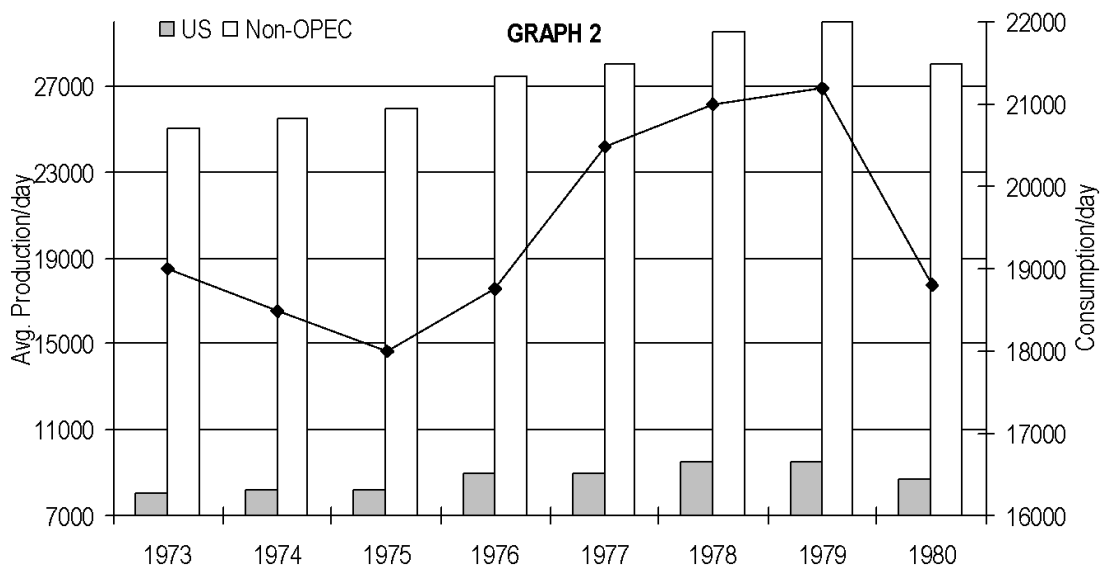
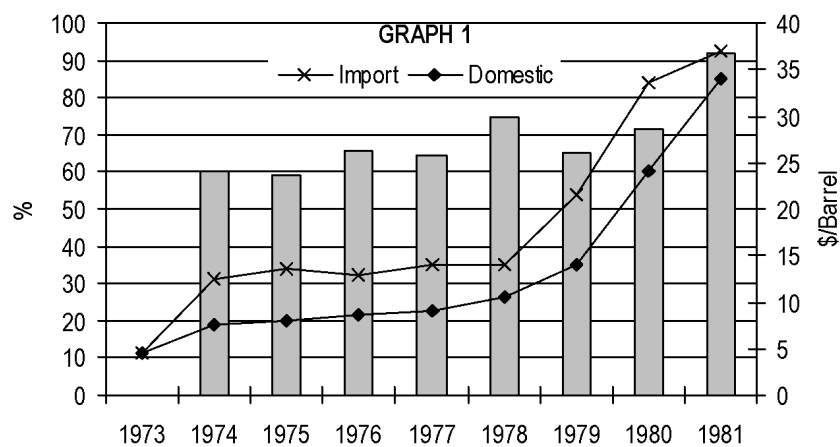


CAT 2014 STUDY MATERIAL

Section I: Number of questions - 30

DIRECTIONS for questions 1 to 4: Refer to the following information on prices and production of crude oil for the period 1973 – 80 and answer the questions given below. In the first graph, the lines show the prices of crude oil per barrel for domestic production and imports while the bars show the domestic price as a percentage of the import price. In the second graph, the bars show average production of barrels per day in the US and Non-OPEC countries, while the line shows the consumption of oil in the US.



- In 1979, if the US imported crude oil in order to meet demands, what is the total cost of imported crude oil?
 - \$ 455,800/day
 - \$ 296,800/day
 - \$ 376,300/day
 - \$ 251,550/day
- What is the difference between the total cost of domestic production of crude oil in the US in 1975 and the total cost of crude oil imported by the US in order to meet demands in this year?
 - \$ 49,500/day
 - \$ 96,750/day
 - \$ 53,625/day
 - \$ 65,625/day

Bulls Eye

www.hitbullseye.com

2011
Bull CAT 02

P
A
G
E
3

www.hitbullseye.com

3. Which of the following statements is/are true?

- I. The percentage change in the price of imported crude oil in 1974 is approximately 120%.
- II. In 1977, the absolute difference between the percentage change in the price of domestic oil and the percentage change in the price of imported oil is approximately 2.
- III. The percentage change in the consumption of oil by the US from 1973 to 1979 is -80%.
- IV. In 1977, the ratio of production of oil by non-OPEC countries to that by the US is 4.25.

1. I only 2. II only 3. III only 4. II and III

4. What is the difference between the percentage change in the price of imported oil and the price of domestic oil in 1976?

1. 2.55 2. -9.95 3. -19 4. 1.25

DIRECTIONS for questions 5 to 8: Table A shows the number of hits scored by leading male actors of the Bollywood film industry in the past 5 years. Table B gives data on who were leading ladies in each of these hit films. The data for the four established actresses is given separately, while the hits of all the other heroines are clubbed under the head "Others".

Table A	Year				
Actors	2000	2001	2002	2003	2004
SRK	1	0	2	1	1
VO	1	2	0	0	1
AK	0	0	1	1	0
HR	0	1	1	0	1
SK	1	0	1	0	1

Table B	Year				
Actresses	2000	2001	2002	2003	2004
AR	2	0	1	0	1
RM	1	1	0	1	0
PZ	0	1	1	1	0
MD	0	1	0	0	1
Others	0	0	3	0	2

Note:

AR and SK have vowed never to work together in a film. Also PZ has not yet worked with VO. Among the four established actresses, AK only works with RM. All of SRK's hits in the past 5 years have been with only two actresses. VO only works with established actresses.

5. In 2002, SRK's two hits have been with

1. AR & PZ 2. AR & others 3. PZ & others 4. RM & MD

6. MD's two hits in the past 5 years have been with

1. VO and SK 2. VO only 3. VO and SRK 4. VO and HR

7. HR's hits have been with

1. RM & AR 2. RM & PZ 3. Others & PZ 4. MD & AR

8. Which actor/actors had the highest number of hits with “other” actresses?

1. AK 2. HR 3. HR & SK 4. SK

DIRECTIONS for questions 9 to 12: Refer to the following information and answer the questions given below.

The table below shows the financial performance of business houses for a particular year. Study the table and answer the questions based on the information contained in the table.

Business House	Total Assets (TA)	Net Worth (NW)	Total Borrowings	Net Sales (NS)	Op. Profits(OP)
Tata	2,671,163	963,496	1018,262	1,934,490	341,976
Birla	2,039,079	969,612	792,092	1,280,812	324,145
Reliance	1,152,904	719,265	249,749	549,367	145,801
ESSAR	1,054,419	342,532	458,843	155,391	91,092
RPG	658,631	286,670	264,555	289,391	62,580
JK	490,622	196,010	197,141	285,150	45,964
Thapar	443,936	207,870	121,217	357,406	54,782
L & T	411,672	211,810	65,605	305,442	51,689
ITC	324,964	125,544	120,442	313,948	72,257
Mafatlal	183,733	62,600	783,754	1,611,263	26,485

Business House	Gross Profit	Net Profits (NP)	GP/NS (%)	GP/TA (%)	NP/NW (%)
Tata	248,422	156,487	12.8	9.3	16.2
Birla	226,078	145,544	17.7	11.1	15.0
Reliance	134,369	106,485	24.5	11.6	14.8
ESSAR	70,907	57,438	45.5	6.7	16.8
RPG	28,671	14,738	9.9	4.4	5.1
JK	27,690	12,660	9.7	5.6	6.5
Thapar	33,867	22,412	9.5	7.6	10.8
L & T	44,002	27,736	14.4	10.7	13.1
ITC	54,721	33,362	17.4	16.8	26.6
Mafatlal	16,336	8,905	10.1	8.9	14.2

9. If NP/NW ratio is considered to be an index of performance, which of the business houses is the best performer?

1. Tata 2. ITC 3. Birla 4. Reliance

10. If executive compensation is a function of operating profit on sales, which organisation would be the most remunerative for an executive?

