

STAFF SELECTION COMMISSION

MULTI – TASKING STAFF RECRUITMENT – MODEL PAPER

No. of Questions: 150

Maximum Marks: 150

Time: 2 Hours

GENERAL INTELLIGENCE

Directions (Q. 1 – 5): In each of the following questions, select the related letter/ word/ figure/ number from the given alternatives.

1. Football : 11 :: Water polo : ?

- 1) 4 2) 7 3) 9 4) 5

2. Tiger : India :: ? : Afghanistan

- 1) Dove 2) Eagle 3) Snow leopard 4) Deer

3. 7 : 5040 :: 8 : ?

- 1) 46230 2) 40320 3) 56470 4) 38420

4. Moccasin : Shoe :: ? : Snake

- 1) Alligator 2) Aspis 3) Waders 4) Loaf

5. CMFR : LGKN :: LGKN : ?

- 1) RTUP 2) CMFR 3) SAPJ 4) RBOK

Directions (Q. 6 – 8): Find the odd word/ letter/number from the given alternatives.

6. Find the odd one.

- 1) Charan Singh 2) Zail Singh 3) Morarji Desai 4) V.P. Singh

7. Find the odd one.

- 1) 923 2) 871 3) 1079 4) 1241

8. Find the odd one.

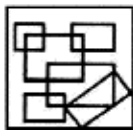
- 1) 2) 3) 4)

9. I am facing South. I turn right and walk 20 m. Then I turn right again and walk 10 m. I turn left and walk 10 m and then turning right walk 20 m. Then I turn right again and walk 60 m. In which direction am I from the starting point?

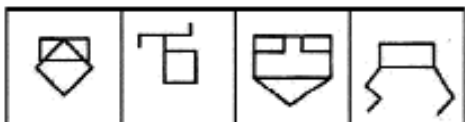
- 1) North 2) North-West 3) East 4) North-East

10. Find out the alternative figure which contains question figure as its part.

Question figure:

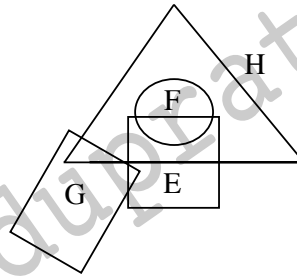


Answer figures:



- 1) 2) 3) 4)

11. In first 400 years how many times 29 th Feb had appeared?
 1) 97 2) 98 3) 99 4) 100
12. $X - Z$ means X is the mother of Z; $X \times Z$ means X is the father of Z and $X + Z$ means X is the daughter of Z.
 Then, for $M - N \times T + Q$, which of the following is not true?
 1) T is N's daughter 2) N is wife of Q
 3) M is mother-in-law of Q 4) Q is wife of N
13. The triangle stands for Hindi-speaking people, circle for French-speaking, square for English speaking and rectangle for German-speaking people. In the below diagram, which one of the following statements is not true?



- 1) German-speaking people cannot speak French
 2) No French-speaking people can speak German
 3) Some Hindi-speaking people can speak French, English and German as well
 4) Some French-speaking people can speak Hindi and English but not German
14. If $14 + 2 = 7$, then find the value of $\sqrt{5 + 5 + 5 + 5 + 5}$.
 1) 5 2) 0.024 3) 0.089 4) None

Directions (Q.15 – 16): In the given series, some letter/ number/ digit is missing. Choose the appropriate option.

15. 5, 3, 3, 5, 15, ?
 1) 62 2) 69 3) 46 4) 48
16. 4, 2, 2, 4, 14, ?
 1) 54 2) 64 3) 68 4) 52

17. **Statements:** All apples are brinjals.
 All brinjals are ladyfingers.
 All ladyfingers are oranges.
- Conclusions:** I. Some oranges are brinjals.
 II. All brinjals are apples.
 III. Some apples are oranges.
 IV. All ladyfingers are apples.

- 1) None follows 2) All follow
 3) Only I and III follows 4) Either I or III follows

Directions (Q.18 – 19): From the given options choose the missing number.

18.

3	2	2
6	20	4
12	25	64
6	10	?

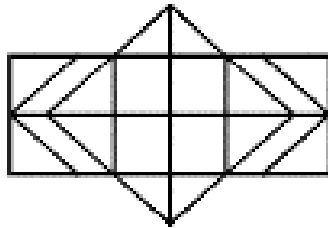
- 1) 6 2) 8 3) 10 4) 2

19.

13	12	17	6
6	9	13	4
12	14	9	5
21	?	22	8

- 1) 13 2) 17 3) 19 4) 15

20. How many rectangles and hexagons are there in the following figure?

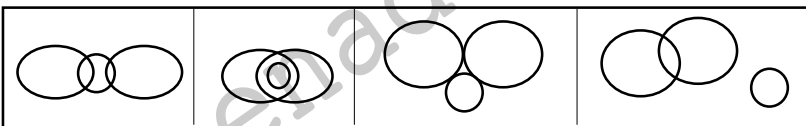


- 1) 8 rectangles, 3 hexagons 2) 15 rectangles, 3 hexagons
 3) 24 rectangles, 5 hexagons 4) 30 rectangles, 5 hexagons

21. A staff may claim Rs.15 for each km which he travels by taxi and Rs.5 for each km which he drives his own car. In one week if he claimed Rs.500 for travelling 80 km. How many kms did he travel by taxi?

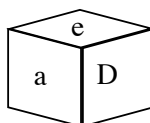
- 1) 10 2) 20 3) 30 4) 40

22. If animals that live on land and the animals that live in water are represented by two big circles and animals that live both in water and on land are represented by small circle. How the combination of these three can best be represented?



- 1) 2) 3) 4)

23. In a die a, b, c and d are written on the adjacent faces in a clockwise order, with e and f as the top and bottom faces respectively. When c is at the top, what will be at the bottom?



- 1) a 2) b 3) c 4) e

24. First bunch of bananas has $\frac{1}{4}$ again as many bananas as a second bunch. If the second bunch has 3 bananas fewer than the first bunch, then the number of bananas in the first bunch are
 1) 9 2) 10 3) 12 4) 15
25. A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of letters as in two matrices given below. The columns and rows of Matrix-I are numbered from 0 to 4 and that of Matrix- II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column. E.g., 'B' can be represented by 01, 31 etc., and 'P' can be represented by 67, 75 etc. Similarly, you have to identify the set for the word 'HIGH'.

