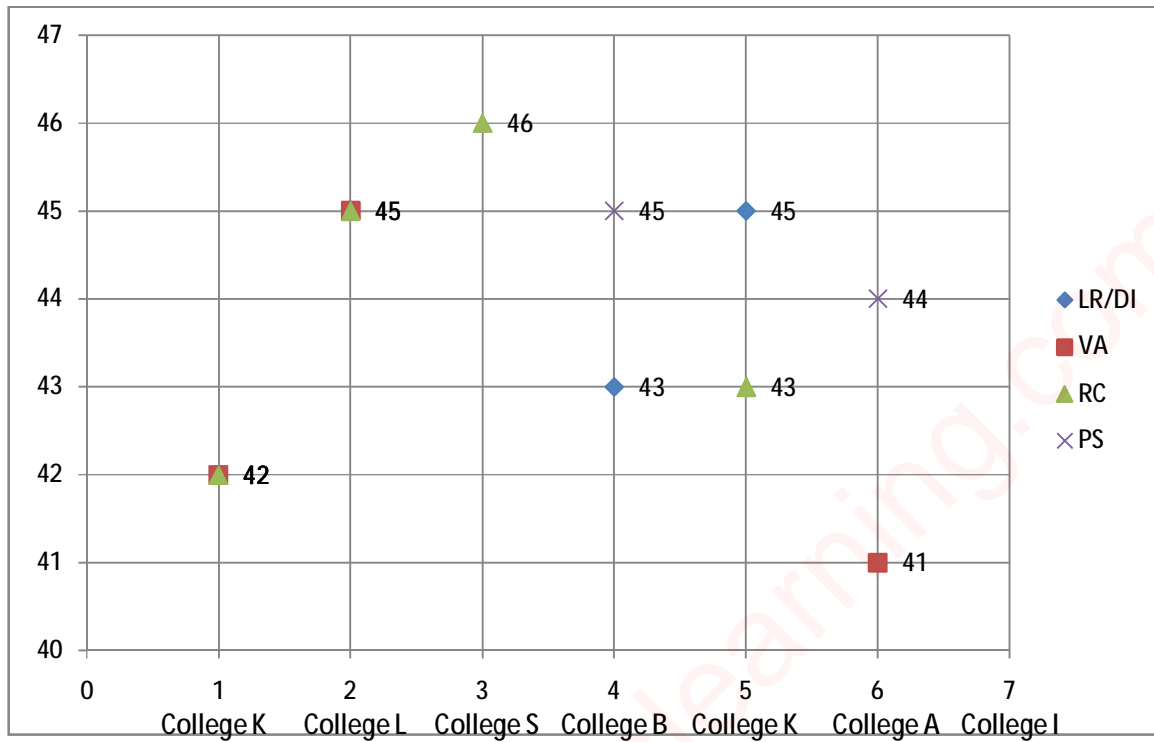
j I only **k**II only **l** III only **m**l and II **n**l and III

For question 36 to 40 refer to the scatter graph and the bar graph below:

