

# SYMBIOSIS NATIONAL APTITUDE TEST (SNAP) 2008

## Instructions:

This test is divided into the following sections

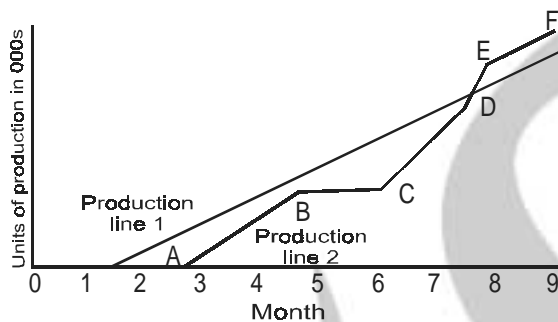
Sections	No. of Questions	No. of Questions	Total
	Mark-1 each	Marks-2 each	
Quantitative & Data Interpretation & Data Sufficiency	30	5	35
General English	30	5	35
Analytical & Logical Reasoning	-	30	30
General Awareness: General Knowledge, Current Affairs, Business	30	5	35
<b>Total</b>	90	45	135

\* For every wrong answer, you will score 25% negative marks. You will be given 120 minutes to complete the test.

**SECTION I QUANTITATIVE APTITUDE DATA INTERPRETATION & SUFFICIENCY**

For the following 5 questions in this section, correct answers carry 2 marks each.

1. A factory is to commission two production lines. Production line 1 is to use existing technology. Production line 2 is to use the latest innovations in technology and, while promising to achieve considerable advances in productivity, it will take longer to start and is likely to experience teething problems. Graph indicates the productive record of each product line. Refer to graph to answer the following



- A. Can the duration of reported breakdown be established?  
B. Can the loss of production be quantified?  
(a) Both questions A and B can be answered  
(b) Only A question can be answered  
(c) Only B question can be answered  
(d) Neither question can be answered
2. From a book, a number of consecutive pages are missing. The sum of the page numbers of these pages is 9808. Which pages are missing?  
(a) The page 9808 is missing.  
(b) The pages 291 up to 322 are missing.  
(c) The page 291 up to and including 322 are missing.  
(d) Either a or c
3. In the following series find the one number that is wrong  
2, 3, 13, 37, 86, 167, 288.  
(a) 3 (b) 13  
(c) 37 (d) 86
4. Two sea trawlers left a sea port simultaneously in two mutually perpendicular directions. Half an hour later, the shortest distance between them was 17

km, and another 15 minutes later, one sea trawler was 10.5 km farther from the origin than the other. Find the speed of each sea trawler.

- (a) 16 km/h, 30 km/h  
(b) 18 km/h, 24 km/h  
(c) 20 km/h, 22 km/h  
(d) 18 km/h, 36 km/h

5. The image below indicates the number of residents at 5 hotels on 1 Feb and 1 July 1998. Which hotel had the greatest increase in the total number of adult residents on 1 July 1998 compared with 1 Feb of that year?

01-Feb-98				
Hotel	Female Adults	Male Adults	Female Children	Male Children
V	32	64	8	11
W	11	28	3	2
X	47	84	14	7
Y	22	42	5	6
Z	63	104	18	23

01-July-98				
Hotel	Female Adults	Male Adults	Female Children	Male Children
V	41	73	16	14
W	18	37	7	6
X	47	92	12	17
Y	37	59	19	13
Z	81	112	26	20

- (a) V (b) W  
(c) Y (d) Z

For the following questions in this section, correct answers carry 1 mark each.

6. This question consists of a question and two statements numbered I and II. Decide whether the data given in the statements are sufficient to answer the question.  
What is the 57<sup>th</sup> number in a series of numbers?  
I Each number in the series is three more than the preceding number.  
II The tenth number in the series is 29.

- (a) The data in Statement I alone is sufficient to answer the question while the data in Statement II alone is not sufficient to answer the question.  
 (b) The data in Statement II alone is sufficient to answer the question, while the data in Statement I alone is not sufficient to answer the question.  
 (c) If the data either in Statement I or Statement II alone are sufficient to answer the question.  
 (d) If the data in both Statements I and II together is necessary to answer the question.

7. The cost of levelling and turfing a square field at Rs. 160 per hectare is Rs. 2624.40. The cost of surrounding it with a railing costing 25 paise per metre is:  
 (a) Rs. 350 (b) Rs. 375  
 (c) Rs. 400 (d) Rs. 405
8. When the Sun ray's inclination increase from  $30^\circ$  to  $60^\circ$ , the length of the shadow of a tower decreases by 60 m. Find the height of the tower.  
 (a) 50.9 m (c) 51.96 m  
 (d) 48.8 m (d) None of these

**Directions for Question No. 9-12:** A survey of movie goers from five cities A, B, C, D and E is summarized below. The first column gives the percentage of viewers in each city who watch less than one movie a week. The second column gives the total number of viewers who view one or more movies per week.

City	I	II
A	60	2400
B	20	3000
C	85	2400
D	55	2700
E	75	8000

9. How many viewers in city C watch less than one movie a week?  
 (a) 2040 (b) 13600  
 (c) 16000 (d) 3600
10. Which city has the highest number of viewers who watch less than one movie a week?  
 (a) City E (b) City D  
 (c) City B (d) City C
11. A city with the second lowest number of movie watchers is  
 (a) City E (b) City D  
 (c) City B (d) City C

12. The total number of all movie goers in the five cities who watch less than one movie per week is  
 (a) 50000 (b) 36000  
 (c) 18500 (d) 45250
13. The 288<sup>th</sup> term of the sequence a, b, b, c, c, c, d, d, d, d,... is  
 (a) u (b) v  
 (c) w (d) x
14. The inequality of  $p^2 + 5 < 5p + 14$  can be satisfied if:  
 (a)  $p \leq 6, p = -1$  (b)  $p = 6, p = -2$   
 (c)  $p \leq 6, p \leq 1$  (d)  $p \geq 6, p = 1$