Matrix - I

	0	1	2	3	4
0	A	B	H	G	E
1	G	H	B	A	E
2	D	A	G	H	E
3	G	B	H	A	E
4	H	G	A	E	B

Matrix - II

	5	6	7	8	9
5	P	Q	R	I	H
6	Q	I	P	R	H
7	P	H	R	I	Q
8	Q	I	P	R	H
9	H	P	I	Q	R

- 1) 02, 67, 76, 24 2) 23, 66, 41, 76
 3) 40, 66, 69, 03 4) 23, 58, 69, 42

QUANTITATIVE APTITUDE

26. The length, breadth and height of a room are 16 m, 11 m and 5 m respectively, including a door measures $2\text{ m} \times 1\text{ m}$ and four windows measures $1\text{ m} \times 0.75\text{ m}$. What is the total cost of painting at the rate of $\text{₹} 2.50/\text{m}^2$ excluding door and windows?
 1) 626.5 2) 650 3) 662.5 4) 652.6
27. A person saw an eagle in east at an angle of elevation of 30° . In 24 seconds the eagle flew from east to west and then angle of elevation changed to 60° . If the eagle is flying at a height of 288 m, then find the speed of the eagle.
 (1) $8\sqrt{3}$ m/sec 2) 16 m/sec 3) $16\sqrt{3}$ m/sec 4) 48 m/sec
28. In an election two candidates participated and 10% of the voters did not vote and out of total votes polled, 2000 votes were declared invalid. The winner gets 52% of the total votes on voting list and wins by 13,200 votes. Find the no. of votes polled in favour of losing candidate?
 1) 30400 2) 32600 3) 28400 4) 26200
29. The difference between the SI and CI on Rs.1250 for 3 years is 1.51 and the compound interest obtained on the same sum at the same rate is Rs.76.51. Find the annual rate of interest.
 1) 2% 2) 3% 3) 4% 4) 5%
30. What will be the minimum value of $4\sin^2\theta + 6\cos^2\theta$.
 1) 2 2) 4 3) 6 4) 0
31. Nikita bought 30 kg of wheat at the rate of Rs.9.50 per kg and 40 kg of wheat at the rate of Rs.8.50 per kg and mixed them. She sold the mixture at the rate of Rs.8.90 per kg. Her total profit or loss in the transaction was
 1) Rs.2 loss 2) Rs.2 profit 3) Rs.7 loss 4) Rs.7 profit

32. Milk and water are mixed in vessel A in the ratio of 5 : 2 and in vessel B in the ratio of 8 : 5. In what ratio should quantities be taken from the two vessels so as to form a mixture in which milk and water will be in the ratio of 9 : 4?
- 1) 7 : 2 2) 5 : 2 3) 2 : 7 4) 2 : 5
33. If $4x = \sec \theta$ and $\frac{4}{x} = \tan \theta$, then $8\left(x^2 - \frac{1}{x^2}\right)$ is equals to-
- 1) $\frac{1}{2}$ 2) $\frac{1}{4}$ 3) $\frac{1}{8}$ 4) $\frac{1}{16}$
34. A pipe can fill a tank in 12 minutes and an other pipe in 15 minutes, but a third pipe can empty it in 5 minutes. The first two pipes are kept opened for 4 minutes in the beginning and then the third pipe is also opened. In what time will the cistern emptied?
- 1) 25 min 2) 20 min 3) 35 min 4) 55 min
35. The cost price of two articles is Rs.500. First article is sold at a profit of 20% and second at a loss of 20%. If the selling price of both articles is same, then find the selling price of both articles.
- 1) Rs.480 2) Rs.450 3) Rs.490 4) Rs.470
36. If θ be acute angle and $\tan(4\theta - 50^\circ) = \cot(50^\circ - \theta)$, then what is the value of θ in degree?
- 1) 20° 2) 40° 3) 50° 4) 30°
37. Two angles of a triangle are $\frac{1}{2}$ radian and $\frac{1}{3}$ radian. Find the value of third angle in degree.
(Take $\pi = \frac{22}{7}$)
- 1) 132° 2) $132 \frac{3^\circ}{11}$ 3) $132 \frac{1^\circ}{11}$ 4) 140°
38. Find the surface area of the right pyramid formed on a square base of side 10 cm, if the height of the pyramid is 12 cm.
- 1) 206 cm 2) 240 cm 3) 260 cm 4) 278 cm
39. Two persons A and B walk from P to Q, which are at a distance of 21 km respectively. B reaches Q returns immediately and meets A at R. Find the distance from P To R.
- 1) 16 km 2) 19 km 3) 18 km 4) 15 km
41. A well is dug 10 m deep with base radius 14 cm and the earth taken is spread around it in the form of a mateform. Find the height of the platform so formed.
- 1) $\frac{3}{10}$ m 2) $11 \frac{2}{3}$ m 3) $\frac{10}{3}$ m 4) $\frac{2}{3}$ m
42. If $x = a(b - c)$, $y = b(c - a)$ and $z = c(a - b)$, then $\left(\frac{x}{a}\right)^3 + \left(\frac{y}{b}\right)^3 + \left(\frac{z}{c}\right)^3 = ?$
- 1) $3xyz abc$ 2) $\frac{xyz}{abc}$ 3) $\frac{xyz}{3abc}$ 4) $\frac{3xyz}{abc}$
43. If $A = \tan 11^\circ \cdot \tan 29^\circ$, $B = 2 \cot 61^\circ \cdot \cot 79^\circ$, then-
- 1) $A = 2B$ 2) $2A = -B$ 3) $A = -2B$ 4) $2A = B$
44. If $a = 1005$, $b = 1009$, $c = 1012$, then find the value of $\frac{a^3 + b^3 + c^3 - 3abc}{(a + b + c)}$
- 1) 35 2) 351 3) 37 4) 371
45. If $x^2 + y^2 + z^2 + 2 = 2(y - x)$, then what will be the value of $3x + 5y + 6z$?
- 1) 2 2) 0 3) 1 4

Directions (Q.46 – 50): Study the following table carefully to answer these questions.

Number of students enrolled in five colleges over the years

College → Year ↓	A	B	C	D	E
2007	550	430	600	420	300
2008	400	450	300	620	520
2009	1000	900	700	650	520
2010	850	450	720	650	420
2011	800	650	850	420	850

46. In the year 2009, 80% of the students enrolled in College A appeared in a competitive examination. Out of these, 60% students passed. How many students passed the examination?
1) 320 2) 455 3) 535 4) 480
47. In 2008, from all the colleges together overall 70% of the students got enrolled for computer course. How many students got enrolled for the course?
1) 1702 2) 1593 3) 1603 4) 1105
48. What is the ratio of the average number of students enrolled with all the colleges together during the year 2009 to that during 2010?
1) 375 : 364 2) 364 : 365 3) 377 : 309 4) 389 : 367
49. The number of students enrolled in College A in the year 2009 is approximately what percent more than the number of students enrolled in College B in the year 2011?
1) 65% 2) 70% 3) 35% 4) 54%
50. In 2010, from all colleges together 10% of the students enrolled went abroad. How many students went abroad?
1) 409 2) 429 3) 609 4) 309

ENGLISH LANGUAGE

Directions (Q.51 – 55): In these questions some part of the sentences have errors and some are correct. Find out which part of a sentence has an error. If a sentence is free from error, mark (4) in the Answer Sheet.

