

SYNONYMS

Directions [For the 18 items which follow] : Each of the following 18 items consists of a word in capital letters, followed by four words of group or words. Select the word or group of words that is most similar in meaning to the word in capital letters.

1. **IMPERATIVE**
 (a) Negligible (b) Indifferent
 (c) Significant (d) Urgent
2. **INTRUDE**
 (a) Fault (b) Disagree
 (c) Interrupt (d) Leave
3. **RAPPORT**
 (a) Love and affection (b) Full support
 (c) Harmonious accord (d) Sportsmanship
4. **SUSTENANCE**
 (a) Courage (b) Nourishment
 (c) Health (d) Wisdom
5. **VERACITY**
 (a) Forcefulness (b) Simplicity
 (c) Truthfulness (d) Humour
6. **GUSTO**
 (a) Guts (b) Enthusiasm
 (c) Enjoyment (d) Hope
7. **INDIGENOUS**
 (a) State-of-the-art (b) Indigent
 (c) Native (d) Foreign
8. **STARTLED**
 (a) Jumped (b) Shocked
 (c) Surprised (d) Offended
9. **FACTITIOUS**
 (a) Amorous (b) Causing dissension
 (c) Controversial (d) Artificial
10. **DECADENT**
 (a) Deceased
 (b) Disingenuous
 (c) Deteriorating
 (d) Belonging to the last decade
11. **DISPARATE**
 (a) Different (b) Contrary
 (c) Incongruous. (d) Unequal
12. **PANDEMONIUM**
 (a) Violence
 (b) Quarrel
 (c) Wild and noisy disorder
 (d) Verbal exchange

13. **AFFLICTION**
 (a) Problem (b) Hardship
 (c) Plight (d) Distress
14. **EXHORTED**
 (a) Urged (b) Forced
 (c) Persuaded (d) Demanded
15. **DISSEMINATE**
 (a) Develop (b) Popular
 (c) Impart (d) Spread
16. **LEGACY**
 (a) Point (b) Principle
 (c) Inheritance (d) Teaching
17. **HANDY**
 (a) Intact (b) Accessible
 (c) Supportive (d) Handful
18. **INNOCUOUS**
 (a) Harmless (b) Benevolent
 (c) Gentle (d) Non-infectious

ORDERING OF WORDS IN A SENTENCE

Directions [For the 20 items which follow] : In the following items, some parts of the sentence have been jumbled up. You are required to re-arrange these parts which are labelled P, Q, R and S to produce the correct sentence. Choose the proper sequence and mark in your Answer Sheet accordingly.

Example 'Z' has been solved for you.

Z. It is well-known that
the effect is very bad on children of cinema
 (P) (Q) (R) (S)

Which one of the following is the correct sequence ?

- (a) P S R Q
- (b) S P Q R
- (c) S R P Q
- (d) Q S R P

Explanation : The proper way of writing the sentence is "It is well-known that the effect of cinema on children is very bad". This is indicated by the sequence P S R Q, so (a) is the correct answer.

19. they forget between defeat and victory,
 (P) (Q)
that the conditions of welfare have so altered
 (R)
that there is not much difference today
 (S)

Which one of the following is the correct sequence ?

- (a) S R P Q
- (b) P Q S R
- (c) R S Q P
- (d) P R S Q

20. Of all things that distinguish man
is his brain the most important
(P) (Q)
of the animal kingdom from the rest
(R) (S)

Which one of the following is the correct sequence ?

- (a) S R Q P (b) Q P S R
(c) S R P Q (d) R S Q P

21. She introduced me
at the party I had met to a man the previous night
(P) (Q) (R) (S)

Which one of the following is the correct sequence ?

- (a) R P Q S (b) R Q P S
(c) S P R Q (d) P Q R S

22. Some men
were rarely successful but they tried bribing their guards
(P) (Q) (R) (S)

Which one of the following is the correct sequence ?

- (a) P Q R S (b) R Q P S
(c) R S Q P (d) P Q S R

23. Self-taught experts
expected to go through which the escapers
(P) (Q) (R)

prepared maps of the country
(S)

Which one of the following is the correct sequence ?

- (a) P Q R S (b) S Q R P
(c) S R Q P (d) P R Q S

24. the nun who was the Principal called an assembly
(P) (Q)

of my grand-daughter's school
(R)

to announce the result of a fund-raising drive
(S)

Which one of the following is the correct sequence ?

- (a) P Q R S (b) P R Q S
(c) P Q S R (d) P S R Q

25. Whether the plan
depends on how it suggested will succeed or fail
(P) (Q)

interested in its progress will be received by those
(R) (S)

Which one of the following is the correct sequence ?

- (a) S R P Q (b) Q P S R
(c) P Q R S (d) R S Q P

26. This letter
is addressed to Mr. Shah which is written in Gujarati
(P) (Q)

who is my father's best friend
(R) (S)

Which one of the following is the correct sequence ?

- (a) P Q R S (b) Q P R S
(c) Q R S P (d) R S P Q

27. The President
a brief vacation at Shimla is returning from
(P) (Q)

In order to attend a press conference
(R)

with his wife and children
(S)

Which one of the following is the correct sequence ?

- (a) Q S R P (b) Q P R S
(c) S Q P R (d) R S Q P

28. The clothes
were sent by mistake to my father
(P) (Q)

who was very much surprised that I ordered
(R) (S)

Which one of the following is the correct sequence ?

- (a) S Q P R (b) P Q S R
(c) P Q R S (d) S P Q R

29. If in their daily lives
the people of our country and never deceive one another
(P) (Q)

always speak the truth then our prestige will be great
(R) (S)

Which one of the following is the correct sequence ?

- (a) P Q R S (b) R Q P S
(c) S P Q R (d) P R Q S

30. A tortoise
fly in the air two geese everyday watched
(P) (Q) (R) (S)

Which one of the following is the correct sequence ?

- (a) S Q P R (b) R S Q P
(c) P S Q R (d) R P S Q

31. Nobody in the house
was kept where the key seemed to know
(P) (Q) (R)

to the main door
(S)

Which one of the following is the correct sequence ?

- (a) R Q P S (b) Q P R S
(c) S Q P R (d) R Q S P

32. the clerk was not present in the office
(P) (Q) (R)

whom I wanted to meet
(S)

Which one of the following is the correct sequence ?

- (a) P S Q R (b) P Q R S
(c) P R S Q (d) R P Q S

33. the man made a complaint at the police station
(P) (Q) (R)

whose cycle was stolen
(S)

Which one of the following is the correct sequence ?

- (a) P Q R S (b) P R S Q
(c) P S Q R (d) R P Q S

34. in the middle of he stopped his speech
(P) (Q) (R)

to take a glass of water
(S)

Which one of the following is the correct sequence ?

- (a) Q R S P (b) Q R P S
(c) Q P R S (d) P Q R S

35. after his arrival (P) immediately (Q) he began to (R)
quarrel with his wife (S)
- Which one of the following is the correct sequence ?
 (a) Q R S P (b) P Q R S
 (c) Q P R S (d) R Q S P

36. We met (P) on our way home (Q) Mr and Mrs Gupta (R)
this evening (S)
and asked them if they would be free
- Which one of the following is the correct sequence ?
 (a) Q R P S (b) P Q R S
 (c) R Q S P (d) R Q P S

37. You can learn (P) and can be quite difficult (Q) as well as the difficult ones
the easy things (R) although the easy ones are not so easy (S)
- Which one of the following is the correct sequence ?
 (a) S P R Q (b) P Q R S
 (c) Q S P R (d) R Q S P

38. Please (P) equally (Q) share the prize money
that all are satisfied (R) among your friends to make sure (S)
- Which one of the following is the correct sequence ?
 (a) Q R S P (b) P Q S R
 (c) Q P R S (d) Q P S R

ORDERING OF SENTENCES

Directions [For the 15 items which follow] : In the following items, each passage consists of six sentences. The first sentence (S_1) and the final sentence (S_6) are given in the beginning. The middle four sentences in each have been removed and jumbled up. These are labelled P, Q, R and S. You are required to find out the proper sequence of the four sentences and mark accordingly on the Answer Sheet.

Example 'X' has been solved for you.

- X. S_1 : There was a boy named Jack.
 S_6 : At last she turned him out of the house.
 P : So the mother asked him to find work.
 Q : They were very poor.
 R : He lived with his mother.
 S : But Jack refused to work.

Which one of the following is the correct sequence ?

- (a) R Q P S (b) P Q R S
 (c) Q P R S (d) R P S Q

Explanation : The correct sequence in this example is R Q P S which is marked by (a). Therefore, (a) is the correct answer.

39. S_1 : It was Saturday.
 S_6 : The children had already bought roasted gram and peanuts to get into a picnic mood.
 P : A taxi carried us all to the zoo.
 Q : They wanted to be taken out and we decided to take them to the local zoo.

- R : My sister's two young children were at our house.
 S : We bought the tickets and entered the zoo.
 Which one of the following is the correct sequence ?
 (a) R Q S P (b) R P Q S
 (c) R Q P S (d) P R Q S

40. S_1 : The officer rose to his feet, trembling.
 S_6 : A half-hour later he returned to camp.
 P : He failed to find him there.
 Q : Pulling himself together, he ran rapidly away from the cliff to a point a half-mile from its foot.
 R : He was disappointed.
 S : He expected to find the horseman somewhere there.
 Which one of the following is the correct sequence ?
 (a) R P Q S (b) Q P S R
 (c) Q S P R (d) S Q P R

41. S_1 : It was a bitterly cold night and even at the far end of the bus the wind cut like a knife.
 S_6 : I saw trouble brewing.
 P : The conductor came in and took the fares.
 Q : The younger of the two women was dressed in sealskin and carried one of those little Pekinese dogs that women like to carry in their laps.
 R : The bus stopped, and two women and a man got in together and filled the vacant places.
 S : Then his eyes rested with cold malice on the beady-eyed little dog.
 Which one of the following is the correct sequence ?
 (a) R Q P S (b) R S Q P
 (c) R P Q S (d) P S R Q

42. S_1 : Dinner had been served—his daughter laid out the plates.
 S_6 : Then, silently she left the table to retire for the night—it was as if she had never been there.
 P : She was just a child, only 14—too young, too simple to know to understand.
 Q : He sat down groundly, not saying a word to her.
 R : She had already had her meal and was standing by his side, not quite knowing what to do.
 S : Bread and cheese—a simple subsistence at the end of a not-so-simple life.
 Which one of the following is the correct sequence ?
 (a) Q P S R (b) R P S Q
 (c) Q R P S (d) S Q P R

43. S_1 : When my car broke down, I took it to the only mechanic available in our town.
 S_6 : They pushed the car down one street and up another and soon we had gone through most of the streets in the town but the car wouldn't start.
 P : But it just refused to start.
 Q : I went there at the appointed time to collect it.
 R : So I sat at the wheel and the mechanic and his helper started to push it.
 S : He said it required some minor repairs and asked me to collect it in the evening.
 Which one of the following is the correct sequence ?
 (a) S Q P R
 (b) Q S R P
 (c) R P Q S
 (d) P Q R S

44. S_1 : Some people prefer country life to city life.
 S_6 : For these reasons more and more people are leaving the country to live in the city.
 P : Life in the country is quieter, cleaner and less hectic.
 Q : The city also offers more privacy since neighbours are too busy to be interfering in the affairs of others.
 R : However, the city offers more excitement, a wide variety of activities and a chance to meet more people.
 S : Country people live longer and generally seem to be healthier and happier.

Which one of the following is the correct sequence :

- (a) P S R Q (b) S R Q P
 (c) R Q P S (d) Q P S R

45. S_1 : The clerk read the statement loudly and clearly.
 S_6 : They returned in five minutes.
 P : The judge brought down the gavel sharply and roared.
 Q : He told the jury to return a lawful verdict.
 R : We, the jury, find the defendant not guilty, provided he returns the mule.
 S : There is not such verdict in the law; the defendant is either guilty or not guilty.

Which one of the following is the correct sequence ?

- (a) R P S Q (b) R S P Q
 (c) Q R P S (d) P S R Q

46. S_1 : One day I went into the water off the coast of Africa.
 S_6 : I hurried at him the rubber fins.
 P : I sighted a shark at short distance from me.
 Q : He launched towards me as hard and swift as a missile.
 R : I was floating at a shallow depth, without making a movement.
 S : Every muscle of my body tensed.

Which one of the following is the correct sequence ?

- (a) P S Q R (b) S Q R P
 (c) R P S Q (d) P Q S R

47. S_1 : There is no reason for the terror which the sight of a snake causes in most people.
 S_6 : Being aggressive by nature, they can attack human beings for no reason at all, taking a fisherman or swimmer by surprise in the water, where the man is somewhat helpless.
 P : Of the poisonous snakes, only those found in the sea are always dangerous.
 Q : They are only too anxious to avoid human beings.
 R : Many more people are killed, much more frequently by motor-cycles and cigarettes than by snakes.
 S : The majority of snakes are harmless.