15. Answer the question based on the following Table.

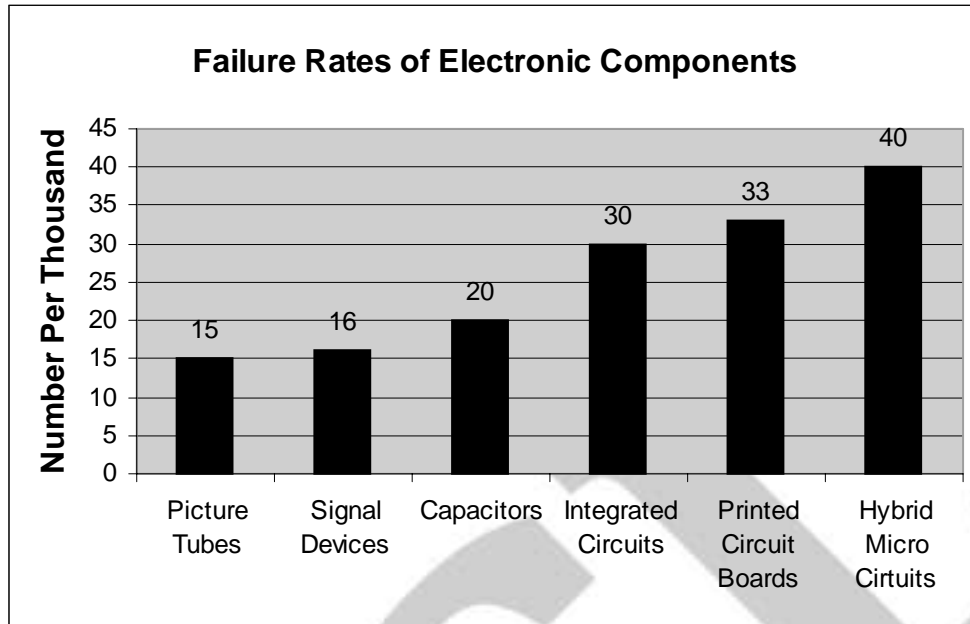
Relative Sweeteners of Different Substances			
Lactose	0.16	Maltose	0.32
Glucose	0.74	Sucrose	1.00
Saccharin	675.00		

What is the ratio of glucose to lactose in a mixture as sweet as maltose?

- (a) 8 : 21 (b) 1 : 3  
 (c) 3 : 2 (d) 16 : 9
16. A colourless cube is painted blue and then cut parallel to sides to form two rectangles solids of equal volume. What percentage of surface area of each of new solids is not painted blue?  
 (a) 25 (b) 16  
 (c) 20 (d) 18
17. There are 10 stations on a railway line. The number of different journey tickets that are required by the authorities is  
 (a) 10! (b) 90  
 (c) 81 (d) 10
18. A and B throw one dice for a stake of Rs. 11, which is to be won by the player who first throws a six. The game ends when the stake is won by A or B. If A has the first throw, what are their respective expectations?  
 (a) 5 and 6 (b) 6 and 5  
 (c) 11 and 0 (d) 10 and 1
19. Which investment gives a better return, assuming the face value of shares to be Rs. 10?  
 A. 5% stock at 75, subject to 30% income tax  
 B. 4% stock at 90, tax free  
 (a) B (b) A  
 (c) Both A and B (d) None of these

20. Four stacks containing equal number of chips are to be made from 11 orange, 9 white, 13 black and 7 yellow chips. If all of these chips are used and each stack contains at least one chip of each colour, what is the maximum number of white chips in anyone stack?  
 (a) 3 (b) 4  
 (c) 5 (d) 6
21. A 14.4 kg. gas cylinder runs for 104 hours when the smaller burner on the gas stove is fully opened while it runs for 80 hours when the larger burner on the gas stove is fully opened. Which of these values are the closest to the percentage difference in the usage of gas per hour, of the smaller burner over the larger burner?  
 (a) 26.23% (b) 30%  
 (c) 32.23% (d) 23.07%
22. Study the question and the statements given below. Decide whether any information provided in the statement(s) is redundant and/or can be dispensed with, to answer it.  
 If 7 is added to numerator and denominator each of fraction  $a/b$ , will the new fraction be less than the original one?
- Statement I:**  
 $a = 73$ ,  $b = 103$
- Statement II:**  
 The average of  $a$  and  $b$  is less than  $b$
- Statement III:**  
 $a - 5$  is greater than  $b - 5$
- (a) II and either I or III (b) Only I or II  
 (c) Any two of them (d) Any one of them
23. Coefficient of variation is useful for studying  
 (a) Risk (b) Disparity  
 (c) Consistency (d) All of the above
24. A cyclist drove one kilometer, with the wind in his back, in three minutes and drove the same way back, against the wind in four minutes. If we assume that the cyclist always puts constant force on the pedals, how much time would it take him to drive one kilometer without wind?  
 (a)  $2\frac{1}{3}$  (b)  $3\frac{3}{7}$   
 (c)  $2\frac{3}{7}$  (d)  $3\frac{7}{12}$
25. A, B and C started a business by investing  $\frac{1}{2}$ ,  $\frac{1}{3}$ <sup>rd</sup> and  $\frac{1}{6}$ <sup>th</sup> of the capital respectively. After  $\frac{1}{3}$ <sup>rd</sup> of the total time, A withdrew his capital completely and after  $\frac{1}{4}$ <sup>th</sup> of the total time B withdrew his capital. C kept his capital for the full period. The ratio in which total profit is to be divided amongst the partners is  
 (a) 1:2:1 (b) 4:1:4  
 (c) 2:1:2 (d) 1:2:2
26. A number lock consists of 3 rings each marked with 10 different numbers. In how many cases the lock cannot be opened?  
 (a)  $3^{10}$  (b)  $10^3$   
 (c) 30 (d) 999
27. A person buys 18 local tickets for Rs.110. Each first class ticket costs Rs.10 and each second class ticket costs Rs.3. What will another lot of 18 tickets in which the number of first class and second class tickets are interchanged cost?  
 (a) 112 (b) 118  
 (c) 121 (d) 124
28. A clock loses 12 minutes every 24 hours. It is set right at 7:25 p.m. on Monday. What will be the time when the clock shows 1:45 p.m. the following day?  
 (a) 1:20:35 p.m. (b) 1:35:50 p.m.  
 (c) 1:25:35 p.m. (d) None of these
29. In a row at a bus stop, A is 7<sup>th</sup> from the left and B is 9<sup>th</sup> from the right. They both interchange their positions. A becomes 11<sup>th</sup> from the left. How many people are there in the row?  
 (a) 18 (b) 19  
 (c) 20 (d) 21
30. A merchant wants to make profit by selling food grains. Which of the following would maximize his profit?  
 I Sell product at 30% profit  
 II Increase the price by 15% over the cost price and reduce weight by 15%  
 III Use 700 gm of weight instead of 1 kg.  
 IV Mix 30% impurities in grains and sell it at cost price  
 (a) III  
 (b) II and I  
 (c) II  
 (d) All give the same profit

Directions for Question No. 31-34: Study the following chart carefully and answer.