1. Birla 2. Mafatlal 3. RPG 4. ESSAR

11. If dividends are a function of net profit over net worth, which company should a person invest in?

www.hitbullseye.com

1. Tata

2. ESSAR

3. ITC

4. RPG

12. As compared to the JK group, which one of the groups could be termed as lean, i.e., having total assets those of JK, and thin, i.e., having borrowings those of JK as well as performing better, i.e., better in sales and net profits than JK?

1. ESSAR

2. Mafatlal

3. Reliance

4. ITC

www.hitbullseye.com

DIRECTIONS for questions 13 and 14: Each of the following questions contains two statements marked I and II. As your answer:

Mark 1, if the question can be answered with the help of any one statement alone, but not with the help of the other statement alone,

Mark 2, if the question can be answered with the help of both statements together,

Mark 3, if the question cannot be answered even with the help of both statements together,

Mark 4, if the question can be answered with the help of either statement alone.

13. A box contains some blue and some green balls. Another box contains 10 blue and 12 green balls. A ball is removed from the first box and placed in the second box. A ball is now removed from the first box. What is the probability that the ball is blue?

- I. The first box contains as many blue balls as the second box contains green balls.
- II. The first box contains a total of 20 blue and green balls in the ratio 3 : 2 respectively.

14. $2x^2 - 7x + k = 10$ and $3x^2 + 10x + m = 15$. Do these equations have a common root?

- I. $k = 6$.
- II. $x = -\frac{1}{3}$ is a root of $3x^2 + 10x + m = 15$.

DIRECTIONS for questions 15 - 30: Answer the following questions as per the best of your judgment.

15. Three natural numbers when divided by the same divisor D leave remainders of 29, 30 and 31 respectively. When the sum of these three numbers is divided by the same divisor, the remainder obtained is 26. Which of the following could be the values of the divisor?

- 1. 24 and 64
- 2. 32 and 64
- 3. 32 and 48
- 4. 48 and 64

16. Three friends, Ranjeet, Sahil and Tarun, have different sums of money with them. If Ranjeet gives away half of his sum to the other two, then Sahil and Tarun together would have 8 times as much money as Ranjeet. If Sahil gives away a third of his sum to the other two, then the Ranjeet and Tarun together would have $3\frac{1}{2}$ times as much money as Sahil. If Tarun gives away a fourth of his sum to the other two, then the Ranjeet and Sahil together would have twice as much money as Tarun. If all the sums involved are an integral number of rupees, which of the following cannot be the sums with Ranjeet, Sahil and Tarun respectively?

- 1. 638, 957, 1276
- 2. 200, 300, 400
- 3. 426, 636, 848
- 4. 346, 519, 692

17. $\log_{\sqrt{128}} \sqrt[12]{50625}$ is the same as

- 1. $\frac{2(\log 3 + \log 5)}{21 \log 2}$
- 2. $\frac{2 \log 15}{3 \log 2}$
- 3. $\frac{7(\log 3 \times \log 5)}{24 \log 2}$
- 4. Both 1 and 2

18. A semicircle of radius 14" is made into a cone by joining the two end points. Another semicircle of perimeter 144" is made into a cone by joining the two end points. Which of the following is the approximate difference between the volumes (in cubic inches) and the areas (in square inches) of the two cones respectively?

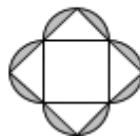
www.hitbullseye.com

1. $1078 \square 3, 1232$ 2. $2874 \square 3, 231$ 3. $8624 \square 3, 616$ 4. $2508 \square 3, 924$

19. A trader mixes three varieties of sugar costing 34.50 / kg, 36.50 / kg and 41.2 / kg. He sells the mixture for 46.20 / kg and gains 22.22%. In what ratio did he mix the three varieties of sugar respectively?

1. 1 : 2 : 3 2. 5 : 3 : 6 3. 2 : 4 : 5 4. 34 : 13 : 33

20. In the figure below, $\square ABCD$ is a square of area 1024 cm^2 . Semicircles and isosceles triangles are drawn on the sides of the square. The shaded region forms approximately what fraction of the total area of the figure?



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

21. Which of the following will leave a remainder of 5 when divided by 16?

1. 29^{1974} 2. 59^{2000} 3. 101^{2011} 4. 77^{1515}

22. Four numbers are chosen from among the first 15 natural numbers such that they form an increasing Arithmetic Progression. What is the sum of all such progressions formed?

1. 960 2. 585 3. 768 4. 465

23. 4-digit positive integers are formed by using the digits 1, 2, 3, 4 and 5 exactly once. If all the numbers formed are multiplied, how many consecutive zeroes will the product end in?

1. 24 2. 39 3. 34 4. 18

24. If x and y are positive integers satisfying $17x + 8y = 3051$, what is the sum of the maximum and minimum difference between values of x and y ?

1. 331 2. 375 3. 394 4. 575

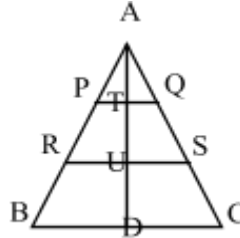
25. In an effort to explain concepts of *Time & Work* to his students, a Math professor connects an inlet and an outlet to an empty cistern. The inlet can fill the empty cistern in 10 minutes while the outlet can empty the full cistern in 20 minutes. Beginning with the inlet, the professor opens the inlet and the outlet alternately for a minute each. However, when the cistern should have been full, he finds that due to a leak in the bottom, the cistern is still 37% empty. How long will the leak alone take to empty the full cistern?

1. 20 minutes 2. 50 minutes 3. 1 hour 4. 1 hour 40 minutes

26. Raghuvir owns 500 shares of BDC Pharmaceuticals Ltd. of face value ` 100 each and gets a dividend of 16%. He sells the shares for ` 101 each and invests the proceeds partly in BBA Consultants Ltd. with a dividend of 12% and the rest in BCC Cements with a dividend of 42% so that his income increases by ` 7000. If he pays a brokerage of 1% on the selling transaction and buys shares at face value, what is the difference between the sums that Raghuvir invested in BBA Consultants Ltd. and BCC Cements?

1. ` 9,900 2. ` 10,100 3. ` 8,750 4. ` 10,000

27. Consider isosceles $\triangle ABC$ as shown. PQ and RS are parallel to base BC such that the ratio of areas of $\triangle APQ$ to $\triangle ABC$ is $1 : 6$ while the ratio of areas of $\triangle ARS$ to $\triangle ABC$ is $1 : 2$. $\triangle ABC$ is rotated about the height AD to form a cone. What is the ratio of the volumes of the cone with height AT, frustum with height TU and the frustum with height UD?



1. $1 : 3\sqrt{3} : 6\sqrt{6}$ 2. $1 : 2\sqrt{2} : 3\sqrt{3}$
 3. $1 : 3\sqrt{3} - 1 : 2\sqrt{2} - 1$ 4. $1 : 3\sqrt{3} - 1 : 3\sqrt{3}(2\sqrt{2} - 1)$

DIRECTIONS for questions 28 to 30: A train, 600 m long, starts from Pune to Jammu at 5:40 p.m. At the same time, another train, 350 m long, starts from Jammu to Pune on a parallel track. On the way, the train from Pune crosses a tunnel in 35 seconds while the train from Jammu crosses the same tunnel in 40 seconds. After crossing each other inside the tunnel, the trains reach Jammu and Pune 4 hours and 9 hours later respectively.

28. What is the length of the tunnel?
1. 700 m 2. 450 m 3. 750 m 4. 1050 m
29. When the two trains meet inside the tunnel, one train has travelled x km more than the other. What is x ?
1. 216 km 2. 108 km 3. 135 km 4. 96 km
30. If both trains had started from Pune at 5:40 p.m., then the slower train would reach Jammu how many hours after the faster train had reached Jammu?
1. 1 hour 2. $2\frac{1}{2}$ hours 3. 5 hours 4. 8 hours

SECTION – II

Number of questions: 30

DIRECTIONS for questions 31 to 33: Each question below consists of six statements marked A, B, C, D, E and F followed by options consisting of three statements put together in a specific order. Choose the option which indicates a valid agreement, where the third statement is a conclusion drawn from the preceding two statements.

