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Total: 200 Marks

GENERAL AWARENESS

UN International Day for Natural Disaster Reduction is observed on :

- | | |
|------------------------------|--------------------------------|
| (1) 6 th July | (2) 15 th September |
| (3) 13 th October | (4) 18 th November |

Who among the following got the Rajiv Gandhi Khel Ratna Award for 2011 ?

- | | |
|--------------------|-------------------|
| (1) Gagan Narang | (2) Saina Nehwal |
| (3) Joseph Abraham | (4) Satish Pillai |

When was Delhi made the capital of India ?

- | | | | |
|----------|----------|----------|----------|
| (1) 1910 | (2) 1911 | (3) 1947 | (4) 1942 |
|----------|----------|----------|----------|

Commonwealth Day is celebrated on _____ .

- | | | | |
|---------------------------|-------------------------------|--------------------------|-----------------------------|
| (1) 15 th July | (2) 26 th December | (3) 24 th May | (4) 10 th August |
|---------------------------|-------------------------------|--------------------------|-----------------------------|

Who is the author of the book "My Life" ?

- | | |
|---------------------|------------------|
| (1) Hillary Clinton | (2) Bill Clinton |
| (3) The Dalai Lama | (4) Imran Khan |

Which one of the following is not a land - locked country?

- | | | | |
|--------------|-----------------|-----------|------------|
| (1) Thailand | (2) Afghanistan | (3) Nepal | (4) Bhutan |
|--------------|-----------------|-----------|------------|

"Smasher" is associated with which of the following sports?

- | | | | |
|------------|---------------|---------------|-----------------|
| (1) Boxing | (2) Wrestling | (3) Foot ball | (4) Volley Ball |
|------------|---------------|---------------|-----------------|

What is the full form of 'NBFC' as used in the financial sector?

- New Banking Finance Company
- Non - Banking Finance Company
- New Business Fund Company
- National Banking and Finance Company

Which one of the following causes the disease 'Swine Flu' ?

- | | |
|---------------|---------------------|
| (1) Bacteria | (2) Helminthic worm |
| (3) Protozoan | (4) Virus |

10. The source of oxygen during photosynthesis is :

- | | | | |
|---------|--------------------|-----------|-----------------|
| (1) air | (2) Carbon Dioxide | (3) water | (4) chlorophyll |
|---------|--------------------|-----------|-----------------|

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11. The 'Indian Standard Time' is measured at :
- (1) Allahabad (2) Bhopal (3) Jaipur (4) Mumbai
12. 'Short Sightedness' or 'Myopia' can be corrected by using:
- (1) Convex Lens (2) Concave Lens
(3) Cylindrical Lens (4) Bifocal Lens
13. The Chairman of the Joint Parliamentary Committee on the 2G spectrum issue is :
- (1) Dr. Murli Manohar Joshi (2) P.C. Chacko
(3) Kishore Chandra Dev (4) Thambi Durai
14. The paintings of Ajanta depicts stories of the:
- (1) Ramayana (2) Mahabharata (3) Jatakas (4) Panchatantra
- The Vice - President of India is elected by the:
- Members of both the houses of parliament
Elected members of both the houses of parliament
Members of Parliament and the Vidhan Sabhas
Members of Rajya Sabha and the Vidhan Parishads
- The largest gland in the human body is :
- (1) Liver (2) Pancreas (3) Thyroid (4) Gall bladder
17. A nautical mile is equal to :
- (1) 2050 meters (2) 1575 meters (3) 2000 meters (4) 1852 meters
18. The Chairman of National Human Rights Commission during 2011 was:
- (1) Justice Govind Prasad Mathur (2) Justice K.G. Balakrishnan
(3) Justice Kakru (4) Justice A.S. Anand
19. Vitamin A is abundantly found in :
- (1) Carrot (2) Brinjal (3) Tomato (4) Potato
20. Where is the 'Silent Valley' located in India?
- (1) Gujarat (2) Madhya Pradesh
(3) Karnataka (4) Kerala
21. The President of India to have served for two terms in the office was:
- (1) Dr. S. Radha Krishnan (2) Dr. V. V. Giri
(3) Dr. Rajendra Prasad (4) Dr. Zakir Hussain

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22. Which one of the Indian State is not bisected by the Tropic of Cancer?
(1) West Bengal (2) Rajasthan (3) Odisha (4) Gujarat
23. What is the local name of Mohenjodaro ?
(1) Mound of the Dead (2) Mound of the Great
(3) Mound of the living (4) Mound of the sun
24. Khajuraho Temples were built by the rulers of:
(1) Eastern Ganga Dynasty (2) Chandella Dynasty
(3) Kushans (4) Pandyas
25. To an astronaut in space, the sky appears to be :
(1) White (2) Blue (3) Red (4) Dark
26. Mullaperiyar Dam whose safety has been a matter of concern is a dispute between
(1) Tamil Nadu and Andhra Pradesh (2) Karnataka and Kerala
(3) Tamil Nadu and Kerala (4) Tamil Nadu and Karnataka
27. Who among the following is not a Noble Peace Prize 2011 winner?
(1) Ellen Johnson Sirleaf (2) Saul Perlmutter
(3) Leymar Gbowee (4) Tawakkol Karman
28. Koodankulam Nuclear Power Plant, which was in news in recent times is located in
(1) Tamil Nadu (2) Kerala
(3) Karnataka (4) Himachal Pradesh
29. Who among the following was considered by Gandhiji as his political Guru ?
(1) Bal Gangadhar Tilak (2) Dadabhai Naoroji
(3) Motilal Nehru (4) Gopal Krishna Gokhale
30. Who among the following is not a winner of Padma Vibhushan award for the year 2011 ?
(1) Vijay Kelkar (2) A Nageshwara Rao
(3) Satyadev Dubey (4) Azim Premji

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TEST-II

ENGLISH LANGUAGE

Directions for Questions 31 to 45 :

This section consists of two passages followed by questions based on the contents of the passages. Answer the questions following each passage on the basis of what is stated or implied in the passage.