31. From the failure data of electronics components presented here, which statement is true?
- Integrated circuits and Printed circuit boards are more reliable.
  - Capacitors are more reliable than picture tubes.
  - Higher number of component failures is likely to be due to picture tubes.
  - The least reliable component is Hybrid Micro circuits.
32. Which of the following components has a failure rate 25% more than that of signal devices?
- Picture tubes
  - Capacitors
  - Integrated circuits
  - Printed Circuit boards
33. Lowest priority for investing in any changes or additions to the component manufacturing units, in the company's investment plans, may be given to the following:
- Printed circuit boards and hybrid micro circuits.
  - Capacitors and integrated circuits
  - Picture tubes and signal devices
  - Signal devices and capacitors
34. For the equipments using Integrated Circuit Boards: 400, capacitors: 240 and Printed Circuit Boards: 120 to run with minimum downtime, how many spares should be kept in the store respectively?
- 12, 4, 3
  - 12, 5, 4
  - 5, 12, 4
  - 12, 4, 4
35. The water from a roof, 9 sq. metres in area, flows down to a cylindrical container of 900 cm<sup>2</sup> base. To what height will the water rise in cylinder if there is a rainfall of 0.1 mm?
- 0.1 cm
  - 0.1 metre
  - 0.11 cm
  - 1 cm

**SECTION II ENGLISH**

**For the following 5 questions in this section, correct answers carry 2 marks each.**

36. Match the following idiomatic references to parts of the human anatomy
- |             |                                      |
|-------------|--------------------------------------|
| (1) palm    | (5) Could not tolerate the insult    |
| (2) foot    | (6) to look at with envy and desire  |
| (3) eye     | (7) to put the blame on someone else |
| (4) stomach | (8) forced to pay the bill           |

- |                        |                        |
|------------------------|------------------------|
| (a) 1-8, 2-6, 3-5, 4-7 | (b) 1-5, 2-7, 3-6, 4-8 |
| (c) 1-7, 2-8, 3-6, 4-5 | (d) 1-6, 2-8, 3-5, 4-7 |

37. Find the maximum number of times any one of the given words fits the set of sentences

RAISE      ARISE      AROSE      RISE

- (i) Opportunities will \_\_\_\_\_, and you must grab them.  
 (ii) A hot wind \_\_\_\_\_ from the desert.  
 (iii) I \_\_\_\_\_ at dawn on most days.  
 (iv) A mood of optimism \_\_\_\_\_ among the people.

- (a) in all four sentences  
 (b) in 3 sentences  
 (c) in 2 sentences  
 (d) in 1 sentence

38. Which two sentences in the following convey the same idea? Choose from the combinations listed below:

- (1) He is in a fool's paradise  
 (2) He can't see the wood for the trees  
 (3) He can't distinguish between reality and fancy.  
 (4) He is unable to separate unimportant details from the really important ones

- |         |         |
|---------|---------|
| (a) 2,3 | (b) 2,4 |
| (c) 1,4 | (d) 1,3 |

39. Find the correct match of grammatical function with usage for the word THEN.

- | Function        | Usage   |
|-----------------|---|
| (1) Noun        | (5) He was the then King of Nepal.                          |
| (2) Adjective   | (6) I have not heard about him since then.                  |
| (3) Adverb      | (7) He is not feeling well, then how can he possibly go for |
| (4) Conjunction | (8) He was not a graduate then.                             |

- |                        |                        |
|------------------------|------------------------|
| (a) 1-8, 2-5, 3-7, 4-7 | (b) 1-6, 2-5, 3-8, 4-7 |
| (c) 1-7, 2-5, 3-6, 4-8 | (d) 1-8, 2-7, 3-6, 4-5 |

40. We can never make our beliefs regarding the world certain. Even scientific theory of a most rigorous and well-confirmed nature is likely to change over a decade or even tomorrow. If we refuse to even try to understand, then it is like resigning from the human race. Undoubtedly life of an unexamined kind is worth living in other respects--as it is no mean thing to be a vegetable or an animal. It is also true that a man wishes to see this speculative domain beyond his next dinner.

From the above passage it is clear that the author believes that

- (a) men would do well not to speculate  
 (b) progress in the scientific field is impossible  
 (c) one should live life with the dictum 'what will be will be'  
 (d) men are different from animals as far as their reasoning abilities are concerned.

**For the following questions in this section, correct answers carry 1 mark each.**

**Directions for Question No. 41-46:** Read the passage and answer within its context.

Rajendra K. Pachauri, head of the Intergovernmental Panel on Climate Change, is getting nightmares because of the Nano, Tata's soon-to-be-launched Rs. One lakh car. Sunita Narain of the Centre for Science and Environment (CSE) says that it isn't the Nano by itself but cars overall that give her nightmares. The villains in my nightmares are neither the Nano nor cars overall, but stupid government policies that subsidize and encourage pollution, adulteration and congestion.

Sanctimonious greens call the Nano disastrous because of its affordability - millions more will now clog roads and consume more fossil fuel. This is elitism parading as virtue. Elite greens own cars, but cannot stand the poorer masses becoming mobile, since the consequent congestion will eat into the time of the elite!

More logical would be a protest against big cars that use more space and fuel, or highly polluting old cars. Instead, green hypocrites aim at a new car with the lowest cost, best mileage and least emissions. The Nano will not burden us with too many cars. India has very few cars per person by world standards. London and New York have ultra-high car densities, yet have clearer air than Delhi. Our problem is too many bad policies, not too many cars.

We subsidize vehicles on a gargantuan scale invisible to lay folk. Roads and flyovers cost crores to build and maintain, yet road use is free (save on a few toll roads). Traffic police and lights are costly, yet are provided free. These invisible subsidies starve cities of funds to expand roads and public transport.

Land in cities now costs lakhs per square metre. Yet parking is free in the suburbs, and often costs just Rs. 10 per day in city centres. A single parking space of 23 square meters occupies land worth Rs. 40 lakhs. A car occupies more space than an office desk, yet the desk space pays full commercial rent while parking space costs just about Rs. 10 per day.

Daily parking charges range from \$30 (Rs. 630) in Washington to \$30 (Rs. 1260) in New York. CSE launched a sensible campaign to raise parking fees in Delhi to Rs. 120 per day, but was foiled. So, parking space now exceeds green space, a scathing comment on priorities.

The world price of crude oil has risen 13 fold since 1998 to over \$ 130 per barrel, but Indian petrol prices have barely doubled. Left Front politicians, who once wanted to soak the rich, now want to subsidize them. Under-recoveries of oil companies' total may be Rs. 2,00,000 crore, even after a recent price hike. This is far more than the cost of Sarva Shiksha Abhiyan (education for all) and the Employment Guarantee Scheme put together.