51. The wound will kill him (1)/ were it not (2)/ for his great strength. (3)/ No error (4).
52. His actions were commended (1)/ neither by his friends (2)/ or by his enemies. (3)/ No error.(4)
53. It is no use (1)/ finding fault (2)/ at everything. (3)/ No error. (4)
54. I think (1)/ she sang very well, (2)/ isn't it? (3)/ No error.(4)
55. Not only the bandit robbed the person (1)/ of his purse (2)/ but also wounded him. (3)/ No error (4)

Directions (Q. 56 – 60): In these questions, sentences given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four.

56. It was hot that day and the cable suffered the brunt of the heat.
1) acceptably 2) uncompromisingly 3) unflinchingly 4) unbelievably
57. What he has done admits no excuse.
1) with 2) of 3) for 4) in

58. She yelled him and he hastily retreated, went out and yelled help.
1) to, for 2) at, for 3) at, at 4) against, at

59. Several members from voting.
1) restrained 2) refused 3) abstained 4) retained

60. He the policeman to help him catch the thief, but the policeman pretended not to hear.
1) asked 2) threatened 3) pleaded 4) requested

Directions (Q.61 – 63): In these questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

61. LASSITUDE
1) Beneficial 2) Injurious 3) Useful 4) Weariness

62. SARDONIC
1) Ironical 2) Productive 3) Stubborn 4) Beneficial

63. JOCOSE
1) Praiseworthy 2) Readable 3) Humorous 4) False

Directions (Q.64 – 66): In these questions, choose the word opposite in meaning to the given word.

64. INTOLERABLE
1) Tiring 2) Bearable 3) Disappointment 4) Gloomy

65. LATENT
1) Ordinary 2) Concealed 3) Obvious 4) Hidden

66. RUTHLESS
1) Compassionate 2) Wanton 3) Generous 4) Malicious

Directions (Q.67 – 68): In these questions, four words are given in each question, out of which only one word is spelt correctly/ wrongly out of them. Find the word spelt correct/ wrong and mark your answer in the Answer Sheet.

67. 1) Erudite 2) Unknown 3) Sluggish 4) Stedfast

68. 1) Grateful 2) Greatfull 3) Gratefull 4) Greatful

Directions (Q.69 – 74): In these questions, four alternatives are given for the Idiom/ Phrase in **bold**. Choose the alternative which best expresses the meaning of the Idiom/ Phrase and mark it in the Answer Sheet.

69. We could not hold the British army **at bay for long**.
1) quarrel with 2) upset 3) prevent 4) cheat

70. When the police arrived the rioters **ran helter skelter**.
1) here and there 2) unknowingly
3) In an arranged manner 4) replaced

71. Congress needs **live-wire** political leaders like Modi who can put the party on the right track.
1) a soft corner person 2) an artistic person
3) energetic 4) incomprehensible

72. He **made light of** his father advice.
1) followed readily 2) disregarded
3) treated lightly 4) rejected

73. The **long and short** of the SSC's notification was that examination would be held in August.
1) detail 2) purpose 3) in brief 4) subject

74. A **mealy-mouthed** sycophant is always dangerous.
1) a weak person 2) soft spoken 3) a man of qualities 4) literary person

Directions (Q.75 – 82): In these questions, a sentence/ a part of the sentence is underlined. Below are given alternatives to the underlined part at (1), (2), (3) which may improve the sentence. Choose the correct alternative. In case no improvement is needed your answer is (4). Mark your answer in the Answer Sheet.

75. I am sorry to losing my temper this morning.
1) about 2) of 3) for 4) No improvement

76. I am keen for building a career in publication.
1) at 2) to 3) on 4) No improvement

77. Rahul is having a lot of coins.
1) has a lot of 2) has lot of 3) has lots of 4) No improvement

78. Purushottam cut a sad figure in his performance.
1) cut a sorry face 2) cut a sorry figure
3) made a sorry figure 4) No improvement

79. No sooner I saw the snake, than I ran away.
1) No sooner I had seen 2) No sooner I see
3) As soon as I saw 4) No sooner did I see

80. Her every answers in examination were correct.
1) Her all answers 2) All of her answers
3) All her answers 4) No improvement

81. Had you been told me about your problem, I would have helped you.
1) If you would have told 2) If you have told
3) Had you told 4) No improvement

82. All womans doctors are on leave today.
1) Women doctor 2) Women doctors 3) Woman doctors 4) No improvement

Directions (Q.83 – 90): In the following questions, out of the four alternatives, choose the one which can be substituted for the given sentence.

83. A person who is made to bear the blame for the mistakes of others.
1) Innocent 2) Scapegoat 3) Ignoramus 4) Nincompoop

84. A person claiming to be superior in culture and intellect to others.
1) Intellectual 2) Aristocrat 3) Elite 4) Highbrow

85. One filled with excessive and mistaken enthusiasm in cause.
1) Martyr 2) Pedant 3) Fanatic 4) Patriot

86. To bring peace and end violence.
1) Soothe 2) Harmonise 3) Pacify 4) Tranquilize

87. Relationship by blood or birth.
1) Parentage 2) Affiliation 3) Consanguinity 4) Nepotism
88. A story in which ideas are symbolised as people.
1) Allegory 2) Tale 3) Anecdote 4) Parable
89. The cessation of warfare before a treaty is signed.
1) Affidavit 2) Agreement 3) Armistice 4) Amnesty
90. Acutely affected by external impressions.
1) Ingenious 2) Sensitive 3) Credulous 4) Impressionable

Directions (Q. 91 – 95): Read the passage carefully and choose the best answer to each question out of the four alternatives.

If this is so, if to read a book as it should be read calls for the rarest qualities of imagination, insight and judgement. You may perhaps conclude that literature is a very complex art and that it is unlikely that we shall be able, even after a life time of reading, to make any valuable contribution to its criticism. We must remain readers, we shall not put on the further glory that belongs to those rare beings who are also critics.

91. What are the qualities required for reading a book?
1) Proper judgement 2) Imagination
3) Imagination, insight and judgement 4) None of the above
92. According to the author
1) It is not possible for most of us to contribute anything for criticism
2) It is possible to do something
3) It is not even easy to understand literature
4) Most of the people can contribute to criticism of literature
93. The author feels that we cannot have the greatness of
1) writers 2) critics 3) publishers 4) readers
94. What is the opinion of most of the people about literature?
1) That it is not an easy one to contribute anything
2) That it is to some extent difficult to understand
3) That no contribution is necessary for literature
4) That it is very easy to understand
95. The antonym of 'conclude' is
1) commence 2) exclude 3) end 4) include

Directions (Q. 96 – 100): Read the passage carefully and choose the best answer to each question out of the four alternatives.

With India's accelerating growth rate, its air and water pollution will grow even faster. Cities like Delhi and Bengaluru once known for open spaces and gardens, growth and job creation rapidly turned them into polluted urban nightmares. Now, the question is: can cars and clean air co- exist? Yes, they can, even with diesel engines if decision makers give technology and logic a chance.