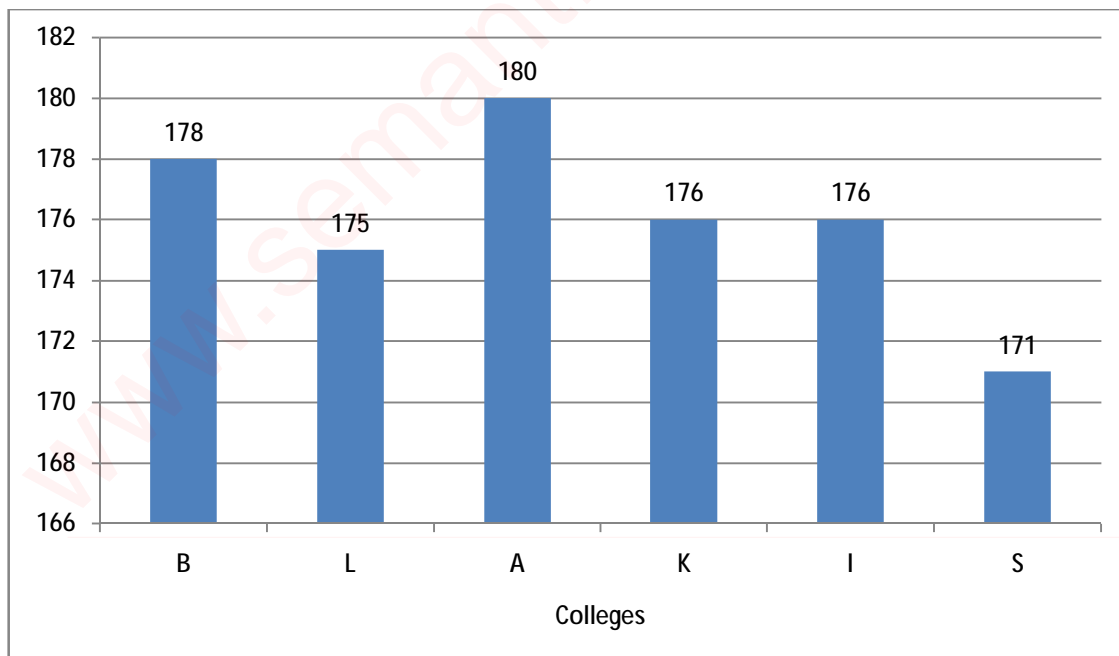
University of Bhopal conducts a written test with 4 different sections (LR/DI, RC, PS, VA) each with maximum 50 marks as a part of its admission process.

There are six colleges under this university. They are college B, College L, College A, College K, College I and College S

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A student gets selected into the university only if he clears the aggregate cut-off. The aggregate cut-off of each college is represented in this bar graph.



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34. In the month of March, Mr. Miser saves Rs. 6000. If his salary increases by 33.33% and if the expenses on food, clothing, interest on loan, medicine and others show 2% increase, 10% decrease, 15% increase, 5% increase and 30% decrease respectively, find his savings.

j Rs. 10,725 **k**Rs. 9275 **l** Rs. 10,500 **m**Rs. 9500 **n**Rs.9000

36. Salem secured 44 in a section. Assuming that he got only the cut-off scores in the other section; he got a call from college A. But she was disappointed to have missed out college B. What was the sectional cut-off of VA in college B?

j 46 only **k**46 or 44 only **l** 44 or 45 only **m**44, 45 ,46 **n**45 only

37. If Raju got calls from all the collages. What could be the minimum aggregate marks obtained by him?

j 180 **k**176 **l** 181 **m**184 **n**187

38. Sanju was very disappointed that he didn't get calls from any college. But it was known that his aggregate marks was high. What was the maximum aggregate marks obtained by him?

j 181 **k**184 **l** 190 **m**196 **n**195

39. Meera got admission to two colleges. What could be the minimum marks obtained by her in a sections?

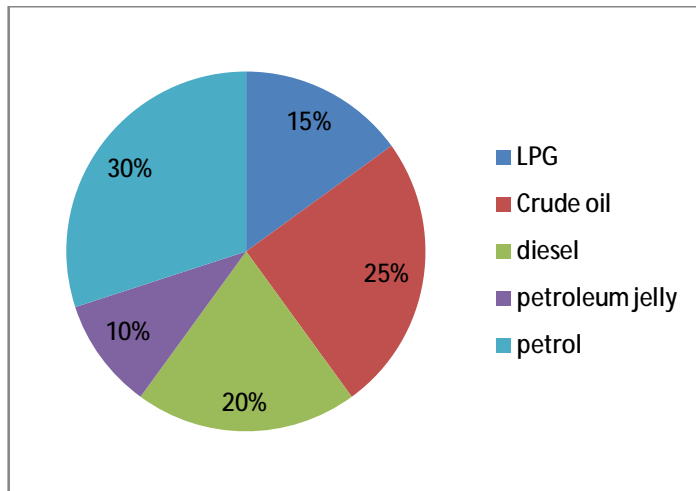
j 10 **k**35 **l** 41 **m**25 **n**30

40. To fill the seats, the university decided to lower the average aggregate marks for this years admission process. Shalini's 10 friends could now choose more colleges. Find the number of ways the ten friends can choose the colleges?.