31. A. All students are bright. D. No bright person is a student.
B. No bright person is a litterer. E. All litterers are bright.
C. Some litterers are students. F. No litterer is a student.
1. CAE 2. ABF 3. EFD 4. BDF
32. A. Some Americans are rich. D. No Americans are French.
B. No New Yorkers are French. E. Some poor people are Americans.
C. Some French are rich. F. All New Yorkers are Americans.
1. DAE 2. DBF 3. ACD 4. FDB
33. A. All politicians are corrupt. D. All ministers are politicians.
B. No politician is a minister. E. No corrupt person is a politician.
C. Some ministers are corrupt. F. All ministers are corrupt.
1. FBE 2. BFE 3. FDA 4. ADF

DIRECTIONS for questions 34 to 36: Santosh is making the daily schedule of classes for the VIth standard students of The Peepal Tree School. Schools timings are from 8:30 a.m to 3:30 p.m., with two breaks, one from 10:30 a.m. to 10:40 a.m and the other from 12:40 p.m. to 1:30 p.m. The nine classes are divided into three areas – Languages (English, Hindi and German), Primary subjects (Math, Science and Social Sciences) and Co-curricular subjects (PT, Swimming and Arts & Crafts). While making the schedule, Santosh has to ensure that the following conditions are met with.

- English, Math and Science cannot be the first or the last classes of the day.
 - Hindi and English cannot have any language or a primary subject either immediately before or after them.
 - German is scheduled between Science and Social Sciences.
 - None of the languages can be scheduled in consecutive classes.
 - A Co-curricular subject must be scheduled between English and Science.
 - Math cannot be the second or the second last class of the day.
34. Which of the following pieces of information is redundant?
1. Math cannot be the second or the second last class of the day.
 2. English, Math and Science cannot be the first or the last classes of the day.
 3. None of the languages can be scheduled in consecutive classes.
 4. A Co-curricular subject must be scheduled between English and Science.
35. Santosh feels that as far as possible, the schedule for each day should be different. If he makes the maximum possible number of schedules, after how many days will Santosh be forced to repeat any of the previous schedules?

36. Which of the following cannot be true?

1. The Arts & Crafts class is conducted at 2:10 p.m.
2. The German class can be conducted at 9:10 a.m., 11:20 a.m. or 2:10 p.m.
3. Neither Swimming nor Arts & Craft can be conducted at 11:20 a.m.
4. Swimming, PT or Arts & Craft cannot be conducted at 12:00 noon.

DIRECTIONS for questions 37 to 38: Each of the following questions has a short paragraph. Read the paragraph carefully and choose the option that indicates the best conclusion that follows.

37. Neoliberalism by its very nature restricts the range of policy options available to politicians and political parties. This implies that parties try and position themselves differently from one another, often based on faint distinctions. _____

1. Political parties must foster more conservative policies to stay afloat in the current environment of neoliberalism.
2. Political parties will find it difficult to maintain distinct identities and big parties will swallow the small parties.
3. There will be increased polarization in politics leading to greater tensions in the national fabric.
4. There is bound to be a convergence of the views of political parties on major policy options if neoliberalism becomes an integral part of the political reality.

38. A notable weakness of the Indian bureaucracy is its failure to familiarize itself with modern management techniques, acquire new skills and tone up in professional efficiency. An equally unwelcome feature of the higher civil service is the lack of cost-consciousness. Rare, indeed, is the senior officer who is aware of the crucial significance of the compound rates of interest and realizes that money today and money two years hence are very different things. The typical bureaucrat's lack of cost consciousness is partly responsible for his well-known tendency to avoid decision making. A large number of top civil servants rue the day they are obliged to take a decision. When it becomes no longer possible to postpone a decision,

- _____
1. they revert back to sophisticated techniques of planning.
 2. they decide in great haste, almost mechanically, with little attention being paid to the relevant technical, financial and aspects.
 3. they invariably try to minimize the imagined risk by roping in a number of their colleagues into the decision making process.
 4. they take the help of particular political groups of individual leaders, who they identify with.

DIRECTIONS for questions 39 to 40: Select the best replacement for the underlined part.

39. A star will compress itself into a white dwarf, a neutron star, or a black hole after it passes through a red giant stage, depending on mass.

1. After passing through a red giant stage, depending on its mass, a star will compress itself into a white dwarf, a neutron star, or a black hole.
2. After passing through a red giant stage, a star's mass will determine if it compresses itself into a white dwarf, a neutron star, or a black hole.
3. Mass determines whether a star, after passing through the red giant stage, will compress itself into a white dwarf, a neutron star, or a black hole.

4. The mass of a star, after passing through the red giant stage, will determine whether it compresses itself into a white dwarf, a neutron star, or a black hole.
40. According to a recent study, the elderly in the United States are four times more likely to give regular financial aid to their children as to receive it from them.
1. the elderly in the United States are four times more likely to give regular financial aid to their children as
 2. the elderly in the United States are four times as likely to give regular financial aid to their children as it is for them
 3. the elderly in the United States are four times more likely to give regular financial aid to their children than
 4. it is four times more likely for the elderly in the United States to give regular financial aid to their children than they are

DIRECTIONS for questions 41: *Each sentence is labelled with a letter. Choose the most logical order of sentences from amongst the four choices given to construct a coherent paragraph.*

41. A. The questions reach their polemical aim only if one assumes that the results of science which no one will deny have arisen without any help from non-scientific elements, and that they cannot be improved by an admixture of such elements either.
- B. 'Unscientific' procedures such as the herbal lore of witches and cunning men, the astronomy of mystics, and the treatment of the ill in primitive societies are totally without merit.
- C. Science alone gives us a useful astronomy, an effective medicine, a trustworthy technology.
- D. One must also assume that science owes its success to the correct method and not merely to a lucky accident.
- E. It was not a fortunate cosmological guess that led to progress, but the correct and cosmologically neutral handling of data.

1. ABCDE 2. CDABE 3. DCEAB 4. ABEDC

DIRECTIONS for question 42: *Below the paragraph, four different ways of completing the paragraph are indicated. Choose the best alternative amongst the four.*

42. Now let us see what the philosophers say. Note that venerable proverb: Children and fools always speak the truth. The deduction is plain -- adults and wise persons never speak it. Parkman, the historian, says, "The principle of truth may itself be carried into an absurdity." In another place in the same chapter he says, "The saying is old that truth should not be spoken at all times; and those whom a sick conscience worries into habitual violation of the maxim are imbeciles and nuisances."

Everybody lies -- every day; every hour; awake; asleep; in his dreams; in his joy; in his mourning.

1. Of course there are people who think they never lie, but it is not so -- and this ignorance is one of the very things that shame our so-called civilization.
2. None of us could live with a habitual truth-teller; but thank goodness none of us has to.
3. Even in sermons -- but that is a platitude.
4. If he keeps his tongue still, his hands, his feet, his eyes, his attitude, will convey deception - and purposely.

DIRECTIONS for questions 43 to 45: *The passage given below is followed by a set of questions. Choose the most appropriate answer to each question.*

www.hitbullseye.com

We believe that the editor has one primary responsibility, one loyalty, and that is to the author's book. He owes some loyalty to the author as well, in that at all times he must tell the author the truth; but he is not the author's friend, he is the book's friend – and he must not superimpose his own philosophy or his own style on the author's.

No editor should labor under the delusion that he or she is a collaborator. A collaborator belongs to the other side of an editor's desk. True, the editor can give the author direction – what the editor, as reader, would want to know – but he should not “improve” a manuscript by infusions of editorial prose or invention. The editor asks the author to clarify, he does not himself clarify.

There is nothing glamorous about the proper use of an editorial pencil. Georges Pompidou once remarked, “Conception is much more fun than delivery.” If the author suffers all the pains of giving birth – and all authors do – then the editor will sympathize, for he soon learns about the long hours and late nights of the midwife, one who works at home rather than at the maternity ward that the public imagines the publishers' offices to be.

Tough questions have to be asked. Most of these questions ought to be asked at the time of conception. The good editor will let realism temper enthusiasm, but on the other hand cannot let prudent enthusiasm flag. Time and time again, the tightrope trembles, and there is no safety net below. Almost all books perform above or below our expectations once they are published.