To combat pollution, India needs to quickly upgrade to Euro-6 emission norms across the country. The technology is proven and available. But refiners want at least four years to upgrade, and some car makers

want eight. The current approach seems to ignore emission norms. The strategy is to shoot a rabbit to make a mark as a hunter, even if lions are prowling menacingly. The Delhi government has ordered half the cars to be off the roads on alternate days, but did not ban trucks which are overloaded and have kerosene mixed in their tanks, repaired on the roadside, often with spurious parts, and burn adulterated fuel making them dramatically more polluting. But then, shooting the rabbit is easier. Authorities must ask what made people buy diesel cars. For decades, governments have kept diesel artificially cheap and prescribed lenient emission norms. So is it the buyer's fault for opting for diesel? Ministers and judges should also remember that old cars and diesel taxis won't disappear. Banning them in Delhi will shift the cars and pollution to other districts.

96. What is the reason of Delhi and Bengaluru turning into polluted urban nightmares?

- 1) Deforestation
- 2) Growth and job creation
- 3) Relentless increase in the number of diesel cars
- 4) Failure of the local bodies responsible for pollution control

97. In order to combat pollution, India needs to

- 1) Make a regulatory framework
- 2) Reduce the number of diesel vehicles on roads
- 3) Upgrade to Euro-6 emission norms across the country
- 4) Adopt the policy of 'one family one car'.

98. What is the meaning of the phrase 'shooting the rabbit is easier'?

- 1) It is not difficult to eradicate the menace of pollution completely.
- 2) It is easier to punish the weaker ones.
- 3) It is easier to punish the small animals.
- 4) It is easier to punish wrong doers.

99. Find the incorrect statement on the basis of the passage.

- 1) Trucks are more polluting than cars.
- 2) Some car makers want eight years to upgrade their cars.
- 3) Banning old cars in Delhi will ultimately pollute other cities.
- 4) Under no condition cars and clean air can coexist.

100. Who is the real culprit behind the increased number of diesel cars?

- 1) The government
- 2) The buyer
- 3) The car manufacturer
- 4) Other than the given options

GENERAL AWARENESS

101. The island of corsica is associated with

- 1) Mussolini
- 2) Hittler
- 3) Napoleon Bonaparte
- 4) Winstorn Churchil

102. Which among the following inscription is known as Prayag Prashasti?

- 1) Mehroli Inscription
- 2) Allahabad Pillar Inscription
- 3) Hathigumpha Inscription
- 4) Aihole Inscription

103. Philadelphia is famous for
1) Ship-building 2) Silk textiles 3) Locomotives 4) Dairy industry
104. The island of Honshu in Japan is famous for
1) Coal 2) Iron ore 3) Oil 4) Diamonds
105. Fibrinogen is converted into fibrin by
1) thrombin 2) prothormbin 3) thrombokinase 4) thromboplastin
106. Which of the following are used to prepare the main storage (starch) of food in plants?
1) Carbon dioxide and oxygen 2) Water and oxygen
3) Carbon dioxide and nitrogen 4) Carbon dioxide and water
107. Presence of excess fluorine in water causes
1) Fluorosis 2) Dental Cavity 3) Tooth Decay 4) Respiratory disease
108. Which one among the following books is centred around 'environment' ?
1) The Late, Great Planet Earth 2) Silent Spring
3) Here I Stand 4) And Then One Day
109. Kudankulam Project is located in which state?
1) Karnataka 2) Tamil Nadu 3) Telangana 4) Kerala
110. Which was the first National News Agency of free India?
1) The Indian Review 2) The free Press of India
3) The Associated Press of India 4) None of these
111. An indirect instrument of monetary policy is -
1) Bank rate 2) Cash reserve ratio
3) Oper market operations 4) Statutory liquidity ratio
112. Which of the following countries has become the first country in the world to receive funds from United Nations for its fast growing Solar Home System ?
1) Switzerland 2) Burma 3) Bangladesh 4) Afghanistan
113. Which type of Vitamin deficiency a person will face who develops a completely carnivorous life style.
1) Thiamine 2) Niacin 3) Cobalamin 4) Vitamin-C
114. The directive principles of state policy of the Indian Constitution is an idea borrowed from the Constitution of :
1) Irish Constitution 2) UK Constitution
3) US Constitution 4) French Constitution
115. Viruses that infect bacteria are called
1) Basidiospores 2) Bacteriophages 3) Basal body 4) Basophils
116. Comptroller and Auditor General of India is not responsible for
1) Regulating Reserve Bank of India
2) Accounting of State & UTs, and Auditing of all Government Institution.
3) Making payments to the States
4) Issue of money from the Consolidated Fund

117. In which of the following year the Gandhi- Irwin Pact was signed ?
1) 1931 2) 1929 3) 1932 4) 1935
118. The Kannauj assembly organised by Harsha was held in honour of
1) Fa hien 2) Itsing 3) Hieun-tsang 4) Megasthenes
119. Which of the following islands is under direct threat of rising sea levels due to climate change has appealed for help from European leaders?
1) Plau 2) Tuvalu Island 3) Marshall Islands 4) Nauru
120. A plant with green leaves placed in red light will appear
1) Violet 2) Green 3) Black 4) Red
121. Which one of the following Pacts sought to be resolved the Hindu-Muslim differences?
1) Lucknow Pact 2) Gandhi-Irwin Pact
3) Lahore Pact 4) Poona Pact
122. The book "Globalization, Democratization and Distributive Justice" has been authored by
1) Karan Bajaj 2) Anita Nair
3) Salman Rushdies 4) Mool Chand Sharma
123. One strategy of allocating kernel memory is known as
1) Frames allocation 2) Register allocation
3) Slab allocation 4) Resource allocation
124. Breath analysers used by police to test drunken drivers works on the chemical basis of
1) Acid-base reactions 2) Precipitation reactions
3) Complexation reactions 4) Redox reactions
125. Amjad Ali Khan is associated with which of the following musical instruments?
1) Violin 2) Sitar 3) Sarod 4) Veena
126. During emergency, imposed under art 352, which of the following constitutional provisions stands suspended?
1) Directive principles of state policy 2) Amendment procedures
3) Fundamental rights 4) Judicial review
127. What is Hawala?
1) Full details of a subject
2) Illegal transactions of foreign exchange
3) Illegal trading of shares
4) Tax evasion
128. The 'Great Bath' was found at
1) Harappa 2) Mohenjodaro 3) Lothal 4) Chanhudaro
129. Fertilization of human eggs most often takes place in
1) Ovary 2) Uterus
3) Oviduct fallopian tube 4) Cervix