Which one of the following is the correct sequence ?

- (a) S Q R P (b) R S Q P
 (c) R P Q S (d) P Q R S

48. S_1 : I had not seen my father for several years.
 S_6 : His words sank deep into my heart.
 P : I met him late one evening in his flat.
 Q : I wrote him a note suggesting a very early meeting.
 R : He listened to my story in silence.
 S : When he spoke, his voice was soft but without warmth.

Which one of the following is the correct sequence ?

- (a) Q S R P (b) P Q R S
 (c) Q P R S (d) Q P S R

49. S_1 : Gopal worked as a labourer at the building site.
 S_6 : He unscrewed the lid and found a valuable collection of old silver in it.

- P : But Gopal made a bid and he got the box.
 Q : There was no key to it and it seemed useless but Gopal took it home.
 R : Once while returning from his work Gopal stopped at an auction sale.
 S : No one seemed to want a rough old box when it was put up for sale.

Which one of the following is the correct sequence ?

- (a) S P R Q (b) S R P Q
 (c) R S P Q (d) R P Q S

50. S_1 : The ancestors of whales, it is said, lived on land, for they still have slight traces of hind-legs.
 S_6 : He has flippers on his sides to keep him balanced and layers of fat or oil under the skin which furnish heat and make the huge body light and buoyant.
 P : But ages ago whales changed their home—moving from the land to the sea.
 Q : He is shaped like a submarine boat, with a tail turned into a power paddle.
 R : The whale is suited to live in water.
 S : They are warm-blooded animals, and feed their babies as land mammals do.

Which one of the following is the correct sequence ?

- (a) P R S Q (b) S P R Q
 (c) R Q P S (d) Q P R S

51. S_1 : There was a check-post for passing vehicles at a village called Gobindapur, a short distance from where the road to Dhandad branched off from the Grand Trunk Road.
 S_6 : He asked me more than once if I was sure that the man had noted the number down.
 P : When I came sufficiently near, he moved back and the barrier was lifted.
 Q : I slowed down and found a man coming forward with pencil and book in hand.
 R : I told uncle that the man had taken down the number of the car, adding that it was a routine practice.
 S : As I approached it, I saw the barrier coming down slowly.

Which one of the following is the correct sequence ?

- (a) R Q P S (b) Q R P S
 (c) S Q P R (d) R S P Q

52. S_1 : My journey was to last for thirty-six hours.
 S_6 : In the steel trunk under the seat there was a bag containing two hundred rupees that did not belong to me.
 P : Every mile of the country through which the train was running, was interesting.
 Q : Yet I was not happy.
 R : I had the carriage for myself.
 S : The train would stop for breakfast, lunch and dinner.

Which one of the following is the correct sequence ?

- (a) R S P Q (b) S Q P R
 (c) P Q S R (d) R P Q S

53. S_1 : The life of early men had advantages and disadvantages.
 S_6 : On the whole, there was friendship and amity within the tribes.
 P : Then, they had enough physical exercise which made them healthy and active.

Q : They could roam for months without fear of meeting a stranger.

R : One of the advantages was that they were not overcrowded.

S : They lived in small tribes where everybody knew everybody else.

Which one of the following is the correct sequence ?

- (a) Q S R P
(b) R Q P S
(c) S P R Q
(d) P R Q S

Directions [For the 5 items which follow] : You are given four alternative meanings to each idiom/phrase. Choose the most appropriate one.

54. BANK UPON
(a) Accumulate
(b) Consequent upon
(c) Guess
(d) Depend upon
55. UNDER DURESS
(a) With superstition
(b) According to merit
(c) Under compulsion
(d) In good faith
56. THREW DOWN THE GAUNTLET
(a) Challenged
(b) Protested
(c) Defeated
(d) Surpassed
57. IN THE GUISE OF
(a) In the cloak of
(b) In the colour of
(c) In the semblance of
(d) In the pretence of
58. CAUGHT UP WITH
(a) Conversated
(b) Tackled
(c) Arrested
(d) Overlook

SPOTTING ERRORS

Directions [For the 18 items which follow] :

(i) In this Section a number of sentences are given. The sentences are underlined in three separate parts and each one is labelled (a), (b) and (c). Read each sentence to find out whether there is an error in any underlined part. No sentence has more than one error. When you find an error in any one of the underlined parts (a), (b) or (c), indicate your response on the separate Answer Sheet at the appropriate space. You may feel that there is no error in a sentence. In that case letter (d) will signify a 'No error' response.

(ii) You are to indicate only one response for each item in your Answer Sheet. (If you indicate more than one response, your answer will be considered wrong : Errors may be in grammar word usage or idioms. They may be a word missing or there may be a word which should be removed.

(iii) You are not required to correct the error. You are required only to indicate your response on the Answer Sheet.

Examples 'P' and 'Q' have been solved for you.

P. They young child singed a very sweet song. No error.

- (a) (b) (c) (d)

Q. We worked very hard throughout the season.

- (a) (b) (c)

No error.

- (d)

Explanation : In item P, the word 'singed' is wrong. The letter under this part is (b), so (b) is the correct answer. Similarly, for item Q, (d) is the correct answer, the sentence does not contain any error.

59. During the earthquake people listened a strange noise

- (a) (b)

and rushed out of homes. No error.

- (c) (d)

60. My friend has got an appointment

- (a)

in a television company some three months ago No error.

- (b) (c) (d)

61. When the plane landed he found that

- (a) (b)

one of the wings is damaged by a shell. No error.

- (c) (d)

62. He had no objection to forward my application

- (a) (b)

to the higher authority. No error

- (c) (d)

63. People shouldn't drop litter on pavements, should they?

- (a) (b) (c)

No error.

- (d)

64. She could not believe that it had all happened to her.

- (a) (b) (c)

No error.

- (d)

65. I always like to have about four toasts for breakfast.

- (a) (b) (c)

No error.

- (d)

66. I was baffled with the instructions he gave me. No error.

- (a) (b) (c) (d)

67. Nobody in their senes would have acted so. No error.

- (a) (b) (c) (d)

68. Thousands of people far and near

- (a)

started gathering outside the auditorium

- (b)

from early morning to pay their tributes

to the departed leader No error.

- (c) (d)

69. He went in the room opened a box and took out a gun.

- (a) (b) (c)

No error.

- (d)

70. The reason why the plane crashed as soon as it took off

- (a) (b)

is the failure of one of the engines. No error.

- (c) (d)

71. If you don't start behaving properly, I will be forced to

- (a) (b)

tell to your supervisor. No error.

- (c) (d)

72. Language is a skill activity

- (a)

by which fine distinctions on meaning can be made

- (b)

for a better understanding of behaviour. No error.

(c) (d)

73. Every man is conditioned by the age in which he lives,

(a)

and if he were to return to another age

(b)

he would not be happy. No error.

(c) (d)

74. The work of an uneducated farmer is far important than

(a)

(b)

that of a professor. No error.

(c) (d)

75. The question is often raised

(a)

that whether it is desirable to send Indian students abroad

(b)

since they rarely return. No error.

(c) (d)

76. The watch is a valuable present my uncle

(a)

and it costed him more than two thousand rupees.

(b)

(c)

No error.

(d)

COMPREHENSION

Directions [For the 25 items which follow] : In this Section you have FIVE short passages. After each passage, you will find several questions based on the passage. First, read a passage, and then answer the questions based on it. You are required to select your answers based on the contents of the passage and opinion of the author only.

Examples 'I' and 'J' are solved for you.

PASSAGE

In our approach to life, be it pragmatic or otherwise, a basic fact that confronts us squarely and unmistakably is the desire for peace, security and happiness. Different forms of life at different levels of existence make up the teeming denizens of this earth of ours. And, no matter whether they belong to the higher groups such as human beings or to the lower groups such as animals, all beings primarily seek peace, comfort and security. Life is as dear to a mute creature as it is to a man. Even the lowliest insect strives for protection against dangers that threaten its life. Just as each one of us wants to live and not to die, so do all other creatures.

The author's main point is that

- (a) different forms of life are found on earth
- (b) different levels of existence are possible in nature
- (c) peace and security are the chief goals of all living beings
- (d) even the weakest creature struggles to preserve its life

Which one of the following assumptions or steps is essential in developing the author's position ?

- (a) All forms of life have a single overriding goal
- (b) The will to survive of a creature is identified with a desire for peace
- (c) All beings are divided into higher and lower groups
- (d) A parallel is drawn between happiness and life, and pain and death

Explanations :

- I. The idea which represents the author's main point is 'peace and security are the chief goals of all living beings', which is response (c). So (c) is the correct answer.
- J. The best assumption underlying the passage is 'The will to survive of a creature is identified with a desire for peace', which is response (b). So (b) is the correct answer.

PASSAGE I

He dropped off to sleep. The cigarette slipped out of his mouth and burnt a great black hole in his only shirt. The smart of the burn awoke him, and he got up, cursing, under his breath, and fumbled in the dark for a needle in order to sew up the hole. Otherwise his wife would see it in the morning and would nag away at him for a couple of hours. But he could not find a needle. He fell asleep again.

- 77. The cigarette fell out of the man's mouth because
 - (a) he fell off his stool
 - (b) he was surprised to see that it had made a hole in his shirt
 - (c) he fell asleep while smoking
 - (d) he fumbled in the dark for a needle
- 78. The man woke up in the dark because
 - (a) the cigarette had burnt his favourite shirt
 - (b) the cigarette had burnt his only shirt
 - (c) the cigarette had to be lit again
 - (d) the cigarette had burnt him
- 79. The man got up to search for a needle because
 - (a) his wife would be very upset
 - (b) the cigarette had damaged his only shirt
 - (c) he wanted to mend the shirt
 - (d) the burn-hole was huge and black
- 80. The man wanted to sew the hole because
 - (a) he wanted to avoid being scolded by his wife
 - (b) he had nothing else to do
 - (c) he had no other shirt
 - (d) he wanted to sleep again
- 81. Which one of the following statements best sums up the man's reaction to his problem ?
 - (a) The man is extremely upset to find the shirt burnt and frantically tries to repair the damage
 - (b) The hole in the shirt and the wife's anticipated nagging are minor problems, the greater one is that the man cannot find a needle
 - (c) Neither the shirt hole nor the nagging nor the lack of a needle is of great consequence
 - (d) The man is terrified of his wife and dreads her discovering the burnt shirt

PASSAGE II

It happened one day, about noon, going towards my boat, I was exceedingly surprised with the print of a man's naked foot on the shore, which was very plain to be seen in the sand. I stood like one thunder-struck, or as if I had seen an apparition. I listened, I looked round me, I could hear nothing, nor see anything. I went up the shore, and down the shore, but it was all one; I could see no other impression but that one. I went to it again to see if there were any more and to observe if it might not be my fancy; but there was no room for that, for there was exactly the very print of a foot, toes, heel and every part of a foot.

82. On finding the foot-print on the shore, what did the author do ?
 (a) Did not pay much attention to it
 (b) Observed it with curiosity
 (c) Began to investigate its origin
 (d) Ran away in fear
83. Which one of the following words best describes the emotion evoked by the foot-print in the author ?
 (a) Curiosity
 (b) Indifference
 (c) Fear
 (d) Surprise
84. How does the author convince himself that the foot-print is a real one ?
 (a) By finding the person who made it
 (b) By being told about it by a witness
 (c) By thinking about it for some time
 (d) By examining it carefully and noticing its details
85. Which one of these expressions best brings out the effect of the foot-print on the author ?
 (a) Seen an apparition
 (b) Stood like one thunder-struck
 (c) Went up the shore
 (d) Looked round himself
86. The passage is full of short simple sentences. Their purpose is to
 (a) facilitate easy understanding
 (b) give a plain narration
 (c) convey breathless excitement
 (d) imply the inability of the author to write in a better way

PASSAGE III

While I stood drinking in the beauty of this placid scene I became conscious of an alteration. In a moment the sole porter emerged from his midday nap, operated a signal that clanked noisily into position, and then ambled slowly towards me for my return-half-ticket, whilst I remarked that his red amiable face and easy-going gait were in perfect harmony with the tranquil surroundings.

A wisp of smoke on the horizon with a dark snake crawling beneath it announced the approach of the train. As it drew nearer, the deep silence of the place was gradually displaced by a creaking of brakes and a hissing of steam. Save for myself, no one entered the train and no one alighted. The porter with leisurely expertness, trundled a couple of milk churns on board, the door was slammed, the guard signalled to the driver, and we moved off, leaving the small station once more to its drowsy silence.