If you do not tolerate a certain level of anxiety over a considerable period of time, then you are probably not constituted to be an editor. Editors and publishers take gambles every day. The gamble is greatest in serious fiction. The odds in non-fiction publishing can be minimized, but even with better communication between stake holders, there is still more than a small element of luck.

Excerpted from “Editors on Editing – An inside view of what editors really do” by Gerald Gross.

43. Which of the following is most likely to be the author's reaction to employing market research in the publishing industry?
1. The publishing industry is too conservative to employ relatively modern tools like market research.
 2. Market research is too expensive to be tried on anything so one-of-a-kind as a book.
 3. Market research is used by the industry only to confirm what they already know about the book's audience.
 4. Market research is best used by the likes of Procter and Gamble to decide on which toothpaste to push, it cannot work at all in the area of books.
44. The editorial pencil is properly employed in
1. asking questions
 2. making corrections
 3. rewriting the parts that are beyond the scope of the author's ken
 4. pressing for revisions that match the author's expression
45. Referring to the third paragraph, which of the following is NOT implied about an editor's job?
1. Editors have a 9 to 5 job.
 2. Editors work long hours, often taking work home with them.
 3. Editors rarely come to office, preferring to work out of home.
 4. Editors have a high level of involvement, starting from the birth of the book.

www.hitbullseye.com

DIRECTIONS for question 46: Given below are sentences that form a paragraph. Identify the sentence(s) or part(s) of sentence(s) that is/are incorrect in terms of grammar and usage (including spelling, punctuation and logical consistency). Then, choose the **most appropriate** option.

46. A. It must be remembered that, at the beginning, Soviet education had many problems to contend.
B. There were plenty of people who objected to the new Soviet regime.
C. Yet, although many people are critical of other aspects of Soviet society, it cannot be denied that the authorities invested a great deal on education.
D. This catered well to Soviet youth, most of whom profited from the education they received.
E. Teachers were respected professionals who devoted themselves to their pupils, doing all they could to interest them in their lessons and insisting high standards in the classroom.

1. B and C 2. A, C, D and E 3. C and D 4. All of them

DIRECTIONS for Question 47: Each sentence has pairs of words highlighted and marked A and B. From the answer choices select the option that contains the most appropriate word for each pair.

47. Going on a camping holiday with young children was definitely **a mistake (A) / an error(B)**.
A company representative will **call on (A) / drop by (A)** you tomorrow.
As the lift was not working we started to climb the **stairs (A) / staircase (B)**.
A doctor **talked (A) / spoke (B)** to the class about the dangers of smoking.
His **current (A) / actual (B)** age was 55, not 50 as stated on the form.

- 1.BAAAB 2. AAABB 3.ABBAA 4.AABAB

DIRECTIONS for questions 48 to 50: The passage given below are followed by a set of questions. Choose the most appropriate answer to each question.

As well as understanding the various cognitive processes that users engage in when interacting with systems, it is also useful to understand the way people cope with the demands of everyday life. A well known approach to applying knowledge about everyday psychology to interaction design is to *emulate*, in the digital world, the strategies people commonly use in the physical world. In some situations, however, the simple emulation approach can turn out to be counter-productive. This can happen when the activity being emulated is more complex than is assumed, resulting in much of it being oversimplified and not being supported effectively. Designers may notice something salient that people do in the physical world and then fall into the trap of copying it without thinking whether it will work in the new context.

Tom Malone carried out a study of the “natural history” of physical offices. One of his findings was that whether people have messy or tidy offices may be more significant than people realize. Messy offices were seen as being chaotic with piles of papers everywhere and little organization. Tidy offices, on the other hand, were seen as being well organized with good use of a filing system. In analyzing these two types of offices, Malone suggested what they reveal in terms of the underlying cognitive behavior of the occupants. The observations suggested that using piles is a fundamental strategy. Such observations bring to mind an immediate design implication about how to support file management: to capitalize on the “pile” phenomenon by trying to emulate it in the electronic world. Why not let people arrange their electronic files as they do with paper files? The danger of doing this is that it could heavily constrain the way people would manage their files, when in fact there may be far more effective and flexible ways of filing in the electronic world.

www.hitbullseye.com

A group of designers tackled this problem by building an application that went beyond physical world capabilities. They examined how people use the default hierarchical file-management systems that operating systems provide. The new conceptual model provided various interactive organizational elements based on the notion of using piles. These included providing the user with the means of creating, ordering and visualizing piles of files.

Excerpted from "Interaction Design – Beyond human computer interaction" by Preece, Roger & Sharp.

48. In the electronic context, the emulation strategy would work best for –
1. Personal assistants
 2. Greeting cards
 3. Post-It notes
 4. Games like scrabble
49. Which of the following electronic filing practices would one associate with the person in the messy office?
1. A cluttered desk-top
 2. Unscientific file naming systems
 3. Copies of the same file lying in many directories
 4. All files stored in the 'My Documents' folder
50. In an electronic interface when a cursor freezes on the screen, most people bash away at all manners of keys in the vain hope that this will make it work again. All of the below are 'emulations' in the real world, except –
1. Pressing the button twice in an elevator.
 2. Running down the battery of a car that is refusing to start
 3. Setting the Air Conditioner temperature controller to the minimum, on entering the home on a hot summer afternoon.
 4. Hitting the top of a TV which is acting up.

DIRECTIONS for questions 51: Each sentence is labelled with a letter. Choose the most logical order of sentences from amongst the four choices given to construct a coherent paragraph.

51. A. Worse, is the danger that the academic justifies, with his or her position or complicated prose, authoritarian efforts undertaken in the name of some dubious programme.
- B. This is not to say that serious speculation is without interest, but moreover that healthy scepticism, exhibited on many occasions by bewildered students, might be a healthy response to convoluted theories.
- C. Social sciences do have a role to play, as long as practitioners steer clear of simple careerism, whereby academics multiply complex treatment of simple subjects for personal gain.
- D. But the problem is not just with the individuals and their careerist agendas; it is also that theoretical understanding is, in my opinion, very thin outside of a few areas, something I've written about a lot.
- E. And this kind of common sense approach may yield important results in pursuits which, although challenging, are certainly worth pursuing.
1. ABCDE 2. CADBE 3. CEBAD 4. CBAED

DIRECTIONS for question 52: In each of the sentences given below, a word has been used. Choose the option corresponding to the sentence in which the word usage is incorrect or inappropriate

52. SANGUINE

1. With the administration's planned budget cuts, it is difficult to be sanguine about the fate of America's institutions of higher learning.
2. She was supremely placid and sanguine in comparison with her mercurial husband.
3. The congressman favored the proposed legislation, but he was not sanguine about the chances of it passing.
4. The man used to be happy and easy-going, but has turned sanguine over the years.

DIRECTIONS for questions 53 to 55: The passage given below *is followed by a set of questions.* Choose the most appropriate answer to each question.

Validity refers to the appropriateness of the interpretations made from the test scores with regard to a particular use. For example, if a test is used to describe pupil achievement, we should like to be able to interpret the scores as relevant and representative sample of the achievement domain to be measured. If the results are to be used to predict pupils' success in some future activity, we should like our interactions to be based on as accurate an estimate of future success as possible. Validity is always concerned with the specific use of the results and soundness of our proposed interpretations.

Reliability refers to the consistency of evaluation results. If we obtain quite similar results when the same test is administered to the same group on two different occasions, we can conclude that our results have a high degree of reliability from one occasion to another. Similarly, if different teachers independently rate the same pupils on the same instrument and obtain similar ratings, we can conclude that the results have a high degree of reliability from one rater to another. As with validity, reliability is intimately related to the type of interpretation to be made. For some uses, we may be interested in asking how reliable our evaluation results are over a given period of time and, for others, how reliable they are over different samples of the same behavior. In all instances in which reliability is being determined, however, we are concerned with the consistency of the results, rather than with the appropriateness of the interpretations made from the results.

The relation between reliability and validity is sometimes confusing. Reliability of measurement is needed to obtain valid results, but we can have reliability without validity.

