

SPOTTING ERRORS

Directions (For the 10 items which follow) :

In this section, you are given four alternative meanings to each idiom/phrase. Choose the most appropriate one.

1. IN TATTERS
 (a) In prison (b) Under mortgage
 (c) Ruined (d) Under confusion
2. COME A CROPPER
 (a) To come as a surprise
 (b) To fail
 (c) To get injured
 (d) To get unexpected success
3. IN THE FULLNESS OF TIME
 (a) By sheer hardwork (b) At leisure
 (c) Night of full Moon (d) At the appropriate time
4. THE LIE OF THE LAND
 (a) Protection of environment
 (b) Spirit of adventure
 (c) Assessment of a situation
 (d) Mountaineering
5. AN EAGER BEAVER
 (a) An enthusiastic person
 (b) Fond of travelling
 (c) A rich person
 (d) A successful politician
6. RAISE SOMEBODY'S HACKLES
 (a) To praise somebody (b) To deceive somebody
 (c) To flatter somebody (d) To make somebody angry
7. BENEATH CONTEMPT
 (a) Guilt
 (b) Completely unworthy of respect
 (c) Animosity
 (d) Under wraps
8. AT A RATE OF KNOTS
 (a) Very rapidly
 (b) Sluggishly
 (c) Technology-savvy
 (d) Highly self-opinionated
9. CLAM UP
 (a) To depart
 (b) To remain silent
 (c) To prepare meticulously
 (d) To feel sad
10. PLAIN AS A PIKESTAFF
 (a) Polished surface
 (b) Extremely honest
 (c) Extremely poor
 (d) Very obvious

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 rearrange 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
 (P) (Q)
on children of cinema
 (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 and so (a) is the correct answer.

11. Disaster management
to facilitate and extend all support

(P)
financial and other, through the various Ministries
 (Q)
responsibility of the State and the Government of India
 (R)
is a State subject and it is the primary

(S)
 Which one of the following is the correct sequence ?

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

12. Owing to the realisation
by India in various fields would in reality by meaningless

(P)
if they failed to offer quality of life and dignity to
 (Q)
that the economic development and advancement
 (R)

our rural masses, today the focus is more on rural development
 (S)

Which one of the following is the correct sequence?

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

13. In the last
who have become great achievers in their are of expertise
 (P)
decade or so, the Indian community
 (Q)
and a large number of them are first generation migrants
 (R)
abroad has become more visible internationally
 (S)

Which one of the following is the correct sequence?

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

14. Even clear its policy enter
 (P)
before the adoption of the new Constitution
 (Q)
the economic field in a very active manner
 (R)
the Government of independent India had made
 (S)

Which one of the following is the correct sequence?

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

15. What is
in which below-poverty line rural citizens would be ensured
 (P)
to ensure that every family can at least meet its basic needs
 (Q)
needed is a system of "life-line tariffs"
 (R)
a limited amount of water and electricity at zero price
 (S)

Which one of the following is the correct sequence?

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

16. For nearly
freed from concerns over balance of payments
 (P)
sweeping liberalisation measures for the economy
 (Q)
one and half decades, India has been
 (R)
after the 1990-91 crisis, which triggered
 (S)

Which one of the following is the correct sequence?

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

17. It is
the Supreme Court has taken on the role of arbitrator
 (P)
and judge of moral and ethical value systems
 (Q)
and even the enforcer of the law of the country
 (R)
interesting to note that in the past few years
 (S)

Which one of the following is the correct sequence?

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

18. The word
but if we give to it a positive connotation
 (P)
it means nations which object lining up for war purp
 (Q)
to military blocs, to military alliances and the like
 (R)
non-aligned may be differently interpreted
 (S)

Which one of the following is the correct sequence?

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

19. At the
and the grandeur of her success and her failures
 (P)
dawn of history India started on
 (Q)
her unending quest, and trackless centuries
 (R)
are filled with her striving
 (S)

Which one of the following is the correct sequence?

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

20. It is
his native country after travelling in foreign lands
 (P)
difficult believe that any man can be so
 (Q) (R)
spiritually dead as to have no love for
 (S)

Which one of the following is the correct sequence?

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

21. All the performance
praise or wonder, are instances of resistless
force of perseverance
 (P)
it is by this that quarry becomes a pyramid
 (Q)
and that distant countries are united by canals
 (R)
of human art, at which we look with
 (S)

Which one of the following is the correct sequence?

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

22. You are not to destroy or dictate to millions
 (P)
born a king's son
 (Q)
or settle your differences amicably with them
 (R)
you can only expect to share their fate
 (S)

Which one of the following is the correct sequence?

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

23. One common mistake
they have thought that it would be a very good thing
 (P)
whether they worked hard or lived quite idly
 (Q)
if everybody had exactly the same amount of money
 (R)
that many people have made is this
 (S)

Which one of the following is the correct sequence?

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

24. The ideas, those of ordinary working life that
 (P)
other without an acute sensation and consciousness of the contrast
 (Q)

Sentiments, expressions, are so far beyond
 (R)
you cannot turn aside one to the
 (S)

Which one of the following is the correct sequence?

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

25. Real bliss consisted,
which the word regarded as prosperity
 (P)
he thought, not in riches nor in anything else
 (Q)

fellow men through perfect love and fellowship and
selfless service and sacrifice
 (R)

but in the joy and happiness derived from
being at peace with one's
 (S)

Which one of the following is the correct sequence?

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

26. On the morrow
the estrangement and conflict of these past months and
 (P)
while the bitterness that had crept in
 (Q)

Gandhiji stood out as the beloved champion and
leader of the people of India
 (R)

of the tragedy, all of us forgot for a
 (S)

Which one of the following is the correct sequence?

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

27. It is of poets have no practical value
 (P)
accurate to refer to poets as dreamers
 (Q)
beyond the realm of literary diversion
 (R)

but it is no discerning to infer that the dreams

(S)

Which one of the following is the correct sequence?

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

28. For,
in making the great experiment of governing people
 (P)

the party in power should have a majority
 (Q)

by consent rather than by coercion
 (R)

it is not sufficient that
 (S)

Which one of the following is the correct sequence?

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

29. Far different
beauties of nature and art to be found in foreign lands
 (P)

their native country with minds prepared by
 (Q)

is the effect of travels upon who leave
 (R)

culture feel intelligent admiration for all the
 (S)

Which one of the following is the correct sequence?

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

30. But many
and in escaping such misfortunes
 (P)

of our friends may be invaluable
 (Q)

misfortunes which threaten us are not inevitable
 (R)

the advice and active assistance
 (S)

Which one of the following is the correct sequence?

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

COMPREHENSION

Directions (For the 22 items which follow) :

In this section you have six 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.

Example '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 others creatures.

- I. The author's main point is that
- different forms of life are found on earth
 - different levels of existence are possible in nature
 - peace and security are the chief goals of all living beings
 - even the weakest creature struggles to preserve its life
- J. Which one of the following assumptions or steps is essential in developing the author's position?
- All forms of life have a single overriding goal
 - The will to survive of a creature is identified with a desire for peace
 - All beings are divided into higher and lower groups
 - A parallel is drawn between happiness and life and pain and death

Explanation :

- 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

Like human beings, elephants are sometimes the victims of acute stress, and in both species, stress produces diseases of the heart and arteries.

Thousands of elephants living in parts of East Africa are crowded together on dry, dusty, treeless plains, confined by the terrain and the size of their herds. All day the animals huddle together, munching and waving their large, fan-like ears. Exposed to strong sunlight, restricted in their diet and frustrated in their migration, the elephants appear bored and restless and are also afflicted with vascular diseases.

Recent studies show that the elephants, whose life span is similar to man's are suffering from habitat stress. They are also suffering from two ailments common to man - medial sclerosis and atherosclerosis- unknown among other jungle dwelling beasts.

Both diseases affect the lining of the arteries, resulting in thickening, hardening and inelasticity of the vessel walls. In medial sclerosis the accumulation of calcium salts makes the arteries in the neck and limbs into rigid, narrow pipes. In advanced cases the blood supply is severely reduced and there is a danger of heart failure. In such circumstances medial sclerosis produces stiff and lame elephants.

When excessive layers of fat, rather than calcium salts, are deposited in the artery lining, the elephants develop lipid plaques closely resembling atheroma in man. Such lipid accumulations in human beings are a major cause of heart disease and are attributed to high blood pressure, improper diet, smoking and stress.

31. Consider the following statements :
- Elephants are blissfully happy while moving in the jungles of East Africa.

2. Exposure to strong sunlight causes a number of eye-diseases for elephants

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

32. Consider the following statements :

1. Elephants develop lipid plaques when calcium salts get deposited in the vessel walls.

2. In medial sclerosis, calcium salts end up in imparting rigidity to the arteries in the neck.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

33. Which one of the following causes a diseases in elephants which is similar to atheroma in man?

- Excessive sunlight
- Consumption of sugar-cane
- Consumption of banana
- Deposit of fat

34. Consider the following statements :

1. Many of animals living in the jungles suffer from the diseases common to elephants.

2. Average life of an elephant, particularly in East Africa is much larger than that of a human being.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

PASSAGE-II

In 1837 Louis Aggasiz, a young naturalist, had to suffer ridicule at the hands of geologists while trying to prove that the earth had gone through a number of ice ages. Then, for almost a century, the four-fold ice age scheme of the Alps (Wurm, Riss, Mindel and Gunz) given by Albrecht Penck and E. B. Rucker in 1909 got so well entrenched in geology that most of the global evidence was forced to fit into this four-fold framework and nobody dared to think of more than four ice ages. Only recently have the data from sea-cores and deep ice cores revealed that, in the last 2 million years, the earth has witnessed 17-18 cold-warm oscillations rather than four as believed earlier. More important was the realization that ice ages, were several times longer than the warm periods and that they could be triggered off even within a brief space of a century. The warm periods were normally only of a span of 10-15 thousand years. The portrait of an ice age is starkly gloomy. Vast areas of earth, including large areas of Europe, Canada, U.S. and India may come under a thick blanket of ice and the lower latitudes will be under the grip of drought and famine. With the already mounting food and fuel crisis, the earth can ill-afford such a catastrophe.