Passage I

Four legal approaches may be followed in attempting to channel technological development in socially useful directions: specific directives, market incentive modifications, criminal prohibitions, and changes in decision-making structures. Specific directives involve the government's identifying one or more factors controlling research, development, or implementation of a given technology. Directives affecting such factors may vary from administrative regulation of private activity to government ownership of a technological operation. Market incentive modifications are deliberate alterations of the market within which private decisions regarding the development and implementation of technology are made. Such modifications may consist of imposing taxes to cover the costs to society of a given technology, granting subsidies to pay for social benefits of a technology, creating the right to sue to prevent certain technological development, or easing procedural rules to enable the recovery of damages to compensate for harm caused by destructive technological activity. Criminal prohibitions may modify technological activity in areas impinging on fundamental social values, or they may modify human behaviour likely to result from technological applications for example, the deactivation of automotive pollution control devices in order to improve vehicle performance. Alteration of decision-making structures includes all possible modifications in the authority, constitution, or responsibility of private and public entities deciding questions of technological development and implementation. Such alterations include the addition of public-interest members to corporate boards, the imposition by statute of duties on governmental decision-makers, and the extension of warranties in response to consumer action.

Effective use of these methods to control technology depends on whether or not the goal of regulation is the optimal allocation of resources. When the object is optimal resource allocation, that combination of legal methods should be used that most nearly yields the allocation that would exist if there were no external costs resulting from allocating resources through market activity. There are external costs when the price set by buyers and sellers of goods fails to include some costs, to anyone, that result from the production and use of the goods. Such costs are internalized when buyers pay them.

Air pollution from motor vehicles imposes external costs on all those exposed to it, in the form of soiling, materials damage, and disease; these externalities result from failure to place a price on air, thus making it a free good, common to all. Such externalities lead to nonoptimal resource allocation, because the private net product and a social net product of market activity are not often identical. If all externalities were internalized, transactions would occur until bargaining could no longer improve the situation, thus giving an optimal allocation of resources at a given time.

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The author's primary aim in this passage is to describe:

- objective and legal methods for directing technological development.
- technological innovations making it possible to achieve optimum allocation of resources.
- technical approaches to the problem of controlling marketing activity.
- economic procedures for facilitating transactions between buyers and sellers.

The author cites air pollution from motor vehicles in order to :

- evaluate legal methods used to prevent technological developments
- give examples of costs not included in buyer - seller bargains
- raise cost estimates calculated by including the costs of resources
- commend technological research undertaken for the common welfare.

According to the passage, transactions between private buyers and sellers have effects on society that generally:

- encompass more than the effects on the buyers and sellers alone
- are guided by legal controls on the development of technology
- reflect on optimal allocation of natural resources
- give rise to ever-increasing resource costs

The author does NOT favour one of the options given below. Which one is it ?

- Protecting the environment for future use
- Causing technological development to ease
- Intervening in the activity of the free market
- Changing the balance of power between opposing interests in business.

A gasoline - conservation tax on the purchase of large automobiles is an example of:

- (1) a specific directive
- (2) a market incentive modification
- (3) an optimal resource allocation
- (4) an external cost

If there were no external cost, as they are described in the passage, which of the following would be true ?

- The availability of common goods would increase
- Some resource allocations would be illegal
- Prices would include all costs to members of society
- All technology - control methods would be effective

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The phrase 'Criminal prohibitions may modify technological activity in areas impinging on fundamental societal values' suggests that:

technology would require to be altered if it affected the basic ethical values of society.

criminal proceedings would be taken against those technologies that attempted to alter basic societal values

technology which had criminal implications and affected social behaviour would require to be transformed

technology which led to crime would require to be prohibited

On the basis of the passage, it can be, inferred that the author would agree with one of the following statements concerning technological development. Which one is it ?

The government should own technological operations

The effects of technological development cannot be controlled

Some technological development are beneficial

Applications of technological developments are criminally destructive

The Writer's main purpose in writing this piece was to :

- (1) report (2) persuade (3) inform (4) instruct

Passage II

The fundamental objectives of sociology are the same as those of science generally - discovery and explanation. To *discover* the essential data of social behaviour and the connections among the data is the first objective of sociology. To *explain* the data and the connections is the second and larger objective. Science makes its advances in terms of both of these objectives. Sometimes it is the discovery of a new element or set of elements that marks a major breakthrough in the history of a scientific discipline. Closely related to such discovery is the discovery of relationships of data that had never been noted before. All of this is, as we know, of immense importance in science. But the drama of discovery, in this sense, can sometimes lead us to overlook the greater importance of explanation of what is revealed by the data. Sometimes decades, even centuries, pass before known connections and relationships are actually explained. Discovery and explanation are the two great interpenetrating, interacting realms of science.

The order of reality that interests the scientists is the *empirical* order, that is, the order of data and phenomena revealed to us through observation or experience. To be precise or explicit about what is, and is not, revealed by observation is not always easy, to be sure. And often it is necessary for our natural powers of observation to be supplemented by the most intricate of mechanical aids for a given object to become "empirical" in the sense just used. That the electron is not as immediately visible as is the mountain range does not mean; obviously, that it is any less empirical. That social behaviour does not lend itself to as quick and accurate description as, say, chemical behaviour of gases and compounds does not mean that social roles, statuses, and attitudes are any less empirical than molecules and tissues. What is empirical and observable today may have been nonexistent in scientific consciousness a decade ago. Moreover, the empirical is often data *inferred* from direct observation. All of this is

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clear enough, and we should make no pretence that there are not often shadow areas between the empirical and the nonempirical. Nevertheless, the first point to make about any science, physical or social, is that its world of data is the empirical world. A very large amount of scientific energy goes merely into the work of expanding the frontiers, through discovery, of the known, observable, empirical world.