In addition to providing results that possess a satisfactory degree of validity and reliability, an evaluation procedure must meet certain practical requirements. It should be economical from the viewpoint of both time and money; it should be easily administered and scored; and it should produce results that can be accurately interpreted and applied by the school personnel available. These practical aspects of an evaluation procedure all can be included under the heading of usability.

Excerpted from "Measurement and Evaluation in Teaching" by Norman Gronlund.

53. Which of the following is true?

1. Reliability is a necessary but not a sufficient condition for validity.
2. Validity is a necessary but not a sufficient condition for reliability.
3. Reliability and usability are pre requisites for validity
4. Usability is a necessary but not a sufficient condition for validity.

54. All of the following about validity are true, except –

1. It refers to the appropriateness of the interpretation of the results.
2. It is a matter of degree; it does not exist on an all-or-none basis.

www.hitbullseye.com

3. It is specific to some particular use; no test is valid for all purposes.
4. The validity of an interpretation depends primarily on having a representative sample.

55. Which of the following about reliability is true?

1. Reliability refers to the evaluation instrument and not the results obtained with it.
2. Reliability implies similar scores for different periods, different samples and different raters.
3. The logical analysis of a test provides evidence concerning the reliability of the scores.
4. The more consistent our test results are from one measurement to another, the greater the reliability.

DIRECTIONS for questions 56: *The sentence has two blanks with four answer choices. Pick the best option which completes the sentence in the most meaningful manner.*

56. These men who grouped themselves under different _____, but who may all be designated by the _____ title of socialists, endeavored to pierce that rock and to cause it to spout forth the living waters of human felicity.

- | | |
|-----------------------------|--------------------------------|
| 1. appellations, generic | 2. sobriquets, disparate |
| 3. appellations, ubiquitous | 4. nomenclatures, multifaceted |

DIRECTIONS for question 57: *In the sentence below, a Capitalized word has been used. Choose the option corresponding to the sentence in which the word usage is incorrect or inappropriate*

57. **OSTENSIBLY**

1. Ostensibly the richest person in town, the owner of the grain elevator company seldom left a tip at the local cafe.
2. The book is a spoof of two ostensibly glamorous worlds: politics and professional football.
3. The ostensibly neutral ambassador finally showed her preference of candidates.
4. The young lawyer had ostensibly hung his Harvard diploma on the door to his office.

DIRECTIONS for questions 58: *Each sentence is labelled with a letter. Choose the most logical order of sentences from amongst the four choices given to construct a coherent paragraph.*

58. A. That, in essence, is to say India should reply, if not in kind, but in good measure, to Chinese manoeuvres that probe India's sovereignty.
B. The sudden move of issuing stapled visas to Kashmiris travelling to China, is indubitably part of the Chinese game plan as it secures more than a foothold in PoK as part of its ambitions in Pakistan, Afghanistan and the Central Asian region.
C. That can, while aiding the transformation of Chinese society, allow for China's rise to be in harmony with its neighbours and within, vis-à-vis its restive minorities in Tibet and Xinjiang.
D. New Delhi should, while steering away from any apparent hostilities, develop a calibrated response even as the wider process of mutual engagement continues.
E. And while access to the huge Indian market offers New Delhi valuable leverage, the larger aim should be the spread of democracy in China.

- | | | | |
|----------|----------|----------|----------|
| 1. BADCE | 2. BCADE | 3. DEABC | 4. BDAEC |
|----------|----------|----------|----------|

DIRECTIONS for question 59: *In the following paragraph, a part of the paragraph is left unfinished. Beneath the paragraph, four different ways of completing the paragraph are indicated. Choose the best alternative amongst the four.*

59. There are several kinds of stories, but only one difficult kind--the humorous. The humorous story depends for its effect upon the manner of the telling; the comic story and the witty story upon the matter. The humorous story may be spun out to great length, and may wander around as much as it pleases, and arrive nowhere in particular; but the comic and witty stories must be brief and end with a point. The humorous story bubbles gently along, the others burst.

_____ ; but the teller of the comic story tells you beforehand that it is one of the funniest things he has ever heard, then tells it with eager delight, and is the first person to laugh when he gets through.

1. And sometimes if the humorous storyteller has had good success, he is so glad and happy that he will repeat the "nub" of it and glance around from face to face, collecting applause, and then repeat it again.
2. The humorous story is told gravely; the teller does his best to conceal the fact that he even dimly suspects that there is anything funny about it;
3. The humorous story is American, the comic story is English, the witty story is French.
4. The humorous story teller needs to give no time to the audience to think; Humor and logic do not go hand in hand.

DIRECTIONS for question 60: *Given below are sentences that form a paragraph. Identify the sentence(s) or part(s) of sentence(s) that is/are incorrect in terms of grammar and usage (including spelling, punctuation and logical consistency). Then, choose the **most appropriate** option.*

60. A. Currently, a person can only file for a judicial review of a decision to refuse sanction; there is no right to appeal.
B. The difference between an appeal and review is significant.
C. The powers of a review court to correct a decision is much more limited than that of an appellate court.
D. A review court mainly ensures that certain technical rules of decision-making were followed, and that the decision was not so unreasonable that no reasonable person could have made it.
E. An appellate court, on the other hand, can examine the issue of merits and substitute its own judgment for that of the government.

1. A, C and E

2. B and E

3. B, C and E

4. B, C and D



ANSWER KEY

	4		2
1.		31.	
2.	4	32.	4
3.	2	33.	4
4.	2	34.	3
5.	1	35.	2
6.	2	36.	4
7.	3	37.	4
8.	3	38.	3
9.	2	39.	3
10.	4	40.	3
11.	3	41.	1
12.	4	42.	4
13.	1	43.	2
14.	2	44.	1
15.	2	45.	1
16.	3	46.	2
17.	1	47.	2
18.	4	48.	3
19.	2	49.	1
20.	3	50.	3
21.	4	51.	2
22.	1	52.	4
23.	3	53.	1
24.	2	54.	4
25.	4	55.	4

Bulls Eye

www.hitbullseye.com

2011
Bull CAT 02

P
A
G
E
3

26.	4	56.	1
27.	4	57.	4
28.	2	58.	4
29.	1	59.	2
30.	3	60.	3



EXPLANATIONS

1.	<p>The total consumption of crude oil in the US in 1979 is 21,200 barrels per day while the total domestic production of crude oil is 9,500 barrels per day. This means that the US has to import 11,700 barrels of crude oil per day.</p> <p>In 1979, the cost of imported crude oil was \$ 21.5 per barrel.</p> <p>So the total cost of imported oil is $11700 \times 21.5 = \\$ 251,550$ per day.</p>
2.	<p>In 1975, the domestic production of crude oil in the US was 8250 barrels per day while the consumption was 18000 barrels per day. This means that the US had to import 9750 barrels per day.</p> <p>The price of domestic and imported oil in 1975 was \$ 8 and \$ 13.5 per barrel respectively.</p> <p>So the total cost of domestic oil was \$ 66,000 / day while the cost of imported oil was \$ 131,625 per day.</p> <p>Thus the required difference is \$ 65,625 per day.</p>
3.	<p>The percentage change in the price of imported crude oil in 1974 is $(12.5 - 4.5)/4.5 \times 100 = 177\%$.</p> <p>So statement I is false.</p> <p>The percentage change in the price of domestic crude oil is $(9 - 8.5)/8.5 \times 100 = 5.88\%$ while the percentage change in the price of imported crude oil is $(14 - 13)/13 = 7.69\%$.</p> <p>The difference is $5.88 - 7.69 = -1.81$.</p> <p>So statement II is true.</p> <p>The consumption of crude oil by the US has changed by $(21200 - 19000)/19000 \times 100 = 11.57\%$.</p> <p>So statement III is false.</p> <p>The production of crude oil by non-OPEC countries and the US in 1977 is 28,000 and 9,000 respectively. The required ratio is 3.11. So statement IV is false.</p>
4.	<p>The price of imported oil has changed by $(13 - 13.5)/13.5 = -3.7\%$, while the change in the price of domestic oil is $(8.5 - 8)/8 = 6.25\%$.</p> <p>The difference between these values is difference $= -3.7 - 6.25 = -9.95$.</p>
5.	<p>If AK only works with RM, then 2003 hit of AK is with RM.</p> <p>Hence SRK in 2003 combined with PZ to give a hit. If AR and SK do not work together, then AR's two hits in 2000 are with SRK and VO.</p> <p>Hence SK's hit in 2000 is with RM.</p> <p>SRK has had hits with PZ and AR in 2003 and 2000 respectively. So SRK's hits in 2002 are with PZ and AR. Also SRK's in 2004 is with AR. VO's 2004 hit is with MD.</p> <p>As VO has had 2 hits in 2001, at least one of them is with MD. Given that PZ has not worked with VO, then VO's 2nd hit in 2001 is with RM. Hence in 2001, PZ has a hit with HR. So in 2002, SRK's two hits are with PZ and AR.</p> <p>Hence 1st option.</p>
6.	<p>MD's both hits have been with VO.</p> <p>Hence 2.</p>
7.	<p>HR's hits have been with PZ in 2001 and others in 2002 and 2004. Hence 3.</p>