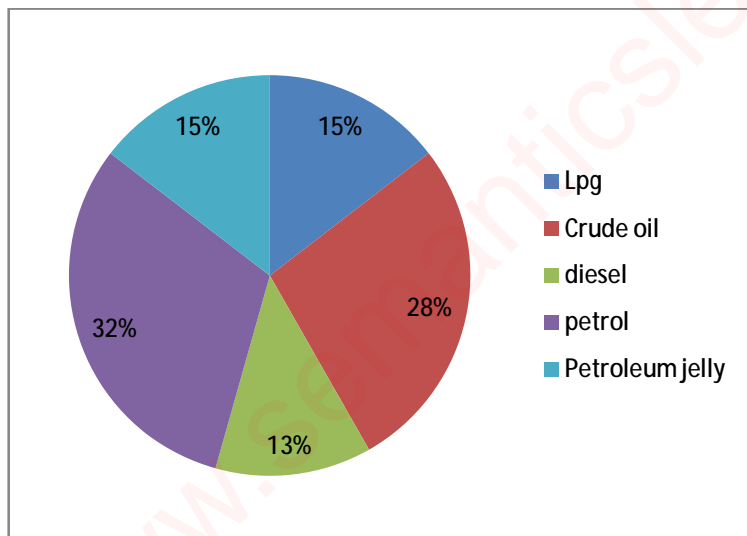
j 280 **k**286 **l** 66 **m**165 **n**270

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For questions 41 to 45 read the following data.



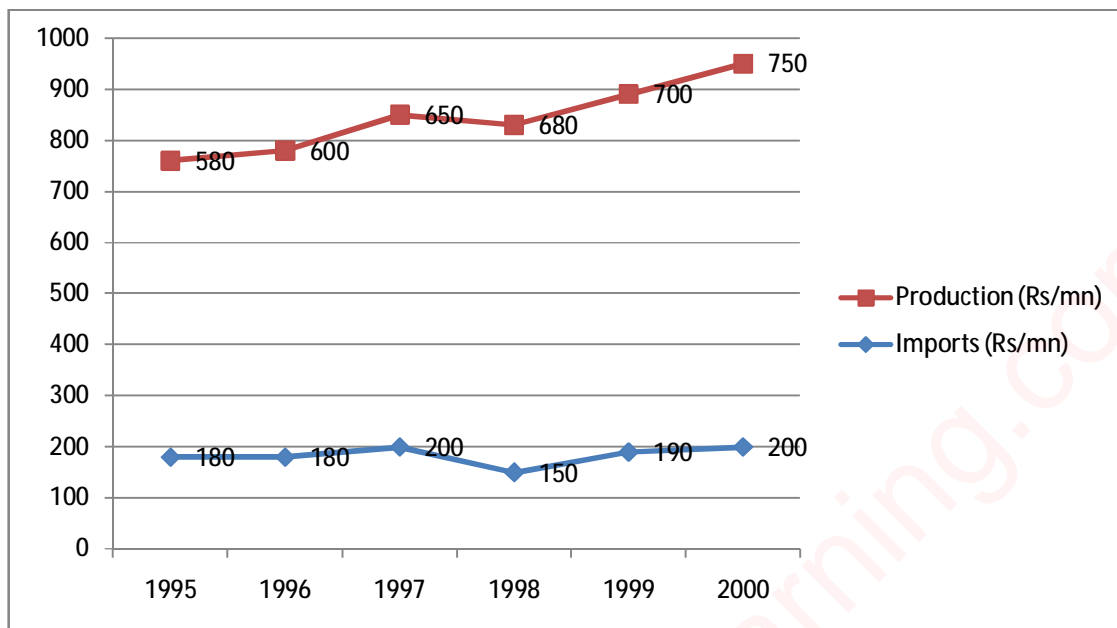
Percentage wise split of petroleum products(Production statistics) in 2000.



Percentage wise split of petroleum products imported in 2000.

Demand gap = demand – production

Production & imports of petroleum products in India.



41. The demand gap was maximum in which of the following years?

- j** 1996 **k** 1998 **l** 1999 **m** 2000 **n** 1995

42. What is the demand gap for crude oil in the year 2000?

- j** 347mn **k** 347.5mn **l** 244mn **m** 374mn **n** cannot be determined.

43. If in the year 2001 production increases by 10% and imports reduce by 15% what is the percentage increase decrease in demand?