We sanctimoniously lecture rich countries to reduce their green house emissions, yet subsidize our own. Diesel is subsidized to be cheaper than petrol. So, Indian car makers produce the highest proportion of diesel cars in the world. Diesel fumes contain suspended particles that are highly toxic. This subsidy kills.

So does kerosene provided at throwaway prices, ostensibly to benefit poor villagers. One third of all kerosene is used to adulterate petrol and diesel. That causes horrendous pollution even in the greenest of cars.

What's the way forward? We must abolish subsidies and raise taxes on vehicles and fuels to reflect their full social cost. The biggest but least visible subsidy is for parking, and we should start there.

Many car owners in the West take public transport to work since parking space downtown is costly and scarce. We should levy parking fees on an hourly, not daily, basis. Rs. 10 per hour could be a starting point in the metros.

In parts of Tokyo, you cannot own a car unless you own a private parking space. This is too extreme for India, but indicates the future path. If we charge owners the full social cost of parking, people will buy smaller and perhaps fewer vehicles, and fewer still will take them to work. That will slash congestion and pollution.

Cities should levy stiff annual taxes on vehicles, not a one-time tax, and use the revenue to constantly expand public transport and roads. This will create economic synergy: Private transport will finance public transport. London and New York have high density public transport as well as high car density.

Apart from underground rail, cities need elevated roads to ease congestion and pollution, Lata Mangeshkar helped kill a proposal for an elevated road near her Mumbai flat; perhaps she felt her throat and singing would be affected. She did not care that the throats of poor people living on the pavements were far worse affected by fumes, and might get relief if some fumes were diverted to a higher level. What elitism!

Next, some medicine that will be really bitter, politically. The excise duty on all automotive vehicles should be raised to reflect their social costs. Fuel subsidies should be abolished. Price differentials between petrol, diesel and kerosene should be removed, ending incentives for adulteration. Diesel cars should bear a heavy additional cess to finance improved healthcare for those affected by their emission of harmful particulate matter.

That is a long, politically difficult agenda. Only part of it will ever be achieved. Yet that is the way to go, rather than agitate the Nano.

41. By 'Sanctimonious greens' the writer refers to
  - (a) aristocratic environmentalists
  - (b) the rich
  - (c) environmentalists with a 'holier than thou' attitude
  - (d) those elite are
42. The elite are
  - (a) jealous of Nano owners
  - (b) afraid of traffic jams and depletion of fossil fuel
  - (c) afraid of reaching their destinations late
  - (d) full of disdain that the poor can afford cars
43. The paradox of the situation is that
  - (a) bigger cars mean more fuel, more space and more pollution
  - (b) though India has fewer cars the Nano will bring more pollution
  - (c) London and New York have more cars and less pollution
  - (d) though India is smaller than the US its cars cause more pollution
44. In saying 23 square metres of parking space costs 40 lakhs, the writer is \_\_\_\_\_
  - (a) caustic
  - (b) exaggerating
  - (c) sarcastic
  - (d) ironical

45. The writer blames India for  
 (a) subsidizing kerosene whereby greenhouse emissions are indirectly subsidized  
 (b) subsidizing diesel  
 (c) for increasing the cost of parking by the hour  
 (d) for not making it mandatory for car owners to own parking space
46. The most suitable title for this passage is  
 (a) Polluting Politics  
 (b) No No Nano  
 (c) Submerge Subsidies  
 (d) More Cars, Less Pollution
47. The plural of Virus is  
 (a) Viruses (b) Virare  
 (c) Virii (d) Virus
48. If the following segments of a sentence are to be rearranged in logical order as A, B, C, D where would '3' be placed  
 (1) to see that students do not altogether forget to write especially during exam time  
 (2) the education groups are now asking for hand writing classes  
 (3) thanks to mobile testing and computer literacy  
 (4) writing in long hand is becoming a vanishing art  
 (a) A (b) B  
 (c) C (d) D
49. If leaf is to leaves and knife is to knives, then belief is to -----  
 (a) beliefs (b) believes  
 (c) belief (d) believing
50. Choose the sentence where the underlined word is used correctly.  
 (a) This latest novel is a pedestrian story about spies.  
 (b) The exam paper is not pedestrian but difficult.  
 (c) This is the pedestrian highway.  
 (d) Every week we are forced to listen to a pedestrian lecture.
51. When the fire alarm rang \_\_\_\_\_ left the building immediately  
 (a) all (b) everyone  
 (c) all the people (d) every person
52. In the following sentence choose the erroneous segment/s  
 A B  
 He is one of those people / who thinks  
 C  
 /he owns the world  
 (a) error in segment A  
 (b) error in segment B  
 (c) error in segment A & C  
 (d) error in segment B & C
53. Choose the correct meaning for the word: cynic-  
 (a) the person who is selfish  
 (b) the person who is concerned about others  
 (c) the person who isn't misanthropic  
 (d) the person who believes that people always act from selfish motives
54. Choose the word with correct spelling  
 (a) catagories  
 (b) diarrhoea  
 (c) ommission  
 (d) inaugarate
55. Pick out the right sentences.  
 (1) I will go with you.  
 (2) There was nobody I could go with.  
 (3) I have a glass with painting on it.  
 (4) The curtains do not match with the furniture.  
 (a) 1 & 2  
 (b) 2 & 3  
 (c) 1 & 4  
 (d) all
56. About the following pair of phrases, choose the correct option.  
 (i) A two days' visit  
 (ii) A two day's visit  
 (a) The first phrase is erroneous  
 (b) The second phrase is erroneous  
 (c) Both phrases are erroneous  
 (d) Both phrases are correct



**Directions for Question No. 57 - 59:** Read the following passage and answer within its context.

Nearly two thousand years have passed since a census decreed by Caesar Augustus became part of the greatest story every told. Many things have changed in the intervening years. The hotel industry worries more about overbuilding than overcrowding, and if they had to meet an unexpected influx, few inns would have managed to accommodate the weary guests. Now it is the census taker that does the traveling in the fond hope that a highly mobile population will stay put long enough to get a good sampling. Methods of gathering, recording and evaluating information have presumably been improved a great deal. And where then it was the modest purpose of Rome to obtain a simple head count as an adequate basis for levying taxes, now batteries of complicated statistical series furnished by governmental agencies and private organizations are eagerly scanned and interpreted by sages and seers to get a clue for future events.