From observation or discovery we move to *explanation*. The explanation sought by the scientist is, of course, not at all like the explanation sought by the theologian or metaphysician. The scientist is not interested - not, that is, in his role of scientist - in ultimate, transcendental, or divine causes of what he sets himself to explain. He is interested in explanations that are as empirical as the data themselves. If it is the high incidence of crime in a certain part of a large city that requires explanation, the scientist is obliged to offer his explanation in terms of factors which are empirically real as the phenomenon of crime itself. He does not explain the problem, for example, in terms of references to the will of God, demons, or original sin. A satisfactory explanation is not only one that is empirical, however, but one that can be stated in the terms of a *causal proposition*. Description is an indispensable point of beginning, but description is not explanation. It is well to stress this point, for there are all too many scientists, or would-be scientists, who are primarily concerned with data gathering, data counting, and data describing, and who seem to forget that such operations, however useful, are but the first step. Until we have accounted for the problem at hand, explained it causally by referring the data to some principle or generalization already established, or to some new principle or generalization, we have not explained anything.

The primary objective of the passage is to :

- show that explanation is more important than discovery
- prove that sociology is a science
- explain the major objectives of sociology
- describe social behaviour

Which of the following statements best agrees with the author's position?

- Science is the formulation of unverified hypotheses
- Explanation is inferred from data
- Causation is a basis for explanation
- Generalization is a pre requisite for explanation

According to the passage, the final step in a study of social behaviour would be to :

- establish generalizations
- offer an explanation of the data by determining causation
- attempt to discover the problem
- collect data

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The author's main point in the first paragraph may best be described by which of the following statements?

- Science and technology are interdisciplinary
- The first objective of sociology is discovery
- Discovery without explanation is meaningless
- Both discovery and explanation are fundamental to building a science

The major objective of the second paragraph is to :

- show that electrons are empirical data
- show that science changes as time passes
- explain how science expands the frontiers of the observable world
- explain what the term empirical order means

According to the passage, scientists are not interested in theological explanations because

- Scientists tend to be atheists
- theology cannot explain social behaviour
- theological explanations are not empirical
- theology cannot explain change

Directions for Questions 46 to 50 :

Each of these questions consists of a word in capital letters followed by four alternative words or phrases. From among the alternatives, choose the word most nearly *similar* in meaning to the word in capital letters in each case.

46. NONCHALANT

- (1) anxious (2) coy (3) excited (4) offhand

47. PROFANE

- (1) blasphemous (2) skilled (3) sacred (4) underhanded

48. ABHORRENT

- (1) critical (2) coercive (3) repugnant (4) cruel

49. TEMPERANCE

- (1) self-restraint (2) self - pity (3) anger (4) impudence

50. VILIFY

- (1) exalt (2) appease (3) defame (4) defy

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Directions for Questions 51 to 55 :

Each of these questions consists of a word in capital letters followed by four alternative words or phrases. From among the alternatives, choose the word most nearly *opposite* in meaning to the word in capital letters in each case.

51. ANOMALOUS

- (1) hostile (2) normal (3) vigorous (4) outrageous

52. BESMIRCH

- (1) defame (2) demonstrate (3) praise (4) mystify

53. DAUNT

- (1) frighten (2) encourage (3) run (4) sadden

54. DIABOLICAL

- (1) resourceful (2) zealous (3) candid (4) angelic

55. EPHEMERAL

- (1) fleeting (2) permanent (3) rapid (4) dull

Directions for Questions 56 to 60 :

Each of these questions consists of a sentence with two blanks, followed by four alternative words or set of words. In each case, choose the word or set of words for each blank that best fits the meaning of the sentence as a whole.

The citizens had become so _____ by the politician _____ that the latest financial scandal did not surprise them at all.

- (1) disgusted peccadilloes (2) jaded indiscretions
(3) regretful antics (4) distraught dishonesty

Although the stock market has experienced strong _____ in the past two years, there have been short periods in which the market has _____ precipitously

- (1) expansion stagnated (2) growth fallen
(3) extension stabilized (4) augmentation decreased

Economic reforms _____ the shackles on India's entrepreneurs, _____ them new freedoms to both create and participate in economic wealth.

- (1) released allowing (2) freed permitting
(3) removed showing (4) untied granting

The _____ of the poor vary considerably across countries, and in India we have to frame Indian _____ to benefit them.

- (1) difficulties..... results (2) problems..... options
(3) challenges..... solutions (4) obstacles..... resolutions

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Human beings are violent and therefore any theory of conflict resolution between nations that _____ to account for this _____ is flawed.

- | | |
|-----------------------------|-------------------------------|
| (1) decline..... supposedly | (2) refuses..... pejoratively |
| (3) fails inherently | (4) consents..... manifestly |

Directions for questions 61 to 65 :

Each of these questions consists of a related pair of words in capital letters followed by four pairs of words. Select the pair that best expresses a relationship.

61. ORCHESTRA: MUSICIAN: :

- | | |
|----------------------|-------------------|
| (1) story : comedian | (2) band : singer |
| (3) garden : leaf | (4) troupe: actor |

62. STROKE: SMOTHER: :

- | | |
|----------------------------|-------------------------|
| (1) incinerate: heat | (2) animate: enervate |
| (3) acknowledge: apprehend | (4) garrote: asphyxiate |

63. MUTTER: INDISTINCT: :

- | | |
|-----------------------------|-------------------------|
| (1) define: easy | (2) blunder: polished |
| (3) articulate: well-spoken | (4) censure: histrionic |

64. EMPATHY: FEELING: :

- | | |
|---------------------|--------------------------------|
| (1) melancholy: joy | (2) sibling: relative |
| (3) boldness: guilt | (4) institution: encouragement |

65. DEVIATE: LECTURE: :

- | | |
|---------------------------|---------------------------|
| (1) disown : friend | (2) welcome: indifference |
| (3) entreat: solicitation | (4) meander: drive |

Directions for Questions 66 to 75 :

In all these questions, either a part or the whole of the sentence is underlined. The sentence is followed by four ways of writing the underlined part. Select the alternative which represents the correct way of writing the underlined part as per standard written English.