35. Why was Louis Aggasiz scoffed at?
- He was too unorthodox
 - He did not subscribe to the theory of four ice ages
 - He believed too much in the laws of nature
 - He believed in sustainable development

36. Which one of the following statements is correct? In the cold-warm oscillations in the life of the earth,
- warm periods have been longer than the ice ages
 - ice ages have been as brief as a century
 - ice ages were several times longer than warm periods
 - both warm and cold periods lasted for a span of 10-15 thousands years.

37. If an ice, age grips the earth in the near future, then
 (a) only Europe, USA, Canada and India will be under ice
 (b) the most parts of the southern hemisphere will be under the grip of famine and droughts
 (c) the food and fuel crisis will become severe particularly in the northern hemisphere
 (d) many earthquakes will occur
38. "The earth can ill-afford such a catastrophe" means
 (a) The earth cannot afford illness which would be brought about by an ice age
 (b) Catastrophic diseases will be unleashed by an ice age
 (c) The mankind will not be able to bear such a catastrophe
 (d) Only rich nations will survive

PASSAGE-III

Are newspapermen not limiting the scope of their job? They have been content to speak only to the elite and are not in touch with the vast masses of our country that they ignore. That is why the press as a whole has often been wide off the mark in its assessment of the people's feelings and in its forecasts of the shape of things to come. In India where literacy is not very widespread out political consciousness and political judgement are highly evolved, there must be new methods of reaching people are arguing with them, persuading them and reading their views. This is the challenge before the press in India.

39. In India, there is
 (a) More literacy than political consciousness
 (b) Less literacy than political consciousness
 (c) An equal measure of literacy and political consciousness
 (d) Widespread use of malpractices by the big houses owning press
40. Newspapermen have limited the scope of their profession because
 (a) They do not make correct assessments
 (b) They are influenced by politicians
 (c) They are out of the touch with the common people
 (d) They are too much influenced by the electronic media
41. What are 'New methods of reaching people'?
 (a) Arguing with people and getting to know them
 (b) Persuading people and making them well-informed
 (c) Convincing people to use Internet
 (d) They have not been enlarged upon in the passage

PASSAGE-IV

Our greatest need, after water is sodium chloride, or common salt. We need it for a very curious reason. It is not found in most cells of our body, or in most plant cells. They contain potash salts and there are plenty of these in every kind of food. But it is found in our blood. Our horses and cows are often short of salt. That is why they lick each other in summer. Men who sweat a good deal feel an instinctive need of salt. Miners in deep and hot mines eat far more bacon than the average of the population, and some of them put a little salt in the drinking water. If they run very short of salt they may get cramps in the limbs or stomach. The same applies to other workers who sweat very greatly, such as ship's

firemen. The firemen of Scandinavian ships eat more salted fish and salted meat than those of British ships and are therefore less affected.

42. Man's greatest need is
 (a) Salt (b) Bacon
 (c) Water (d) Vitamins
43. Horses lick one another in order to
 (a) Show their love (b) Relive fatigue and stress
 (c) Take in some salt (d) Get a cooling effect
44. Consider the following statements :
 1. Men who sweat less are in dire need of salt.
 2. Shortage of salt can lead to cramps in the stomach or limbs.
 Which of the statement(s) given above is/are correct?
 (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2

PASSAGE-V

The essence of democracy is the active participation of the people in government affairs. When the people do not participate, when they are uninformed or uninterested when they cannot and will not make their voices heard or felt, when in short, they default; the spirit of democratic action will soon die. But when the people individually and through their institutions and organizations become active participants in the governmental activities, then we have that fertile soil in which democracy flourishes.

Democracy is founded upon a faith in the overall judgement and good sense of the people as a whole. The magic lies not in the literal arithmetic of majority vote, but in the oft-proven sense of what is right and what is fair.

45. The essence of democracy lies in seeking the opinion of the public on
 (a) contemporary issues
 (b) who should rule
 (c) what is morally justified
 (d) what should be the economic policy of the country
46. According to the author, public opinion means
 (a) the opinion expressed by the public opinion polls
 (b) the opinion expressed by its elected representatives
 (c) the opinion of the majority
 (d) the consensus of the public as a whole
47. Democracy takes deep roots in a country if its citizens
 (a) become active participants in the issues of governance
 (b) become active members of political parties
 (c) participate in parliamentary discussions
 (d) read national news and commentaries regularly
48. According to the author, the spirit of democracy cannot survive if people
 (a) do not believe in democratic values
 (b) turn against an elected government
 (c) do not take interest in the affairs of the government
 (d) become intolerant

PASSAGE-VI

There are people still living who once trembled to think what would happen to family life if hungry school children were fed at the public expense. In the first place, they thought, this would destroy the parental sense of responsibility and put an end to that thrift which is so

strong a tie between underpaid parent and underfed child. House would cease to be sweet home if mothers had no longer to deny themselves the necessities of life in order to keep the bodies and souls of their infants together. The sanctity of family life must not be violated by free sandwiches. I happen to believe in the institution of the family, but I could never see how under-feeding children was the best way to preserve it. Similarly, I could never see how the institution of the family was imperilled by the work of the Society for the Prevention of Cruelty to Children. Yet many people once trembled to think what the consequences would be if the prying officials of this society were permitted to interfere with the sacred relationship between a parent and a child.

49. According to the evidence in the passage, the author
 (a) sides with those who dislike outside interference in family life
 (b) partially agrees with those who want families to be left alone
 (c) mentions about the virtues of democracy
 (d) clearly shows his preference for public intervention favouring children
50. This passage is mainly about
 (a) Old beliefs in the present-day world
 (b) Public care for undernourished children
 (c) The rights of families
 (d) Parents' responsibility to children
51. "The sanctity of family life must not be violated by free sandwiches". This is an expression of the
 (a) Author's personal belief
 (b) General belief of the people
 (c) Belief of all the old people
 (d) Belief of those who oppose public expenditure on feeding children
52. The use of the adjective 'sacred' in the phrase 'sacred relationship' shows that the attitude of the author is
 (a) Sarcastic (b) Humorous
 (c) Religious (d) Sorrowful

SPOTTING ERRORS

Directions (For the 17 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. There 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. The young child singed
 (a) (b)
a very sweet song. No error
 (c) (d)
- Q. We worked very hard throughout the season.
 (a) (b) (c)
No error
 (d)

Explanation :

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

53. A careful driver watches the road
 (a)
and goes slowly or quickly,
 (b)
 depending upon the condition of the road, the
visibility and the traffic
 (c)
No error
 (d)
54. Despite some past experiences
 (a)
with averse publicity
 (b)
she is usually gracious reporters. No error
 (c) (d)
55. According to a spokesman for the government,
 (a)
the charge of corruption is a contemptuous lie
 (b)
inspired by political motives. No error
 (c) (d)
56. If I would have arrived sooner, I would
 (a) (b)
not have missed the fun. No error
 (c) (d)
57. Unless two or more members object
 (a)
to him joining the club, we shall have to
 (b)
accept his application for membership. No error
 (c) (d)
58. The prospective buyer of the house
 (a)
left the premises because he was asked to pay a
 (b)
considerable higher price than he could afford. No error
 (c) (d)
59. You are being quite cynical
 (a)
when you say that the reason why we have
 (b)

such a large turnout is because we are
servicing refreshments.

(c)

No error

(d)

We can't hardly believe

(a)

that the situation is so serious as to

(b)

justify such precautions as you have taken. No error

(c)

(d)

Although I am playing cricket

(a)

for more than three years

(b)

I have not been able score a century. No error

(c)

(d)

If I have make a choice between Aryan, Amit and Abhishek

(a)

I think I'll select Aryan

(b)

because of his commanding personality. No error

(c)

(d)

Man's happiness or misery

(a)

are in a great measure

(b)

in his own hands. No error

(c)

(d)

I feel bad about the present conflict

(a)

because I do not know how to resolve it

(b)

without hurting either you or him. No error

(c)

(d)

Cows are amongst the gentlest of breathing creatures

(a)

more shows more passionate

(b)

tenderness their young. No error

(c)

(d)

He is not the kind of a person

(a)

who accepts such treatments passively

(b)

he is certain to seek revenge. No error

(c)

(d)

The rise and fall of the tide are due

(a)

(b)

to lunar influence. No error

(c)

(d)

I was surprised and pleased

(a)

when I was informed of me

(b)

winning the contest. No error

(c)

(d)

69. Many a man has succumbed

(a)

(b)

to this temptation. No error

(c)

(d)

ANTONYMS

Directions (For the 18 items which follow) :

Each of the following 18 items consists of a word in capital letters, followed by four words or groups of words. Select the word or group of words that is *furthest* in meaning to the word in capital letters.

70. DIURNAL

(a) Beyond doubt

(b) Related to the night

(c) Related to travel

(d) Hereditary

71. LAMBASTE

(a) Regret

(b) Praise

(c) Enhance

(d) Strengthen

72. SPORADIC

(a) Vivid

(b) Distant

(c) Greedy

(d) Often

73. INSOLENT

(a) Generosity

(b) Curiosity

(c) Politeness

(d) Obstinacy

74. CORPOREAL

(a) Disciplined

(b) Playful

(c) Spiritual

(d) Wasteful

75. VACILLATION

(a) Sickness

(b) Introduction

(c) Steadfastness

(d) Politeness

76. TERSE

(a) Angry

(b) Verbose

(c) Reliable

(d) Fickle

77. ALACRITY

(a) Complaint

(b) Sluggishness

(c) Intelligence

(d) Solution

78. SOPORIFIC

(a) Pleasant

(b) Wandering

(c) Frugal

(d) Awakening

79. PRODIGAL

(a) Thrifty

(b) Thirsty

(c) Careless

(d) Talented

80. CHOLERIC

(a) Indisposed

(b) Cool-headed

(c) Miserly

(d) Negligent

81. GREGARIOUS

(a) Immature

(b) Introvert

(c) Wise

(d) Timid

82. PRUDENCE

(a) Senility

(b) Lack of judgement

(c) Peace

(d) Unreal

83. UNGAINLY

(a) Fruitful

(b) Graceful

(c) Honest

(d) Knowledgeable

84. UNKEMPT

(a) Merciful

(b) Neat

(c) Doubtful

(d) Compressed

85. SQUANDER
(a) Preserve (b) Weep
(c) Abhor (d) Forfeit
86. VORACIOUS
(a) Resolution (b) Abstemious
(c) Sharp (d) Generalize
87. ABOMINABLE
(a) Frightening (b) Costly
(c) Pleasant (d) Tiresome

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 or group of words. Select the word or group of words that is most similar in meaning to the word in capital letters.