87. What does the author suggest by the word 'placid' ?
 (a) The scene was filled with noise of the train
 (b) The place was filled with lively humanity
 (c) The place was quite and lonely
 (d) The horizon looked smoke laden
88. Who/what does first break the silence of the station ?
 (a) The train
 (b) The porter
 (c) The passenger
 (d) Milk churns
89. Who had a midday nap ?
 (a) The author
 (b) The passenger
 (c) The Station-master
 (d) The porter
90. The central idea of the passage is
 (a) Leisure and Peace
 (b) Hurry and Noise
 (c) Activity
 (d) The Porter

91. The meaning of drowsy is
 (a) Untidy
 (b) Sleepy
 (c) Freezing
 (d) Drugged

PASSAGE IV

Deriving your authority from the government, your position would secure the respect and consideration of everyone, especially in a service where official rank carries so much weight. This would secure to you every attention and comfort on your way and there, together with a complete submission to your orders. I know these things are a matter of indifference to you except so far as they may further the great objects you have in view, but they are of importance in themselves, and of every importance to those who have a right to take an interest in your personal position and comfort.

92. 'The great objects' in the passage means
 (a) Significant items
 (b) Noble goals
 (c) Precious merchandise
 (d) Objects of praise
93. The writer is asking his reader to accept
 (a) great objects
 (b) a respected position
 (c) an official rank
 (d) a significant assignment
94. The person addressed is most likely a
 (a) social worker
 (b) government servant
 (c) commercial agent
 (d) foreign dignitary
95. The writer's attitude towards the person addressed is characterised by
 (a) officiousness
 (b) flattery
 (c) humility
 (d) arrogance
96. The above passage most probably is a part of a
 (a) speech
 (b) official communication
 (c) written report
 (d) personal letter

PASSAGE V

The New Year is a time for resolutions. Mentally at least, most of us could compile formidable lists of do's and don'ts. The same old favourites recur year in and year out with monotonous regularity. Past experience has taught us that certain accomplishments are beyond attainment. If we remain inveterate smokers, it is only because we have so often experienced the frustration that results from failure. Most of us fail in our efforts at self-improvement because our schemes are too ambitious and we never have time to carry them out. We also make the fundamental error of announcing our resolutions to everybody so that we look even more foolish when we slip back into our old bad ways.

97. The phrase 'formidable lists of do's and don'ts' means that
 (a) the bad points of our character are formidable
 (b) the list is so long that it is frightening
 (c) the things that need to be included is frightening
 (d) the realisation that we are so imperfect is frightening
98. The same old favourites recur...with monotonous regularity' implies that
 (a) we want to be so perfect that we include some items regularly

- (b) we have been so regularly doing certain things that they have become monotonous
- (c) in spite of repeated failures, we still would like to try one more time
- (d) some favourite actions if repeated often could become monotonous

99. The author seems to imply that many are inveterate smokers because
- (a) they have not really tried to give up smoking
 - (b) they know from past experience that they can never succeed in their attempt to give up
 - (c) they want to forget the frustration of not smoking
 - (d) they do not have the will power to stop smoking
100. The author says that most of us fail in our attempts at self-improvement because
- (a) we set too high goals for ourselves
 - (b) we do not have the persistence of mind
 - (c) our nature is such that we cannot become perfect
 - (d) certain imperfections have become a part and parcel of our lives
101. The author seems to think that others
- (a) feel happy when we slip back to our old ways
 - (b) do not really want us to improve ourselves
 - (c) are ready to tease and laugh at our attempts
 - (d) might embarrass us by praising our attempts

ANTONYMS

Directions [For the 19 items which follow] : Each of the following 19 items consists of a word in capital letters, followed by four words or group of words. Select the word or group of words that is furthest in meaning to the word in capital letters.

102. **PLIABLE**
 (a) Wilful (b) Stubborn
 (c) Firm (d) Opinionated
103. **OBSCURE**
 (a) Filthy (b) Unknown
 (c) Untidy (d) Well known
104. **HERETICAL**
 (a) Pious (b) Orthodox
 (c) Superstitious (d) Outdated
105. **IMPUDENT**
 (a) Brave (b) Gentle
 (c) Polite (d) Boisterous
106. **INFERNAL**
 (a) Paradisiac (b) Majestic

- (c) Peaceful
107. **VERDANT**
 (a) Dry (b) Green
 (c) Beautiful (d) Water-logged
108. **TEMPORAL**
 (a) Serious (b) Political
 (c) Eternal (d) Divine
109. **OSTENTATION**
 (a) Miserliness (b) Simplicity
 (c) Purity (d) Innocence
110. **LOFTY**
 (a) Mean (b) Glorious
 (c) Envious (d) Devilish
111. **LOQUACIOUS**
 (a) Flamboyant (b) Silent
 (c) Dispirited (d) Dumb
112. **DILAPIDATED**
 (a) Costly (b) Well-furnished
 (c) Broken-down (d) Renovated
113. **ABHORRENCE**
 (a) Admiration (b) Abomination
 (c) Repulsion (d) Acceptance
114. **ENIGMATIC**
 (a) Lethargic (b) Unambiguous
 (c) Wrangling (d) Obscure
115. **AMENABLE**
 (a) Obedient (b) Diplomatic
 (c) Stubborn (d) Answerable
116. **SCRUPULOUS**
 (a) Lax (b) Shameful
 (c) Awful (d) Pitiful
117. **EVASIVE**
 (a) Unreliable (b) Tricky
 (c) Straightforward (d) Elusive
118. **NADIR**
 (a) Zenith (b) Climax
 (c) Peak (d) The lowest point
119. **EXONERATED**
 (a) Implicated (b) Criticised
 (c) Condemned (d) Convicted
120. **INSUPERABLE**
 (a) Predictable (b) Surmountable
 (c) Countable (d) Unendurable

General Knowledge

1. The Treaty of Amritsar was concluded between Maharaja Ranjit Singh and who of the following ?
 (a) Lord Cornwallis (b) Lord Dalhausie
 (c) Lord Hastings (d) Lord Minto
2. Consider the following statements :
 1. The Ministries/ Departments of the Union Government are created by the Prime Minister.
 2. The Cabinet Secretary is the Ex-officio Chairman of the Civil Services Board.
 Which of the statement given above is/are correct ?
 (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2
3. With respect to Article 371A of the Constitution of India, the Governor of which one of the following States has special responsibility with respect to law and order of the State ?
 (a) Asom (b) Manipur
 (c) Nagaland (d) Andhra Pradesh
4. Department of Official Language (Raj Bhasha Vibhag) comes under which one of the following Ministries ?
 (a) Ministry of Culture
 (b) Ministry of Home Affairs
 (c) Ministry of Human Resource Development
 (d) Ministry of Information and Broadcasting
5. International Bank for Reconstruction and Development is also known as
 (a) Credit Bank (b) Exim Bank
 (c) World Bank (d) Asian Bank
6. Consider the following statements :
 1. The Chairman and the Members of the UPSC are appointed by the President.
 2. The Chairman and the Members of the UPSC are eligible for further employment under the Government.
 Which of the statements given above is/are correct ?
 (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2
7. The Bombay High Court does not have a bench at which one of the following places ?
 (a) Nagpur (b) Panaji
 (c) Pune (d) Aurangabad
8. Consider the following statements :
 1. Article 46 of the Constitution of India provides for free legal aid to Scheduled Castes and Scheduled Tribes.
 2. Article 14 of the Constitution of India provides for equality before law.
 Which of the statements given above is/are correct ?
 (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2
9. Which one of the following pairs is not correctly matched ?

	Organisation	Headquarters
(a)	International Labour Organisation	Geneva
(b)	International Maritime Organisation	London
(c)	International Monetary Fund	Washington D.C.
(d)	International Atomic Energy Agency	New York

10. In which one of the following states is Kakrapar nuclear power station located ?

- (a) Karnataka (b) Tamil Nadu
 (c) Maharashtra (d) Gujarat
11. Which one of the following statements is not correct ?
 (a) All meridians run in a true north-south direction
 (b) Meridians are spaced farthest apart at the Equator and converge to common points at the poles
 (c) All meridians are always parallel to one another
 (d) An indefinite number of meridians may be drawn on a globe
12. The hill station of Coonoor is located in which one of the following States ?
 (a) Karnataka (b) Andhra Pradesh
 (c) Kerala (d) Tamil Nadu
13. Which one of the following places is famous for production of railway coaches ?
 (a) Nasik (b) Kapurthala
 (c) Kanpur (d) Kochi
14. Match List-I with List-II and select the correct answer using the codes given below the Lists :

	List-I	List-II
A.	Slate	1. Igneous rock
B.	Lignite	2. Metamorphic rock
C.	Bauxite	3. Non-ferrous mineral
D.	Granite	4. Sedimentary rock

Codes :

	A	B	C	D
(a)	1	3	4	2
(b)	2	4	3	1
(c)	2	3	4	1
(d)	1	4	3	2

15. Which one of the following is correct ?
 Setting of Plaster of Paris is
 (a) dehydration
 (b) oxidation with atmospheric oxygen
 (c) hydration leading to another hydrate
 (d) combination with atmospheric CO₂
16. Which one of the following rivers flows into the Arabian Sea ?
 (a) Indravati (b) Godavari (c) Kaveri (d) Narmada
17. The island of Honshu is located in which one of the following countries ?
 (a) Indonesia (b) Malaysia
 (c) Japan (d) South Korea
18. In which one of the following countries is the volcano 'Guallatiri' located ?
 (a) Peru (b) Chile (c) Tanzania (d) Ecuador
19. For which one of the following is Sualkuchi famous ?
 (a) Bird sanctuary (b) Temple city
 (c) Silk centre (d) Hill station

20. Match List-I with List II and select the correct answer using the codes given below the Lists :

	List-I	List-II
A.	Aurangabad	1. Auroville
B.	Guwahati	2. Saranath
C.	Puducherry	3. Ellora temples
D.	Varanasi	4. Nilachal hills

Codes :

	A	B	C	D
(a)	3	4	1	2
(b)	2	1	4	3
(c)	3	.	4	2
(d)	2	4	1	3

21. Pattadakal group of monuments are located in which one of the following States ?
 (a) Bihar (b) Orissa
 (c) Madhya Pradesh (d) Karnataka
22. In which one of the following States is Ranganathittu Bird Sanctuary located ?
 (a) Tamil Nadu (b) Kerala
 (c) Karnataka (d) Andhra Pradesh
23. Mist is a result of which one of the following ?
 (a) Condensation (b) Evaporation
 (c) Sublimation (d) Saturation
24. 28.38 N and 77.12 E are the respective latitude and longitude of which one of the following places ?
 (a) Jaipur (b) Delhi
 (c) Lucknow (d) Allahabad
25. Which one of the following Indian States does not have a common international border with Bangladesh ?
 (a) Manipur (b) West Bengal
 (c) Tripura (d) Asom
26. What is the correct order of occurrence of the following places as one moves from east to west ?
 1. Murshidabad 2. Gorakhpur
 3. Bhopal 4. Bhavnagar
 Select the correct answer using the codes given below :
 (a) 2, 4, 3, 1 (b) 1, 3, 4, 2
 (c) 1, 2, 3, 4 (d) 4, 3, 2, 1
27. Which one of the following States has the largest forest area to its total land area ?
 (a) Mizoram (b) Arunachal Pradesh
 (c) Sikkim (d) Jammu and Kashmir
28. Rihand Valley Project is located in which one of the following States ?
 (a) Orissa (b) Gujarat
 (c) Himachal Pradesh (d) Uttar Pradesh
29. The city of Nasik is situated on the bank of which one of the following rivers ?
 (a) Krishna (b) Mandovi
 (c) Godavari (d) Tapi
30. For which one of the following is planimeter used ?
 (a) To know the surface area on a map
 (b) To know the distance on a map
 (c) To know the direction on a map
 (d) To know the height of places on a map
31. Which of the following tributaries of the Ganga System flows northwards ?
 (a) Kosi (b) Ghaghara
 (c) Gandak (d) Sone
32. Who among the following has been selected for the Netherlands Golden Ark Award for the year 2008 ?
 (a) Medha Patkar (b) Charudutt Mishra
 (c) Baba Amte (d) Swami Ramdev
33. Match List-I with List-II and select the correct answer using the codes given below the Lists ?