8.	<p>The 2 hits of others in 2004 are with HR and SK, and the three hits in 2002 are with AK, HR and SK.</p>
	<p>Hence both HR and SK have had 2 hits with others. Hence 3.</p>
9.	<p>By observing table II, we can see that NP/NW ratio is maximum for ITC. Hence it is the best performer.</p>
10.	<p>Operating Profit/Sales for Birla = $324145/1280812 = 0.253$. Operating Profit/Sales for Mafatlal = $26485/1611263 = 0.016$. Operating profit/Sales for RPG = $62580/289391 = 0.216$. Operating profit/Sales for ESSAR = $91092/155391 = 0.586$. Thus ESSAR is the best choice.</p>
11.	<p>Net Profit / Net Worth is highest for ITC. Hence a person should invest in ITC.</p>
12.	<p>JK's total assets, borrowings, sales and net profits are 490,622, 197,141, 285,150 and 12,660 respectively. Of the given choices, ITC satisfies all the given conditions since its total assets, borrowings, sales and net profits are 324,964, 120,442, 313,948 and 33,362 respectively.</p>
13.	<p>In order to calculate the probability, the number of blue and green balls in the first box must be known. Statement I alone is not sufficient to answer the question since it gives the number of blue balls in the first box as 12, but does not provide any information about the number of green balls. Statement II alone is sufficient to calculate the probability since it gives the number of blue and green balls in the first box.</p>
14.	<p>The roots can be compared only if the values of k and m are known. Statement I gives the value of k but not that of m. Statement II can be used to find the value of m but not that of k. So neither statement alone is sufficient to answer the question. If the two statements are taken together, the values of k and m are known and the roots can be calculated and then compared. Thus the two statements together are required to answer the question.</p>
15.	<p>Suppose the numbers are $N_1 = Q_1D + 29$, $N_2 = Q_2D + 30$ and $N_3 = Q_3D + 31$. So, $N_1 + N_2 + N_3$ = $(Q_1 + Q_2 + Q_3) \square D + (29 + 30 + 31)$ = $(Q_1 + Q_2 + Q_3) \square D + 90$. When this sum is divided by D, the remainder is obtained from $90/D$. Since the remainder is 26, we can write $90 = QD + 26$, where $QD = 90 - 26 = 64$. Since the divisor must be greater than the largest remainder, we get $(Q, D) \square (1, 64)$ or $(2, 32)$. The best answer is option 2.</p>
16.	<p>Since all sums involved are integral number of rupees, let us assume that Ranjeet, Sahil and Tarun have 2, 3 and 4 respectively.</p>

www.hitbullseye.com

	<p>If Ranjeet gives away $\frac{1}{2} \square 2 = 1$, to the other two, their total will be 8 and Ranjeet would have 1. If Sahil gives away $\frac{1}{3} \square 3 = 1$, to the other two, their total will be 7 and Sahil would have 2. If Tarun gives away $\frac{1}{4} \square 4 = 1$, to the other two, their total will be 6 and Tarun would have 3. Since all conditions have been satisfied, we can safely say that the sums of money with them must be in the ratio 2 : 3 : 4. Option 3 does not satisfy this ratio and cannot be the sums of money with the three friends.</p>
17.	<p>$50625 = 15^4$ and $128 = 2^7$.</p> <p>So, $\log_{\sqrt{128}} \sqrt[12]{50625}$</p> $= \frac{1/12 \log 15^4}{1/2 \log 2^7}$ $= \frac{1 \log 15^4}{6 \log 2^7}$ $= \frac{4 \log 15}{6 \times 7 \log 2}$ $= \frac{2 \log 3 + \log 5}{21 \log 2}$
18.	<p>The curved part of the semicircle will form the circumference of the cone. The curved part of the first semicircle is $14 \square$. This is the circumference of the first cone. So, $2 \square R_1 = 14 \square$ $\square R_1 = 7$. The lateral height of this cone will be 14 and its height will be $7 \square 3$. The perimeter of the second semicircle is $\square R + 2R = 144$ $\square R = 28$. The curved part of the second semicircle is $28 \square$. This is the circumference of the second cone. So, $2 \square R_2 = 28 \square$ $\square R_2 = 14$. From this, we can conclude that the ratio of the dimensions of the first cone to the second is 1 : 2. The ratio of areas will be 1 : 4 and the ratio of volumes will be 1 : 8. So the difference in areas will be $3A_1$ and the difference of volumes will be $7V_1$, where, A_1 and V_1 are the area and volume of the first cone respectively. The difference of volumes is $7 \square 1/3 \square \square 7^2 \square 7 \square 3 \square 2508 \square 3$ and the difference of areas is $3 \square \square \square 7 \times 14 = 924$.</p>
19.	<p>The trader makes of profit of $2/9^{\text{th}}$ when he sells the mixture for `46.20. So the cost of the mixture is $(46.2 \square 9) / 11 = 37.80$. Suppose he mixes x, y and z kg of these respectively. Then, $34.5x + 36.5y + 41.2z = 37.8(x + y + z)$. Simplifying this equation, we get $3.3x + 1.3y = 3.4z$. From the answer choices, the only set of values satisfying this equation is 5 : 3 : 6.</p>

<p>20.</p>	<p>Since we need to find a ratio, we can assume the side of the square to be 14 so that the radii of the semicircles are 7 each. Area of the figure equals the area of the square (196) and the area of the 4 semicircles ($4 \times \frac{1}{2} \times \pi \times 7^2$). So the area of the figure is $196 + 308 = 504$. Each of the triangles is an isosceles right triangle with side $7\sqrt{2}$. The area of the shaded region equals the area of the</p>
	<p>four semicircles (308) less the area of the four triangles ($4 \times \frac{1}{2} \times 7\sqrt{2} \times 7\sqrt{2}$). So the area of the shaded region is $308 - 196 = 112$. Thus the required ratio is $112/504 = 1/5$.</p>
<p>21.</p>	<p>$59 \div 16$ leaves remainder 11. Subsequent powers of 59 when divided by 16 will leave the same remainder as subsequent powers of 11 when divided by 16. We can check that $11^1, 11^2, 11^3$ and 11^4 when divided by 16 will leave remainders of 11, 9, 3 and 1 respectively. This cycle repeats after every four steps. So, $59^{2000} = (59^4)^{500}$ will leave remainder 1 when divided by 16. $101 \div 16$ leaves remainder 5. Using the same logic as above, $5^1, 5^2, 5^3$ and 5^4 when divided by 16 will leave remainders of 5, 9, 13 and 1 respectively. This cycle repeats after every four steps. So, $101^{2011} = (101^4)^{502} \times 101^3$ will leave remainder $1 \times 13 = 13$, when divided by 16. 29 and 77, when divided by 16 leave a remainder of 13 each. Using the same logic as above, $13^1, 13^2, 13^3$ and 13^4 when divided by 16 will leave remainders of 13, 9, 5 and 1 respectively. This cycle repeats after every four steps. So, $29^{1974} = (29^4)^{493} \times 29^2$ will leave a remainder of $1 \times 9 = 9$ when divided by 16 and $77^{1515} = (77^4)^{378} \times 77^3$ will leave a remainder of $1 \times 5 = 5$ when divided by 16.</p>
<p>22.</p>	<p>If $d = 1$, there are 12 APs formed $\square (1, 2, 3, 4), (2, 3, 4, 5), \dots, (12, 13, 14, 15)$. The sum of the terms in the first AP is 10. Each term of the next AP is greater than the corresponding terms of the previous AP by 1. So the sum of terms in each of the next APs will be $>$ than the sum of terms of the previous AP by 4. The sum of the terms in all such APs is $10 + (10 + 4) + (10 + 8) + \dots + (10 + 44)$ $= \frac{12}{2}(10 + 54)$ $= 12 \square 32$. If $d = 2$, there are 9 APs formed $\square (1, 3, 5, 7), (2, 4, 6, 8), \dots, (9, 11, 13, 15)$. The sum of the terms in the first AP is 16 and the sum of terms of each of the next APs will be 4 more than the sum of terms of the previous AP. The sum of the terms in all such APs is $16 + (16 + 4) + (16 + 8) + \dots + (16 + 32)$ $= \frac{9}{2}(16 + 48)$ $= 9 \square 32$. If $d = 3$, there are 6 APs formed $\square (1, 4, 7, 10), (2, 5, 8, 11), \dots, (6, 9, 12, 15)$.</p>