88. MIFFED
(a) Tired (b) Injured
(c) Forgotten (d) Annoyed
89. TENOR
(a) Instrument (b) General meaning
(c) Punishment (d) Chances of success
90. RESURRECT
(a) Revolt (b) Revengeful
(c) Review (d) Revive
91. POTABLE
(a) Respectful (b) Lifiable
(c) Drinkable (d) Undeniable
92. LEGION
(a) Large number (b) Promotion
(c) Rating (d) Rapport
93. SUBTERFUGE
(a) Reaction (b) Major issue
(c) Receipt (d) Trick
94. VERBATIM
(a) Reassurance
(b) Fashionable
(c) Exactly spoken or written
(d) Debate
95. VERDANT
(a) Rebound (b) Rebate
(c) Scarce (d) Fresh and green
96. UNFLAGGING
(a) Unstoppable
(b) Unsuspecting
(c) Untiring
(d) Untenable
97. UNEARTHLY
(a) Sophisticated (b) Tidy
(c) Inconvenient (d) Unthinkable
98. SCORN
(a) Spiritless (b) Contempt
(c) Unused (d) Joke
99. SLIMY
(a) Dishonest (b) Active
(c) Thin (d) Hard-working
100. PROSAIC
(a) Handsome (b) Polished
(c) Uninspiring (d) Playful

101. PURLOIN
(a) Sequential (b) Shout
(c) Serene (d) Steal
102. VENERABLE
(a) Deep-rooted (b) Verifiable
(c) Deserving respect (d) Salutary
103. REMONSTRATE
(a) To survey (b) To protest
(c) To show as a sample (d) To feel intimidated
104. DOUGHTY
(a) Farmer (b) Playful
(c) Brave and strong (d) Unsophisticated
105. ABJECT
(a) Ideal (b) Role-model
(c) Healthy (d) Wretched

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.

106. S_1 : Music is one of the oldest and finest forms of human expression.
 S_6 : This style gave an entirely new dimension to Hindustani classical music tradition.
 P : A new form of Hindustani music known as *Khayal* emerged during the 13th and 14th centuries.
 Q : This has led to the existence of family traditions called *gharanas*.
 R : Music can be divided into Western classical, Hindustani classical, Carnatic classical, Folk etc.
 S : The main schools of classical music, Hindustani and the Carnatic, continue to survive through oral tradition being passed on by teachers to disciples.
 Which one of the following is the correct sequence?
 (a) S R Q P (b) R S P Q
 (c) R S Q P (d) S R P Q
107. S_1 : Scientific inventions and discoveries are important because they lead to the creation of mechanisms and artefacts which improve our living conditions.
 S_6 : Rocketry and missiles opened the way for space exploration and the epochal landing of man on the Moon.

- P : All these inventions have turned out to be quite beneficial in peace time.
- Q : Inventions and discoveries come about sometimes by accident but mostly by design.
- R : Most of the discoveries in the 20th century were the results of purposeful investigations, though some like penicillin were discovered accidentally.
- S : Roentgen discovered X-ray by accident but the Curies laboriously pursued the radium and discovered it eventually in 1898.
- Which one of the following is the correct sequence?
- (a) Q S R P (b) S Q P R
(c) Q S P R (d) S Q R P
108. S₁ : The Indians are found in 136 countries a geographic spread that is unmatched.
- S₆ : In the beginning of the millenium there were three Presidents, two Prime Ministers and over 300 legislators of Indian origin all over the world.
- P : Many of the Indians besides being leading professionals have also made a mark in the political structures in their host countries.
- Q : People of Indian origin constitute more than forty per cent of the population in Fiji, Mauritius, Guyana and Suriname.
- R : In forty countries the Indian population exceeds 500000.
- S : There are small minorities in countries like Malaysia, South Africa, Sri Lanka and Uganda.
- Which one of the following is the correct sequence?
- (a) R S P Q (b) S P R Q
(c) R Q S P (d) S P Q R
109. S₁ : The great advantage of early rising is that one can start one's work long before others.
- S₆ : Exercise supplies a person with a good deal of energy that enables him to work hard until evening.
- P : Also, one finds time to take some exercise in the fresh morning air.
- Q : The early riser has done a large amount of work before other men have got out of bed.
- R : The work done at that time is generally done well.
- S : In the early morning the mind is fresh and no sounds or noises disturb our attention.
- Which one of the following is the correct sequence?
- (a) R P Q S (b) Q S R P
(c) R S Q P (d) Q P R S
110. S₁ : The first time the German airplanes came over London during the First World War was a Saturday afternoon.
- S₆ : We all dashed out into the street to look at them.
- P : I was alone in the house with the servants.
- Q : Suddenly people began shouting, "German airplanes".
- R : It was broad daylight.
- S : The rest of the family had gone down to the countryside for the weekend.
- Which one of the following is the correct sequence?
- (a) S P R Q (b) R Q S P
(c) S Q R P (d) R P S Q
111. S₁ : All plants that grow in the desert are cleverly equipped to withstand the heat and make full use of what little water exists.
- S₆ : The great networks of roots, which remain close to the surface soak quickly any water that reach them.
- P : However, there are occasional showers, but much of the water runs off swiftly instead of sinking into the ground.
- Q : Cacti and other succulents be brilliantly solve the problem of story of water.
- R : Instead of leaves, they hae extensive root system which is their life-savers.
- S : In the desert, soil temperatures may rise to very high level and the soil is often bone dry.
- Which one of the following is the correct sequence?
- (a) S P Q R (b) Q R S P
(c) S R Q P (d) Q P S R
112. S₁ : The physician must be extremely cautious.
- S₆ : No one is perfect.
- P : Even a slight misjudgement may result in a permanent affliction or even death.
- Q : He must be cautious in his diagnosis and in his treatment of the patient's malady.
- R : This is why doctors carry malpractice insurance so that if they do make a mistake they do not have to pay the patient out of their pockets.
- S : This is not being mercenary, since doctors are only human, and as the poet says, "to err is human; to forgive divine".
- Which one of the following is the correct sequence?
- (a) Q R P S (b) S P R Q
(c) Q P R S (d) S R P Q
113. S₁ : Early societies and different systems of writing.
- S₆ : When reading a letter in knotwriting a person had to take into account how thick was the cord and what sort of knot was made.
- P : This was used in China, Persia, Mexico and Peru.
- Q : Knots of coloured cords were made on sticks.
- R : When a knot was made near the stick, this was a sign that what was being said was specially important.
- S : One of these systems was knotwriting.
- Which one of the following is the correct sequence?
- (a) S P Q R (b) Q R S P
(c) S R Q P (d) Q P S R
114. S₁ : A common disease in Asia is beri-beri which causes paralysis and swelling throughout the body.
- S₆ : The chickens became better if they were fed on unpolished rice.
- P : In 1882, a doctor in the Japanese Navy discovered that beri-beri could be cured by eating barley instead of rice.
- Q : The sailors were the victims of a lack of vitamins found on the husk of a grain of rice.
- R : About twenty years later, another doctor, working in a prison of Java found that chickens fed on polished rice contracted disease that resembled beri-beri.
- S : The doctor had noticed that many Japanese sailors ate a lot of polished rice and they contracted a disease similar to beri-beri.
- Which one of the following is the correct sequence?
- (a) Q S P R (b) P R Q S
(c) Q R P S (d) P S Q R
115. S₁ : Species that escape extinction tend to be clever opportunists, such as housefly, rat, English sparrow and plants like weeds.

S₆ : Soon cats were dying on all sides, whereupon rats, which had not been a problem so long as there were a problem so long as there were plenty of cats, enjoyed a field day.

P : But predators and parasites too can be sensitive to man's incursions

Q : The floors were soon littered with flies, supplying a feast for lizards and other fly catchers- which were in turn poisoned by the DDT and supplied a further feast for local cats.

R : Normally these species are prevented from breeding to pest proportions by predators and parasites.

S : Consider the domino effect unleashed when the government in Borneo tried to control mosquitoes and drenched the villagers' dwelling with DDT.

Which one of the following is the correct sequence?

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

116. S₁ : I have long laboured under a dark suspicion that I am an idle person.

S₆ : I defend myself by attacking myself and claim a verdict of not guilty by the candour of my confession of guilt.

P : If I had chance to mention it in conversation, I do not expect to be believed.

Q : The art of defence is attack.

R : I announce that I am idle, in fact, to prevent the idea spreading that I am idle.

S : It is an entirely private suspicion.

Which one of the following is the correct sequence?

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

117. S₁ : Along with two other officers, I made a futile attempt to escape on December 11.

S₆ : I seized the golden moment and put it to good use.

P : All of a sudden, one sentry turned, walked up to his comrade and began to talk to him.

Q : The twelfth December was wearing away and I was becoming both despondent and desperate.

R : The real problem was that of climbing the wall, for then one became clearly visible to the two sentries.

S : Through a hole I kept a watch on the sentries.

Which one of the following is the correct sequence?

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

118. S₁ : April 14 was Good Friday.

S₆ : They arrived late and were given an ovation.

P : Theatres, for example, were open as usual.

Q : It was not observed in the United States with the same general suspension of worldly activities as in Europe.

R : His wife and some friends accompanied him.

S : Lincoln decided that he would attend Ford's Theatre in Washington that night to see a humorous piece.

Which one of the following is the correct sequence?

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

119. S₁ : I wanted to avoid violence.

S₆ : I had either to submit to the tyranny of the British Government or to the fury of my people.

P : I still want to avoid violence.

Q : But I had to make my choice.

R : Non-violence is the first article of my faith.

S : It is also the last article of my creed.

Which one of the following is the correct sequence?

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

120. S₁ : Printing is a device for multiplying what is written by making copies of it.

S₆ : So far as Europe is concerned, type was first used in Holland.