	List-I (Place)		List-II (Industry)
A	Muzaffarnagar	1.	Cotton textiles
B	Adoni	2.	Sugar
C	Ranchi	3.	Sports goods
D	Jalandhar	4.	Engineering goods

Codes :

	A	B	C	D
(a)	2	1	4	3
(b)	1	3	4	2
(c)	2	3	4	1
(d)	1	4	3	2

34. Match List-I with List-II and select the correct answer using the codes given below the Lists :

	List-I (Person)		List-II (Organisation)
A	Juan Somavia	1.	IAEA
B	Margaret Chan	2.	ILO
C	Kemal Dervis	3.	WHO
D	Mohamed ElBaradei	4.	UNDP

Codes :

	A	B	C	D
(a)	1	2	3	4
(b)	2	3	4	1
(c)	2	4	3	1
(d)	1	3	2	4

35. The boundary between North and South Korea is marked by which one of the following ?
 (a) 16th Parallel (b) 29th Parallel
 (c) 38th Parallel (d) 49th Parallel
36. Billy Doctrove, a member of the Elite Panel of ICC umpires belongs to which one of the following countries ?
 (a) South Africa (b) West Indies
 (c) Australia (d) New Zealand
37. To encourage increase in the quality, quantity and availability of food in the world the World Food Prize is founded by
 (a) Prof. M.S. Swaminathan (b) UNDP
 (c) Prof. Norman Borlaug (d) WHO
38. Which one of the following is the first geostationary, telecommunication satellite of India ?
 (a) INSAT-IA (b) APPLE
 (c) ROHINI (d) ARYABHATTA
39. Who among the following was the fourth President of independent India ?
 (a) Zakir Hussain (b) Zail Singh
 (c) V.V. Giri (d) Neelam Sanjiva Reddy
40. In which one of the following years did the Right to Information Act come into force ?
 (a) 2003 (b) 2004
 (c) 2005 (d) 2006
41. In which one of the following Indian States is the game of Polo said to have originated ?
 (a) West Bengal (b) Meghalaya
 (c) Manipur (d) Sikkim
42. The 11th Five Year Plan strategy to raise agricultural output envisages which of the following ?
 1. Greater attention to land reforms.
 2. Double the rate of growth of irrigated area.

3. Promote animal husbandry and fishery.
4. Interest free credit to the farmers.
Select the correct answer using the codes given below :
(a) 1 and 3 (b) 2 and 3
(c) 1, 2 and 3 (d) 2 and 4
43. Holding a 'Bandh' was declared illegal for the first time in India by which one of the following High Courts ?
(a) Rajasthan High Court (b) Gujarat High Court
(c) Kerala High Court (d) Maharashtra High Court
44. Who among the following was the Finance Minister of India in the Interim Government during 1946-1947 ?
(a) R. K. Shanmukham Chetty
(b) John Mathai
(c) Liaquat Ali Khan
(d) Chintamanrao Deshmukh
45. Consider the following statements :
1. Food for Work Programme was launched in India during the 10th Five Year Plan.
2. The Planning Commission in India is a constitutional body.
Which of the statements given above is/are correct ?
(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
46. The acronym SRO, being used in the capital market for various market participants, stands for which one of the following ?
(a) Self Regulatory Organisations
(b) Small Revenue Operators
(c) Securities Roll-back Operators
(d) Securities Regulatory Organisations
47. As per the Economic Survey 2007-2008, which one of the following is the largest source of revenue of the Government of India ?
(a) Excise Duty
(b) Personal Income Tax
(c) Corporation Tax
(d) Customs Duties
48. Who among the following was the first Chairman of the Planning Commission ?
(a) Dr. Rajendra Prasad
(b) Pt. Jawahar Lal Nehru
(c) Sardar Vallabhbhai Patel
(d) J. B. Kripalani
49. Which one of the following countries is *not* a member of ASEAN ?
(a) Brunei Darussalam (b) Cambodia
(c) Vietnam (d) India
50. In which one of the following places is the headquarters of the North-Eastern Railway located ?
(a) Guwahati (b) Gorakhpur
(c) Kolkata (d) Bhubaneswar
51. In which of the following International Organisations is India a member ?
1. Indian Ocean Rim Association for Regional Cooperation.
2. Organisation for Economic Cooperation and Development.
Select the correct answer using the codes given below :
(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
52. Who among the following have won the Nobel Prize for Economics in 2007 ?
1. Eric S. Maskin 2. Roger B. Myerson
3. Hu Jintao 4. Leonid Hurwicz
Select the correct answer using the codes given below :
(a) 1 and 2 (b) 3 and 4
(c) 1, 2 and 4 (d) 2 and 3
53. By which one of the following years does the 11th Five Year Plan aim at achieving 10% rural tele density in India from the present 1.9% ?
(a) 2009 (b) 2010
(c) 2011 (d) 2012
54. Which one of the following is *not* a "Navaratna" Public Sector Enterprise ?
(a) Hindustan Petroleum Corporation Ltd.
(b) Indian Oil Corporation Ltd.
(c) Oil and Natural Gas Corporation Ltd.
(d) Oil India Ltd.
55. Which one of the following statements regarding Monitorable Socio-Economic Target of the 11th Five Year Plan, under the head Environment, is *not* correct ?
(a) Treat all urban waste water by 2011-2012 to clear river waters
(b) Increase energy efficiency by 20 percentage points by 2016-2017
(c) Attain WHO standards of air quality in all major cities by 2011-2012
(d) Increase forest and tree cover by 15 percentage points
56. Match List-I with List-II and select the correct answer using the codes given below the Lists :
- | | List-I
(Session of Indian National Congress) | List-II
(Venue) |
|----|---|--------------------|
| A. | 1st Session | 1. Allahabad |
| B. | 2nd Session | 2. Madras |
| C. | 3rd Session | 3. Calcutta |
| D. | 4th Session | 4. Bombay |
- Codes :
A B C D
(a) 4 3 2 1
(b) 1 3 2 4
(c) 4 2 3 1
(d) 1 2 3 4
57. Separate electorates for Muslims in India were introduced by which one of the following Acts ?
(a) Government of India Act of 1909
(b) Indian Councils Act of 1892
(c) Rowlatt Act of 1919
(d) Government of India Act of 1935
58. Who among the following was the Viceroy of India at the time of the formation of Indian National Congress ?
(a) Lord Mayo (b) Lord Ripon
(c) Lord Dufferin (d) Lord Lansdowne
59. Arrange the following in chronological order
1. Partition of Bengal
2. Chauri-Chaura Incident
3. First Round Table Conference
Which one of the following is the correct sequence of the above ?
(a) 1-2-3 (b) 3-2-1
(c) 1-3-2 (d) 2-1-3

60. The 'Arthashastra' is a treatise on which one of the following ?
 (a) Economics
 (b) Environment
 (c) Political Philosophy
 (d) Religion in Administration
61. 'The Musalman', the handwritten daily newspaper in circulation since 1927, is published from which one of the following places ?
 (a) Chennai
 (b) Hyderabad
 (c) Mysore
 (d) Lucknow
62. The quarantine regulation for preventing entry of diseased plants into the country is done by which one of the following ?
 (a) National Botanical Reserach Institute
 (b) Botanical Survey of India
 (c) National Bureau of Plant Genetic Resources
 (d) Council of Scientific and Industrial Research
63. Which one of the following is a global biodiversity hotspot in India ?
 (a) Western Ghats
 (b) Western Himalayas
 (c) Eastern Ghats
 (d) Northern Himalayas
64. Which one of the following is correct ?
 Great Bear is a
 (a) galaxy
 (b) planet
 (c) star
 (d) constellation
65. Which one of the following is a programme that converts high level language to machine language ?
 (a) Linker
 (b) Assembler
 (c) Interpreter
 (d) Compiler
66. Which one of the following common devices works on the basis of the principle of mutual induction ?
 (a) Tubelight
 (b) Transformer
 (c) Photodiode
 (d) LED
67. Which one of the following is the secondary source of light in a fluorescent lamp ?
 (a) Neon gas
 (b) Argon gas
 (c) Mercury vapour
 (d) Fluorescent coating on the glass
68. The phenomenon of mirage occurs due to which one of the following ?
 (a) Polarisation of light
 (b) Dispersion of light
 (c) Diffraction of light
 (d) Total internal reflection of light
69. Between which one of the following sets of blood groups, is the blood transfusion possible ?
 (a) A and O (A donor) (b) B and A (B donor)
 (c) A and AB (A donor) (d) AB and O (AB donor)
70. Which one of the following diseases is caused by virus ?
 (a) Tuberculosis (b) Typhoid
 (c) Influenza (d) Diphtheria
71. Malaria in the human body is caused by which one of the following organisms ?
 (a) Bacteria (b) Virus
 (c) Mosquito (d) Protozoan
72. Sweating during exercise indicates operation of which one of the following processes in the human body ?
 (a) Enthalpy (b) Homeostasis
 (c) Phagocytosis (d) Osmoregulation
73. Which one of the following is responsible for converting milk into curd ?
 (a) Fungi (b) Bacteria
 (c) Virus (d) None of these
74. Which one of the following is a major constituent of Biogas ?
 (a) Carbon dioxide (b) Methane
 (c) Hydrogen (d) Nitrogen dioxide
75. Which chamber of human heart pumps fully oxygenated blood to aorta and thence to the body ?
 (a) Right Auricle (b) Left Auricle
 (c) Right Ventricle (d) Left Ventricle
- Directions :** The following five (5) items consist of two statements, one labelled as the 'Assertion (A)' and the other as 'Reason (R)'. You are to examine these two statements carefully select the answers to these items using the codes given below :
- Codes :**
 (a) Both A and R are individually true and R is the correct explanation of A
 (b) Both A and R are individually true, but R is not the correct explanation of A
 (c) A is true, but R is false
 (d) A is false but R is true
76. **Assertion (A) :** Addition of water to an aqueous solution of HCl increases the pH.
Reason (R) : Addition of water suppresses the ionisation of HCl.
77. **Assertion (A) :** In a pressure cooker food is cooked above boiling point.
Reason (R) : Boiling point of water increases as the pressure increases.
78. **Assertion (A) :** In temperate cyclones winds blow from the periphery towards its centre.
Reason (R) : There is high pressure in the centre of temperate cyclone.
79. **Assertion (A) :** It is easier to swim in sea-water compared to ordinary water.
Reason (R) : Density of sea-water is higher than that of ordinary water.
80. **Assertion (A) :** The Equatorial regions bulge outwards by about 21 kilometre compared to Poles.
Reason (R) : Earth's slow rotation reduces the effect of gravity around the Equator.
81. Which one of the following is the correct chronological order of the freedom movements of India ?
 (a) Quit India Movement—Non-Cooperation Movement—Civil Disobedience Movement
 (b) Non-Cooperation Movement—Civil Disobedience Movement—Quit India Movement
 (c) Quit India Movement—Civil Disobedience Movement—Non-Cooperation Movement
 (d) Non-Cooperation Movement—Quit India Movement—Civil Disobedience Movement
82. Which one of the following is the correct chronological order of the Secretary Generals of the United Nations ?
 (a) U. Thant—K. Waldheim—B.B. Ghali—K. Annan
 (b) K. Waldheim—U. Thant—B.B. Ghali—K. Annan
 (c) U. Thant—K. Waldheim—K. Annan—B. B. Ghali
 (d) K. Waldheim—B. B. Ghali—U. Thant—K. Annan