130. When did India become a full Sovereign Democratic Republic?
- 1) 1949 November 26th
 - 2) 1930, November 26th
 - 3) 1949 January 26th
 - 4) 1951, November 26th
131. To whom did Allauddin Khilji entrust the mission to conquer South?
- 1) Ulugha Khan
 - 2) Malik Kafur
 - 3) Khizra Khan
 - 4) Shaji Malik
132. The first National Park of India is
- 1) Dachigam Wild Life Sanctuary
 - 2) Corbett National Park
 - 3) Simlipal National Park
 - 4) Hazaribagh National Park
133. Mass number is the sum of
- 1) Electrons and protons
 - 2) Protons and neutrons
 - 3) Electrons and neutrons
 - 4) Only protons
134. The resistance of an ideal voltmeter is
- 1) infinite
 - 2) zero
 - 3) high
 - 4) low
135. Stomata Pores open when
- 1) H⁺ ion moved into the guard cell
 - 2) K⁺ ion moved out of guard cell
 - 3) Water moves into the guard cell in response to decrease in water potential in the guard cell
 - 4) Water moves out of the guard cell in response to decrease in water potential in guard cell
136. A plane glass slab is kept over coloured letters, the letter which appears least raised is
- 1) Red
 - 2) Violet
 - 3) Black
 - 4) Green
137. Cancellation of thread occurs only when it reaches a
- 1) Target point
 - 2) Cancellation point
 - 3) Virtual point
 - 4) Error point
138. The weight of a body at the centre of earth is
- 1) Zero
 - 2) infinite
 - 3) twice the weight at the surface
 - 4) half the weight at the surface
139. Gliders depend on the following energy for their flight
- 1) Chemical energy
 - 2) Heat energy
 - 3) Wind energy
 - 4) Electrical energy
140. Which part of the eye gets inflamed and becomes pink when dust gets into it?
- 1) Cornea
 - 2) Choroid
 - 3) Conjunctiva
 - 4) Sclerotic
141. The period of revolution of a certain planet in an orbit of radius R is T. Its period of revolution in an orbit of radius 4R will be
- 1) 4 T
 - 2) 2 2 T
 - 3) 2 T
 - 4) 8 T
142. A group of genes whose activity is coordinated by a DNA sites called
- 1) polypeptide
 - 2) cistron
 - 3) polysome
 - 4) operon

143. Who is the new Prime Minister of Germany?
1) Horst Seehofer
2) Frank-Walter Steinmeier
3) Joachim Gauck
4) Angela Merkel
144. An agricultural department known as 'Diwan-ikohi' was created by
1) Jalaludin Khilji
2) Mohamad-bin- Tughlaq
3) Firoz Tughlaq
4) Alauddin Khilji
145. At very high altitude, the Red blood Corpuscles in the human body will -
1) increase in size
2) decrease in size
3) increase in number
4) decrease in number
146. Which among the following stage is suitable indicator when solution of Sodium carbonate is mixed with Sulphuric acid?
1) Methylene blue
2) Methyl red
3) Phenolphthalein
4) Methyl orange
147. India's share in total global trade in value terms is
1) more than 2%
2) between 1% and 2%
3) less than 1% but more than 1/2%
4) less than 1/2%
148. Which of the following works on the basis of conservation of linear momentum ?
1) Jet
2) Aeroplane
3) Ship
4) Helicopter
149. Who was the first Deputy Prime Minister of India?
1) Jawaharlal Nehru
2) Sardar Vallabhbhai Patel
3) Maulana Abul Kalam Azad
4) Gulzarilal Nanda
150. Allele of gene are found in
1) Same chromosome
2) Any chromosome
3) Homologous chromosome
4) Non homologous chromosome

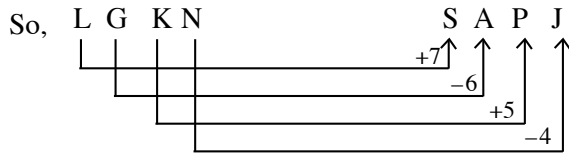
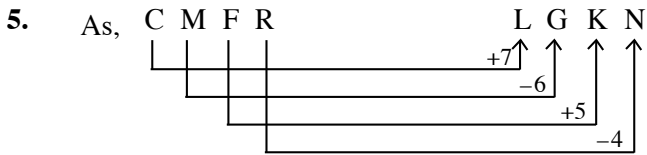
KEY

1-2; 2-3; 3-2; 4-2; 5-3; 6-2; 7-4; 8-4; 9-4; 10-4; 11-1; 12-2; 13-3; 14-3; 15-2; 16-3; 17-3; 18-2; 19-1; 20-4; 21-1; 22-2; 23-1; 24-4; 25-2; 26-3; 27-3; 28-3; 29-1; 30-2; 31-1; 32-1; 33-1; 34-2; 35-1; 36-4; 37-2; 38-2; 39-3; 40-3; 41-3; 42-4; 43-4; 44-3; 45-1; 46-4; 47-3; 48-3; 49-4; 50-4; 51-1; 52-3; 53-4; 54-3; 55-1; 56-4; 57-2; 58-2; 59-3; 60-4; 61-4; 62-1; 63-3; 64-2; 65-3; 66-1; 67-4; 68-1; 69-3; 70-1; 71-3; 72-3; 73-3; 74-2; 75-1; 76-3; 77-1; 78-2; 79-4; 80-3; 81-3; 82-2; 83-2; 84-4; 85-3; 86-3; 87-3; 88-1; 89-3; 90-2; 91-3; 92-1; 93-2; 94-2; 95-1; 96-2; 97-3; 98-2; 99-4; 100-1; 101-3; 102-2; 103-3; 104-3; 105-1; 106-4; 107-1; 108-2; 109-2; 110-2; 111-3; 112-3; 113-4; 114-1; 115-2; 116-1; 117-1; 118-3; 119-2; 120-3; 121-1; 122-4; 123-1; 124-1; 125-3; 126-3; 127-2; 128-2; 129-3; 130-1; 131-2; 132-2; 133-2; 134-1; 135-3; 136-2; 137-2; 138-1; 139-3; 140-3; 141-4; 142-4; 143-2; 144-2; 145-3; 146-4; 147-1; 148-1; 149-2; 150-3.

EXPLANATIONS

- The number of players in football is 11.
whereas in waterpolo, we have 7 players.
- Tiger is the national animal of India and snow leopard is the national animal of Afghanistan.
- $7! = 5040$
 $8! = 40320$

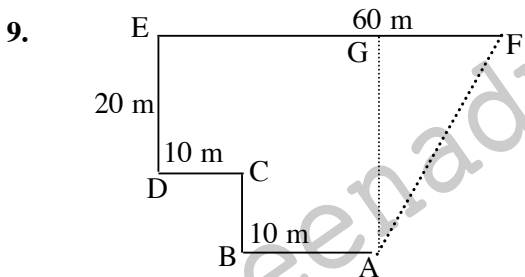
4. A moccasin is a type of shoe and an Aspis is a type of snake.



6. Zail Singh was the President of India whereas rest three were the Prime Ministers of India.

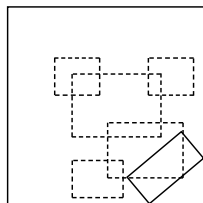
7. Except 1241, rest are the multiple of 13 where 1241, is a multiple of 17.