- j** 4% **k** 5.75% **l** 4.74% **m** 5% **n** cannot be determined

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

- j** . 1996 **k** 1997 **l** 1998 **m** 1999 **n** 2000

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45. What was the demand for diesel in the year 2000?

- j** 28mn **k** 26mn **l** 38mn **m** 30mm **n** Cannot be determined.

Directions for questions 46 to 50

Each question is followed by statement A and B.

Mark **j** if the question can be answered from A alone not from B alone

Mark **k** if the question can be answered from B alone not from A alone

Mark **l** if the question can be answered from A and B together

Mark **n** if the question can be answered from A and B independently

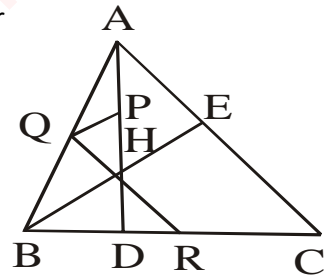
Mark **m** if the question cannot be answered even from A and B together

46. AD is any line from A to BC intersecting BE in H. Find $\angle PQR$

A. $BE \perp AC$

B. P, Q, R are midpoints of AH, AB and BC.

- j** **k** **l** **m** **n**



47. In a quarterly examination, a student secured 30% marks and failed by 12 marks. Find the maximum marks.

A. In the same examination another student secured 40% marks and got 28 marks more than minimum marks to pass.

B. the pass percentage is 33%.

- j** **k** **l** **m** **n**

48. A man starts climbing a moving up escalator at a speed of 3 steps per second. How many steps are there in the escalator?

A. The escalator moves at a speed of 4 steps per second.

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- B. The difference in the timings when a man climbs a moving escalator and a stationary escalator is 21 seconds.

j k l m n

49. What is the remainder when $1+11^{11}+111^{111}+1111^{1111}+\dots$ is divided by 10?

A. The number of terms in the expansion is 11.

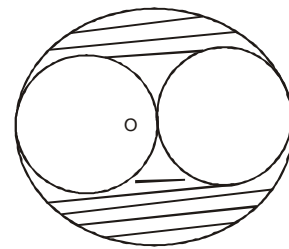
B. Sum of the series is $(1234\dots n)^{12345\dots n}$.

j k l m n

50. What is the radius of the big circle with centre O?

A. The area of the shaded region is $8p$.

B. The circumference of one of the smaller circles is $4p$. The two circles are of equal areas and their centres lie on the diameter of the bigger circle.



j k l m n

SECTION 3

This section contains 25 questions

Directions for questions 51 -54: In each question, there are four sentences. Each sentence has pairs of words/phrases that are italicized and highlighted. From the italicized and highlighted word(s)/phrase(s), select the most appropriate word(s)/phrase(s) to form correct sentences. Then, from the options given, choose the best one

51. 1. Piped piper was always surrounded by a *beehive*[A] / *bevy*[B] of children.
2. I had to *scout*[A] / *scour*[B] my cupboard high and low for the book I had misplaced.
3. The weather report says that we can expect *hail* [A]/ *hale*[B] storms next week.
4. The actress essayed a *meaty*[A] / *measly*[B] role with aplomb.

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j AAAB **k**BABB **l** BBAA **m**ABAB **n**AAAA

52. 1. Certain regions of South Africa are yet to be *chartered*[A] / *charted*[B] by the explorers.
 2. They had to wait an *unconscionable*[A] / *unconscious*[B] time to get a table at the restaurant.
 3. We should never let jealousy *perverse*[A] / *pervade*[B] our work life.
 4. Nothing can *ruffle*[A] / *deter*[B] Reema from working towards her goal.

j ABBA **k**BAAA **l** BABB **m**ABAB **n**ABAA

53. 1. A sunken fence doesn't *interrupt*[A] / *intersect*[B] the view across the fields.
 2. The key to happiness is to *ensue*[A] / *eschew*[B] extremities in life and tread the middle path.
 3. The books on physics were placed on the second *rack*[A] / *rake*[B] of the shelf.
 4. The foreigners couldn't bear the *sneering*[A] / *searing*[B] heat.

j BABA **k**ABAB **l** AABA **m**BABA **n**AAAB

Directions for questions 54 -57: In each of the following questions there are 5 jumbled sentences which when rearrange form a coherent paragraph. From the given options choose the most appropriate order.