It was us who had left before he arrived.

- we who had left before he arrived
- we who had went before he arrived
- us who had went before he arrived
- we who had left before the time he had arrived

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He is the sort of person who I feel would be capable of making these kind of statements.

sort of a person whom I feel would be capable of making these kind of statements

sort of person who I feel would be capable of making these kinds of statements

sort of person whom I feel would be capable of making those kinds of statements

sort of person whom I feel would be capable of making this kind of statements

Due to the continual rain, a smaller number of spectators witnessed the game than had been expected

Due to the continuous rain, a small number

Due to the heavy rain, a lesser number

Because of the intermittent rain, a smaller number

Because of the continual rain, a smaller number

Beside me, there were many persons who were altogether aggravated by his manners.

Beside me, there were many persons who were all together aggravated

Beside me, there are many persons who were all together aggravated

Beside me, there were many persons who were altogether irritated

Beside me, there were many persons who were all together irritated

The owner, who was a kind man, spoke to the boy and he was very rude.

was a kind man and he spoke to the boy and he

spoke to the boy kindly and the boy

a kind man, spoke to the boy who

who was a kind man spoke to the boy and he

Because we cooperated together, we divided up the work on the report which had been assigned.

together, we divided the work on the report which had been assigned.

we divided up the work on the report which was assigned.

we divided the work on the assigned report.

we divided up the work on the assigned report.

R.C. Gupta, the president of the organisation and who is also a member of the core group,
will be in charge of the negotiations.

since he is a member of the core group

a member of the core group

also being a member of the core group

in addition, who is a member of the core group

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Our guest let us know that he would be arriving next week in his last letter
that he was arriving next week in his last letter
that he will arrive next week in his last letter
in his last letter that he would be arriving next week
in his last letter that he was arriving next week

Since we are living in Mumbai for five years, we are reluctant to move to another city.

- (1) Because that we are living (2) Because that we have been living
(3) since we have been living (4) since we were living

His wife awoke him because he forgot to set his alarm before he went to bed.

awoke him because he forgot to set his alarm before he had gone
had awakened him because he forgot to set his alarm before he went
had awakened him because he forgot to set his alarm before he had gone
awoke him because he had forgotten to set his alarm before he went

Directions for Questions 76 to 80.

Each of these questions consists of an idiom, followed by four alternatives. Select the alternative that gives the correct meaning of the idiom.

76. A real rip - off

- (1) badly torn (2) very strange
(3) really crazy (4) extremely expensive

77. got the gift of the gab

- (1) bought an expensive present (2) received an unusual present
(3) good at talking (4) talks without thinking

78. like a bull in a china shop

- (1) be very clumsy (2) talk utter nonsense
(3) be very angry (4) throw things around angrily

79. as hard as nails

- (1) unfriendly person (2) no sympathy for others
(3) has a strong personality (4) can think clearly

80. a head like a sieve

- (1) has a bad memory (2) slightly retarded
(3) capable of absorbing many ideas (4) capable of accepting new ideas

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TEST - III

QUANTITATIVE APTITUDE

81. The sum of first 45 natural numbers is :

- (1) 1035 (2) 1280
(3) 2070 (4) 2140

In a division sum, the divisor is 10 times the quotient and 5 times the remainder. If the remainder is 46, what is the dividend ?

- (1) 4236 (2) 4306 (3) 4336 (4) 5336

83. Which of the following is a pair of co-primes?

- (1) (16, 62) (2) (18, 25) (3) (21, 35) (4) (23, 92)

84. The sum of two numbers is 216 and their HCF is 27. The numbers are:

- (1) 27, 189 (2) 81, 189
(3) 108, 108 (4) 154, 162

85. Which of the following has fractions in the ascending order?

- (1) $\frac{2}{3}, \frac{3}{5}, \frac{7}{9}, \frac{9}{11}, \frac{8}{9}$ (2)

- (3) (4)

$$\frac{2}{3} + \frac{97}{113} + \frac{72}{93} + \frac{89}{5} + \sqrt{108} + \sqrt{154 + \sqrt{225}}$$

86. Evaluate

- (1) 2 (2) 4 (3) 6 (4) 8

87. $2 - [2 - \{2 - 2(2 + 2)\}] = ?$

- (1) -4 (2) 4 (3) 6 (4) -6

Vidushi and Sanya distribute `100 each in charity. Vidushi distributes money to 5 more people than Sanya and Sanya gives each `1 more than Vidushi. How many people are recipients of the charity ?