8. Except D, the other letter can be drawn with the help of three lines whereas D requires 4 lines.



The movements of the person are from A to F, as shown in figure. Clearly, the final position is F which is to the North-East of the starting point A.

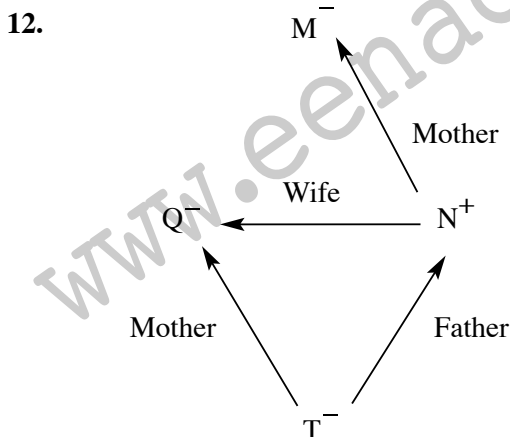
10. On close observation, we find that figure contains figure (4) rotated through an angle of 135° as shown below:



Hence, the answer is (D).

11. Required answer = $\frac{400}{4} - 3 = 97$ times.

Here, 3 has been subtracted as 100, 200 and 300 was not a leap year.



So, B is incorrect.

14. As given,

$$14 + 2 = 7$$

It means '+' = ÷'

$$\text{So, } \sqrt{5 + 5 + 5 + 5 + 5}$$

$$= \sqrt{5 \div 5 \div 5 \div 5 \div 5}$$

$$= \sqrt{5 \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5}}$$

$$= \frac{1}{5} \times \frac{1}{5} \sqrt{5} = \frac{1}{25} \times \sqrt{5} = \frac{2.2360}{25}$$

15. $5 \times 1 - 2 = 3$

$3 \times 2 - 3 = 3$

$3 \times 3 - 4 = 5$

$5 \times 4 - 5 = 15$

$15 \times 5 - 6 = 69$

16. $4 \times 1 - 2 = 2$

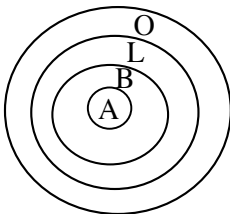
$2 \times 2 - 2 = 2$

$2 \times 3 - 2 = 4$

$4 \times 4 - 2 = 14$

$14 \times 5 - 2 = 68$

17.



- I. ✓
- II. ×
- III. ✓
- IV. ×

Only I and III follows.

18. $\sqrt[3]{3 \times 6 \times 12} = 6$

$\sqrt[3]{2 \times 20 \times 25} = 10$

$\sqrt[3]{2 \times 4 \times 64} = 8$

19. $\frac{13 + 12 + 17}{7} = 6, \frac{6 + 9 + 13}{7} = 4,$

$\frac{12 + 14 + 9}{7} = 5, \frac{21 + 13 + 22}{7} = 8$

20. We have 30 rectangles and 5 hexagons in the given figure.

21. Let the distance covered by taxi be x km.

Then, distance covered by car = $(80 - x)$ km

$$15x + 5(80 - x) = 500$$

$$\text{or, } 15x + 400 - 5x = 500$$

$$\text{or, } 10x = 100$$

$$\text{or, } x = 10$$

\therefore Distance covered by taxi = 10 km

Hence, the answer is (1).

23. As it is clear from the description, 'b' lies opposite 'd', 'c' lies opposite 'a' and 'f' lies opposite 'e'. So, when, 'c' is at the top, 'a' will be at the bottom.

24. Let the number of bananas in the second bunch be x .

Then, number of bananas in the first bunch

$$= x + \frac{1}{4}x = \frac{5}{4}x$$

$$\text{So, } \frac{5}{4}x - x = 3 \Rightarrow 5x - 4x = 12 \Rightarrow x = 12$$

\therefore Number of bananas in first bunch

$$= \left(\frac{5}{4} \times 12\right) = 15$$

26. Area of four wall = $2 \times h(l + b)$

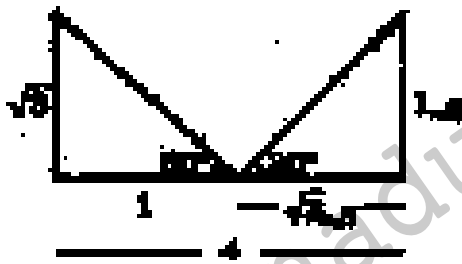
$$= 2 \times 5 (16 + 11) = 270 \text{ m}^2$$

$$\text{Total area of gate and windows} = 2 \times 1 + 1 \times 0.75 \times 4 = 2 + 3 = 5 \text{ m}^2$$

$$\text{Area to be painted} = 270 - 5 = 265 \text{ m}^2$$

$$\therefore \text{Required cost} = 265 \times 2.50 = \text{Rs.}662.5$$

- 27.



ATQ,

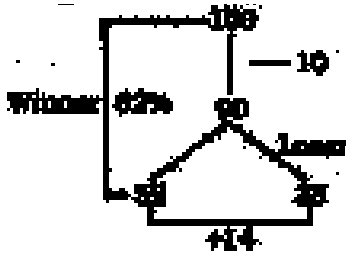
$$\therefore \sqrt{3} = 288 \text{ m (given) and eagle flies for 24 seconds}$$

$$\therefore \text{speed of eagle} = \frac{288 \times 4}{\sqrt{3} \times 24}$$

$$= 16\sqrt{3} \text{ m/ sec.}$$

28. Let the total votes be 100

ATQ,



$$14 \text{ unit} = (13200 - 2000)$$

$$= \frac{11200}{14} = 800$$

$$\begin{aligned} \text{Votes polled for losing candidate} &= 800 \times 38 - 2000 \text{ (invalid votes)} \\ &= 28400 \text{ votes} \end{aligned}$$

29. Simple Interest for 3 years = 76.51 - 1.51

$$= \text{Rs.75}$$

$$\therefore \text{Rate } \% = \frac{75 \times 100}{1250 \times 3} = 2\%$$

30. $4 \sin^2 \theta + 6(1 - \sin^2 \theta) = 4 \sin^2 \theta + 6 - 6 \sin^2 \theta = 6 - 2 \sin^2 \theta$