54. A. The criteria for spotlights determines the locale – choice of lamp determines light colour, brilliance, functional life, light intensity.
 B. The emission angle determines the beam of light and is defined by the reflector.
 C. These spotlights are also rotatable and tiltable, they come with a set of imperative accessories : in terms of lenses, filters and glare control.
 D. Sportlights are offered with different beam emission angles and light distributions.
 E. The cut-off angle limits glare and increases the visual comfort for viewing.

j ADBCE **k**DABEC **l** ADCBE **m**DCBEA **n**ABDCE

55. A. However, it would be wrong to assume that a fall in crude oil prices would help these industries – petro chemicals, rubber and tyre, plastic products etc – by reducing their raw material costs.
- B. When the crude oil prices were hitting their bottom in the December 2008 quarter, these players reported their worst ever performance for over 20 preceding quarters.
- C. Apart from being a major source of fuels, crude oil also accounts for chemicals used in various colours, fragrances, plastics and as additives to boost the characteristics of other materials.
- D. Historical analysis shows that their operating margins improve when the crude oil prices move up.
- E. Since crude oil is the common factor, a rise in crude prices lends a natural push to the prices of the dependent industries.

j ECDAB **k** ECADB **l** CEADB **m** CEDAB **n** ECDBA

56. A. People strive for that perfect relationship, the perfect house, the beautiful body, the approval of others, all in an attempt to be happy.
- B. If the focus isn't on money, but on the jobs that bring the money, those jobs are generally thought to make people happy.
- C. While people have many and varied goals that they pursue, there is an almost universal underlying goal to virtually all pursuits : the goal to be happy.
- D. Your attitude about life and the things that happen to you each day can also greatly impact your overall level of happiness and life satisfaction.
- E. People who spend a lot of time making money generally do so because they believe that the money itself will make them happy.

j CEBDA **k** CDEBA **l** CEBDA **m** CEBAD **n** CADBE

57. A. Over the past two decades, the only successful bank mergers have been among the new generation private banks.

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- B. The move was initiated to safeguard the interests of the depositors of the failing private bank and to avert systematic damage.
- C. With smaller staff and fewer branches, such banks faced fewer obstacles.
- D. Rationalisation of bank branches and manpower requirements are clearly the most daunting challenges to bank mergers.
- E. This move was initiated by the government.

j DABEC **k** DEBAC **l** ADCEB **m** ACEBD **n** DAEBE

Directions for questions 58- 60: 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.

58. Kant rejected Bishop Berkeley's earlier empiricist attempt to derive the perception of depth and of the perceptual constancies from empirical correlations between sensations on the two-dimensional retina and the sense of touch – for example, reaching the hand to the object in view. This issue still absorbs the interest of psychologists who study perceptual development and recent evidence appears to favor the 'innate' hypothesis of depth perception.

j Thus, newborn infants appear to see objects in depth, and they perceive an object to be the different depending upon whether the object is near or far from them

k Objects are viewed as far or near depending upon the object, which changes its image on the retina.

l The mechanism of perception is not fully understood and the proposed theories are merely speculative.

m That is, infants perceive an object to be the same if it is near and different if it is far from them, which changes its image on the retina.

n That is, infants appear to see objects in depth, and they perceive an object to be the same whether it is near or far from them, which changes its image on the retina.

59. The daily crossword puzzle in the newspaper is not merely an old habit that dies hard. Solving crossword puzzles every day, playing cards and board games, or even just talking in groups, playing

music or reading and writing could delay memory decline in old age. These activities apparently help build 'cognitive reserves'- a sort of cumulative fixed deposit of additional standby memory that minds can dip into when age drains normal memory accounts- and thus fend off forgetfulness. Five years of documenting 488 people between the age of 75 and 85 who did not have dementia at the start of the period showed that those who participated more in six specific activities stayed mentally more agile. They discovered that as memory loss accelerated the addition of an activity actually delayed the decline.

j Thus, the complexity of mental activity in younger years has a correlation to how people fare mentally in their old age.

k Thus the world is going to see a mentally alert old age population.

l Those who concentrated on physical health rather than mental health in younger days will face memory loss in old age.

m Therefore, we can design specific activities for the elderly so that they do not suffer from dementia.

n So, daily activities may be one thing that stands between us and the habit of the old: the onset of dementia.