www.hitbullseye.com


	<p>The sum of the terms in the first AP is 22 and the sum of terms of each of the next APs will be 4 more than the sum of terms of the previous AP. The sum of the terms in all such APs is $22 + (22 + 4) + (22 + 8) + \dots + (22 + 20)$ $= \frac{6}{2}(22 + 42) = 6 \square 32.$ If $d = 4$, there are 3 APs formed $\square (1, 5, 9, 13), (2, 6, 10, 14)$ and $(3, 7, 11, 15)$. The sum of the terms in the first AP is 28 and the sum of terms of each of the next APs will be 4 more than the sum of terms of the previous AP. The sum of the terms in all such APs is $28 + (28 + 4) + (28 + 8) = \frac{3}{2}(28 + 36) = 3 \square 32.$ Thus the sum of the terms of all the APs is $32 \square (12 + 9 + 6 + 3) = 32 \square 30 = 960.$ </p>
<p>23.</p>	<p>In order to find the number of zeroes, we need to find the number of integers that end in a 5 and the number of integers that end in an even digit. Consider numbers that end in a 5. Since repetition of digits is not allowed, the other 3 digits can be chosen in 4, 3 and 2 ways respectively. So, there are $4 \square 3 \square 2 = 24$ integers that end in a 5. There are definitely 48 even integers. So, we will have 24 zeroes. Now consider integers that contain higher powers of 5. All such integers will end in 25. These integers are $1325 = 5^2 \square 53$, $1425 = 5^2 \square 57$, $3125 = 5^3$, $3425 = 5^2 \square 137$, $4125 = 5^3 \square 33$ and $4325 = 5^2 \square 173$. In each of these 6 integers, one 5 has already been considered in the first set of 24 integers. So, these 6 integers will yield an additional 10 fives. Since there are 10 other even integers, we have another 10 zeroes. Thus the total number of zeroes is $24 + 10 = 34$.</p>
<p>24.</p>	<p>The first pair of values (x, y) satisfying $17x + 8y$ is $(3, 375)$. After this, values of x will increase by 8 while the values of y will decrease by 17. Subsequent values of (x, y) are $(11, 358), (19, 341), \dots, (179, 1)$. The maximum difference between the values of x and y is $375 - 3 = 372$. For the minimum difference, the values of x and y should be as close as possible. Since values of x and y form APs, we have $3 + 8(n - 1) - [375 - 17(n - 1)] = 25n - 397$ should be minimum. This is possible when $n = 16$ so that $25n - 397 = 3$. Thus the sum of these differences is $372 + 3 = 375$.</p>
<p>25.</p>	<p>Suppose the volume of the cistern is 200 litres. The inlet will pour in 20 litres per minute while the outlet will take out 10 litres per minute. So, the cistern will effectively be filled at a rate of 10 litres every 2 minutes. In 36 minutes, the cistern will contain 180 litres and in the 37th minute, the inlet will pour in another 20 litres to make it full. However, after 37 minutes, the cistern is still 37% empty, i.e., it contains only 126 litres. This means that the leak has drained out 74 litres in 37 minutes, i.e., the leak drains out 2 litres per minute.</p>


	<p>At this rate, the leak will take $200/2 = 100$ minutes or 1 hour 40 minutes to empty the full cistern.</p>
26.	<p>When he sells 500 shares, he pays a brokerage of ` 1 per share. So his proceeds from the sale are $500 \square 100 = ` 50,000$. Initially he had an income of $16 \square 500 = ` 8,000$. His income in the second case is $8000 + 7000 = ` 15,000$ or $(15000/50000) \square 100 = 30\%$. He invests ` 50,000 partly at 12% and the remaining at 40% to get returns of 30%. Using <i>Alligation</i> we get the ratio of investments in BBA Consultants Ltd. and BCC Cements as 2 : 3. Thus the difference between the investments is $(3 - 2) \square (50000/5) = ` 10,000$.</p>
27.	<p>Since $\square APQ \square \square ARS \square \square ABC$, we know that the ratio of heights and radii will be the same as that of the heights and bases of the triangles. We can calculate the ratio of areas of $\square APQ : \square ARS : \square ABC$ as 1 : 3 : 6. So the ratio of dimensions will be 1 : $\square 3 : \square 6$. From this, the ratio of volumes of the corresponding cones will be 1 : $3 \square 3 : 6 \square 6$. The volume of the frustum with height TU will be $3 \square 3 - 1$ and the volume of the frustum with height UD will be $6 \square 6 - 3 \square 3 = 3 \square 3(2 \square 2 - 1)$. Thus the required ratio is $1 : (3 \square 3 - 1) : 3 \square 3(2 \square 2 - 1)$.</p>
28.	<p>Suppose the speeds of the trains from Pune and Jammu are S_1 m/s and S_2 m/s respectively and the length of the tunnel is L. After crossing each other, these trains take 4 hours and 9 hours respectively to reach their destination. $\left(\frac{S_1}{S_2}\right)^2 = \frac{9}{4} \square \frac{S_1}{S_2} = \frac{3}{2}$ So, $\left(\frac{S_1}{S_2}\right)^2 = \frac{9}{4} \square \frac{S_1}{S_2} = \frac{3}{2}$. The train from Pune takes 35 seconds to cross the tunnel. So, $35 = \frac{600 + L}{S_1} \square 35S_1 = 600 + L$. The train from Jammu takes 40 seconds to cross the tunnel. $40 = \frac{350 + L}{S_2} \square 40S_2 = 350 + L$ So, $40 = \frac{350 + L}{S_2} \square 40S_2 = 350 + L$. Substituting for $S_1 = 3S_2/2$ and solving as simultaneous equations, we get $S_2 = 20$ m/s = 72 km/hr and $L = 450$ m. Since $S_1 = 3S_2/2$, we get $S_1 = 30$ m/s = 108 km/hr. Thus the tunnel is 450 m long.</p>
29.	<p>After the meeting point, the train from Pune travels at 108 km/hr for the next 4 hours to reach Jammu. So it travels $108 \square 4 = 432$ km. This is the same distance that the train from Jammu had travelled to reach the meeting point. After the meeting point, the train from Jammu travels at 72 km/hr for the next 9 hours to reach Pune. So it travels $72 \square 9 = 648$ km. This is the same distance that the train from Pune had travelled to reach the meeting point. Thus the difference between the distances travelled when the two trains meet is $648 - 432 = 216$ km.</p>
30.	No calculations required for this question.

www.hitbullseye.com

When going in opposite directions, the slower train reaches its destination 5 hours after the faster train has reached its destination. The same would be true even when both trains travel in the same direction.

31. 
Since all students are bright and no bright person is a litterer, it follows that a person who litters cannot be a student.

32. 
Since all New Yorkers are Americans and Americans are not French, New Yorkers cannot be French.

33. 
If all ministers are politicians and all politicians are corrupt, all ministers must be corrupt.

34
-3
6. The first and the last classes can be Hindi, Social Sciences or any of the Co-curricular subjects P, S or A). There are four basic schedules:

Time	I	II	III	IV
8:30	SocSci	Hindi	PSA	Hindi
9:10	Ger	PSA	Eng	PSA
9:50	Sci	Math	PSA	Math
10:40	PSA	PSA	Sci	SocSci
11:20	Eng	Eng	Ger	Ger
12:00	PSA	PSA	SocSci	Sci
1:30	Math	Sci	Math	PSA
2:10	PSA	Ger	PSA	Eng
2:50	Hindi	SocSci	Hindi	PSA

In each of these schedules, the Co-Curricular subjects (P, S or A) can be arranged in $3! = 6$ different ways.
So, $4 \times 6 = 24$ different schedules are possible.