P : Little metal letters called type, are arranged in such a way as to form the words that you want to print.

Q : The inked letters leave their marks upon the paper and these marks are the printed words.

R : The letters are then inked over and sheets of paper are pressed down tight upon them.

S : As many copies can be made of what is printed as there are sheets of paper.

Which one of the following is the correct sequence?

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

General Knowledge

1. Which one of the following is the correct sequence of GDP composition by sector in India?
 (a) Services > Industry > Agriculture
 (b) Industry > Services > Agriculture
 (c) Agriculture > Services > Industry
 (d) Agriculture > Industry > Services
2. Panini, the first Grammarian of Sanskrit language in India, lived during the
 (a) 2nd Century B.C.
 (b) 6th—5th Century B.C.
 (c) 2nd Century A.D.
 (d) 5th—6th Century A.D.
3. Who among the following was associated with the foundation of Ghadar Party?
 (a) Lala Lajpat Rai
 (b) Lala Hardyal
 (c) C.R. Das
 (d) Bipin Chandra Pal
4. Who among the following were the leaders of the Indigo Revolt?
 (a) Buddhu Bhagat and Jhindari Manaki
 (b) Digambar Biswas and Bishnu Biswas
 (c) Dinabandhu Mitra and Madhusudan Datta
 (d) Birsa Munda and Gaya Munda
5. Who is the author of the book 'The Rights of Man' ?
 (a) Thomas Hardy (b) Thomas Mann
 (c) Thomas Moore (d) Thomas Paine
6. The Treaty of Bassein (1802) was signed between :
 (a) Madhav Rao and the British
 (b) Baji Rao II and the British
 (c) Mahadji Scindia and the British
 (d) Holkar and the British
7. Match List I with List II and select the correct answer using the codes given below the lists :
- | List I
(Rock/Mineral) | List II
(Example) |
|--------------------------|----------------------|
| A. Sedimentary Rock | 1. Granite |
| B. Igneous Rock | 2. Quartz |
| C. Metamorphic Rock | 3. Shale |
| D. Mineral | 4. Basalt |
| | 5. Gneiss |
- Codes :
- | A | B | C | D |
|-------|---|---|---|
| (a) 2 | 5 | 1 | 3 |
| (b) 3 | 4 | 5 | 2 |
| (c) 3 | 5 | 1 | 2 |
| (d) 2 | 4 | 5 | 3 |
8. Which one of the following pairs is not correctly matched?
- | Name of the Mountain Range | Location in the Himalayas |
|----------------------------|---------------------------|
| (a) Zaskar Range | : Kashmir |
| (b) Dhauladhar Range | : Himachal Pradesh |
| (c) Singalila Range | : Arunachal Pradesh |
| (d) Kumaon Range | : Uttarakhand |
9. Which of the following pairs are correctly matched ?
- | Rivers | Ocean/Sea |
|------------------|------------------|
| 1. Yangtze Kiang | : East China Sea |
| 2. Euphrates | : Aral Sea |
| 3. Lena | : Arctic Ocean |
| 4. Mekong | : Japan Sea |
- Select the correct answer using the codes given below :
- (a) 1 and 2 (b) 2 and 3
 (c) 1 and 3 (d) 3 and 4
10. Which one of the following political theories advocates the withering away of the state and ushering in a new society in which there will be no state and no classes ?
 (a) Liberalism (b) Democratic Socialism
 (c) Marxism (d) Fabian Socialism
11. Which among the following is the first commercial bank of limited liability managed by Indians ?
 (a) Punjab National Bank
 (b) Oudh Commercial Bank
 (c) Imperial Bank of India
 (d) Bank of Baroda
12. Who among the following is the Chairman of the Steering Committee to oversee the functions of the National Authority, Chemical Weapons Convention (CWC) ?
 (a) The President
 (b) The Prime Minister
 (c) The National Security Adviser
 (d) The Cabinet Secretary
13. Match List I with List II and select the correct answer using the codes given below the lists :
- | List I
(Name of the Author) | List II
(Name of the Book) |
|--------------------------------|-------------------------------|
| A. Abul Fazl | 1. Tabqat-i-Akbari |
| B. Nizamuddin Ahmad | 2. Akbarnama |
| C. Krishnadeva Raya | 3. Rajatarangini |
| D. Kalhana | 4. Amuktamalyada |
- Codes :
- | A | B | C | D |
|-------|---|---|---|
| (a) 2 | 4 | 1 | 3 |
| (b) 3 | 1 | 4 | 2 |
| (c) 2 | 1 | 4 | 3 |
| (d) 3 | 4 | 1 | 2 |
14. Which one of the following pairs is not correctly matched?
 (a) Sheikh Shihabud-din : Sufi Saint
 Suharwardi
 (b) Chaitanya Maha : Bhakti Saint
 Prabhu
 (c) Minhaj-us Siraj : Founder of Sufi order
 (d) Lalleshwari : Bhakti Saint

15. When the Mughal Empire was collapsing, which of the provinces was lost in 1622 A.D., recovered in 1638 A.D. and finally lost in 1649 A.D. ?

- (a) Ajmer (b) Kashmir
(c) Bengal (d) Kandahar

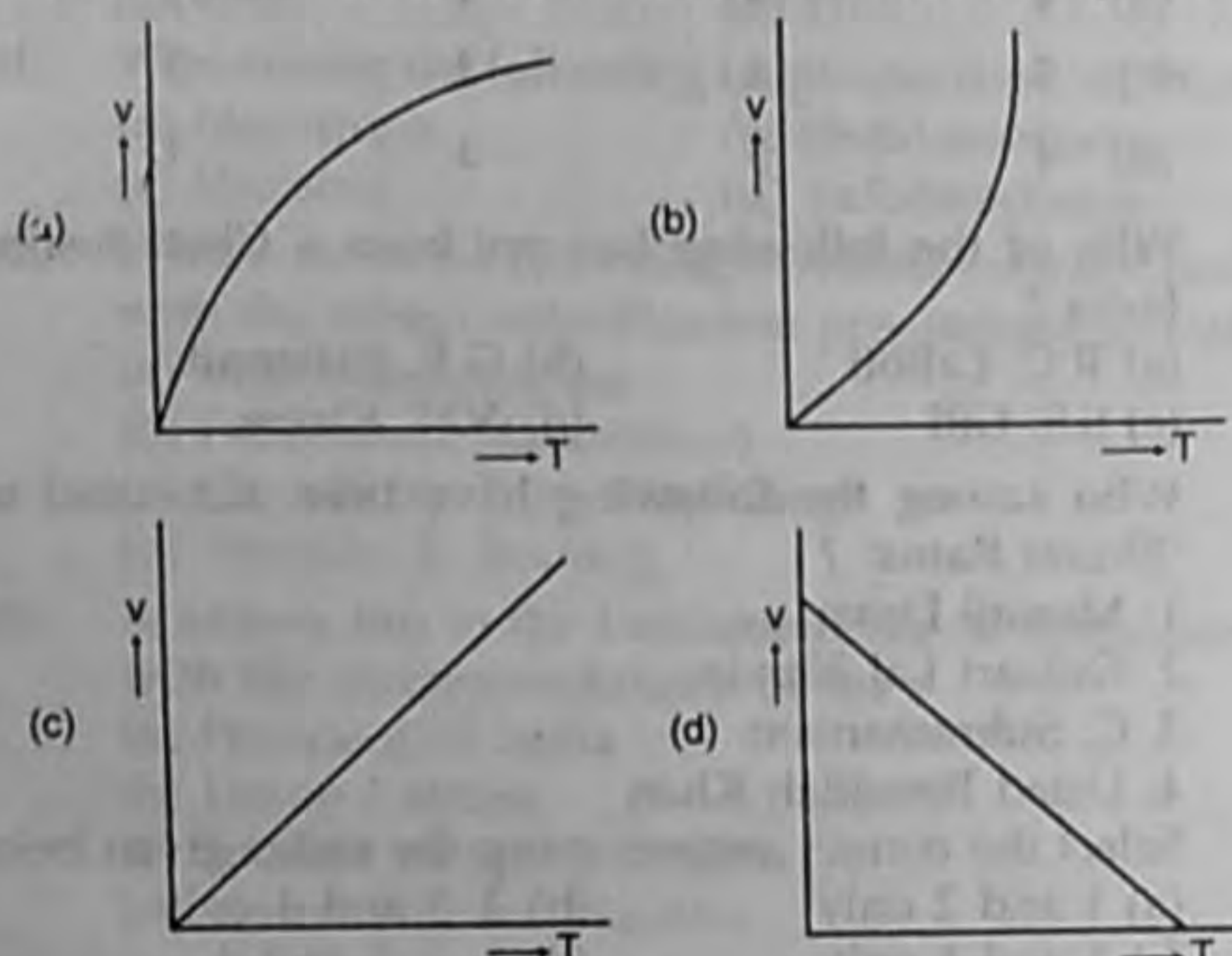
16. Who of the following kings was an ardent follower of Jainism ?

- (a) Bimbisara (b) Mahapadma Nanda
(c) Kharavela (d) Pulakesin II

17. Which one of the following is a vector ?

- (a) Kinetic energy (b) Pressure
(c) Rate of change of momentum
(d) Density

18. Which of the following represents the correct graphical variation of velocity of sound and absolute temperature?



19. The power of lens is -2 D. What is its focal length ?

- (a) 2 m (b) 0.5 cm (c) 1.0 cm (d) 0.5 m

20. What is the maximum number of different electrical combinations possible with three equal resistances ?

- (a) 2 (b) 3 (c) 4 (d) 5

21. By what factor is a solution with $\text{pH} = 2$ more acidic than one with $\text{pH} = 6$?

- (a) 4 (b) 12 (c) 400 (d) 10^4

22. To which dynasty did Ashoka belong ?

- (a) Vardhana (b) Maurya
(c) Kushan (d) Gupta

23. Which one of the following battles was fought between Babar and the Rajputs in 1527 ?

- (a) The First Battle of Panipat
(b) The Battle of Khanwa
(c) The Battle of Ghagra
(d) The Battle of Chanderi

24. Which one of the following nations has recently pushed back its time and synchronised with the Indian Standard Time ?