60. There may not be - as Chomsky says in his extremely nativistic theory - a 'universal grammar governing man's infinite variety of languages nor may there be a 'language acquisition' device, like an organ or a neuronal assembly; but there are wonderful brain centres that can receive and register a wide variety of sounds especially of speech with high sensitivity and precision. In the variety and richness of sounds, forms, patterns and meanings, any human language far excels all other animal languages or systems of communication, which are themselves wonderful.

j Chomsky is a famous psycholinguist.

k Unlike animals, human beings have the capacity to produce and reproduce a variety of sounds with clarity and accuracy.

l Animals and human beings use certain common sounds that convey a similar feeling.

m The richness of human language comes from the continuous practice of various sounds.

n Language acquisition device is more prominent in primates than in man.

Directions for questions 61- 62: In each question, there are 5 sentences or parts of sentences that form a paragraph. Identify the sentence(s) or part(s) of sentences that is/are correct in terms of grammar and usage. Then choose the most appropriate option.

61. A. city may have been unable to prevent the explosions

B. but it has defeated the larger designs of the terrorists

C. by showing that they will be undeterred and that

D. it can quickly restore itself to normalcy

j B only

k B and D

l A and C

m C only

n D only

62. A. Life is lived mainly in small, self contained communities,

B. men are able to take finer personal distinctions into account in dealing with their fellow men.

C. A happy individual with whom one is socially connected boosts

D. the likelihood of one's own happiness by about 9%.

j A and B

k C only

l C and D

m A, B and C

n B, C, and D

63. A. In recent times, governments, usually controlled by men,

B. have given women the right to contraceptive use and access to abortion

C. when their countries were perceived to have an over population problem.

D. However, the religious society took objection into this.

j A and C

k B and D

l C only

m B only

n A and B

Directions for questions 64 -67: the passage below is followed by a set of five questions. Choose the most appropriate answer to each question.

Micro-econometrics is an interface between economics and statistics. It encompasses economic theory and statistical methods used to analyse micro data, economic information about individuals, households and firms. During the last three decades, the field of micro-econometrics has expanded rapidly due to the creation of large databases containing micro data.

Greater availability of micro data and increasingly powerful computers have opened up entirely new possibilities of empirically testing micro-economic theory. Researchers have been able to examine many new issues at the individual level. For instance, what factors determine whether an individual decides to work and, if so, how many hours? How do economic incentives affect individual choices regarding education, occupation or place of residence? What are the effects of different labour market and educational programs on an individual's income and employment?

The use of microdata has also given rise to new statistical problems, owing primarily to the limitations inherent in such (non-experimental) data. As the researcher can only observe certain variables for particular individuals or households, a sample might not be random and thereby not representative. Even when samples are representative, some characteristics that affect individual's behaviour remain unobservable making it difficult or impossible to explain some of the variations among individuals.

Dr. Heckman and Dr. Daniel Mc Fadden have each shown how one can resolve some fundamental statistical problems associated with the analysis of micro data. Their methodological contributions share a solid foundation in economic theory. They emerged in close interaction with applied empirical studies, where new databases served as a definitive prerequisite. Their micro-econometric methods are now part of the standard tool kit, not only of economists, but also of other social scientists.

Dr. Heckman has made many significant contributions to micro-econometric theory and methodology, with different kinds of selection problems as a common denominator. He developed his methodological contributions in conjunction with applied empirical research, particularly in labour economics. Dr. Heckman's analysis of selection problems in micro-econometric research has had profound implications for applied research in economics as well as in other social sciences.

Selection problems are legion in micro-econometric studies. They can arise when sample available to researchers does not randomly represent the underlying population. Selective samples may be the result of rules governing collection of data or the outcome of economic agents' own behaviour. The latter situation is known as self-selection. For example, wages and working hours can only be observed in the case of individuals who have chosen to work and the earnings of university graduates can only be observed for those who have completed their university education. The

absence of information regarding the wage an individual would earn, had he or she chosen otherwise, creates problems in many empirical studies.