- (1) 45 (2) 60 (3) 90 (4) 10.0

89. The value of

- (1) 4 (2) 6 (3) 8 (4) 10

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90. The least number of 4 digits which is a perfect square is :
- (1) 1000 (2) 1016 (3) 1024 (4) 1036

91. The average of first five multiples of 3 is :
- (1) 3 (2) 9 (3) 12' (4) 15

The average age of students of a class is 15.8 years. The average age of boys in the class is 16.4 years and that of girls is 15.4 years. The ratio of the number of boys to the number of girls in the class is :

- (1) 1 : 2 (2) 2 : 3 (3) 3 : 4 (4) 3 : 5
93. The difference between a number and its three-fifth is 50. What is the number?
- (1) 75 (2) 100 (3) 125 (4) 150

The product of two numbers is 120 and the sum of their squares is 289. The sum of the number is:

- (1) 20 (2) 23 (3) 169 (4) 64
- In 10 years, A will be twice as old as B was 10 years ago. If A is now 9 years older than B, the present age of B is :
- (1) 19 years (2) 29 years (3) 39 years (4) 49 years
96. If $2^{n+4} - 2^{n+2} = 3$, then n is equal to:
- (1) 0 (2) 2 (3) -1 (4) -2

97. $\frac{x^a}{x^b} \cdot \frac{x^{(a+b)}}{x^c} \cdot \frac{x^b}{x^c} \cdot \frac{x^c}{x^a} = ?$

- (1) 0 (2) abc (3) x^{a+b+c} (4) 1
98. 88% of 370 + 24% of 210 - ? = 118
- (1) 256 (2) 258 (3) 268 (4) 358

In an examination, 35% candidates failed in one subject and 42% failed in another subject while 15% failed in both the subjects. If 2500 candidates appeared at the examination, how many passed in either subject but not in both?

- (1) 325 (2) 1175 (3) 2125 (4) 2275

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100. Jan 1, 2007 was Monday. What day of the week lies on Jan 1, 2008 ?

- (1) Monday (2) Tuesday (3) Wednesday (4) Sunday

Directions (Questions 101 to 105) :

A school has four section A, B, C, D of class IX students. The results of half-yearly and annual examinations are shown in the table given below answer the questions based on this table

Result	No. of Students			
	A	B	C	D
Students failed in both exams	28	23	17	27
Students failed in half yearly but passed in Annual exams	14	12	8	13
Students passed in half yearly but failed in Annual exam	6	17	9	15
Students passed in both exams	64	55	46	76

101. How many students are there in class IX in the school?

- (1) 336 (2) 189 (3) 286 (4) 430

102. Which section has the minimum failure rate in half - yearly examination?

- (1) A (2) B (3) C (4) D

103. Which section has the maximum success rate in annual examination?

- (1) A (2) B (3) C (4) D

104. Which section has the maximum pass percentage in at least one of the two examinations?

- (1) A (2) D (3) B (4) C

105. How many students have passed at least one exam in Section C ?

- (1) 63 (2) 73 (3) 83 (4) 93

A, B, C hired a car for `520 and used it for 7, 8, 11 hours respectively. Hire charges paid by B were:

- (1) `140 (2) `160 (3) `180 (4) `220

107. If a quarter Kg of potato costs 60 paise, how many paise will 200 gm cost?

- (1) 48 paise (2) 54 paise (3) 56 paise (4) 72 paise

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2 men and 7 boys can do a piece of work in 14 days; 3 men and 8 boys can do the same in 11 days. Then 8 men and 6 boys can do three times the amount of this work in

- (1) 18 days (2) 21 days (3) 24 days (4) 30 days

A tap can fill a tank in 6 hours after half the tank is filled, three more similar taps are opened. What is the total time taken to fill the tank completely?

- (1) 3 hours 15 min (2) 3 hours 45 min
(3) 4 hours (4) 4 hours 15 min

A man in a train notices that he can count 21 telephone posts in 1 minute. If they are known to be 50 metres apart, then at what speed is the train travelling?

- (1) 55 km/hr (2) 57 km/hr (3) 60 km/hr (4) 63 km/hr

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

- (1) 3 : 2 (2) 3 : 4 (3) 3 : 5 (4) 4 : 5

112. If $\log x + \log y = \log (x + y)$, then

- (1) $x = y$ (2) $xy = 1$ (3) $y = \frac{x-1}{x}$ (4) $y = \frac{x}{x-1}$

The length of a room is 5.5 m and width is 3.75 m. Find the cost of paving the floor by slabs at the rate of ₹800 per square metre.

- (1) ₹15,000 (2) ₹5,550 (3) ₹15,600 (4) ₹16,500

114. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through:

- (1) 145° (2) 150° (3) 155° (4) 160°

115. The cost price of a ₹100 stock at 4% discount, when brokerage is % is :

- (1) ₹95.75 (2) ₹96 (3) ₹96.25 (4) ₹104.25

116. In how many ways can the letters of the word "APPLE" be arranged?

- (1) 720 (2) 120 (3) 60 (4) 180

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A man and his wife appear in an interview for two vacancies in the same post. The probability of husband's selection is $\frac{1}{7}$ and the probability of wife's selection is $\frac{1}{5}$. What is the probability that only one of them is selected?

- (1) $\frac{4}{5}$ (2) $\frac{2}{7}$ (3) $\frac{8}{15}$ (4) $\frac{4}{7}$

From a point P on a level ground, the angle of elevation of the top of a tower is 30° . If the tower is 100 m high, the distance of point P from the foot of the tower is :

- (1) 149 m (2) 156 m (3) 173 m (4) 200 m

119. If the volumes of two cubes are in the ratio 27 : 1, the ratio of their sides is :

- (1) 1 : 3 (2) 1 : 27 (3) 3 : 1 (4) 27 : 1

120. Evaluate $36 \log_6^4$:

- (1) 0 (2) 1 (3) 4 (4) 16

121. When the interest (R) is compounded half - yearly, the amount (A) is :

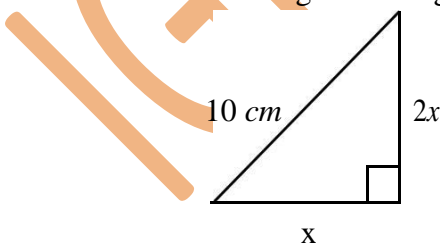
- (1) (2)
(3) (4)

$$A = P \left(1 + \frac{R}{100} \right)^n$$

The speed of a boat in still water is 15 km/hr and the rate of current is 3 km/hr. The distance travelled downstream in 12 minutes is :