- (a) Sri Lanka (b) Bangladesh
(c) Bhutan (d) Nepal

25. Match List I with List II and select the correct answer using the codes given below the lists :

List I

List II

(Sun Temple)

(Location)

A. Dakshinaarka Temple 1. Goalpara (Assom)

B. Surya Pahar Temple 2. Arasavilli (Andhra Pradesh)

C. Suryanaar Temple 3. Gaya (Bihar)

D. Suryanarayana Swamy Temple 4. Kumbhakonam (Tamil Nadu)

5. Modhera (Gujarat)

Codes :

	A	B	C	D
(a)	4	2	5	1
(b)	3	1	4	2
(c)	4	1	5	2
(d)	3	2	4	1

26. Which one of the following towns celebrated the completion of one thousand years of establishment recently ?

- (a) Chamba (b) Shimla
(c) Ranikhet (d) Kullu

27. Who among the following cricket players has/have held the record for scoring the highest number of runs in an inning in a cricket test match at different times ?

1. Garfield Sobers 2. Matthew Hayden
3. Zaheer Abbas

Select the correct answer using the code given below :

- (a) 1 only (b) 2 and 3 only
(c) 1 and 2 only (d) 1, 2 and 3

28. How is Satyadev Dubey well known ?

- (a) Playwright and Director
(b) A renowned economist
(c) A well known environmentalist
(d) A renowned Hindi poet

29. Asafa Powell, the 100-metres race world record holder is from which country ?

- (a) Jamaica (b) U.S.A.
(c) Canada (d) Nigeria

30. Which of the following countries is not in the African continent ?

- (a) Togo (b) Sierra Leone
(c) Costa Rica (d) Mauritania

31. What is the total number of matches which were played in the FIFA World Cup—2006 in Germany ?

- (a) 48 (b) 52 (c) 63 (d) 64

32. The words 'Satyameva Jayate' in the State Emblem of India, have been adopted from which one of the following ?

- (a) Brahma Upanishad (b) Mudgala Upanishad
(c) Maitreyi Upanishad (d) Mundaka Upanishad

33. Which one of the following pairs is not correctly matched ?

Lake	Location
(a) Superior	: US—Canada
(b) Baikal	: Russia
(c) Great Bear	: Canada
(d) Great Slave	: Russia

34. Which one of the following pairs is not correctly matched ?

Line	Countries
(a) Durand Line	: Pakistan and Afghanistan
(b) Maginot Line	: France and Germany
(c) 38th Parallel	: Russia and Finland
(d) Radcliffe Line	: India and Pakistan

35. Match List I with List II and select the correct answer using the codes given below the lists :

List I (Symbol)	List II (Important event of life of Buddha)
A. Elephant	1. Renouncement of worldly pleasures
B. Tree	2. Birth of Buddha
C. Empty Throne	3. Enlightenment
D. Horse	4. Representation of royalty

Codes :

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

36. 8 Export Processing Zones have been converted into Special Economic Zones. Which one of the following is not a location of one of these SEZs ?

- (a) NOIDA (b) Surat
(c) Vadodara (d) Vishakhapatnam

37. Match List I with List II and select the correct answer using the codes given below the lists :

List I (Industrialist)	List II (Industrial Unit/Group)
A. Nandan Nilekani	1. Maruti Udyog
B. B.L. Munjal	2. Bharti Telecom
C. Jagdish Khattar	3. Infosys
D. Sunil Mittal	4. Hero Honda
	5. ITC

Codes :

A	B	C	D
(a) 2	4	1	3
(b) 3	1	5	2
(c) 2	1	5	3
(d) 3	4	1	2

38. Consider the following statements :

- In the Lok Sabha, 12 members are nominated by the President of India.
- In the Rajya Sabha, a maximum of 2 members of the Anglo-Indian community can be nominated by the President of India.

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

39. During whose tenure as the Viceroy of India were the great martyrs Bhagat Singh, Sukhdev and Rajguru hanged?

- (a) Lord Curzon (b) Lord Irwin
(c) Lord Minto (d) Lord Chelmsford

40. Match List I with List II and select the correct answer using the codes given below the lists :

List I (Steel Plant)	List II (State)
A. Bhilai Steel Plant	1. Karnataka
B. Bokaro Steel Plant	2. Tamil Nadu
C. Visvesvaraya Steel Plant	3. Andhra Pradesh
D. Salem Steel Plant	4. Chhattisgarh
	5. Jharkhand

Codes :

A	B	C	D
(a) 5	4	3	1
(b) 4	5	1	2
(c) 5	4	2	3
(d) 4	5	3	1

41. Who of the following has not been a Chief Justice of India ?

- (a) R.C. Lahoti (b) G.B. Pattanaik
(c) S.S. Gill (d) V.N. Khare

42. Who among the following have been honoured with 'Bharat Ratna' ?

- Morarji Desai
- Gulzari Lal Nanda
- C. Subramaniam
- Ustad Bismillah Khan

Select the correct answer using the codes given below :

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

43. Who among the following had the longest tenure as the Prime Minister of India ?

- (a) Morarji Desai (b) Charan Singh
(c) V.P. Singh (d) Lal Bahadur Shastri

44. Consider the following :

- Electron
- Proton
- Neutron

Which of the above are baryons ?

- (a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

Directions : The following four (4) 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 and 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

45. Assertion (A) : Syphilis can be prevented by vaccination.
Reason (R) : Vaccination triggers the production of antibodies in the body.

46. Assertion (A) : The deficiency of Vitamin D causes rickets.

Reason (R) : The deficiency of Vitamin D leads to the increased loss of Ca^{++} in urine.

47. **Assertion (A)** : Citric acid is used in soft drinks.
Reason (R) : Citric acid is a good substitution for acetic acid in soft drinks.

48. **Assertion (A)** : The Gangetic plains are among the most bountiful agricultural areas of the world.
Reason (R) : The Gangetic plains contain predominantly regur soil.

49. Setting up of which one of the following not stated in the Constitution of India :

- (a) Planning Commission
 (b) Finance Commission
 (c) Election Commission
 (d) Union Public Service Commission

50. How many States of India border Myanmar :

- (a) Two (b) Three
 (c) Four (d) Five

51. Who among the following taught doctrine of 'Shunyata'?

- (a) Nagarjuna (b) Shankaracharya
 (c) Harisena (d) Vallabhacharya

52. Which one of the following scientists were not associated with the wheat hybridization programme in India ?

- (a) M.S. Swaminathan
 (b) Panchanan Maheshwari
 (c) Choudhary Ram Dhan Singh
 (d) Norman E. Borlaug

53. A Money Bill in the Parliament can be introduced only with the recommendations of the :

- (a) President of India
 (b) Union Cabinet
 (c) Speaker of the Lok Sabha
 (d) Union Finance Minister

54. Match List I with List II and select the correct answer using the codes given below the lists :

List I (Discovery/ Invention)	List II (Scientist)
A. Circulation of blood in human body	1. William Harvey
B. Stethoscope	2. Wilhelm C. Roentgen
C. X-ray	3. Willem Einthoven
D. Electro-cardiogram (ECG)	4. Rene Laennec
	5. Hargobind Khurana

Codes :

A	B	C	D
(a) 1	4	2	3
(b) 2	3	5	4
(c) 1	3	2	4
(d) 2	4	5	3

55. Which one of the following vitamins is essential for the coagulation of blood ?

- (a) Vitamin A (b) Vitamin B₁₂
 (c) Vitamin K (d) Vitamin D

56. Match List I with List II and select the correct answer using the codes given below the lists :

List I (Lake)	List II (State)
A. Chilika Lake	1. Andhra Pradesh
B. Kolleru Lake	2. Kerala

- C. Sambhar Lake 3. Orissa
 D. Vembanad Lake 4. Rajasthan

Codes :

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

57. What is International Development Association ?

- (a) A voluntary association of developing countries
 (b) A federation of international lending agencies
 (c) An affiliate of World Bank
 (d) An organization of donor countries of European Union

58. In which one of the following States of India is the Pemayangtse Monastery situated ?

- (a) Nagaland (b) Himachal Pradesh
 (c) Sikkim (d) Arunachal Pradesh

59. Recently, who among the following took over as Chief Election Commissioner from B.B. Tandon ?

- (a) M. Damodaran (b) N. Gopalaswamy
 (c) Y.V. Reddy (d) S.Y. Qureshi

60. When did the United Nations Organization come into existence ?

- (a) October 24, 1945 (b) October 24, 1943
 (c) November 26, 1945 (d) November 26, 1943

61. According to the Preamble of its Constitution, India is a :

- (a) Sovereign democratic socialist republic
 (b) Sovereign socialist secular republic
 (c) Sovereign democratic republic
 (d) Sovereign socialist secular democratic republic

62. What is the median age (approximate) of the Indian population ?

- (a) 25 years (b) 29 years
 (c) 32 years (d) 35 years

63. Which one of the following is not correctly matched :

- (a) NH 2 : Delhi - Kolkata
 (b) NH 4 : Chennai - Thane (Mumbai)
 (c) NH 3 : Agra - Mumbai
 (d) NH 9 : Delhi - Mumbai

64. Nagda is well known as a centre of production of :

- (a) Steel (b) Automobiles
 (c) Viscose staple fibre (d) Electric motors

65. Match List I with List II and select the correct answer using the codes given below the lists :

List I (State)	List II (Full Statehood Granted In)
A. Goa	1. 1966
B. Haryana	2. 1972
C. Meghalaya	3. 1975
D. Sikkim	4. 1987

Codes :