The Bible does not tell us how the Roman census takers made out, and as regards our more immediate concern, the reliability of present-day economic forecasting, there are considerable differences of opinion. They were aired at the celebration of the 125<sup>th</sup> anniversary of the American Statistical Association. There was the thought that business forecasting might well be on its way from an art to a science, and some speakers talked about new-fangled computers and high-faulting mathematical systems in terms of excitement and endearment, which we, at least in our younger years when these things mattered, would have associated more readily with the description of a fair maiden.

But others pointed to a deplorable record of highly esteemed forecasts and forecasters with a batting average below that of the Mets and the President-elect of the Association cautioned that "high-powered statistical methods are usually in order where the facts are crude and inadequate, statisticians assume."

We left his birthday party somewhere between hope and despair and with the conviction, not really newly acquired, that proper statistical methods applied to ascertainable facts have their merits in economic forecasting as long as neither forecaster nor public is deluded into mistaking the delineation of probabilities and trends for a prediction of certainties of mathematical exactitude.

57. According to the passage, taxation in Roman times was based on
  - (a) mobility
  - (b) wealth
  - (c) population
  - (d) census takers
58. The author refers to the Mets primarily in order to
  - (a) show that sports do not depend on statistics
  - (b) contrast verifiable and unverifiable methods of record keeping
  - (c) indicate the changes in attitudes from Roman days to the present
  - (d) illustrate the failure of statistical predictions.
59. The author's tone can best be described as
  - (a) jocular
  - (b) scornful
  - (c) pessimistic
  - (d) humanistic
60. Disinterested is closest in meaning to
  - (a) bored
  - (b) unbiased
  - (c) not interested
  - (d) indifferent
61. Choose the option which is the nearly opposite in meaning to BERATE
  - (a) grant
  - (b) praise
  - (c) refer
  - (d) purchase
62. Arrange the following in the right order to make a complete sentence
  - (i) with interconnected vibrating balls and springs
  - (ii) in a naive sense, a field in physics may be envisioned as if space were filled
  - (iii) as the displacement of a ball from its rest position
  - (iv) and the strength of the field can be visualized
  - (a) ii, i, iv, iii
  - (b) i, ii, iii, iv
  - (c) iv, iii, ii, i
  - (d) iii, iv, i, ii
63. Find the odd one out
  - (a) latent
  - (b) natural
  - (c) inborn
  - (d) inherent

64. He told the teacher that \_\_\_\_\_.
- he was liked by the whole class
  - you are liked by the whole class
  - he is liked by the whole class
  - you were liked by the whole class

65. Match the several meanings of the word COMPLEX with their appropriate usages.

Meaning	Usage
(1) complicated	(5) A new sports complex is coming up for the Common Wealth
(2) abnormal state of mind	(6) Culture is a complex whole of many things
(3) group of structures	(7) She has a complex about being overweight
(4) mixture	(8) His motives in carrying out the crime were
(a) 1-6, 2-8, 3-7, 4-5	
(b) 1-8, 2-7, 3-5, 4-6	
(c) 1-5, 2-7, 3-6, 4-8	
(d) 1-8, 2-5, 3-6, 4-7	

66. Which does not make a sensible word/phrase when added to the word:

Honey

- |          |            |
|----------|------------|
| (a) pot  | (b) suckle |
| (c) comb | (d) taste  |

**Directions for Question No. 67-69:** Read the passage carefully and answer within the context.

In September of 1929, traders experienced a lack of confidence in the stock market's ability to continue its phenomenal rise. Prices fell. For many inexperienced investors, the drop produced a panic. They had all their money tied up in the market, and they were pressed to sell before the prices fell even lower. Sell orders were coming in so fast that the ticker tape at the New York Stock Exchange could not accommodate all the transactions.

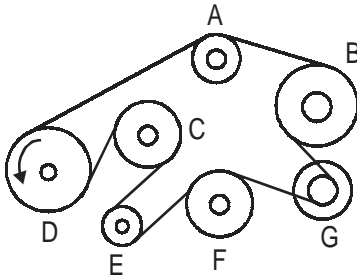
To try to reestablish confidence in the market, a powerful group of New York bankers agreed to pool their funds and purchase stock above current market values. Although the buy orders were minimal, they were counting on their reputations to restore confidence on the part of the smaller investors, thereby affecting the number of sell orders. On Thursday, October 24, Richard Whitney, the Vice President of the New York Stock Exchange and a broker for the J.P. Morgan Company, made the effort on their behalf. Initially it appeared to have been successful, then, on the following Tuesday, the crash began again and accelerated. By 1932, stocks were worth only twenty percent of their value at the 1929 high. The results of the crash had extended into every aspect of the economy, causing a long and painful depression, referred to in American history as the Great Depression.

67. The new York bankers counted on -
- Current market values
  - The number of sell orders
  - Confidence
  - Their reputation
68. The cause of downfall of share market was -
- Inexperienced investors
  - Phenomenal decrease
  - Lack of confidence in stock market's ability.
  - Panic amongst investors.
69. Choose the word in the passage that is an antonym of "minimal"
- negligible
  - minimum
  - maximal
  - significant
70. Identify the correct sentence.
- The office is opposite to the bank.
  - The office is opposite the bank.
  - The office is opposite from the bank.
  - The office is opposite of the bank

**SECTION III ANALYTICAL & LOGICAL REASONING**

For all questions in this section, correct answers carry 2 marks each.

71. A band passes around all the wheels so that they can all be turned by the driving wheel. When the driving wheel turns in the direction shown. Which way will the wheel B turn?



- (a) Clockwise (b) Cannot move  
(c) Anti-clockwise (d) Either way
72. In a certain language, (A) 'Sun shines brightly' is written as 'ba lo sul'; (B) 'Houses are brightly lit' as 'kado udo ari ba'; and (C) 'Light comes from sun' as 'dapi kup lo nro'. What words will be written for 'sun' and 'brightly'?
- (a) Lo, ba  
(b) ba, lo  
(c) snl, lo  
(d) ba, sul

73. Given are the following three equations:

(1) ■● = ▲

(2) ■ = ●◆

(3) ▲▲ = ◆◆◆

How many circles are equivalent to a square, as per the ratios in the three given equations?

- (a) ■ = ●●●●●●  
(b) ■ = ●●●●●  
(c) ■ = ●●●●  
(d) ■ = ●●

74. Each child in a family has at least 4 brothers and 3 sisters. What is the smallest number of children the family might have?
- (a) 7 (b) 8  
(c) 9 (d) 10

75. In the following question two statements are followed by two conclusions numbered I and II. Assume the two statements are true even if they are at variance with commonly known facts. Then pick the correct answer from the choices given below.