- (1) 1.2 km (2) 1.8 km (3) 2.4 km (4) 3.6 km

123. The area of the given triangle is :



- (1) 20 cm^2 (2) (3) 40 cm^2 (4) 50 cm^2

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If a square and a rhombus stand on the same base, then the ratio of the areas of the square and the rhombus is :

- (1) > 1 (2) $= 1$ (3) $= \frac{1}{2}$ (4) $= \frac{1}{4}$

125. If $\left(\frac{-}{4}\right)\left(\frac{11}{-}\right) = 3^{-}$, then $x = ?$

- (1) 1 (2) 2 (3) 3 (4) 4

126. A number of two digits has 3 for its unit's digit and the sum of digits is $\frac{1}{7}$ of the number itself. The number is :

- (1) 43 (2) 53 (3) 63 (4) 73

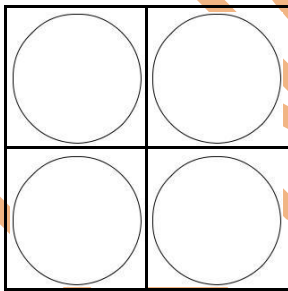
127. The value of $\sqrt{\frac{0.16}{0.4}}$ is:

- (1) 0.02 (2) 0.2 (3) 0.63 (4) 2

128. $\frac{13^3+7^3}{13^2+7^2} = 20$

- (1) 6 (2) 20 (3) 91 (4) 120

129.



Four equal sized maximum circular plates are cut off from a square paper sheet of area 784 cm^2 . The circumference of each plate is :

- (1) 22 cm (2) 44 cm (3) 66 cm (4) 88 cm

130. If $2 * 3 = \sqrt{13}$ and $3 * 4 = 5$ then value of $5 * 12$

- (1) $\sqrt{17}$ (2) $\sqrt{19}$ (3) 12 (4) 13

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TEST - IV REASONING

Directions (Questions 131-132) :

Find the missing term in each of the following series.

131. 1, 6, 15, ? 45, 66, 91

- (1) 25 (2) 26 (3) 27 (4) 28

132. 10,000, 11,000, 9,900, 10,890, 9,801 ?

- (1) 10, 241 (2) 10, 423 (3) 10, 781 (4) 10, 929

133. Find the next term in the series:

BMO, EOQ, HQS ?

- (1) KSU (2) LMN (3) SOV (4) SOW

Which term will replace the question mark in the series: ABD, DGK, HMS, MTB, SBL ?

- (1) ZKU (2) ZKW (3) ZAB (4) XKW

Choose an alternative to show the relationship as the words of the given pair bear: Wimbledon trophy: Tennis :: Walker's cup: ?

- (1) Hockey (2) Polo (3) Golf (4) Wrestling

Choose one number which is similar to the number in the following set: (992, 733, 845, 632)

- (1) 114 (2) 326 (3) 425 (4) 947

Choose that set of numbers from the four alternatives, that is similar to the given set: (2, 4, 16)

- (1) (2, 7, 8), (2) (2, 9, 16) (3) (3, 21, 24), (4) (4, 16, 18)

138. Choose the group of letters which is different from others:

- (1) BCD (2) KMN (3) QRS (4) GHI

In a certain code language RUSTICATE is written as QTTUIDBSD. How would STATISTIC be written in that code:

- (1) RSBUJTUHB (2) RSBITUHB (3) RSBUIRSJD (4) TUBUITUMB

In a certain language MADRAS is coded as NBESBT, how is BOMBAY coded in that language:

- (1) CPNCBX (2) CPNCBZ (3) CPOCBZ (4) CQOCBZ

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Directions (Questions 141 to 145) :

In each of the questions given below, a group of digits followed by four combinations of letter codes labelled (1), (2), (3) and (4) are given. You have to find out which of the combinations is correct coded form of the group of digits as per the following codes and conditions.

Digit	9	3	2	8	1	5	7	6	0
Letter code	M	E	B	N	K	R	H	T	J

Conditions :

If the first digit is an odd number and the last digit is an even number both are to be coded as 'X'.

If the first digit is an even number and the last digit is an odd number, both are to be coded as 'Y'.

If either the first or the last digit is 0, then 0 is to be coded as 'W'.

141. 328469

- (1) YBNDTM (2) XBNDTX (3) EBNDTM (4) YBNDTY

142. 631420

- (1) TEKBDW (2) TEKDBW (3) TEKDBJ (4) TKDEBW

143. 640598

- (1) TDJRMN (2) TDWRMN (3) XDJRMN (4) TDJRMY

144. 893561

- (1) XMERTY (2) NMERTK (3) XMERTX (4) YMERTY

145. 743506

- (1) XDERWT (2) HDERWT (3) XDERJX (4) YDERJY

If 'pen is table', 'table is fan, fan is chair' and 'chair is roof' on which of the following a person will sit.

- (1) Fan (2) Chair (3) Roof (4) Table

Directions (Question 147 to 148) :

In a certain code language

'pit dar na' means you are good

'dar tok pa' means good and bad

'tim na iok' means they are bad

147. In that language which word stands for 'they' ?

- (1) na (2) tok (3) tim (4) pit

148. To find the answer to the above question, which of the given statement can't be dispensed with?

- (1) Only A (2) A or B (3) A or C (4) none of the above

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Directions (Questions 149 to 153) :

Read the information given below and answer the questions that follows:

There are six persons A, B, C, D, E and F. C is the sister of F. B is the brother of E's husband. D is the father of A and grandfather of F. There are two fathers, three brothers and a mother in the group.