83. Consider the following statements
- The USSR assisted in the building of the Bhilai Steel Plant.
 - The British assisted in the building of the Bokaro Steel Plant.
- Which of the statements given above is/are correct ?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
84. The Balwant Rai Mehta Committee recommended which one of the following Panchayati Raj structures ?
- Gram Panchayat at the village level and Panchayat Samiti at the block level only
 - Panchayat Samiti at the block level and Zilla Parishad at the district level only
 - Gram Panchayat at the village level, Panchayat Samiti at the block level and Zilla Parishad at the district level
 - Gram Panchayat at the village level and Zilla Parishad at the district level only
85. Consider the following statements on Parliamentary Committees :
- Members of the Rajya Sabha are not associated with the Committees on Public Accounts and Public Undertakings.
 - Members of the Committee on Estimates are drawn from both the Lok Sabha and the Rajya Sabha.
- Which of the statements given above is/are correct ?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
86. Which of the following statements is/are correct ?
- Article 26 of the Constitution of India states that subject to public order, morality and health, every religious denomination or any section thereof shall have the right.
- to establish and maintain institutions for religious and charitable purposes.
 - to manage its own affairs in matters of religion.
 - to own and acquire movable and immovable property.
- Select the correct answer using the codes given below :
- (a) 1 only (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3
87. Who among the following was *not* a party to the coalition that fought against the English in the Battle of Buxar ?
- Mir Kasim
 - Mir Jafar
 - Shuja-ud-daulah
 - Shah Alam II
88. Who among the following had founded the Theosophical Society in the United States of America ?
- Swami Dayanand Saraswati
 - Madame Blavatsky
 - Madame Cama
 - Lala Hardayal
89. In which one of the following cities, was the East India Association founded by Dadabhai Naoroji in 1866 ?
- Paris
 - London
 - New York
 - Tokyo
90. In which one of the following Sessions was the Indian National Congress split into Moderates and Extremists ?
- Nagpur
 - Allahabad
 - Surat
 - Calcutta
91. Who among the following was the first Governor General of India ?
- Lord Amherst
 - Lord William Bentinck
 - Sir Charles Metcalfe
 - Robert Clive
92. Which one of the following has geographical position of 0° latitude and 0° longitude ?
- In the South Atlantic Ocean
 - In the Mediterranean Sea
 - In Ghana, a West African country
 - At Greenwich Observatory in England
93. Arrange the following in chronological order :
- Third Carnatic War
 - First Burmese War
 - First Mysore War
 - Second Afghan War
- Which one of the following is the correct sequence of the above ?
- (a) 1-4-3-2 (b) 1-3-2-4
(c) 2-4-1-3 (d) 3-1-2-4
94. After 1857, who of the following announced, at a Darbar at Allahabad, the assumption of the Government of India by the Sovereign of Great Britain ?
- Lord Canning
 - Sir Johan Lawrence
 - Lord Mayo
 - Lord Northbrook
95. With which one of the following did the Civil Disobedience Movement in India commence ?
- The Dandi March
 - No Tax campaign by Sardar Patel
 - The unfurling of the national flag by Nehru
 - Mahatma Gandhi's going on fast
96. Who among the following was the Governor-General of India immediately preceding Chakravarti Rajgopalachari ?
- The Marquess of Linlithgow
 - Lord Mountbatten
 - Lord Wavell
 - Lord Chelmsford
97. Meghnad Saha is known for his contribution in which one of the following fields ?
- Physics
 - Medical Science
 - Environmental Science
 - History
98. Which one of the following days is observed as the World Environment Day ?
- 28th February
 - 4th March
 - 5th June
 - 16th September
99. Which one of the following pairs is *not* correctly matched ?
- Hindalco Industries : Novelis
 - Tata Steel : Corus Group
 - Jet Airways : Air Sahara
 - Kingfisher Airlines : MDLR Airlines
100. Match List-I with List-II and select the correct answer using the codes given below the Lists :
- | | List-I | | List-II |
|----|---------------------|----|-----------------|
| A. | M. F. Hussain | 1. | Tabla |
| B. | Zakir Hussain | 2. | Classical dance |
| C. | Ulhas Kashalkar | 3. | Painting |
| D. | Yamini Krishnamurty | 4. | Vocal classical |

Codes :

- | | A | B | C | D |
|-----|---|---|---|---|
| (a) | 3 | 1 | 4 | 2 |
| (b) | 2 | 4 | 3 | 1 |
| (c) | 2 | 3 | 4 | 1 |
| (d) | 3 | 4 | 1 | 2 |

101. Match List-I with List-II and select the correct answer using the codes given below the Lists :

	List-I		List-II
A.	Girija Devi	1.	Leading woman executive
B.	Indira Nooyi	2.	Leading writer
C.	Kiran Desai	3.	Hematologist turned executive of the BBC trust
D.	Chitra Bharucha	4.	Anti-liquor activist

Codes :

- | | A | B | C | D |
|-----|---|---|---|---|
| (a) | 3 | 1 | 2 | 4 |
| (b) | 4 | 1 | 2 | 3 |
| (c) | 4 | 2 | 1 | 3 |
| (d) | 3 | 2 | 1 | 4 |

102. In which one of the following places is the Indira Gandhi Centre for Atomic Research located ?

- (a) Thiruvananthapuram (b) Sriharikota
(c) Kalpakkam (d) Trombay

103. Match List-I with List-II and select the correct answer using the codes given below the Lists :

	List-I		List-II
A.	Jeev Milkha Singh	1.	Archery
B.	Jayanta Talukdar	2.	Cricket
C.	N. Kunjarani Devi	3.	Power lifting
D.	Jhulan Goswami	4.	Golf

Codes :

- | | A | B | C | D |
|-----|---|---|---|---|
| (a) | 4 | 1 | 3 | 2 |
| (b) | 4 | 3 | 1 | 2 |
| (c) | 2 | 3 | 1 | 4 |
| (d) | 2 | 1 | 3 | 4 |

104. Who among the following fast bowlers has taken a hat-trick in the very first over of a Test Cricket Match ?

- (a) Glenn Mc Grath (b) K. Pietersen
(c) C. Walsh (d) Irfan Pathan

105. Who among the following is the author of the book 'India Remembered' ?

- (a) J. K. Rowling
(b) Robert Dallek
(c) Pamela Mountbatten
(d) Stephen Hawking

106. Among the following persons whose birth anniversary is celebrated as Sadbhavana Divas and death anniversary as Anti-terrorism Day ?

- (a) Indira Gandhi (b) Rajiv Gandhi
(c) Mahatma Gandhi (d) Sanjay Gandhi

107. Who among the following is the Commonwealth Secretary General ?

- (a) Rajiv Chandran
(b) Kamallesh Sharma
(c) Sashi Tharoor
(d) Shiv Shankar Mukherjee

108. Which one of the following is the correct sequence of the nuclear power plants of India in the increasing order of their installed power generation capacity ?

- (a) Rawatbhata-Narora-Kaiga-Tarapur
(b) Narora-Kaiga-Rawatbhata-Tarapur
(c) Kaiga-Tarapur-Narora-Rawatbhata
(d) Tarapur-Narora-Kaiga-Rawatbhata

109. Which one of the following is *not* a chemical change ?

- (a) Burning of coal in air
(b) Fermentation of sugarcane juice
(c) Crystallisation of table salt from sea water
(d) Cracking of petroleum

110. Which one of the following is used in the preparation of antiseptic solution ?

- (a) Potassium nitrate (b) Iodine
(c) Iodine chloride (d) Potassium chloride

111. For which one of the following is the density maximum ?

- (a) Chloroform (b) Water
(c) Benzene (d) Ice

112. Sarkaria Commission was established to study

- (a) President and Governors relations
(b) Centre-State relations
(c) State and Panchayat body relations
(d) President and Prime Minister's relations

113. Which one of the following properties changes with valency ?

- (a) Atomic weight
(b) Equivalent weight
(c) Molecular weight
(d) Density

114. Which one of the following is the softest ?

- (a) Sodium (b) Aluminium
(c) Iron (d) Lithium

115. Which one of the following is correct ?

- Butter is
(a) a super cooled oil (b) an emulsion
(c) a molecular solid (d) None of the above

116. Which one of the following substances used in the manufacture of safety matches

- (a) Red Phosphorus
(b) White Phosphorus
(c) Phosphorus Trioxide (P_2O_3)
(d) Black Phosphorus

117. Which one of the following is an element ?

- (a) Topaz (b) Diamond
(c) Ruby (d) Sapphire

118. Which one of the following is correct ?

The mean distance from the Sun to the Earth is called a/an

- (a) Light Year (b) Parallax Second
(c) Astronomical Unit (d) Angstrom

119. On which one of the following conservative laws, does a rocket work ?

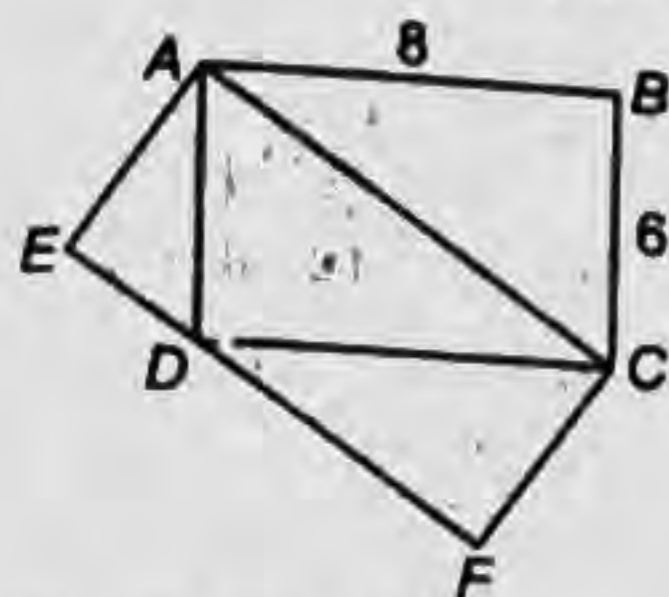
- (a) Mass (b) Energy
(c) Linear momentum (d) Angular momentum

120. By using which one of the following techniques, is DNA fingerprint done ?

- (a) ELISA (b) RIA
(c) Northern Blotting (d) Southern Blotting

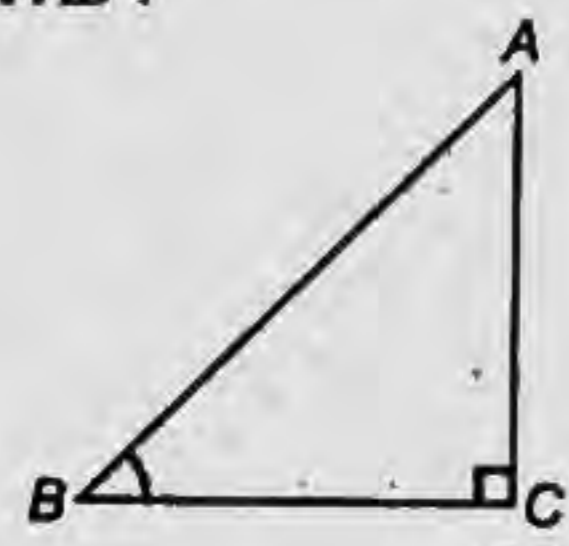
Elementary Mathematics

- If x and y are respectively the areas of a square and a rhombus of sides of same length, then what is $x : y$?
 (a) 1 : 1
 (b) $2 : \sqrt{3}$
 (c) $4 : \sqrt{3}$
 (d) 3 : 2
- If the area of a circle, inscribed in an equilateral triangle is $4\pi \text{ cm}^2$, then what is the area of the triangle?
 (a) $12\sqrt{3} \text{ cm}^2$
 (b) $9\sqrt{3} \text{ cm}^2$
 (c) $8\sqrt{3} \text{ cm}^2$
 (d) 18 cm^2



- $ABCD$ is a rectangle of dimensions 8 unit and 6 unit. $AEFC$ is a rectangle drawn in such a way that diagonal AC of the first rectangle is one side and side opposite to it is touching the first rectangle at D as shown in the figure given above. What is the ratio of the area of rectangle $ABCD$ to that of $AEFC$?
 (a) 2
 (b) $3/2$
 (c) 1
 (d) $8/9$
- A field is 125 m long and 15 m wide. A tank $10 \text{ m} \times 7.5 \text{ m} \times 6 \text{ m}$ was dug in it and the earth thus dug out was spread equally on the remaining field. The level of the field thus raised is equal to which one of the following?
 (a) 15 cm
 (b) 20 cm
 (c) 25 cm
 (d) 30 cm
- What is the total surface area of a one-side open cubical box of outer side of length 5 cm and thickness 0.5 cm?
 (a) 125 cm^2
 (b) 214 cm^2
 (c) 180 cm^2
 (d) 205 cm^2
- A solid metallic cube of edge 4 cm is melted and recast into solid cubes of edge 1 cm. If x is the surface area of the melted cube and y is the total surface area of all the cubes recast, then what is $x : y$?
 (a) 2 : 1
 (b) 1 : 2
 (c) 1 : 4
 (d) 4 : 1
- The dimensions of a rectangular box are in the ratio 2 : 3 : 4 and the difference between the cost of covering it with a sheet of some metal at Rs 8 and Rs 10 per square metre is Rs 234. What are the length, breadth and height of the box respectively?
 (a) 2 m, 3 m, 4 m
 (b) 3 m, 4.5 m, 6 m
 (c) 4 m, 6 m, 8 m
 (d) 5 m, 7.5 m, 10 m
- From a solid cube of edge 3 m, a solid of largest sphere is carved out. What is the volume of solid left?
 (a) $(27 - 2.25\pi) \text{ m}^3$
 (b) $(27 - 4.5\pi) \text{ m}^3$
 (c) $2.25\pi \text{ m}^3$
 (d) $4.5\pi \text{ m}^3$
- The radius and height of a right circular cone are in the ratio 3 : 4 and its volume is $96\pi \text{ cm}^3$. What is its lateral surface area?
 (a) $24\pi \text{ cm}^2$
 (b) $36\pi \text{ cm}^2$
 (c) $48\pi \text{ cm}^2$
 (d) $60\pi \text{ cm}^2$