Dr. Heckman's methodological breakthroughs regarding self-selection took place in the mid-1970s and are closely related to his studies of individuals' decisions about their labour-force participation and hours worked. Dr. Heckman's achievements have generated a large number of empirical applications in economics as well as in other social sciences. The original method has subsequently been generalized by Dr. Heckman and by others.

64. It can be understood from the passage that access to micro data and sophisticated technology has helped

- j** formulate statistical methods
- k** gather economic data
- l** validate microeconomic theory
- m** accelerate occupational decisions
- n** analyse individual behavior correctly

65. Which of the following is not stated in the passage as an application of microeconomics?

- j** Measuring worker competencies.
- k** Analyzing individual occupational preferences.
- l** Assessing the correlation between a person's income and labor market.
- m** Exploring relationship between monetary incentives and an individual's choice of education.
- n** Identifying a person's choice of education and type of employment.

66. If the sample available to researchers does not randomly represent the underlying population, which of the following would be the result?

- | | |
|--|--|
| j Non-generalisable predictions | k Bias in the selection of the sample |
| l Erroneous conclusions | m Observer bias |

n extraneous factors influencing research conclusion

67. Which of the following is/are limitation(s) of the microeconomic data as discussed in the passage?

j Inaccessibility of non-personal data

k Contradictory representation of data

l Non-representativeness of sample

m Fragmentary nature of data

n Both C and D

Directions for questions 68 -71: the passage below is followed by a set of five questions. Choose the most appropriate answer to each question.

Some texts, such as the Taslima Nasreen poems, are consciously 'feminist', while a few, like Kunzang Choden Roder's story from Bhutan, are almost silent on gender. Some exhibit an overt engagement with contemporary politics, while others, narrated from the émigré's perspective, recount the political repression back 'home', while still others steer conspicuously clear of any culture or political specificities. Notably, several of the texts from Southeast Asia focus on foreign intervention and on how it has fuelled social disjunctions and anarchy of values.

Relationships constitute the most important problematic of a sizeable majority of texts in this anthology. Yet, exploring the dynamics of human relationships is not an end by itself for most authors featured here. Women in Asian societies as featured here come across both as products and accomplices of patriarchal socialization and as bodies of dissent, repositories of alternative knowledge systems and harbingers of change.

The collection begins with Bi Shu-Min's Chinese *One Centimetre*, a powerful story that depicts with rare sensitivity, a mother-son relationship, and uses the tropes of human relationship, to comment on Chinese history. Zong Pu's *Melody in Dreams* paints a striking picture of the relationship between Murong Yuejun, a cello teacher, and the teenaged Liang Xia to invoke Chinese political history and critique the persecution of intellectuals during the Cultural Revolution just as the Hong Kong-based Wong Bikwan's *She's a Woman and So am I* builds up the relationship between two college girls to comment on codes governing female sexual behaviour, and the Vietnamese Phan Thi Vang Anh's *Thuong* depicts the relationship between Hao and the much younger Thuong only as an instrument to uncover the hypocrisy of patriarchal discourses of sexuality.

Politics and sexuality are, in fact, abiding concerns of the texts featured in this anthology. And the family figures prominently as a site within which such concerns are explored. It is, thus, when the

narrator of Leila S. Chudori's Indonesian story, *The Purification of Sita*, and her fiancé, the thinking of setting up a family that he invokes questions of sexual fidelity, confesses his infidelity and says, "...but you are a woman and women seem more capable of exercising self-control." Chudori's story offers a re-appraisal of the Ramayana in gender terms and an incipient critique of how codes of honour have got implicated with the female body in Asian societies, a critique whose politics are more fully manifested in Bano Qudsia's Pakistani story, *Soul-Weary*.

It is the prospect of such inter-textual readings that is opened up by these texts that point towards an Asian reality, a reality that many of us are perhaps not quite aware of yet because of our limited access to literatures from other Asian countries.

68. Which of the following is closest in meaning to 'harbinger'?

- j** Eminent person **k** Forerunner **l** pacifist **m** Revolutionary
n Fundamentalist

69. Which of the following does not describe the characteristic of Asian women?

- j** They are chaste women who symbolize purity.
k They are victimized by chauvinism.
l They conform to blind customs and ancient beliefs.
m They are warehouses of diverse knowledge bases.
n They are capable of bringing a radical transformation in the society.