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

66. Where is the College of Defence Management located ?
 (a) Dehradun (b) Wellington
 (c) Pune (d) Secunderabad
67. In which State is the hydel power project — Nathpa Jhakari located ?
 (a) Himachal Pradesh (b) Uttarakhand
 (c) Jammu and Kashmir (d) Madhya Pradesh
68. Which one of the following kingdoms was founded by Raja Odeyar ?
 (a) Tanjore (b) Jinji
 (c) Mysore (d) Madura
69. Which one of the following is the most populous country after China and India ?
 (a) United States of America
 (b) Brazil
 (c) Argentina
 (d) Indonesia
70. In India, which of the following are the southernmost hills ?
 (a) Anaimalai hills (b) Cardamom hills
 (c) Nilgiri hills (d) Javadi hills
71. DPT vaccine is given to children to immunize them against :
 (a) diphtheria, whooping cough and tetanus
 (b) diphtheria, whooping cough and tuberculosis
 (c) diarrhoea, whooping cough and typhoid
 (d) diarrhoea, polio and tetanus
72. In which one of the following States is the Nanga Parbat peak located ?
 (a) Sikkim (b) Himachal Pradesh
 (c) Jammu and Kashmir (d) Uttarakhand
73. Which of the following are water-borne diseases ?
 1. Viral Hepatitis B 2. Cholera
 3. Typhoid fever 4. Amoebiasis
 Select the correct answer using the code given below :
 (a) 1 and 2 only (b) 1, 2 and 3
 (c) 1 and 4 only (d) 2, 3 and 4
74. What may cause a person's ears to get hurt during take-off or landing of an aircraft ?
 (a) Stretching of the tympanic membrane
 (b) Damage to the middle ear ossicles
 (c) Increased impulses to the cochlea
 (d) Vibrations in the bony labyrinth of the inner ear
75. What causes the mottling of the dental enamel ?
 (a) High levels of chlorine in the water
 (b) High levels of nitrate in the water
 (c) High levels of fluoride in the water
 (d) High levels of calcium in the water
76. Ozone gets depleted in the stratosphere due to the presence of :
 (a) Active NO_3 (b) Active NO_2
 (c) Active Cl (d) Active SO_2
77. With reference to the Indian Freedom Struggle, which one of the following events occurred earliest ?
 (a) Surat Split (b) Lucknow Pact
 (c) Rowlatt Styagraha (d) Communal Award
78. Which one of the following allotropes of carbon is used for cutting and drilling ?
 (a) Diamond (b) Graphite
 (c) Activated carbon (d) Carbon black
79. The Strait of Malacca lies between :
 (a) Myanmar and Malaysia
 (b) Malaysia and Indonesia
 (c) Indonesia and Philippines
 (d) Philippines and Taiwan
80. During the Indian Freedom Struggle, who of the following founded the Prarthana Samaj ?
 (a) Atmaram Pandurang (b) Gopal Hari Deshmukh
 (c) Ishwar Chandra Vidyasagar
 (d) Keshab Chandra Sen
81. Which one of the following is not a constituent of stainless steel ?
 (a) Chromium (b) Carbon
 (c) Nickel (d) Tin
82. Cylindrical lens is used by a person suffering from :
 (a) Astigmatism (b) Myopia
 (c) Hypermetropia (d) Presbyopia
83. With reference to the climate of India, the Western disturbances originate over which one of the following ?
 (a) Arabian Sea (b) Baltic Sea
 (c) Caspian Sea (d) Mediterranean Sea
84. What is the mode of nutrition of mushroom ?
 (a) Photosynthetic (b) Chemosynthetic
 (c) Parasitic (d) Saprophytic
85. Which one of the following rivers originates near Mahabaleshwar ?
 (a) Godavari (b) Krishna
 (c) Kaveri (d) Tapi
86. Which organization was set up in November, 1966 following the recommendation of the United Nations Economic Commission for Asia and the Far East to foster economic growth and co-operation in the region of Asia and the Far East ?
 (a) International Monetary Fund
 (b) Food and Agricultural Organisation
 (c) Asiatic Society
 (d) Asian Development Bank
87. 'Asian Drama', by Gunnar Karl Myrdal, is a book on which of the following subjects ?
 (a) Theatre Movements in Asia
 (b) Economics
 (c) International Politics
 (d) Look East Policy of India
88. What does the Constitution (Ninety-second Amendment) Act, 2003 deal with ?
 (a) Creation of a separate National Commission for Scheduled Tribes
 (b) Cyber crime
 (c) Inclusion of Bodo, Dogri, Maithili and Santhali languages in the Eighth Schedule
 (d) Making right to free and compulsory education a Fundamental Right
89. Consider the following statements about Twelfth Finance Commission :
 1. It was constituted to go recommendations on specified aspects of Centre – State fiscal relations during 2005 – 2010.
 2. It has recommended that the share of States in the net proceeds of sharelike Central taxes shall be 50%.
 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

90. Who has been the only Lok Sabha Speaker to have become the President of India ?
 (a) Gyani Zail Singh (b) V.V. Giri
 (c) Neelam Sanjiva Reddy (d) K.R. Narayanan
91. Panchayats at the intermediate level may not be constituted in a State, having population less than :
 (a) Ten lakhs (b) Fifteen lakhs
 (c) Twenty lakhs (d) Twenty-five lakhs
92. During the Civil Disobedience Movement, who led "Red Shirts" of North-Western India ?
 (a) Abul Kalam Azad
 (b) Khan Abdul Ghaffar Khan
 (c) Mohammad Ali Jinnah
 (d) Shaikat Ali
93. Which one of the following periodicals was published by Mahatma Gandhi during his stay in South Africa ?
 (a) Afrikanes (b) Indian Opinion
 (c) India Gazette (d) Navjivan
94. In which Session of the Congress was the resolution passed stating that 'there should be equality before law irrespective of caste, creed or sex' ?
 (a) Calcutta Session, 1906 (b) Lucknow Session, 1916
 (c) Lahore Session, 1929 (d) Karachi Session, 1931
95. Who presides over the joint sitting of the Lok Sabha and the Rajya Sabha ?
 (a) The Speaker of the Lok Sabha
 (b) The Vice-President
 (c) The President
 (d) The Union Minister of Parliamentary Affairs
96. Aryabhatta and Varahamihira belong to which age ?
 (a) Guptas (b) Cholas
 (c) Mauryas (d) Mughals
97. Consider the following statements about Amir Khusro:
 1. He was a disciple of Nizamuddin Auliya.
 2. He was the founder of both Hindustani classical music and Qawwali.
 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
98. The electoral college that elects the Vice-President of India consists of :
 (a) Members of Rajya Sabha only
 (b) Elected Members of both the Houses of Parliament
 (c) Members of both the Houses of Parliament
 (d) Members of the Rajya Sabha and the Legislative Assemblies of States
99. What is the location of measurement of the Indian Standard Time ?
 (a) $72\frac{1}{2}^{\circ}$ East of the Prime Meridian
 (b) $77\frac{1}{2}^{\circ}$ East of the Prime Meridian
 (c) 80° East of the Prime Meridian
 (d) $82\frac{1}{2}^{\circ}$ East of the Prime Meridian
100. Where are the coal reserves of India largely concentrated?
 (a) Son Valley
 (b) Mahanadi Valley
 (c) Damodar Valley
 (d) Godavari Valley
101. In which layer of the atmosphere do most weather phenomena occur ?
 (a) Exosphere (b) Stratosphere
 (c) Ionosphere (d) Troposphere
102. Glycolysis takes place in :
 (a) Photosynthesis
 (b) Aerobic respiration only
 (c) Anaerobic respiration only
 (d) Both Aerobic and Anaerobic respiration
103. X-rays comprise of :
 (a) Electrons only (b) Protons only
 (c) Neutrons only (d) Electromagnetic radiations
104. What is the chemical formula for Marsh gas ?
 (a) C_2H_6 (b) CH_4
 (c) NH_3 (d) $CO_2 + NO_2$
105. Which one of the following Indian States leads in the production of rubber ?
 (a) Tamil Nadu (b) Karnataka
 (c) Kerala (d) Andhra Pradesh
106. Amelie Mauresmo, who won the Wimbledon Tennis Women's Singles Title 2006, is from which country ?
 (a) Belgium (b) France
 (c) Germany (d) Slovakia
107. Consider the following statements :
 1. FIFA World Cup — 2010 will be held in Argentina.
 2. FIFA World Cup — 2002 was held in Japan/South Korea.
 3. No team from Oceania took part in FIFA World Cup — 2006.
 Which of the statements given above is/are correct ?
 (a) 1, 2 and 3 (b) 1 and 3 only
 (c) 2 only (d) 3 only
108. Which one of the following has been proclaimed by UNESCO as a masterpiece of oral and intangible heritages of humanity ?
 (a) Purana (b) Ramlila
 (c) Geeta (d) Mahabharata
109. With which one of the following dance forms is Madhavi Mudgal associated ?
 (a) Bharat Natyam (b) Odissi
 (c) Kathak (d) Kathakali
110. With which one of the following sports is Jayanta Talukdar associated ?
 (a) Golf (b) Snooker
 (c) Archery (d) Shooting
111. Where is Thattekad Bird Sanctuary located ?
 (a) Kerala (b) Tamil Nadu
 (c) Karnataka (d) Andhra Pradesh
112. Indravati is a tributary of which river ?
 (a) Ganga (b) Godavari
 (c) Krishna (d) Mahanadi
113. What is the name of the major base of the Indian Navy at Karwar ?
 (a) INS Kadamba (b) INS Vikramaditya
 (c) INS Harshvardhan (d) INS Kushan
114. Who of the following won the Nobel Prize for his work on Photoelectric effect ?
 (a) Albert Einstein (b) Werner Heisenberg
 (c) Steven Weinberg (d) Max Planck

115. Match List I with List II and select the correct answer using the codes given below the lists :

List I

(Town)

- A. Bhadravathy
- B. Coimbatore
- C. Kapurthala
- D. Surat

List II

(Industry)

- 1. Gem Cutting
- 2. Electrical Motors
- 3. Steel
- 4. Railway Coach

Codes :

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

116. Between which ranges does the Kashmir Valley in the Himalayas lie ?

- (a) Siwalik and Pir Panjal

- (b) Pir Panjal and Dhauladhar
- (c) Zaskar and Pir Panjal
- (d) Dhauladhar and Zaskar

117. In the year 1946, who among the following joined the Viceroy's Executive Council with the finance portfolio?

- (a) Mohammad Ali Jinnah
- (b) Liaqat Ali Khan
- (c) Nawab Salimullah
- (d) Shaukat Ali