- What is the value of the polynomial $r(x)$ so that $f(x) = g(x)q(x) + r(x)$ and $\deg r(x) < \deg g(x)$, where $f(x) = x^2 + 1$ and $g(x) = x + 1$?
 (a) 1
 (b) -1
 (c) 2
 (d) -2
- What is the sum of all prime numbers between 100 and 120?
 (a) 652
 (b) 650
 (c) 644
 (d) 533
- What least value must be given to * so that the number $8798546*5$ is divisible by 11?
 (a) 0
 (b) 1
 (c) 2
 (d) 3
- 21 mango trees, 42 apple trees and 56 orange trees have to be planted in rows such that each row contains the same number of trees of one variety only. What is the minimum number of rows in which the above trees may be planted?
 (a) 3
 (b) 15
 (c) 17
 (d) 20
- What is the value of $\log_{100} 0.1$?
 (a) $1/2$
 (b) $-1/2$
 (c) -2
 (d) 2
- What is the value of $\cot^2 \theta - (1 / \sin^2 \theta)$?
 (a) $1/2$
 (b) -1
 (c) $-1/2$
 (d) $3/2$
- If $\sin^2 60^\circ + \cos^2 (3x - 9^\circ) = 1$, then what is the value of x ?
 (a) 24°
 (b) 23°
 (c) 22°
 (d) 21°
- If $\cos A = \frac{5}{13}$, then what is the value of $\frac{\sin A - \cot A}{2 \tan A}$?
 (a) $395/3644$
 (b) $395/3844$
 (c) $395/3744$
 (d) $385/3744$
- If $\sin x = \cos y$ and angle x and angle y are acute, then what is the relation between x and y ?
 (a) $x - y = \pi / 2$
 (b) $x + y = 3\pi / 2$
 (c) $x + y = \pi / 2$
 (d) $x + y = \pi / 4$
- In the given figure, $BC = 15 \text{ cm}$ and $\sin B = 4/5$. What is the value of AB ?
 (a) 25 cm
 (b) 20 cm
 (c) 5 cm
 (d) 4 cm



- If $\sin \theta = \frac{m^2 - n^2}{m^2 + n^2}$, then what is the value of $\tan \theta$?
 (a) $\frac{m^2 + n^2}{m^2 - n^2}$
 (b) $\frac{2mn}{m^2 + n^2}$
 (c) $\frac{m^2 - n^2}{2mn}$
 (d) $\frac{m^2 + n^2}{2mn}$

21. If $x^2 - 4x + 1 = 0$, then what is the value of $x^3 + \frac{1}{x^3}$?
- (a) 44 (b) 48
(c) 52 (d) 64
22. If $x + y + z = 6$ and $xy + yz + zx = 11$, then what is the value of $x^3 + y^3 + z^3 - 3xyz$?
- (a) 18 (b) 36
(c) 54 (d) 66
23. If a is a rational number such that $(x - a)$ is a factor of the polynomial $x^3 - 3x^2 - 3x + 9$, then
- (a) a can be any integer
(b) a is an integer dividing 9
(c) a cannot be an integer
(d) a can take three values
24. If $x^2 - 11x + a$ and $x^2 - 14x + 2a$ have a common factor, then what are the values of a ?
- (a) 0, 7 (b) 5, 20
(c) 0, 24 (d) 1, 3
25. Which one of the following is a factor of $2x^3 - 3x^2 - 11x + 6$?
- (a) $x + 1$ (b) $x - 1$
(c) $x + 2$ (d) $x - 2$
26. What should be subtracted from $27x^3 - 9x^2 - 6x - 5$ to make it exactly divisible by $(3x - 1)$?
- (a) -5 (b) -7
(c) 5 (d) 7
27. If $(x + k)$ is the HCF of $ax^2 + ax + b$ and $x^2 + cx + d$, then what is the value of k ?
- (a) $\frac{b+d}{a+c}$ (b) $\frac{a+b}{c+d}$
(c) $\frac{a-b}{c-d}$ (d) None of these
28. What is the value of k for which the HCF of $2x^2 + kx - 12$ and $x^2 + x - 2k - 2$ is $(x + 4)$?
- (a) 5 (b) 7
(c) 10 (d) -4
29. What is the LCM of $(x + 2)^2(x - 2)$ and $x^2 - 4x - 12$?
- (a) $(x + 2)(x - 2)$
(b) $(x + 2)^3(x - 2)(x - 6)$
(c) $(x + 2)(x - 2)^2$
(d) $(x + 2)^2(x - 2)(x - 6)$
30. Which one of the following is the quadratic equation whose roots are reciprocal to the roots of the quadratic equation $2x^2 - 3x - 4 = 0$?
- (a) $3x^2 - 2x - 4 = 0$ (b) $4x^2 + 3x - 2 = 0$
(c) $3x^2 - 4x - 2 = 0$ (d) $4x^2 - 2x - 3 = 0$
31. The value of y which will satisfy the equations $2x^2 + 6x + 5y + 1 = 0$ and $2x + y + 3 = 0$ may be found by solving which one of the following equations?
- (a) $y^2 + 14y - 7 = 0$ (b) $y^2 + 8y + 1 = 0$
(c) $y^2 + 10y - 7 = 0$ (d) $y^2 - 8y + 7 = 0$
32. If a polynomial equation has rational coefficients and has exactly three real roots, then what is the degree of the polynomial?
- (a) Equal to 3
(b) Greater than or equal to 3
(c) Strictly greater than 3
(d) Less than 3
33. Suppose X is some statistical variable with mean μ . Let x_1, x_2, \dots, x_n be its deviations from mean with the respective frequencies f_1, f_2, \dots, f_n . What is the value of the sum $x_1f_1 + x_2f_2 + \dots + x_nf_n$?
- (a) 0 (b) 1
(c) μ (d) $\mu + 1$
34. Sets A, B and C contain 5 numbers each. The medians of the numbers in these sets are 3, 8 and 11 respectively. What is the median of the combined 15 numbers of the three sets?
- (a) 8
(b) 7
(c) $22/3$
(d) Median cannot be determined from the given data
35. A truck made a trip of 200 km, covering the first 100 km at the rate of 50 km/h and the second 100 km at 40 km/h. What was the average speed of the truck in km/h?
- (a) 22.2 (b) 28.2
(c) 33.3 (d) 44.4
36. How much tea at Rs 9 per kg must be mixed with 100 kg of superior tea at Rs 13.50 per kg to give an average price of Rs 11 per kg?
- (a) 85 kg (b) 120 kg
(c) 125 kg (d) 130 kg
37. The population of a State increased from 100 million to 169 million in two decades. What is the average increase in population per decade?
- (a) 20% (b) 34.5%
(c) 69% (d) 30%
- Directions (Q. 38-41) :** Each of the following four (4) items consists of two statements, one labelled as 'Assertion (A)' and the other as 'Reason (R)'. You are to examine these two statements carefully and select the answers to these items using the code given below :
- Codes :**
- (a) Both A and R are individually true and R is the correct explanation of A
(b) Both A and R are individually true but R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true
38. Assertion (A) : Two distinct lines cannot have more than one point in common.
Reason (R) : Any number of lines can be drawn through one point.
39. Assertion (A) : Triangles on the same base and between the same parallel lines are equal in area.
Reason (R) : The distance between two parallel lines is same everywhere.
40. Assertion (A) : The volume of a cuboid is the product of the lengths of its coterminous edges.
Reason (R) : The surface area of a cuboid is twice the sum of the products of lengths of its coterminous edges taken two at a time.

41. Assertion (A) : The curved surface area of a right circular cone of base radius r and height h is given by $\pi r(\sqrt{h^2 + r^2})$.

Reason (R) : The right circular cone of base radius r and height h when cut opened along the slant height, forms a rectangle of length πr and breadth $\sqrt{h^2 + r^2}$.

42. If C_1 is a right circular cone with base radius r_1 cm and height h_1 cm and C_2 is a right circular cylinder with base radius r_2 cm and height h_2 cm and if $r_1 : r_2 = 1 : n$ (where n is a positive integer) and their volumes are equal, then which one of the following is correct ?

- (a) $h_1 = 3nh_2$ (b) $h_1 = 3n^2h_2$
(c) $h_1 = 3h_2$ (d) $h_1 = n^2h_2$

43. A right circular cone is cut by a plane parallel to its base in such a way that the slant heights of the original and the smaller cone thus obtained are in the ratio 2 : 1. If V_1 and V_2 are respectively the volumes of the original cone and of the new cone, then what is $V_1 : V_2$?

- (a) 2 : 1 (b) 3 : 1
(c) 4 : 1 (d) 8 : 1

44. A hollow cylindrical iron pipe of length 1.4 m has bore radius 2.5 cm and thickness of the metal is 1 cm. What is the volume of the iron used in the pipe ?

- (a) 2640 cm^3 (b) 2604 cm^3
(c) 2460 cm^3 (d) None of these

45. A container is in the form of a right circular cylinder surmounted by a hemisphere of the same radius 15 cm as the cylinder. If the volume of the container is $32400\pi \text{ cm}^3$, then the height h of the container satisfies which one of the following ?

- (a) $135 \text{ cm} < h < 150 \text{ cm}$
(b) $140 \text{ cm} < h < 147 \text{ cm}$
(c) $145 \text{ cm} < h < 148 \text{ cm}$
(d) $139 \text{ cm} < h < 145 \text{ cm}$

46. The ratio of the surface areas of two hemispheres is 4 : 1. What is the ratio of their volumes ?

- (a) 8 : 1 (b) 4 : 1
(c) 3 : 1 (d) 2 : 1

47. If the number of square centimetres on the surface area of a sphere is three times the number of cubic centimetres in its volume, then what is its diameter ?

- (a) 1 cm (b) 2 cm
(c) 3 cm (d) 6 cm

48. A sphere is cut into two equal halves and both the halves are painted from all the sides. The radius of the sphere is r unit and the rate of painting is Rs 8 per sq unit. What is the total cost of painting the two halves of the sphere in rupees ?

- (a) $6\pi r^2$
(b) $32\pi r^2$
(c) $48\pi r^2$
(d) Insufficient data to answer

49. Which one of the following statements is not correct with reference to a histogram ?

- (a) Frequency curve is obtained by joining the mid points of the top of the adjacent rectangles with smooth curves

- (b) Histogram is drawn for continuous data
(c) The height of the bar is proportional to the frequency of that class
(d) Mode of the distribution can be obtained from the histogram

50.

X	0	1	2	3	4
Frequency	4	f	9	g	4

The table above gives the frequency distribution of a discrete variable X with two missing frequencies. If the total frequency is 25 and the arithmetic mean of X is 2, then what is the value of the missing frequency f ?

- (a) 4 (b) 5
(c) 6 (d) 7

51. Assume that population densities of 5 major states of India are given. Which one of the following diagrams is suitable to represent the data ?

- (a) Single bar diagram
(b) Percentage bar diagram
(c) Pie diagram
(d) Since population density is a ratio, it cannot be represented by any diagram

52. What is the value of

$$\frac{1}{1 + \sqrt{2}} + \frac{1}{\sqrt{2} + \sqrt{3}} + \dots + \frac{1}{\sqrt{15} + \sqrt{16}} ?$$

- (a) 0 (b) 1
(c) 2 (d) 3

53. Which one of the following is one of the two consecutive positive integers, the sum of whose squares is 761 ?

- (a) 15 (b) 20
(c) 24 (d) 25

54. The set of integers is closed with respect to which one of the following ?

- (a) Addition only
(b) Multiplication only
(c) Both addition and multiplication
(d) Division

55. Suppose $p * q = 2p + 2q - pq$, where p, q are natural numbers. If $8 * x = 4$, then what is the value of x ?

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

56. If $y = (a^x)^{(a^x)^{\dots}}$, then which one of the following is correct ?

- (a) $\log y = xy \log a$
(b) $\log y = x + y \log a$
(c) $\log y = y + x \log a$
(d) $\log y = (y + x) \log a$

57. The set $\{2, 4, 16, 256, \dots\}$ can be represented as which one of the following ?

- (a) $\{x \in N \mid x = 2^{2^n}, n \in N\}$
(b) $\{x \in N \mid x = 2^{2^n}, n = 0, 1, 2, \dots\}$
(c) $\{x \in N \mid x = 2^{4^n}, n = 0, 1, 2, \dots\}$
(d) $\{x \in N \mid x = 2^{2^n}, n = 0, 1, 2, \dots\}$

58. Which one of the following is a correct statement ?

- (a) $\phi \in \phi$ (b) $\phi \notin P(\phi)$
(c) $\phi = P(\phi)$ (d) $\phi \in P(\phi)$

59. What is the simplified form of

$$\left(\frac{x^2 - 3x + 2}{x^3 - 8}\right) + \left(\frac{x^2 - 9}{x^2 + 7x + 12}\right) \times \left(\frac{x^3 + 2x^2 + 4x}{x^2 + 3x - 4}\right)?$$

- (a) $\frac{x}{x-3}$ (b) $\frac{x-2}{x-3}$
 (c) $\frac{x}{x+3}$ (d) $\frac{x+3}{x+4}$

60. The sum of the age of a father and the age of son is 75 yr. If the product of their ages before 5 yr was 750, then what is the present age of the father?