Now put the value of $\theta = 90^\circ$

$$\therefore 6 - 2 = 4$$

31. C.P. of 30 kg = $30 \times 9.50 = \text{Rs.}285$

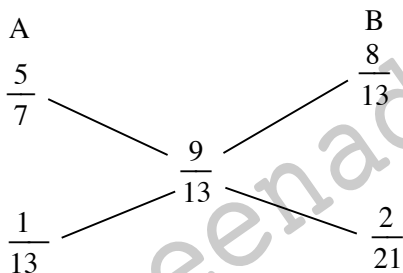
$$\text{C.P. of 40 kg} = 40 \times 8.50 = \text{Rs.}340$$

$$\text{Total C.P. of 70 kg} = 285 + 340 = \text{Rs.}625$$

$$\text{S.P. of 70 kg} = 70 \times 8.90 = \text{Rs.}623$$

$$\text{Loss} = \text{Rs.}625 - \text{Rs.}623 = \text{Rs.}2$$

32. From alligation-



Ratio of quantity taken from vessel

$$\text{A and vessel B} = \frac{1}{13} : \frac{2}{91} = 7 : 2$$

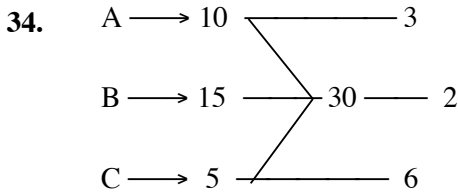
33. $\therefore 4x = \sec \theta \quad \therefore x = \frac{\sec \theta}{4}$

$$\text{and } \frac{4}{x} = \tan \theta \quad \therefore x = \frac{4}{\tan \theta}$$

$$8 \left(x^2 - \frac{1}{x^2} \right) = 8 \left(\frac{\sec^2 \theta}{16} - \frac{1}{16 \tan^2 \theta} \right)$$

$$= 8 \left(\frac{\sec^2 \theta}{16} - \frac{\tan^2 \theta}{16} \right)$$

$$= 8 \times \frac{1}{16} = \frac{1}{2}$$



Total work by A + B in 4 min = 20

Total work by A + B & C in 1 min = -1

∴ Total time taken by C to empty the tank = $\frac{20}{1} = 20$ min.

35. $x + y = 500$ (1)

$$\text{Loss \%} = \frac{(20)^2}{100} = 4\%$$

$$\text{Total loss} = \frac{500}{100} \times 4 = \text{Rs.}20$$

∴ Selling price = 500 - 20 = Rs. 480

36. $\tan(4\theta - 50^\circ) = \cot(50^\circ - \theta)$

$$\tan(4\theta - 50^\circ) = \tan(90^\circ - (50^\circ - \theta))$$

$$\therefore 4\theta - 50^\circ = 90^\circ - (50^\circ - \theta)$$

$$3\theta = 90$$

$$\therefore \theta = 30$$

37. Value of 1 radian = $\frac{180^\circ}{\pi}$

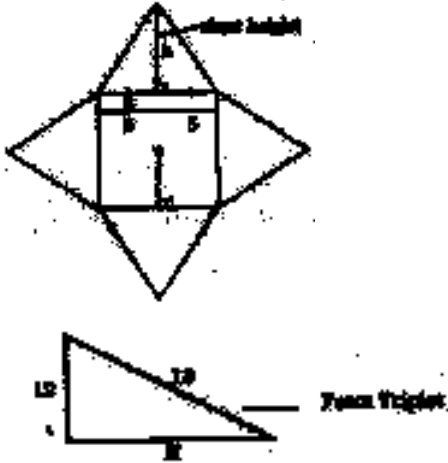
$$\left(\frac{1}{2} + \frac{1}{3} \right) \text{ radian} \frac{180^\circ}{22} \times \frac{5}{6}$$

$$= \frac{180^\circ}{22} \times 7 \times \frac{5}{6} = \left(\frac{525}{11} \right)^\circ$$

∴ Value of 3rd angle

$$= 180^\circ - \frac{525^\circ}{11} = \frac{1455}{11} = 132 \frac{3}{11}$$

38.



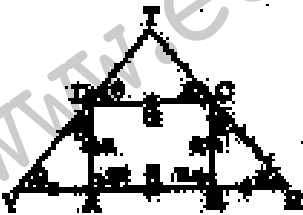
$$\therefore \text{S.A.} = \frac{1}{2} \times 40 \times 12 = 240 \text{ cm}^2.$$

39. Distance travelled by A

$$= 2 \times \text{distance b/w two points} \times \left(\frac{a}{a+b} \right)$$

$$= 2 \times 21 \times \frac{3}{7} = 18 \text{ kms.}$$

40.



$$\therefore 2\theta + 2x = 180^\circ$$

$$\therefore \theta + x = 90^\circ$$

The value of $\angle T$ will be

$$\angle T + \theta + x = 180^\circ$$

$$\Rightarrow \angle T + 90^\circ = 180^\circ \Rightarrow \angle T = 90^\circ.$$

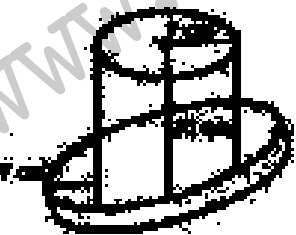
$$\text{Area of the platform} = \pi(r_0^2 - r_1^2)$$

$$\pi r^2 h = \pi(r_0^2 - r_1^2) \times H$$

$$\Rightarrow 7^2 \times 10 = (14^2 - 7^2) \times H$$

$$\Rightarrow \frac{49 \times 10}{21 \times 7} = H \Rightarrow H = \frac{10}{3} \text{ m.}$$

41.



42. $\frac{x}{a} = (b - c), \frac{y}{b} = (c - a), \frac{z}{c} = (a - b)$

if $a + b + c = 0$ then $a^3 + b^3 + c^3 = 3abc$

$\therefore \frac{x}{a} + \frac{y}{b} + \frac{z}{c} = b - c + c - a + a - b = 0$

and $\left(\frac{x}{a}\right)^3 + \left(\frac{y}{b}\right)^3 + \left(\frac{z}{c}\right)^3 = \frac{3xyz}{abc}$

43. $A = \tan 11^\circ \tan 29^\circ$
 $= \tan (90^\circ - 79^\circ) \tan (90^\circ - 61^\circ)$
 $= \cot 79^\circ \cdot \cot 61^\circ$

$B = 2 \cot 61^\circ \cdot \cot 79^\circ$

$\therefore B = 2A$

44.
$$\frac{\frac{1}{2} (a + b + c) [(a - b)^2 + (b - c)^2 + (c - a)^2]}{(a + b + c)}$$

$\frac{1}{2} [(-4)^2 + (-3)^2 + (7)^2] = \frac{1}{2} \times 74 = 37$

45. ATQ,
 $x^2 + 1 + 2x + y^2 + 1 - 2y + z^2 = 0$

$(x + 1)^2 + (y - 1)^2 + z^2 = 0$

$\therefore x = -1, y = 1, z = 0$

Put the above value in equation-

$3x + 5y + 6z = 3 \times -1 + 5 \times 1 + 6 \times 0$
 $= -3 + 5 = 2$

46. Number of students enrolled in College A in the year 2009 = 1000

\therefore Number of students passed = $1000 \times \frac{80}{100} \times \frac{60}{100} = 480$

47. Reqd. number of students = $2290 \times \frac{70}{100} = 1603$

48. Average number of students enrolled in all colleges together in the year 2010 = $\frac{3770}{5} = 754$

Average number of students enrolled in all colleges together in the year 2010 = $\frac{3090}{5} = 618$