34. Since German is scheduled between two other subjects, and English and Hindi cannot have any other language immediately before or after, it means that the 3 languages cannot be scheduled as consecutive classes. Hence option 3.

35. Since 24 different schedules are possible, Santosh will be forced to repeat any of the schedules only on the 25th day.
So, he can have a different schedule for each of the first 24 days.

36. According to schedules I and III, Arts & Craft can be conducted at 2:10 p.m.
The German class can be conducted at 9:10 a.m. in schedule I, at 11:20 a.m. in schedules III and IV and at 2:10 p.m. in schedule II.
According to all the schedules, none of the Co-curricular subjects can be conducted at 11:20 a.m.

	<p>www.hitbullseye.com</p> <p>The Co-curricular subjects can be conducted at 12:00 noon in schedules I and II. So, option 4 cannot be true.</p>
37.	<p>Since neo-liberalism restricts policy options open to political parties, convergence is inevitable.</p>
38.	<p>Option 3. The context talks of what a bureaucrat would do if he is pushed to take a decision. He is avoiding it primarily because he is shirking responsibility. 3 talks of a very convenient way of de-risking, which would appeal to the bureaucrat. 1 is out, because it implies a postponement of the decision. 2 is against the spirit of bureaucracy, where everything moves at a snail's pace. 4 talks of a possible behavior of a few bureaucrats, but generalizing it is difficult.</p>
39.	<p>Option 3. 1 is out because "depending on mass," should be as</p>
	<p>close to the verb as possible. 2 is not correct because the "it" is referring to "stage" when it should rather refer to "a star" but we don't have "a star" here. We only have "a star's mass," which is a possessive. 4 is incorrect because a mass can never compress itself into a white dwarf, a neutron star, or a black whole because everything has a mass.</p>
40.	<p>Option 3. More likely (to give) than (to receive) is idiomatic.</p>
41.	<p>Option 1. <i>Non-scientific elements</i> in A is further talked about in B. In B, astronomy is associated with mystics while C talks of astronomy as useful.</p>
42.	<p>Option 4. The paragraph states that those who are fools and children (innocent) speak the truth. It further states that everyone lies whether awake or asleep. Option 4 carries the idea further by stating that everyone lies and this is true whether he speaks or conveys through non-verbal channels.</p>
43.	<p>Option 2. We can rule out option 3 as the passage states that almost all books perform above or below our expectations. Option 4 is outside the scope of the passage . Option 1 is ruled out because if publishers take gambles (To risk; to try something risky) everyday then they cannot be in an industry which is too conservative. When conducting a market research is very costly and is going to be a one-off affair, market research is not carried out and the product is introduced into the market directly. A book is a one-off affair and hence market research is too expensive to be carried out.</p>
44.	<p>Option 1. The passage states that "he (editor) must not superimpose his own philosophy or his own style on the author's". He should not "improve" a manuscript by infusions of editorial prose or invention. Hence we can rule of option 2, 3 and 4. The editor asks the author to clarify, he does not himself clarify.</p>
45.	<p>Option 1. The passage compares the editor's job with a midwife- a person who assists in childbirth and works from home. Hence Option 2, 3 and 4 are implied.</p>

46.	<p>Option 2. “problems to contend with”, “great deal in education” and “catered well for” and “interest them ininsisting upon high standards”</p>
47.	<p>Option 2. Error is used when talking about calculations and in technical or formal contexts. Mistake is correct in this sentence. You call on somebody for an official purpose. You drop by at somebody’s house if you make a short unplanned visit to friends or family. A staircase is the part of the building including the stairs and the rail and sometimes the walls and ceiling surrounding them.(We have redecorated the staircase) Speak is used when one person is addressing a group. Talk suggests that two or more people are having a conversation. Actual means real or exact and current suggests in a situation that exists now, but which may be temporary.</p>
48.	<p>Option 3. The emulated (effort or desire to equal or excel others) strategy will not work when what you are working on is more complex than is assumed, resulting in much of it being oversimplified and not being supported effectively. The work of personal assistants is complicated and cannot be emulated in an electronic context. The author also states that all activities of the physical world cannot work in a new context. Scrabble is a game which is played by four players and in a board game. Making it electronic is going to make it more difficult to play. Greeting cards though can be made electronic the emotions, feelings associated with giving them personally cannot be reproduced by the electronic medium. Post it notes are best electronic emulated as they work well whether they are electronic or paper based.</p>
49.	<p>Option 1. An office is considered messy by the way it looks i.e. the part that is seen or visible to an outsider. The desktop is the first thing a person notices when the computer starts. The desktop will be cluttered with innumerable files and folders making it quite messy. All the other are visible or seen only after you have gone to those respective folders or files.</p>
50.	<p>Option 3. In all the other cases, the repeated action is not going to get any positive result. In option 3, the phenomena described is altogether different from the one in the question.</p>
51.	<p>Option 2. The academics talked about in C is further talked about as individuals in A. Hence CA is the correct sequence. E , with words like <i>worth pursuing</i> looks more like a closing sentence.</p>
52.	<p>Option 4. The word should be Saturnine - irritable, crabby, surly, sullen, grouchy, harsh, gruff. If he was happy but has turned he cannot be cheerful or optimistic. Sanguine - cheerfully optimistic, hopeful, or confident</p>

53.	<p>Option 1. The passage states that what is reliable need not be valid which means that reliability may not be a sufficient condition for validity.</p> <p>Option 2 is incorrect because the passage states that we can have reliability without validity.</p> <p>The practical aspects of an evaluation procedure are included under the heading of usability.</p> <p>Usability, validity and reliability are three aspects that are needed to evaluate a procedure.</p> <p>No mention of the relationship between usability and the other two is mentioned.</p>
54.	<p>Option 4. Validity refers to appropriateness of interpretations with regard to a particular use and not on the representative sample.</p> <p>The first sentence of the paragraph mentions option 1.</p> <p>For reliability we need consistency of evaluation results but no such thing is mentioned about validity.</p> <p>Validity is always concerned with the specific use of the results and soundness of our proposed interpretation which is option 3.</p>
55.	<p>Option 4. It is mentioned in the passage that “ If we obtain quite similar rater to another”</p> <p>Hence 4 is the right option.</p> <p>Reliability implies similar scores for different periods and different raters but the sample is the same. Hence option 2 is incorrect.</p> <p>It is consistency and not logical analysis that provides evidence concerning the reliability of the scores. Hence option 3 is incorrect.</p> <p>Reliability is concerned with results hence option 1 is incorrect.</p>
56.	<p>Option 1. The men are grouped under different ___ but are all designated _____, hence multifaceted and disparate cannot fit the second blank.</p> <p>Ubiquitous means ever-present or everywhere.</p> <p>However we want a word that means common, hence generic.</p>
57.	<p>Option 4. The word needs to be ostentatious, because by putting his Harvard Diploma on the wall , the young lawyer was showing off.</p> <p>Ostensible means apparent (but misleading), professed and Ostentatious means excessively conspicuous, showing off</p>
58.	<p>Option 4. The paragraph is about the <i>action</i> of the Chinese of issuing stapled visas to Kashmiris and how should India respond to this.</p> <p>The opening sentence then is obviously B.</p> <p><i>That</i> in A refers to the <i>response</i> in D.</p> <p><i>That</i> in C refers to democracy.</p>
59.	<p>Option 2. The word but after the semicolon indicates that what is following is in contrast to the earlier idea. The latter part states that the comic story tells you before hand that it is the funniest thing, hence the humorous then would means a story which will conceal the fact that it is funny.</p>
60.	<p>Option 3. In B, <i>a</i> review ;</p> <p>In C, The powers.... <i>are</i> ;</p> <p>In E, the issue <i>on</i> merits.....</p>

Bulls Eye

www.hitbullseye.com

2011
Bull CAT 02

P
A
G
E
3

□□□