- (a) 60 yr (b) 55 yr
 (c) 52 yr (d) 50 yr

61. 10 yr ago Ram was 5 times as old as Shyam, but 20 yr later from now he will be only twice as old as Shyam. How many years old is Shyam?

- (a) 20 yr (b) 30 yr
 (c) 40 yr (d) 50 yr

62. The solution of the equations

$$\frac{3x - y + 1}{3} = \frac{2x + y + 2}{5} = \frac{3x + 2y + 1}{6}$$

is given by which one of the following?

- (a) $x = 2, y = 1$ (b) $x = 1, y = 1$
 (c) $x = -1, y = -1$ (d) $x = 1, y = 2$

63. If α, β are the roots of $ax^2 + bx + c = 0$, then what is the

value of $\left(\frac{1}{\alpha^2} - \frac{1}{\beta^2}\right)^2$?

- (a) $b^2(b^2 - 4ac)/c^4$ (b) $b(b^2 - 4ac)/c^2$
 (c) $(b^2 - 4ac)/c^2$ (d) $(b^2 - 4ac)/c^4$

64. If $\sin(x - y) = 1/2$ and $\cos(x + y) = 1/2$, then what is the value of x ?

- (a) 15° (b) 30°
 (c) 45° (d) 60°

65. If $1 + \tan \theta = \sqrt{2}$, then what is the value of $\cot \theta - 1$?

- (a) $1/\sqrt{2}$ (b) $\sqrt{2}$
 (c) 2 (d) $1/2$

66. The hypotenuse of a right triangle is $3\sqrt{10}$ unit. If the smaller side is tripled and the longer side is doubled, new hypotenuse becomes $9\sqrt{5}$ unit. What are the lengths of the smaller and longer sides of the right triangle respectively?

- (a) 5 unit, 9 unit (b) 5 unit, 6 unit
 (c) 3 unit, 9 unit (d) 3 unit, 6 unit

67. If $\sin(x + 54^\circ) = \cos x$, where $0 < x, x + 54^\circ < 90^\circ$, then what is the value of x ?

- (a) 54° (b) 36°
 (c) 27° (d) 18°

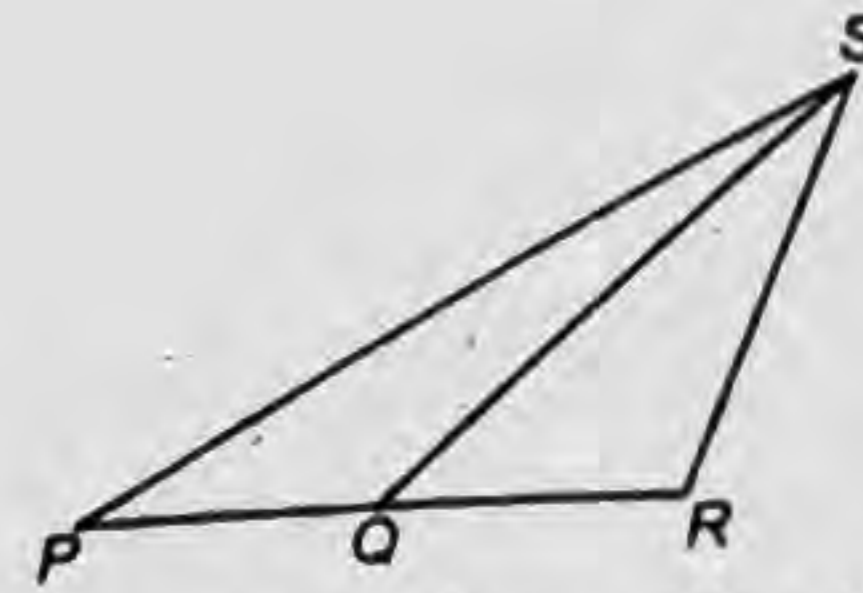
68. A round balloon of unit radius subtends an angle of 90° at the eye of an observer standing at a point, say A. What is the distance of the centre of the balloon from the point A?

- (a) $1/\sqrt{2}$ (b) $\sqrt{2}$
 (c) 2 (d) $1/2$

69. The angle of elevation and angle of depression both are measured with

- (a) the vertical only
 (b) the horizontal only
 (c) both horizontal and vertical
 (d) None of the above

70.



In the figure given above, $PQ = QS$ and $QR = RS$. If $\angle SRQ = 100^\circ$, how many degrees is $\angle QPS$?

- (a) 40° (b) 30°
 (c) 20° (d) 15°

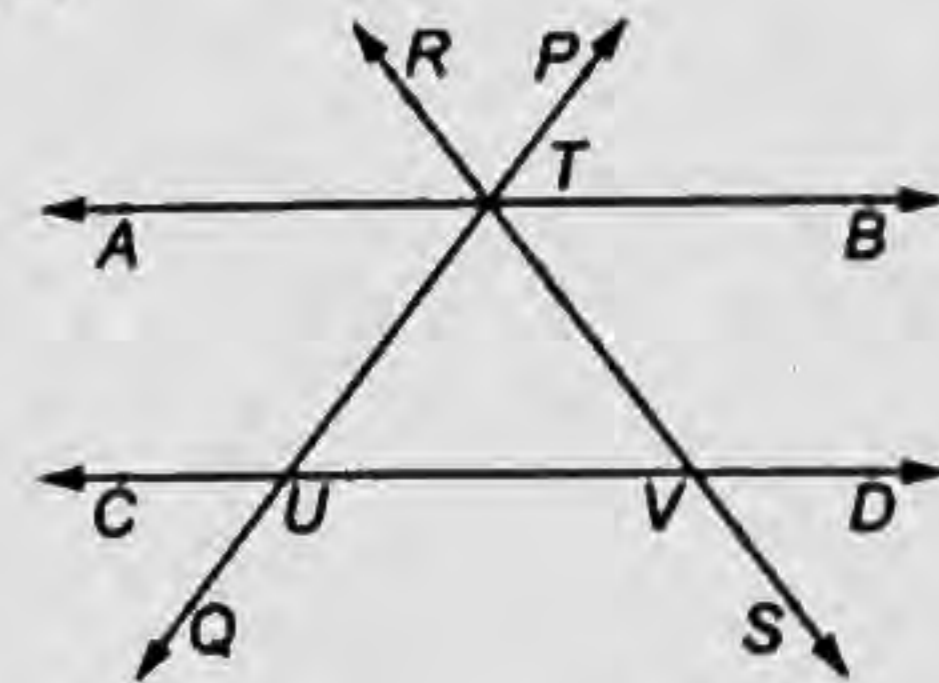
71. If a clock is started at noon, then what is the angle turned by hour hand at 3 : 45 pm?

- (a) 67.5° (b) 97.5°
 (c) 112.5° (d) 142.5°

72. ABC is a right angled triangle, right angled at C and p is the length of the perpendicular from C on AB. If a, b, c are the sides of the triangle, then which one of the following is correct?

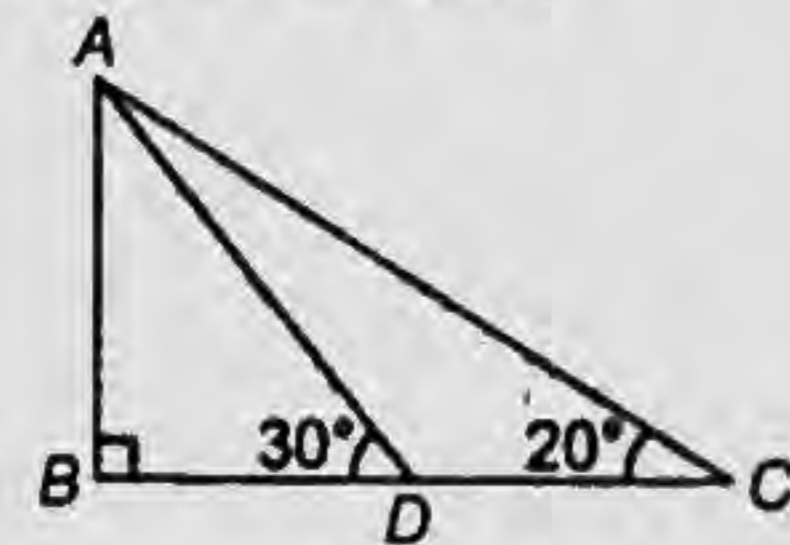
- (a) $(a^2 + b^2)p^2 = a^2b^2$
 (b) $a^2 + b^2 = a^2b^2p^2$
 (c) $p^2 = a^2 + b^2$
 (d) $p^2 = a^2 - b^2$

73. In the given figure, if $AB \parallel CD$, $\angle PTB = 55^\circ$ and $\angle DVS = 45^\circ$, then what is the sum of the measures of $\angle CUQ$ and $\angle RTP$?



- (a) 180° (b) 135°
 (c) 110° (d) 100°

74. In the given figure, $\angle ABD = 90^\circ$, $\angle BDA = 30^\circ$ and $\angle BCA = 20^\circ$. What is $\angle CAD$?



- (a) 10° (b) 20°
 (c) 30° (d) 15°

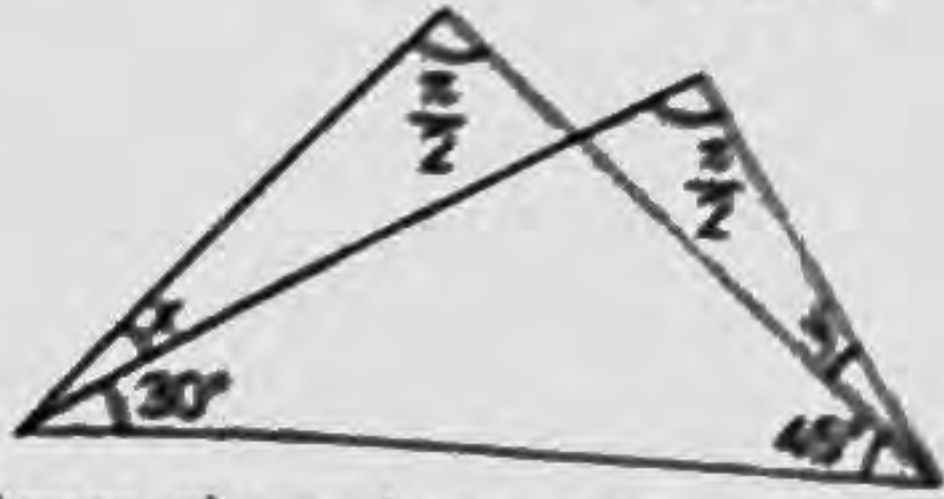
75. If the angles of a triangle are $90^\circ, 60^\circ$ and 30° , then what is the ratio of the sides opposite to these angles?

- (a) $\sqrt{3} : \sqrt{2} : 1$ (b) $1 : \sqrt{2} : 2$
 (c) $2 : \sqrt{3} : 1$ (d) $3 : 2 : 1$

76. A ladder 34 m long is placed in a lane so as to reach a window 30 m high and on turning the ladder to the other side of the lane and keeping its foot at the same place, it reaches a point 16 m high. What is the breadth of the lane?

- (a) 18 m (b) 40 m
 (c) 46 m (d) 50 m

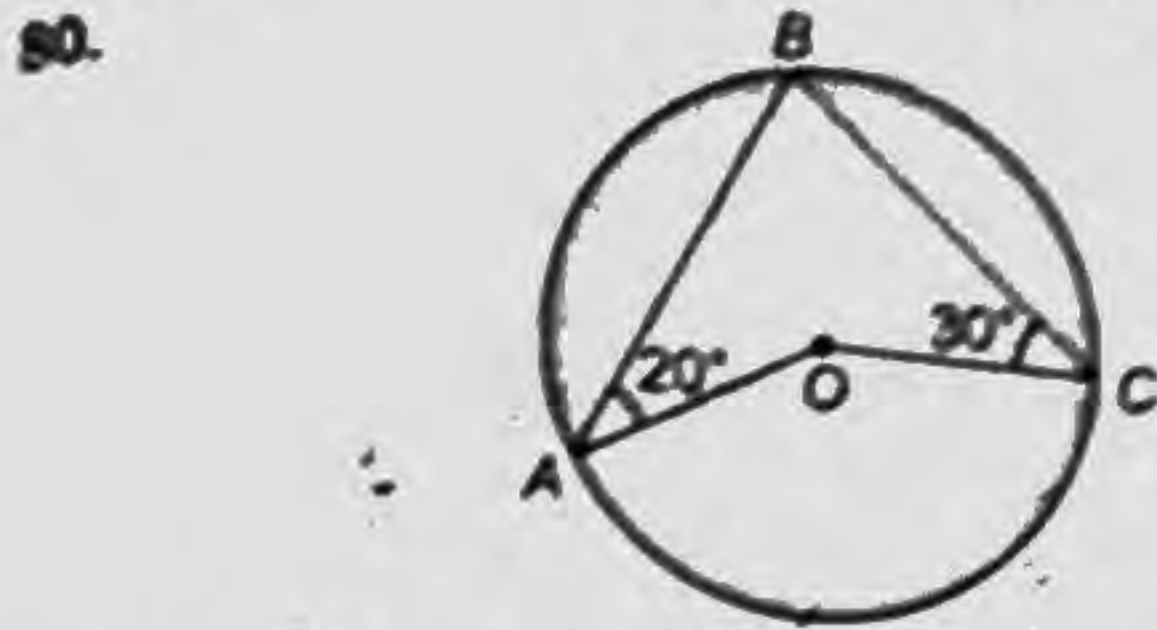
77. The sides of a triangle are 50 m, 40 m and 30 m. What is the length of the altitude of the vertex opposite to the side 50 m?
- (a) 22 m
(b) 24 m
(c) 25 m
(d) 26 m



In the figure given above, what is the value of $(2x - y)$?