149. Who is the mother ?

- (1) A (2) B (3) C (4) D

150. Who is E's husband ?

- (1) B (2) C (3) A (4) F

151. How many male members are there in the group ?

- (1) One (2) Two (3) Three (4) Four

152. How is F related to E ?

- (1) Uncle (2) Husband (3) Son (4) Daughter

153. Which of the following is a group of brothers ?

- (1) ABF (2) ABD (3) BFC (4) BDF

Directions (Questions 154 to 158):

Study the following information carefully and answer the questions given below.

Seven boys A, D, Y, U, P, Q and J live in three different buildings - Ashiana, Top view and Ridge. Each of them is flying kites of different colours i.e. red, green, blue, white, black, yellow and pink, not necessarily in that order. Not more than three or less than two stay in any of the buildings. Q is flying a pink kite and lives in the same building as only J, i.e. Ashiana. Y is flying a black kite and does not live in Ridge building. U does not live in the same building as A or P and is flying a yellow kite. D lives in Ridge building with only one more person and is flying a green kite. None in the Top view building flies a white kite. P does not fly a blue kite.

154. Who lives in Ridge building ?

- (1) D, U (2) D, A, P (3) Y, A, P (4) A, P

155. Who is flying the blue kite ?

- (1) A (2) J (3) P (4) Data inadequate

156. Who flies the red kite ?

- (1) A (2) J (3) P (4) Data inadequate

157. Who stays in Top view building ?

- (1) Y, J, P (2) A, P (3) A, P, D (4) None of these

158. What coloured kite is J flying ?

- (1) Blue (2) White (3) Black (4) Data inadequate

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Directions (Questions 159 to 163) :

Study the given information carefully and answer the questions that follows:

Eleven students A, B, C, D, E, F, G, H, I, J and K are sitting in the first row of the class facing the teacher.

D who is to the immediate of F is second to the right of C

A is second to the right of E who is at one of the ends

J is the immediate neighbour of A and B and third to the left of G

H is to the immediate left of D and third to the right of I

159. Who is sitting in the middle of the row?

- (1) B (2) C (3) G (4) I

160. Which of the following group of friends is sitting to the right of G ?

- (1) CHDE (2) CHDF (3) IBJA (4) ICHDF

161. Which of the following statement is true in the context of the above sitting arrangement?

- (1) C is sitting between A and B (2) D is sitting between E and F
(3) B is sitting between J and I (4) None of these

162. In the above sitting arrangement which of the given statement is superfluous?

- (1) (i) (2) (ii) (3) (iii) (4) none is superfluous

If E and D, C and B, A and Hand K and F interchange their positions which of the following pairs of students is sitting at the ends?

- (1) D and E (2) E and F (3) D and K (4) K and F

Directions (Questions 164 to 168) :

Read the following information and answer the questions given:

A, B, C, D, E and F are six students in a class

B and C are shorter than F but heavier than A

D is heavier than 6 and taller than C

E is shorter than D but taller than F

F is heavier than D

A is shorter than E but taller than F.

164. Who among them is the tallest?

- (1) A (2) B (3) C (4) D

165. Who is third from the top when they are arranged in descending order of heights?

- (1) A (2) B (3) C (4) D

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166. Which of the following groups of friends is shorter than A ?

- (1) B, C only (2) D, B, C only (3) E, B, C only (4) F, B, C only

167. Who among them is the lightest?

- (1) A (2) B (3) B or C (4) Data inadequate

Which of the following statement is true for F as regards height and weight?

- He is lighter than E and taller than E
- He is heavier than B and taller than E
- He is heavier than B and C but shorter than D
- He is lighter than E and also shorter than E

Directions (Questions 169 to 173) :

Read the following information and answer the questions that follow:

Six lectures A, B, C, D, E and F are to be organised in a span of seven days from Sunday to Saturday, only one lecture on each day in accordance with the following:

- A should not be organised on Thursday
- C should be organised immediately after F
- There should be a gap of two days between E and D
- One day there would be no lecture (Friday is not that day), just before that day D will be organised
- B should be organised on Tuesday and should not be followed by D

169. On which day there is no lecture?

- (1) Monday (2) Friday (3) Sunday (4) None of these

170. How many lectures are organised between C and D ?

- (1) None (2) One (3) Two (4) Three

171. Which day will the lecture F be organised ?

- (1) Thursday (2) Friday (3) Saturday (4) None of these

172. Which of the following is the last lecture in the series?

- (1) A (2) B (3) C (4) Sunday

Which of the following information is not required in finding the complete sequence of organisation of lectures?

- (1) (i) only (2) (ii) only (3) (v) only (4) All are required

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Directions (Questions 174 to 178) :

These questions are based on the following information.

From time to time a Planning Committees are to be appointed each consisting of exactly three members. Eligible for appointment are three executives from finance - B, C and O and three executives from operations E, F and M.

Any given committee is subjected to the following restrictions on appointments:

At least one member must be from finance and at least one member must be from operations.

If B is appointed, C cannot be appointed

Neither D nor F can be appointed unless the other is also appointed

If E is appointed, M must be appointed

174. Which of the following is an acceptable committee?

- (1) E, F and M (2) D, E and F (3) D, F and M (4) B, D and M

175. If appointees from operations are in majority in a committee, that committee must include:

- (1) M (2) F (3) E (4) C

If the restrictions on appointment apply also to a four member committee appointed from the same group of executives, which of the following will be true?

If B is appointed, M must also be appointed

If F is appointed, C must also be appointed

If C is appointed, E must also be appointed

None of the above will be true

If B is appointed to the same committee as M, which of the following will be true of that committee?

E is not a committee member

F is a committee member

Appointees from finance are in majority

Appointees from operations are in majority

If appointees from finance are in majority on a committee, that committee must include:

- (1) B (2) C (3) F (4) M

179. A man is facing west. He turns 45° in the clockwise direction and then another 180° in the same direction and then 270° in the anti clock wise direction. Which direction is he facing now?