- (A) Only conclusion I follows  
(B) Only conclusion II follows  
(C) Both conclusions I & II follow  
(D) Neither conclusion I nor conclusion II follows

**Statements:** Some doctors are fools. Joshi is a doctor.

**Conclusions:**

I. Joshi is a fool.

II. Some fools are doctors.

- (a) A (b) B  
(c) C (d) D

76. Debu walks towards East then towards North and turning  $45^\circ$  right walks for a while and lastly turns towards left. In which direction is he walking now?
- (a) North (b) East  
(c) South-East (d) North-West

**Directions for Question No. 77-79:** Read the following instructions and answer.

- I. There is a rectangular wooden block of length 4 cm, height 3 cm and breadth 3 cm.
- II. The two opposite surfaces of 4 cm x 3 cms are painted yellow on the outside.
- III. The other two opposite surfaces of 4 cm x 3 cm are painted red on the outside
- IV. The remaining two surfaces of 3 cm x 3 cm are painted green on the outside
- V. Now, the block is cut in such a way that cubes of 1cm x 1cm x 1cm are created.

77. How many cubes will have only one colour?
- (a) 10 (b) 12  
(c) 14 (d) 18
78. How many cubes will have no colour?
- (a) 1 (b) 2  
(c) 4 (d) 8
79. How many cubes will have any two colours?
- (a) 32 (b) 24  
(c) 16 (d) 12

80. Read the following about the grid given below and answer.
- The cells in this grid contain the digits 1 to 9 in random order.
  - Column A contains no odd digits.
  - Cell C3 minus Cell C2 equals 4.
  - The sum of three digits in Row 1 is 17.
  - Number 7 is in column B; its left hand neighbor is not 4
  - The digits of Column C add upto 14.
  - 2 is not in the same horizontal row as 8; and 9 is not immediately below 3.

Which cell holds the number 9?

	A	B	C
1			
2			
3			

- (a) B1 (b) B3  
(c) C2 (d) C1
81. Replace the question mark with the right option.  
4, 32, 288, ?, 31680  
(a) 25600 (b) 2880  
(c) 7420 (d) 10000
82. In the Sunday bazaar, Jamuna sells her lemons at Rs. 0.50 for two. Her neighbor Seema has a little smaller lemons; she sells hers at Rs. 0.50 for three. After a while, when both ladies have the same number of lemons left, Seema is called away. She asks her neighbour to take care of her goods. To make things simple, Jamuna puts all lemons in one big pile, and starts selling five lemons per one rupee. When Seema returns, at the end of the day, all lemons have been sold. But when they start dividing the money, there appears to be a shortage of Rs. 3.50. Supposing they divide the money equally, how much does Jamuna lose with this deal?  
(a) Rs. 10.50 (b) Rs. 11.50  
(c) Rs. 42.00 (d) Rs. 52.50
83. There are two cups, one containing orange juice and one containing an equal amount of lemonade. One teaspoon of the orange juice is taken and mixed with the lemonade. Then a teaspoon of this mixture is mixed back into the orange juice. Is there more lemonade in the orange juice or more orange juice in the lemonade?  
(a) More orange juice in the lemonade  
(b) More lemonade in the orange juice  
(c) Equal amount of each juice between the two cups  
(d) None of the above

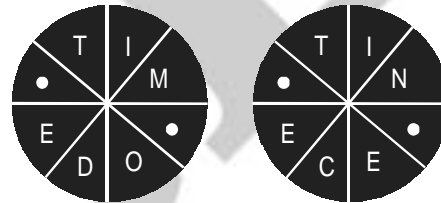
84. Consider the statement and decide which of the assumptions are implicit:-

"In the present period of economic hardships, education and small family norm may lead the nation to progress and prosperity"

Assumptions: A. Education and small family norms are directly related to nations progress.  
B. Big families find it difficult to bear the cost of education.

- (a) Only A is implicit  
(b) Only B is implicit  
(c) Both A & B are implicit  
(d) Neither A nor B is implicit

85. Fill in the blanks to find two words that are synonyms



- (a) KS, ST (b) MS, NT  
(c) ST, DN (d) MS, DN
86. Beautiful beaches attract people, no doubt about that. Just look at the city's most beautiful beaches, which are amongst the most overcrowded places in the state.  
Which of the following exhibits a pattern of reasoning similar to the one exhibited in the argument above?  
(a) Moose and bear usually appear at the same drinking hole at the same time of day.  
Therefore, moose and bear must be feeling thirsty at about the same time.  
(b) Children who are scolded severely tend to misbehave more often than other children.  
Hence if a child is not scolded severely, that child is less likely to misbehave  
(c) During warm weather my dog suffers more fleas than during cool weather.  
Therefore, fleas must thrive in a warm environment  
(d) Tally accounting software helps increase the work efficiency of its users. As a result, these users have more time for other activities.

87. Abdul, Mala, and Chetan went bird watching. Each of them saw one bird that none of the others did. Each pair saw one bird that the third did not. And one bird was seen by all three. Of the birds Abdul saw, two were yellow. Of the birds Mala saw, three were yellow. Of the birds Chetan saw, four were yellow. How many yellow birds were seen in all? How many non-yellow birds were seen in all?

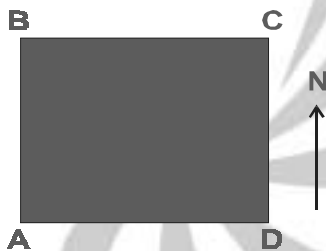
- (a) 7 yellow birds and 3 non yellow birds  
 (b) 5 yellow birds and 2 non yellow birds  
 (c) 4 yellow birds and 2 non yellow birds  
 (d) 3 yellow birds and 2 non yellow birds

88. In each of the following two sets I & II, find the word or pair of words different from the other three words or pair of words:

- I: J. Lake K. Brook  
 L. Stream M. River  
 II: J. Weighty - Heavy K. Broad - Wide  
 L. Big - Large M. Tiny - Small

- (a) I-J, II-J (b) I-K, II-M  
 (c) I-K, II-J (d) I-J, II-K

89. A, B, C, and D are standing on the four corners of a square field as shown in the figure. From the positions shown in the figure, A walks to the North position and B walks to the East position while C decides to walk two sides in anticlockwise direction. D walks to North and then changes his mind to take the previous position. Identify the choice with correct positions.



- (a) A & B occupy the same position.  
 (b) C & D occupy the same position.  
 (c) D & B are in their original positions.  
 (d) B & C are in diagonally opposite positions.