\therefore Reqd. ratio = $\frac{754}{618} = \frac{377}{309}$
 $= 377 : 309$

49. Number of students enrolled in College A in the year 2009 = 1000

Number of students enrolled in College B in the year 2011 = 650

\therefore Reqd. % = $\frac{350}{650} \times 100 = 53.84\% \approx 54$

50. Total number of students in the year 2010 from all the colleges = 3090
∴ Reqd. number of students = 10% of 3090 = 309.
51. Replace 'will kill' by 'would kill'. The sentence is of conditional.
52. Replace 'or' by 'nor', as 'neither' is followed by 'nor'.
54. Replace 'isn't it' by 'didn't she?' as the question tag and the sentence must be in the same tense.
55. Sentence starting with 'Not only' takes inversion form. Thus, it should be as 'not only did the bandit rob the person'. The structure may also be 'The bandit not only robbed
58. 'Yell at some one' 'Yell for help'.
59. 'Abstain' takes preposition 'from' after it.
76. 'Keen' takes preposition 'on' after 'V 1 + ing'.
78. 'Cut a sorry figure' is an idiom which means 'to leave poor impression'.
79. Sentence starting with 'No sooner' takes an inversion form. Thus it will take following form: 1 No sooner + did + sub + V + simple past tense
81. Remove 'been' as this is not a passive voice.
82. Plural form of 'woman doctor' is 'women doctors'.
101. Island of Corsica is Located in the Western Mediterranean. A region of France, Corsica was ruled over the centuries by the Carthaginians, Romans, Vandals, Goths and Saracens. Napoleon Bonaparte (1769 – 1821), also known as Napoleon I, a French military leader and emperor who conquered much of Europe in the early 19th century was born on the island of Corsica.
102. Gupta era is known for a large number of pillar inscriptions erected at a number of places. Out of them Prayag Prashasti (Allahabad Pillar Inscription) by Samudragupta was Composed by Harisena in a very simple and refined Sanskrit in Champukavya style.
103. Philadelphia is the largest city in the Commonwealth of Pennsylvania and the fifth most populous in the North-eastern United States. Throughout the 19th century, Philadelphia had a variety of industries and businesses, the largest being textiles. Major corporations in the 19th and in early 20th centuries included the Baldwin Locomotive Works, William Cramp and Sons Ship and Engine Building Company, and the Pennsylvania Railroad Industry.
104. Japan is a stratovolcanic archipelago of 6,852 islands. The four largest islands are Honshu, Hokkaido, Kyushu, and Shikoku, which together comprise about 97% of Japan's land area. Zinc, copper, and oil have been found on Honshu.
105. Fibrinogen is a glycoprotein in vertebrates that helps in the formation of blood clots. It consists of a linear array of three nodules held together by a very thin thread which is estimated to have a diameter between 8 and 15 Angstrom (A°). Glycoprotein is converted by thrombin into fibrin during blood clot formation.
107. Fluorosis is a disease caused by water that contains high amount of fluoride particularly in ground water.
109. Kudankulam Nuclear Power Plant station is situated in Kudankulam in Tirunelveli district of Tamil Nadu. This is a joint Russia-India project.
110. Free Press of India was an Indian nationalist supporting news agency founded in the 1920s (1923 – 27) by Swaminathan Sadanand, during the period of the British Raj. It was the first news agency owned and managed by Indians.
111. The Central Bank employs a range of both direct and indirect instruments to effect monetary policy. The indirect or market based instruments largely comprise open market operations and the use of a policy interest rate- the 'Repo' rate.

112. Bangladesh has become the first country in the world to receive funds from United Nations for its fast growing Solar Home Systems. In this regard, UN Framework Convention for Climate Change (UNFCCC) has issued carbon credits (CC) worth 3.56 million US dollars to two Bangladeshi organisations.
113. Vitamin C because animal food and product is deficient in vitamin C.
117. The Gandhi-Irwin Pact was a political agreement signed by Mahatma Gandhi and the then Viceroy of India, Lord Irwin on 5 March 1931 before the second Round Table Conference in London.
118. The Kannauj assembly (643 AD) was held in the honour of Hieun Tsang (Chinese pilgrim) and to popularise Mahayana sect of Buddhism. Harshavardhana was a Mahayana Buddhist. He organised Kannauj assembly (643 AD). Though, he was a tolerant ruler and supported all Indic faiths viz. Buddhism, Vedism and Jainism. The scholars regarded him as the last great Hindu emperor of India, who ruled over Northern India.
119. Tuvalu, in the South Pacific, is an independent island nation within the British Commonwealth. Its 9 islands comprise small, sparsely populated atolls and reef islands with palm-fringed beaches and WW II sites.
125. Amjad Ali Khan (born 9 October 1945) is an Indian classical musician who plays the Sarod. Khan was born into a musical family and has performed internationally since the 1960s. He was awarded India's second highest civilian honor, the Padma Vibhushan, in 2001.
128. The Great Bath is one of the best-known structures among the ruins of the ancient Indus Valley Civilization at Mohenjodaro in Sindh, Pakistan.
129. Fertilization of Human egg takes place in ampulla of Fallopian tube.
130. The Constituent Assembly adopted the Constitution of India, drafted by a committee headed by Dr. B. R. Ambedkar, on 26 November 1949. India became a sovereign, democratic, republic after its constitution came into effect on 26 January 1950.
131. Ala-ud-din Khilji (died in 1316), born as Juna Muhammad Khilji, was the second ruler of the Khilji dynasty. He is considered the most powerful ruler of the dynasty. He also had his Eunuch consort Malik Kafur who hold the reigns of the empire in his last few years. After conquering Devagiri and Warangal, Ala-ud-din Khilji sent Malik Kafur (1311) against king Vira Ballala III of the Hoyasala Kingdom of Halebidu. Veera Ballala was surprised and forced to pay an indemnity and become a vassal.
132. India's first national park was established in 1936 as Hailey National Park, now known as Jim Corbett National Park, Uttarakhand.
133. Atomic mass = No. of protons + No. of neutrons.
134. An Ideal voltmeter is one which has infinite resistance. When the resistance is infinite, the voltmeter draws no current and hence, gives accurate readings of voltage.
135. Stomata pores open by endosmosis in which water moves into the guard cell in response of decrease in the potential of guard cell.
136. The refractive index is proportional to the wavelength, so the longer the wavelength the more it refracts. Red has the longest wavelength we can see, so the red letters will appear more raised up than any other colour. Blue/ violet have the shortest wavelengths so they will appear lower than any other colour.
149. The first Deputy Prime Minister of India was Sardar Vallabhbhai Patel, who was also home minister in Jawaharlal Nehru's cabinet.
150. An allele is an alternative form of gene not is location at a specific position on a specific chromosome.

(ఈ సమానా ప్రశ్నపత్రాన్ని RACE సంస్థకు చెందిన నిపుణులు రూపొందించారు)