- (1) South (2) North West (3) West (4) South West

One day Ravi left home and cycled 10 km southwards, turned right and cycled 5 km and turned right and cycled 10 km and turned left and cycled 10 km. How many kilometers will he have to cycle to reach his home straight.

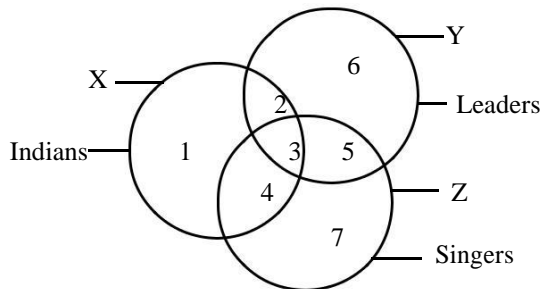
- (1) 10 Km (2) 15 Km (3) 20 Km (4) 25 Km

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Directions (Questions 181 to 185) :

Study the following figures carefully and answer the given questions:



181. Which region denotes Indian leaders who are not singers?
(1) 2 (2) 3 (3) 4 (4) 5
182. Which region denotes Indian leaders who are singers?
(1) 2 (2) 3 (3) 4 (4) 5
183. Which region represents leaders who are neither singers nor Indians?
(1) 2 (2) 3 (3) 6 (4) 7
184. Which region represents Indian singers who are not leaders?
(1) 1 (2) 2 (3) 3 (4) 4
185. Which region represents singers who are neither Indians nor leaders?
(1) 2 (2) 4 (3) 6 (4) 7

Directions (Questions 186 to 188) :

Read the following information to answer the questions given below.

A person is asked to put in a basket one apple when ordered 'One', one guava when ordered 'Two', one orange when ordered 'Three' and is asked to take out from the basket one apple and one guava both when ordered 'Four'.

The order sequence executed by the person is as follows:

1, 2, 3, 3, 2, 1, 4, 2, 3, 1, 4, 2, 2, 3, 3, 1, 4, 1, 1, 3, 2, 3, 4

186. How many fruits will be there in the basket at the end of the above order sequence?
(1) 10 (2) 11 (3) 12 (4) 13
187. How many guavas will be there in the basket at the end of the above order sequence?
(1) 1 (2) 2 (3) 3 (4) 4
188. How many apples will be there in the basket at the end of the above order sequence?
(1) 4 (2) 3 (3) 2 (4) 1

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Sam is ranked ninth from the top and thirty-eight from the bottom in a class. How many students are there in the class?

- (1) 45 (2) 46 (3) 47 (4) 48

190. Nitin ranks eighteenth in a class of 49 students. What is his rank from the last?

- (1) 18 (2) 19 (3) 31 (4) 32

Directions (Questions 191 to 195) :

Study the following information carefully and answer the questions given below:

Following are the eligibility criteria for applying for the post of officer in a Bank:

The candidate should be a graduate with at least 65% marks.

The candidate should have at least 60% marks in graduation if he has post graduation with at least 65% marks

The candidate should have at least 55% marks in graduation and at least 60% marks in post graduation if he holds a doctoral degree (Ph.D.)

(IV) The candidate should have at least 55% marks in both graduation and in post graduation if he has at least five years work experience after graduation

The candidate should have at least 60% marks in graduation if he has at least ten years work experience after graduation.

In each of the following questions details of one candidate are given. You have to find whether the candidate in each question is eligible under which of the above criteria. The candidate may be eligible under one or more criteria given above.

Mansi Roy has secured 65% marks in graduation and 50% in post graduation. She has been work-ing for ten years after completing her Ph. D.

- (1) I only (2) I and II only (3) I and III only (4) None of these

Samar Rastogi has secured 60% marks in Post graduation and has been working for the past five years since then. He has secured 55% marks in graduation.

- (1) Not eligible (2) II only (3) IV only (4) III and IV only

Deepak Sehgal has secured 65% marks in graduation and 55% marks in post graduation. He has been working for the last six years after his post graduation

- (1) I only (2) IV only (3) I and IV only (4) I, IV and V only

Ravi Gautam has been working for the past seven years after completing his Ph. D. He has secured 50% marks in graduation and 55% marks in post graduation.

- (1) Not eligible (2) III and IV only (3) IV only (4) V only

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Gargi Sen has secured 65% marks in both graduation and post graduation. She has been working for the last ten years after completing her Ph. D.

- | | |
|------------------------|------------------------|
| (1) I and II only | (2) I, II and III only |
| (3) II, III and V only | (4) None of these |

Directions (Questions 196 to 200) :

Read the following information and answer the questions given below.

A wooden cube is painted blue on all the four adjoining sides and green on the two opposite sides i.e. top and bottom. It is then cut at equal distances at right angles four times vertically (top to bottom) and two times horizontally (along the sides).

196. How many cubes will have one face painted only in blue?

- | | | | |
|-------|-------|-------|-------|
| (1) 1 | (2) 2 | (3) 3 | (4) 4 |
|-------|-------|-------|-------|

197. How many cubes will have one face painted only in green?

- | | | | |
|-------|-------|-------|-------|
| (1) 1 | (2) 2 | (3) 3 | (4) 4 |
|-------|-------|-------|-------|

198. How many cubes are formed in all ?

- | | | | |
|--------|--------|--------|--------|
| (1) 16 | (2) 24 | (3) 27 | (4) 32 |
|--------|--------|--------|--------|

199. How many cubes will have at least three sides painted?

- | | | | |
|--------|-------|-------|-------|
| (1) 12 | (2) 8 | (3) 6 | (4) 3 |
|--------|-------|-------|-------|

200. How many cubes will have no faces painted at all ?

- | | | | |
|-------|-------|-------|-------|
| (1) 1 | (2) 2 | (3) 3 | (4) 4 |
|-------|-------|-------|-------|