90. A gambler bet on a horse race, but the bookie wouldn't tell him the results of the race. The bookie gave clues as to how the five horses finished -- which may have included some ties -- and wouldn't pay the gambler off unless the gambler could determine how the five horses finished based on the following clues:

- Penn Fe finished before Night Marvel and after Wish Bones.
- Wish Bones tied with Penn Fe if and only if Hallelujah did not tie with Sundae.
- Penn Fe finished as many places after Sundae as Sundae finished after Wish Bones if and only if Wish Bones finished before Night Marvel.

The gambler thought for a moment, then answered correctly. How did the five horses finish the race?

- (a) Sundae came in first. Wish Bones and Hallelujah tied for second place. Penn Fe came in fourth. Night Marvel came in fifth.  
 (b) Wish Bones came in first. Sundae and Penn Fe tied for second place. Hallelujah came in fourth. Night Marvel came in fifth.  
 (c) Wish Bones came in first. Sundae and Hallelujah tied for second place. Penn Fe came in fourth. Night Marvel came in fifth.  
 (d) Penn Fe came in first. Night Marvel and Hallelujah tied for second place. Wish Bones came in fourth. Sundae came in fifth.

91. In a school drill, a number of children are asked to stand in a circle. They are evenly spaced and the 6<sup>th</sup> child is diametrically opposite the 16<sup>th</sup> child. How many children are made to stand in the circle?

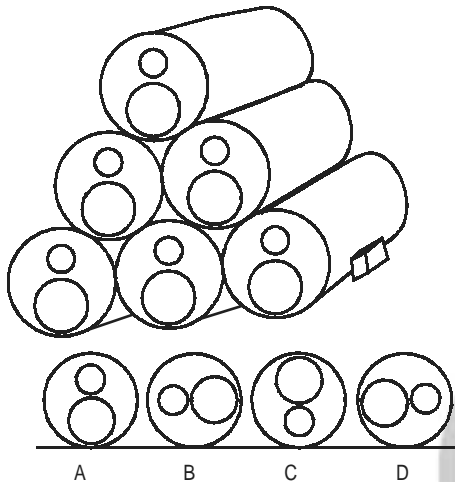
- (a) 16  
 (b) 20  
 (c) 22  
 (d) None of the above

92. In this question insert the missing number at the sign of interrogation.

8	4	9	5
5	7	3	4
3	4	5	8
39	44	60	?

- (a) 62 (b) 72  
 (c) 60 (d) 70

93. Steel cylinders are made so that each one has a large and small hole through the middle. In the drawing six cylinders have been stacked on top of each other. To stop the cylinders from rolling on the smooth floor they are wedged by heavy blocks at each side of bottom row. If the heavy blocks are removed what would be the position of cylinders when they stopped rolling?



- (a) A (b) B  
(c) C (d) D

**Directions for Question No. 94-96:** Use the information given below to answer.

- There is a group of 5 persons A, B, C, D and E
  - In the group there is one badminton player, one chess player and one tennis player
  - A and D are unmarried ladies and do not play any games
  - No lady is a chess player or a badminton player
  - There is a married couple in the group of which E is the husband
  - B is the brother of C and is neither a chess player nor a tennis player
94. Which of the groups has only ladies?  
(a) ABC (b) BCD  
(c) CDE (d) None of the above
95. Who is the tennis player?  
(a) B (b) C  
(c) D (d) E
96. Who is the wife of E?  
(a) A (b) B  
(c) D (d) None of the above

97. Consider the following statements and answer the question.

M, N, O and P are all different individuals

M is the daughter of N.

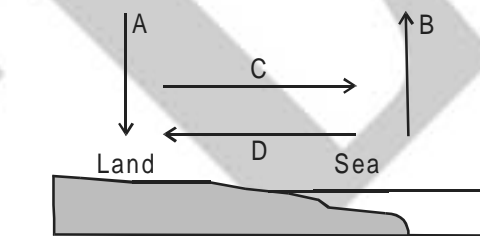
N is the son of O

O is the father of P.

Which among the following statements is contradictory to the above premises?

- (a) P is the father of M.  
(b) O has three children.  
(c) M has one brother.  
(d) M is the granddaughter of O.

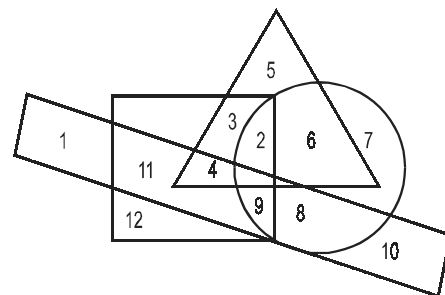
98. The Drawing shows a cross section where the land meets the sea. The section covered is 5 kilometers. On a hot day, in which direction, indicated by four arrows, is the wind most likely to blow?



- (a) A (b) B  
(c) C (d) D

**Directions for Question No. 99-100:** In the diagram below, the circle stands for 'educated', square stands for 'hard working', triangle for 'urban people' and rectangle for 'honest'. The different regions of the diagram are numbered from 1 to 12. Study the diagram carefully and answer the questions:

99. Uneducated urban hard-working and honest people are indicated by:



- (a) 3 (b) 11  
(c) 9 (d) 4
100. Non-urban educated people who are neither hard-working nor honest are indicated by:  
(a) 5 (b) 7  
(c) 10 (d) 11

**SECTION IV GENERAL AWARENESS**

For the following 5 questions in this section, correct answers carry 2 mark each.

101. A. M. Turing award is considered as the Nobel Prize in the field of computers, given annually by Association for Computing Machinery co-sponsored by Intel and Goggle. Who was A M Turing in whose memory the award was instituted?
  - (a) First Chairman of Intel.
  - (b) A British Mathematician
  - (c) The legendary Dean of Stanford who revolutionized the computer education in the US.
  - (d) An US cognitive scientist in the field of artificial intelligence (AI) and co-founder of Massachusetts Institute of Technology's AI laboratory.
102. Find the most accurate description of 'Bt cotton'.
  - (a) A variety of cotton that grows fast.
  - (b) A genetically modified crop of cotton whose DNA has been altered by introducing an extra gene.
  - (c) A variety of cotton that is immune to diseases.
  - (d) A genetically modified crop of cotton whose DNA has been designed in the lab.
103. Las Vegas, U.S.-based tour operator AMX Company has filed a trademark patent for which of the following Tagline?
  - (a) "God's Own Country"
  - (b) "Heaven on Earth"
  - (c) "Discover Incredible India"
  - (d) "Come Alive with India"
104. Which out of the following holds the highest number of shares of ICICI Bank?
  - (a) Banks Financial Institutes and Insurance
  - (b) FIIs
  - (c) General public
  - (d) Private Corporate Bodies
105. Indian Standard Time is based on the longitude of 82.5 degrees passing through which of the following places?
  - (a) Mirzapur, U.P
  - (b) Jabalpur, M.P.
  - (c) Nagpur, Maharashtra
  - (d) Jaipur, Rajasthan

For the following questions in this section, correct answers carry 1 mark each.