118. Which is the primary component of natural gas ?

- (a) Methane
- (b) Butane
- (c) Propane
- (d) Ethane

119. Which one of the following topographic units receives the first monsoon in summer ?

- (a) Western Ghats
- (b) Himalayas
- (c) Meghalaya Plateau
- (d) Eastern Ghats

120. Which one of the following ocean currents converges with the Gulf Stream ?

- (a) Benguela current
- (b) South Atlantic current
- (c) Kuroshio current
- (d) Labrador current

Elementary Mathematics

1. A car can finish a certain journey in 15 h at a speed of 50 km/h. In order to cover the same distance in 12 h, the speed of the car must be increased by how many km/h ?
 (a) 12.5 (b) 13
 (c) 13.5 (d) 14
2. Sachin, Rahul and Lata together can finish a piece of work in 3 days. If Sachin alone can do it in 6 days and Rahul in 9 days, then in how many days can Lata alone do it ?
 (a) 18 days (b) 19 days
 (c) 20 days (d) 21 days
3. Two persons A and B are walking around a circular track of length 1800 m, at speeds of 40 m/min and 50 m/min respectively. Both of them start in the same direction and at the same time but B reverses his direction every time he completes one full round. What is the time taken by them from the start to meet for the first time ?
 (a) 36 min (b) 40 min
 (c) 45 min (d) 56 min
4. What is the value of $5 \log_8 2 - \frac{1}{3} \log_3 9$?
 (a) 0 (b) 1
 (c) 2 (d) 3
5. An electric pump can fill a tank with water in 3 h. Because of leak in the tank, it takes $3\frac{1}{2}$ h to fill the tank. In how much time can the leak drain all the water off the tank ?
 (a) $6\frac{1}{2}$ h (b) $9\frac{1}{2}$ h
 (c) 12 h (d) 21 h
6. Suppose x is a 10-digit number with leftmost digit being 5, and is divisible by 3 and 11. Suppose y is the number obtained by reversing the digits of x , which one of the following statements is not necessarily correct ?
 (a) y is divisible by 33 (b) y is divisible by 45
 (c) y is divisible by 55 (d) y is divisible by 165
7. If 25% of A is the same as 40% of B , then what is the value of $(A + B) : (A - B)$?
 (a) 7 : 4 (b) 7 : 3
 (c) 13 : 8 (d) 13 : 3
8. A certain sum at certain simple rate of interest becomes Rs 1,300 in 3 yr and Rs 1,750 in 6 yr. It will become Rs. 2,200 in x yr. What is the value of x ?
 (a) 18 yr (b) 15 yr
 (c) 12 yr (d) 9 yr
9. Simple interest on a certain amount for 2 yr at 10% p.a. is Rs 400. What is the compound interest at the same rate and same time ?
 (a) Rs 404 (b) Rs 408
 (c) Rs 410 (d) Rs 420
10. A certain sum amounts to Rs 13,230 in two years and to Rs 13,891.50 in three years at compound interest, compounded annually. What is the rate of interest per annum ?
 (a) 4% (b) 5%
 (c) 6% (d) 7%
11. The circumference of front and back wheels of a carriage are $2\frac{2}{5}$ m and $3\frac{3}{7}$ m respectively. A chalk mark is put on the point of contact of each wheel with the ground at the same instant. What is the distance travelled by the carriage so that their chalk marks may be again in the ground at the same time ?
 (a) 16 m (b) 24 m
 (c) 26 m (d) 42 m
12. A sum P_1 at rate R_1 becomes $5P_1$ in 5 yr. Likewise, a sum P_2 at rate R_2 becomes $10P_2$ in 10 yr. Which of the following is a correct statement if R_1 and R_2 are simple interest rates ?
 (a) $R_1 = R_2$
 (b) $R_1 < R_2$
 (c) $R_2 < R_1$
 (d) The relation between R_1 and R_2 depends upon P_1 and P_2
13. If $\frac{\operatorname{cosec} \theta + \sin \theta}{\operatorname{cosec} \theta - \sin \theta} = \frac{5}{3}$ and $0^\circ < \theta < 90^\circ$, then what is the value of $\tan \theta$?
 (a) $1/2$ (b) $1/\sqrt{3}$
 (c) $\sqrt{3}$ (d) $\sqrt{3}/2$
14. If $\sin^4 x + \sin^2 x = 1$, then what is the value of $\cot^4 x + \cot^2 x$?
 (a) $\cos^2 x$ (b) $\sin^2 x$
 (c) $\tan^2 x$ (d) 1
15. Given $x \cos \theta + y \sin \theta = 2$ and $x \cos \theta - y \sin \theta = 0$, then which one of the following is correct ?
 (a) $x^2 + y^2 = 1$ (b) $\frac{1}{x^2} + \frac{1}{y^2} = 1$
 (c) $xy = 1$ (d) $x^2 - y^2 = 1$
16. Which of the following is/are the value(s) of the expression $\sin A (1 + \tan A) + \cos A (1 + \cot A)$?
 1. $\sec A + \operatorname{cosec} A$
 2. $2 \operatorname{cosec} A (\sin A + \cos A)$
 3. $\tan A + \cot A$
 Select the correct answer using the code given below:
 Code :
 (a) 1 only (b) 1 and 2 only
 (c) 2 only (d) 1 and 3 only
17. If $x + y = 90^\circ$, then what is the value of $\left(1 + \frac{\tan x}{\tan y}\right) \sin^2 y$?
 (a) 0 (b) $1/2$
 (c) 1 (d) 2
18. A school is situated at a distance of $600\sqrt{2}$ m measured along north-east direction from a point on a National Highway which extends north-south. What is the perpendicular distance of the school from the National Highway ?
 (a) 600 m (b) $600/\sqrt{3}$ m
 (c) $600\sqrt{3}$ m (d) 300 m

19. The angles of elevation of the top of a tower h m tall, from two different points on the same horizontal line are x and y ($x > y$). What is the distance between the points?

- (a) $h(\tan x - \tan y)$ (b) $\frac{h}{\tan x \tan y}$
 (c) $\frac{h(\tan x - \tan y)}{\tan x \tan y}$ (d) $\frac{h(\tan x \tan y)}{\tan x - \tan y}$

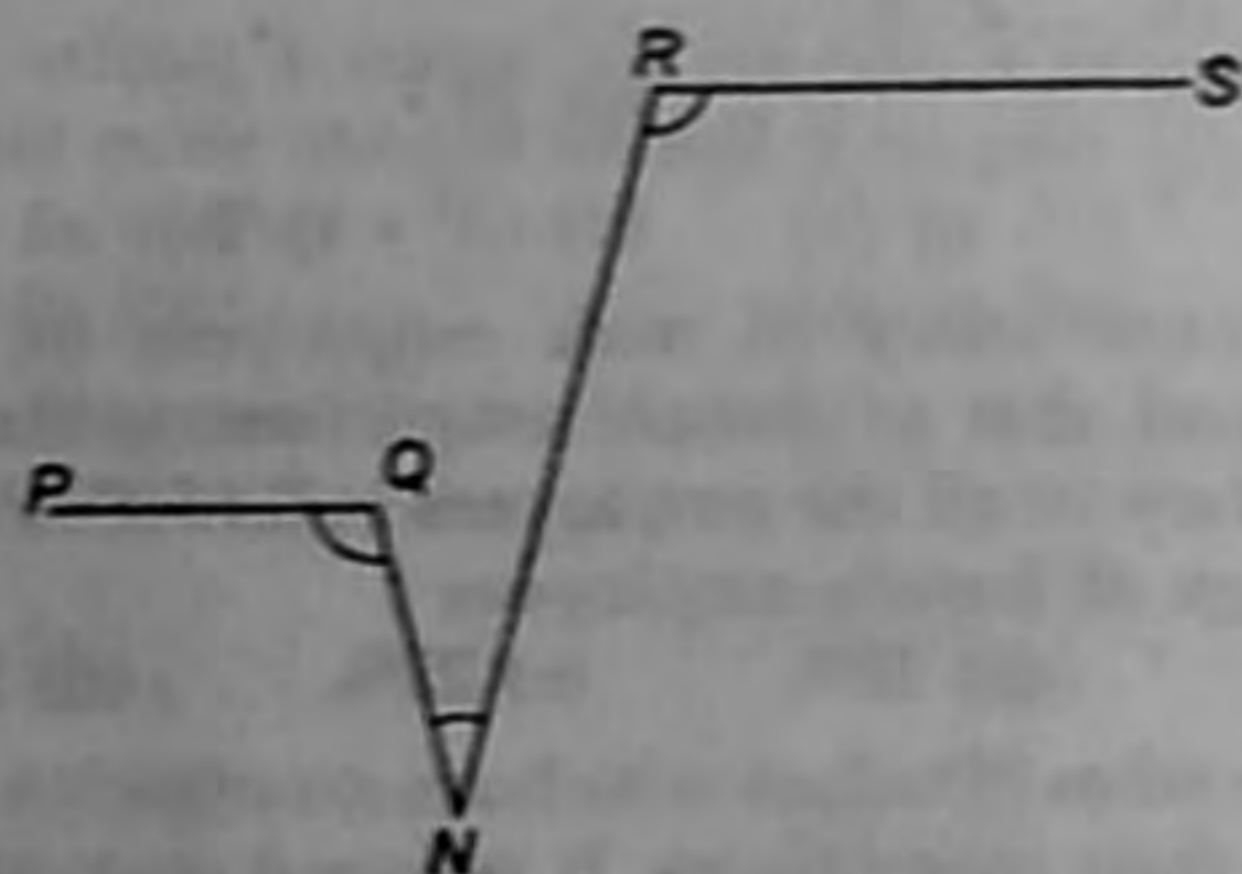
20. If two angles are complementary of each other, then each angle is :

- (a) an obtuse angle (b) a right angle
 (c) an acute angle (d) a supplementary angle

21. Let D be the mid point of a straight line AB and let C be a point different from D such that $CA = CB$. Then, which one of the following is correct?

- (a) $\angle CDB$ is acute (b) $\angle CDB > 90^\circ$
 (c) $\angle CDB = 90^\circ$ (d) $CA \perp AB$

22.



In the figure given above,

$\angle PQN = 99^\circ$,

$\angle NRS = 111^\circ$,

$PQ \parallel RS$, then what is $\angle QNR$?