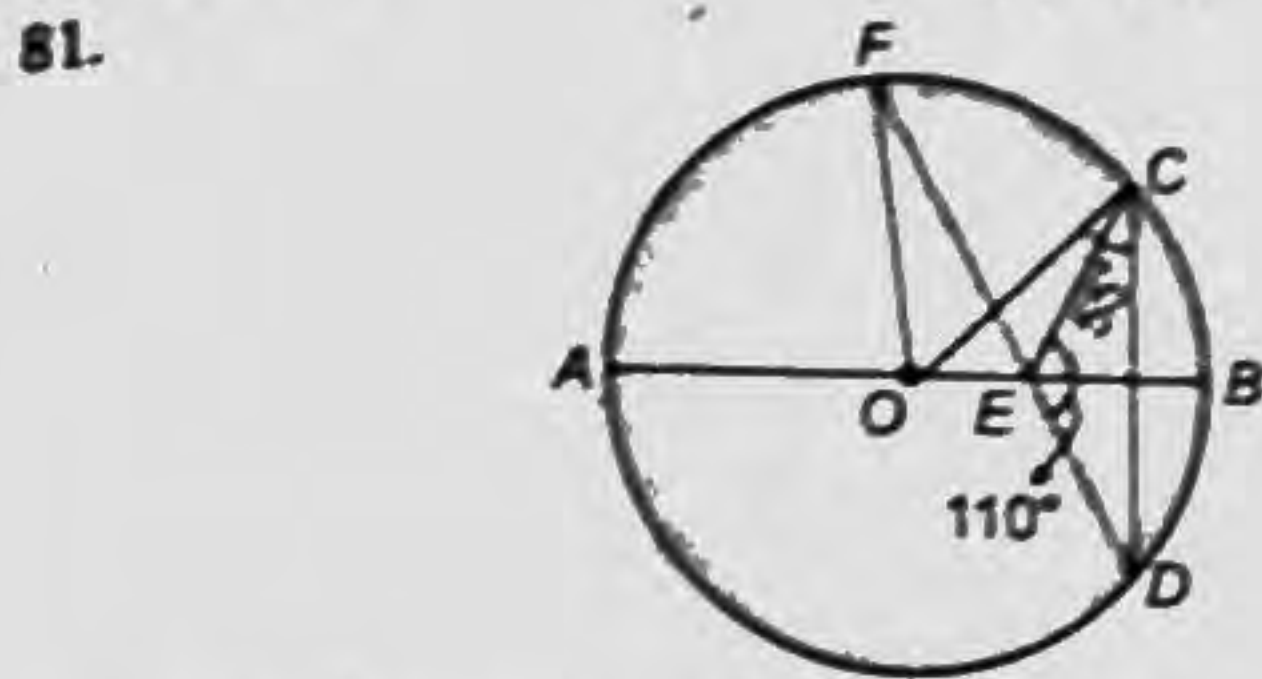
(a) 10°
(b) 15°
(c) 20°
(d) 25°

79. ABCD is a square. The diagonals AC and BD meet at O. Let K, L be the points on AB such that $AO = AK$, $BO = BL$. If $\theta = \angle LOK$, then what is the value of $\tan \theta$?
- (a) $1/\sqrt{3}$
(b) $\sqrt{3}$
(c) 1
(d) $1/2$



In the figure given above, O is the centre of the circle. What is $\angle AOC$?

(a) 160°
(b) 150°
(c) 120°
(d) 100°



In the figure given above AB is a diameter of the circle with centre O and $EC = ED$. What is $\angle EFO$?

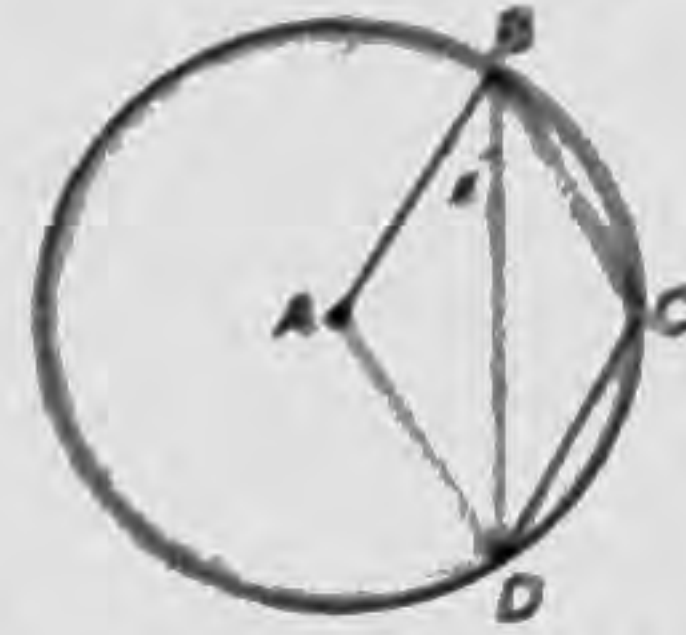
(a) 15°
(b) 20°
(c) 25°
(d) 30°

82. If ABC is a triangle, right angled at B and M, N are mid points of AB and BC respectively, then what is $4(AN^2 + CM^2)$ equal to?
- (a) $3AC^2$
(b) $4AC^2$
(c) $5AC^2$
(d) $6AC^2$
83. If A is the area of a right angled triangle and b is one of the sides containing the right angle, then what is the length of the altitude on the hypotenuse?
- (a) $2Ab / \sqrt{b^4 - 4A^2}$
(b) $2A^2b / \sqrt{b^4 + 4A^2}$
(c) $2Ab^2 / \sqrt{b^4 + 4A^2}$
(d) $2A^2b^2 / \sqrt{b^4 - A^2}$

84. Triangle ABC is right angled at A. $AB = 3$ unit, $AC = 4$ unit and AD is perpendicular to BC. What is the area of the triangle ADB?

- (a) $\frac{9}{25}$ sq unit
(b) $\frac{54}{25}$ sq unit
(c) $\frac{72}{25}$ sq unit
(d) $\frac{96}{25}$ sq unit

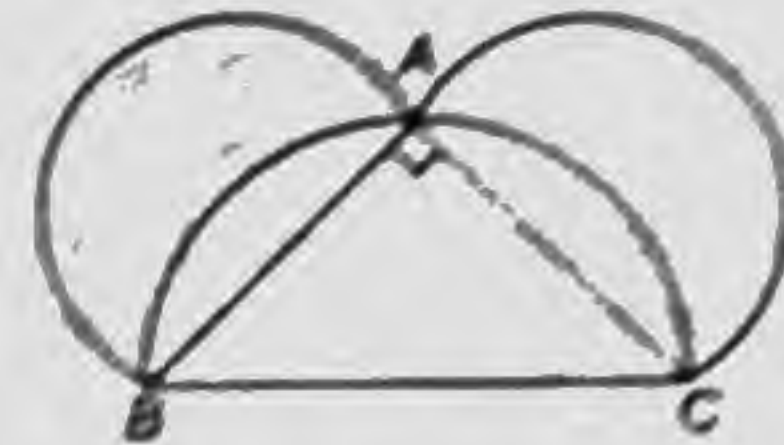
85.



In the figure given above, A is the centre of the circle and $AB = BC = CD$. What is the value of x?

- (a) 20°
(b) $22\frac{1}{2}^\circ$
(c) 25°
(d) None of these

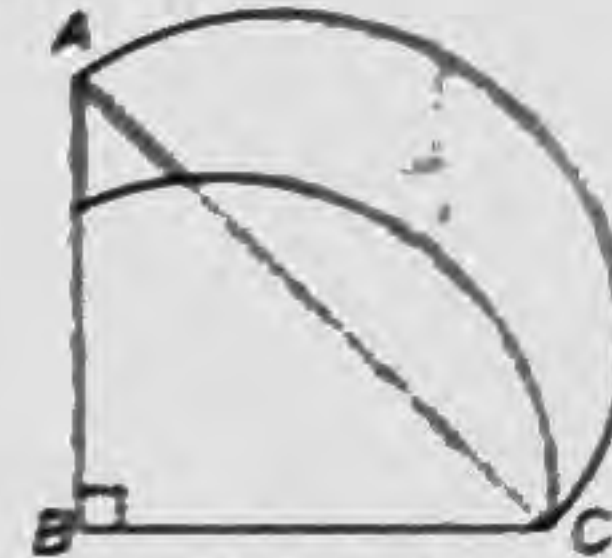
86.



In the figure given above, ΔABC is a right angled triangle, right angled at A. Semicircles are drawn on the sides AB, BC and AC. Then the area of the shaded portion is equal to which one of the following?

- (a) Area of ΔABC
(b) 2 times the area of ΔABC
(c) Area of semicircle ABC
(d) None of the above

87.



In the figure given above, ABC is a right angled triangle, right angled at B. $BC = 21$ cm and $AB = 28$ cm. With AC as diameter of a semicircle and with BC as radius a quarter circle are drawn. What is the area of the shaded portion?

(a) 425 cm^2
(b) 425.75 cm^2
(c) 428 cm^2
(d) 428.75 cm^2

88. Which one of the following statements is always correct?
- (a) The square of a prime number is prime
(b) The sum of two square numbers is a square number
(c) The number of digits in a square number is even
(d) The product of two square numbers is a square number
89. A number, when divided by 987, gives a remainder. When the same number is divided by 21, what is remainder?
- (a) 21
(b) 19
(c) 17
(d) 15
90. What is the simplified form of $9\sqrt{2} - \sqrt{8} - 4\sqrt{2}$?
- (a) $4\sqrt{2}$
(b) $3\sqrt{2}$
(c) $2\sqrt{2}$
(d) $\sqrt{2}$

91. If $\sqrt{1 + \frac{93}{196}} = 1 + \frac{x}{14}$, then what does x equal to ?

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

92. What is the value of $\left[\frac{(2.3)^3 - 0.027}{(2.3)^2 + 0.69 + 0.09} \right] ?$

- (a) 2.6 (b) 2
(c) 1.3 (d) 1

93. A train 110 m long is running with a speed of 60 km/h. What is the time in which it will pass a man who starts from the engine running at the speed of 6 km/h in the direction opposite to that of the train ?

- (a) 5 s (b) 6 s
(c) 10 s (d) 15 s

94. A train crosses a telegraph post in 8 s and a bridge 200 m long in 24 s. What is the length of the train ?

- (a) 100 m (b) 120 m
(c) 140 m (d) 160 m

95. If one man or two women or three boys can do a piece of work in 55 days, then one man, one woman and one boy will do it in how many days ?

- (a) 20 days (b) 30 days
(c) 40 days (d) 50 days

96. If m men can do a job in p days, then $(m + r)$ men can do the job in how many days ?

- (a) $(p + r)$ days
(b) $\frac{mp}{m + r}$ days
(c) $\frac{p}{m + r}$ days
(d) $\frac{m + r}{p}$ days

97. At what rate percent per annum simple interest, will a sum of money triple itself in 25 yr ?

- (a) 8% (b) 9%
(c) 10% (d) 12%

98. The marked price of a machine is Rs 18000. By selling it at a discount of 20%, the loss is 4%. What is the cost price of the machine ?

- (a) Rs 10000 (b) Rs 12000
(c) Rs 14000 (d) Rs 15000

99. What number must be added to each of 4, 10, 12, 24 so that the resulting numbers are in proportion ?

- (a) 6 (b) 8
(c) 10 (d) 4

100. What is the number which has to be added to each term of the ratio 49 : 68 so that it becomes 3 : 4 ?

- (a) 3 (b) 5
(c) 8 (d) 9