106. The Black Box of an aircraft is an important part as all the conversations and data are recorded therein. Although it is named black box, but its color is not black. What is the color of the black box in a commercial airplane?
  - (a) Brown
  - (b) Yellow
  - (c) Red
  - (d) Orange
107. Find the person who plays the odd sport out of the following.
  - (a) Navaratilova
  - (b) Michael Phelps
  - (c) David Beckham
  - (d) Prakash Padukone
108. Sariska and Ranthambore are the reserves for which of the following animals?
  - (a) Lion
  - (b) Deer
  - (c) Tiger
  - (d) Bear
109. March, 2008 witnessed a turning point in the history of which of the following Himalayan Kingdoms when democracy was ushered in replacing monarchy?
  - (a) Bhutan
  - (b) Nepal
  - (c) Sikkim
  - (d) None of these
110. Neil Armstrong brought back a rock from the moon. On earth
  - (a) The mass of the rock will change
  - (b) The weight of the rock will change
  - (c) Mass and weight will change
  - (d) None of the above
111. Milk, Cheese and Eggs are the source of
  - (a) Vitamin C & A
  - (b) Vitamin A & D
  - (c) Vitamin C & D
  - (d) Vitamin B & C
112. In August 2008, India's longest runway for passenger aircraft was commissioned in:
  - (a) Mumbai
  - (b) New Delhi
  - (c) Hyderabad
  - (d) Bangalore
113. The first ever public hearing in India, almost like a referendum, on the fate of SEZ was held during the month of September 2008 in / at \_\_\_\_\_.
  - (a) Verna IT/ITeS SEZ in Goa
  - (b) Haryana for Reliance Haryana SEZ
  - (c) Pen, Maharashtra
  - (d) POSCO India, Steel SEZ Phase II, Orisa

114. Al Ahram is  
 (a) A University in Damascus  
 (b) A Newspaper in Cairo  
 (c) A Mosque in Riyadh  
 (d) A small mountain range in Jordan
115. India's largest and first multi-national pharmaceutical giant Ranbaxy is being bought over by \_\_\_\_\_.  
 (a) Matrix Pharma  
 (b) GVK Bio-sciences  
 (c) Merck  
 (d) None of these
116. Find the odd product out of the following:  
 (a) Pampers (b) Dove  
 (c) Tide (d) Pantene
117. In the internet sphere, 'Opera' is the name of a:  
 (a) web conference site  
 (b) web advertising firm  
 (c) software for webinars  
 (d) web browser
118. Which of the following pair is not correct?  
 (a) Shahid Parvez : Sitar  
 (b) Rashid Khan : Vocal Music  
 (c) Ayaan Ali Khan: Sarod  
 (d) Romu Muzumdar: Guitar
119. At what frequency SENSEX calculation is carried out?  
 (a) Every half an hour.  
 (b) Every hour  
 (c) Real time  
 (d) 6 times a day.
120. The second largest manufacturer of CD's, DVD's and other optical media in the world is:  
 (a) Sony  
 (b) Intel  
 (c) Philips  
 (d) Moser Baer
121. What of the following is a legal right and not a fundamental right  
 (a) Right to Liberty of thought and expression  
 (b) Right against exploitation  
 (c) Right to property  
 (d) Right to practice religion
122. The term Net Shot is associated with  
 (a) Badminton (b) Tennis  
 (c) Table Tennis (d) Volley Ball
123. What is Dry Ice?  
 (a) Solidified Carbon Dioxide  
 (b) Transparent plastic decoy which looks like Ice  
 (c) Sulfur dioxide at  $-57^{\circ}$  Celsius  
 (d) Chemically treated Ice to make it dry.
124. The rail-based mass rapid transit system in Mumbai has been awarded to a consortium of companies led by:  
 (a) Reliance Infrastructure  
 (b) Reliance Industries  
 (c) GMR Infrastructure  
 (d) Lanco Infrastructure
125. If bilirubin is high in a human body, organ is most affected?  
 (a) Pancreas  
 (b) Liver  
 (c) Kidney  
 (d) Large intestine
126. Who of the following is one of the most celebrated Photo Journalists in India?  
 (a) Gautam Rajadhyaksha  
 (b) Raghu Rai  
 (c) Anjii Reddy  
 (d) Sudhir Dar
127. Inflation implies  
 (a) Rise in budget deficit  
 (b) Rise in general price index  
 (c) Rise in price of consumer goods  
 (d) Rise in money supply
128. The India-US Nuclear Deal is called 123 Agreement. What does 123 denote?  
 (a) The deal is governed by the clause number 123 of International Atomic Energy Agency, in the context of peaceful use of atomic energy.  
 (b) This number denotes a cluster of clauses of Hyde Act of US Government.  
 (c) This is the simple number related to chain reaction for creation of atomic energy.  
 (d) Section 123 of the US Atomic Energy Act.
129. In the United States of America, the President is elected  
 (a) By the electorate  
 (b) By the electoral college  
 (c) By the two national political parties  
 (d) By the U.S. congress



130. The term "Uruguay Round" is associated with an important world organization. Which one?  
 (a) UNDP  
 (b) GATT  
 (c) WTO  
 (d) World Bank
131. Siebel is software firm that is now taken over by:  
 (a) IBM  
 (b) Accenture  
 (c) Gartner  
 (d) Oracle
132. First Indian motion picture insured by a General Insurance company is  
 (a) Hum Apke Hain Kaun  
 (b) Taal  
 (c) Dile se  
 (d) Ashoka
133. India's first coalition government in New Delhi was formed under the leadership of:  
 (a) V. P. Singh  
 (b) P. V. Narasimharao  
 (c) Morarji Desai  
 (d) Atal Behari Vajpayee
134. WiMax stands for:  
 (a) Wireless internet for microwave access  
 (b) Wireless inter-operability for microwave access  
 (c) Worldwide internet for microwave access  
 (d) Worldwide inter-operability for microwave access
135. El Nino is  
 (a) A sea storm  
 (b) A war ocean current  
 (c) A tropical disturbance  
 (d) Another name of typhoon