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

- j** Infidelity is escalating among Asian women.
k Exploring dynamics of human relationships through literary works is challenging.
l Politics and sexuality are factors of prime concern in Asian societies.
m The social practices of ancient societies still exist.
n None of these

71. The most appropriate title for the passage would be

- j** Politics in modern Asia.
- k** An anthology of women's writings.
- l** Human relationships in emerging Asia.
- m** Poignant pictures of women in Asia.
- n** Asian civilization and culture.

Directions for questions 72 -75: the passage below is followed by a set of five questions. Choose the most appropriate answer to each question.

Abstract art, the main contributions of 20th C to art history, is definitely its distinctive movement. Nobody until the dawn of 20th C had thought of painting a picture that did not represent something – a face, a body, a landscape, a still life. The idea that art could be unmoored from appearances, that marks on canvas could convey emotions, spiritual states and pleasures quite independently of any reference to the world as we know it, had a long ancestry in theory. Plato, after all, raised the idea that there were certain perfect forms – the square, the circle and so on – that move us in a way free from the itch of desire.

But in reality, it wasn't tried in any systematic fashion until early 20thC, when the chief proponents of abstract painting – Wassily Kandinsky and Kazimir Malevich (both Russians) and Piet Mondrian (a Dutch) – came to believe that pure form, in opposing what they saw as the deadly materialism of European culture, could open the way to a world of pure spirit. Abstraction would become language, the key to utopian states of mental and social harmony that had been only dimly implied in art before. Abstract art would be the music of the spheres for the 20th century, manifesting, wrote Malevich, 'the spiritual, therefore the divine, the universal.'

This faith in a new world order induced by art collapsed soon enough; today it looks like a fossil from the early Messianic era of modernism. In fact, none of the more exalted claims made of abstract art over the past century have worn well. In the first flush of optimism after the 1917 Revolution, artists like Vladimir Tatlin hoped that abstraction, made of the common materials of the workers, could lift dialectical materialism to a new plane and so become the basis of a popular art. These dreams ended in indifference.

Abstract painting lapsed into mannerism in Europe by the late 1930s and was revived in America by artists who discarded its utopian fantasies and replaced them with ideas related to epic space,

primitive ritual, spontaneous gesture and the sublime. But who today still buys the rhetoric that surrounded Abstract Expressionism?

At every point in its long life, abstraction laid claim to a myth of progress. It was the necessary next stage in art, which went forward by throwing out everything not intrinsic to its nature. Art was heroic reductionism, a long-term contest with history. On that basis, it became a world class academy-without-walls. But since no one practically believes anymore that there is such a thing as progress in art, this view has taken a terrible beating. The idea that pure abstraction admits you, as artist or as viewer, to superior domains of experience flounders on competitive ideas of purity. First you throw out the bath water, then the baby and then the bath.

72. The quoted lines 'the spiritual, therefore the divine, the universal', refers to

- j** The perfect forms in art as suggested by Plato.
- k** The art forms that liberate us from desires.
- l** The world order from the abstractionist perspective.
- m** The spiritual states depicted in abstract art with matter as the reference point.
- n** The representation of human body and landscapes in quasi-divine forms.

73. The author of the passage concedes which of the following about abstract art?

- j** It was a progressive movement in art.
- k** It was a notable chapter in art history.
- l** It introduced a new universal grammar.
- m** It discredited the artificiality in the works of the non-representational artists.
- n** It defied the artistic norms put forward by western artists.

74. Which of the following can be inferred from the passage about the response of twentieth century American artists to abstract art?

- j** American artists wholeheartedly embraced abstract art unlike their European counterparts.
- k** The American artists' progress became a reality mainly through abstract art.

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l American artists made exalted claims on the modernist elements in abstract painting.

m American artists, unlike European painters, repudiated the spiritual and universal elements in abstract art.

n American artists integrated more realism into abstract art to bring it back in vogue.

75. 'Art was heroic reductionism' (concluding para). Which of the following best restates the above statement?

j Art daringly oversimplifies and distorts complex ideas.

k Artists are treated as heroic figures by art reductionists.

l Art distorts reality to the extent that exact representation is difficult.

m Art as more of a creator's fantasy than as the representation of reality

n Artists being considered as heroic, larger than life figures, thus reducing the significance of art itself.

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