- (a) 10° (b) 15°
 (c) 20° (d) 30°

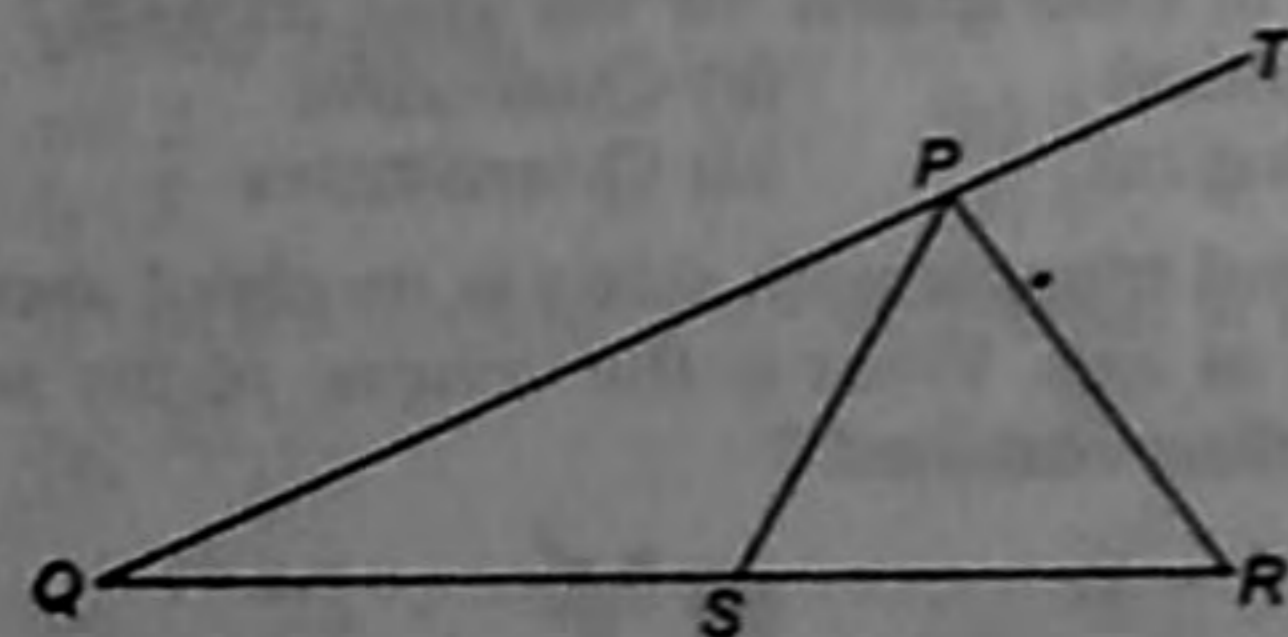
23. $ABCD$ is a cyclic quadrilateral such that $A + B = 2(C + D)$. If $\angle C > 30^\circ$, then which one of the following is correct?

- (a) $\angle D \geq 90^\circ$ (b) $\angle D < 90^\circ$
 (c) $\angle D \leq 90^\circ$ (d) $\angle D > 90^\circ$

24. If two parallel lines are intersected by a transversal, then the bisectors of the interior angles form which one of the following?

- (a) Rectangle (b) Square
 (c) Rhombus (d) Parallelogram

25.



In the figure given above,

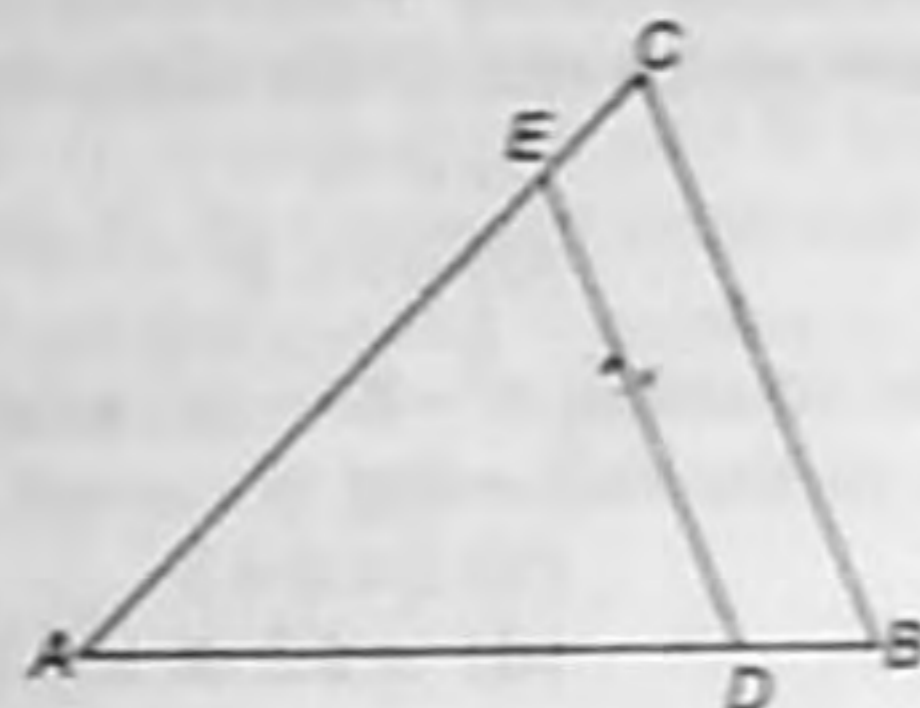
$PS = QS = PR$,

$\angle TPR = 78^\circ$,

What is $\angle PRS$ equal to?

- (a) 45° (b) 50°
 (c) 52° (d) 55°

26.



In the figure given above,

$DE \parallel BC$, $AD = x$, $DB = x - 2$, $AE = x + 2$ and $EC = x - 1$.

What is the value of x ?

- (a) 3 (b) 4
 (c) 5 (d) 6

27. If the difference between the roots of the equation $x^2 + 4x + k = 0$ be 2, then what is the value of k ?

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

28. What is the condition that $5x^7 + 9x^4 - 7x^3 + 11ax + 5a^2$ may contain $x + 1$ as a factor?

- (a) $5a^2 - 11a + 11 = 0$ (b) $a + 1 = 0$
 (c) $a - 1 = 0$ (d) $5a^2 + 11a + 7 = 0$

29. If the roots of the equation $x^2 + ax + \beta = 0$ are 8, 2; and those of the equation $x^2 + \alpha x + b = 0$ are 3, 3; then what are the roots of the equation $x^2 + ax + b = 0$?

- (a) 8, -1 (b) -9, 2
 (c) -8, -2 (d) 9, 1

30. Let x, y and z be integers, where x and z are relatively prime. If z divides xy , then which one of the following is correct?

- (a) z divides x (b) z divides y
 (c) z does not divide y (d) z is relatively prime to y

31. A train covers a distance of 200 km between two stations at a speed of x km/h. Another train covers the same distance at a speed of $(x + 5)$ km/h. If the second train takes 2 h less than the first, what is the value of x ?

- (a) 25 (b) 20
 (c) 30 (d) 40

32. What is the square root of $23 + 4\sqrt{10} - 10\sqrt{2} - 8\sqrt{5}$?

- (a) $\sqrt{5} + \sqrt{10} - 2\sqrt{2}$ (b) $\sqrt{5} - \sqrt{10} + 2\sqrt{2}$
 (c) $\sqrt{5} + 2\sqrt{2} + \sqrt{10}$ (d) $2\sqrt{2} - \sqrt{5} + \sqrt{10}$

33. If $a = \frac{xy}{x+y}$, $b = \frac{xz}{x+z}$ and $c = \frac{yz}{y+z}$ where a, b and c are non-zero, then what is x equal to?

- (a) $\frac{2abc}{ac+bc-ab}$ (b) $\frac{2abc}{ab-ac+bc}$
 (c) $\frac{2abc}{ab+bc+ac}$ (d) $\frac{2abc}{ab+ac-bc}$

34. HCF of two expressions is $(a + 1)$ and LCM is $(a^3 + a^2 - a - 1)$. If one expression is $(a^2 - 1)$, then what is the second expression?

- (a) $(a + 1)$
 (b) $(a - 1)^2$
 (c) $(a + 1)^2$
 (d) $(a + 1)(a - 1)$

35. If the roots of the equation $ax^2 + bx + c = 0$ are reciprocal to each other, then which one of the following is correct?
 (a) $a = 1/c$ (b) $a = c$
 (c) $c = 1/a^2$ (d) $a = -c$
36. If the roots of the equation $x^2 - 8x + (a^2 - 6a) = 0$ are real, then which one of the following is correct?
 (a) $-2 < a < 8$ (b) $2 < a < 8$
 (c) $a \leq -2$ or $a > 8$ (d) $a \leq 2$ or $a > 8$

37. If $x = \frac{a-b}{a+b}$, $y = \frac{b-c}{b+c}$, $z = \frac{c-a}{c+a}$, then what is the value of

$$\frac{1+x}{1-x} \cdot \frac{1+y}{1-y} \cdot \frac{1+z}{1-z} ?$$

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

Directions : The following four (4) 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 and select the answers to these items using the code given below :

Code :

- (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) :**

If the diameters of two circles are 6 unit and 10 unit, and their centres are at a distance of 8 unit, four common tangents can be drawn.

Reason (R) :

The maximum number of common tangents that can be drawn to two circles is 4.

39. **Assertion (A) :**

$(2 \times 3 \times 5 \times 7 \times 11 \times 13) + 1$ is a prime number.

Reason (R) :

If $p_1, p_2, p_3, \dots, p_n$ are consecutive prime numbers, then $(p_1 \times p_2 \times p_3 \times \dots \times p_n) + 1$ is also a prime number.

40. **Assertion (A) :**

$\sin 40^\circ > \sin 20^\circ$

Reason (R) :

If $\theta_1 > \theta_2$, $\sin \theta_1$ is always greater than $\sin \theta_2$.

41. **Assertion (A) :**

The arithmetic mean is the most widely used mean in practice.

Reason (R) :

It is simple to understand and easiest to compute.

42. If $4x^2 - 6x + m$ is divisible by $x - 3$, which one of the following is the greatest divisor of m ?

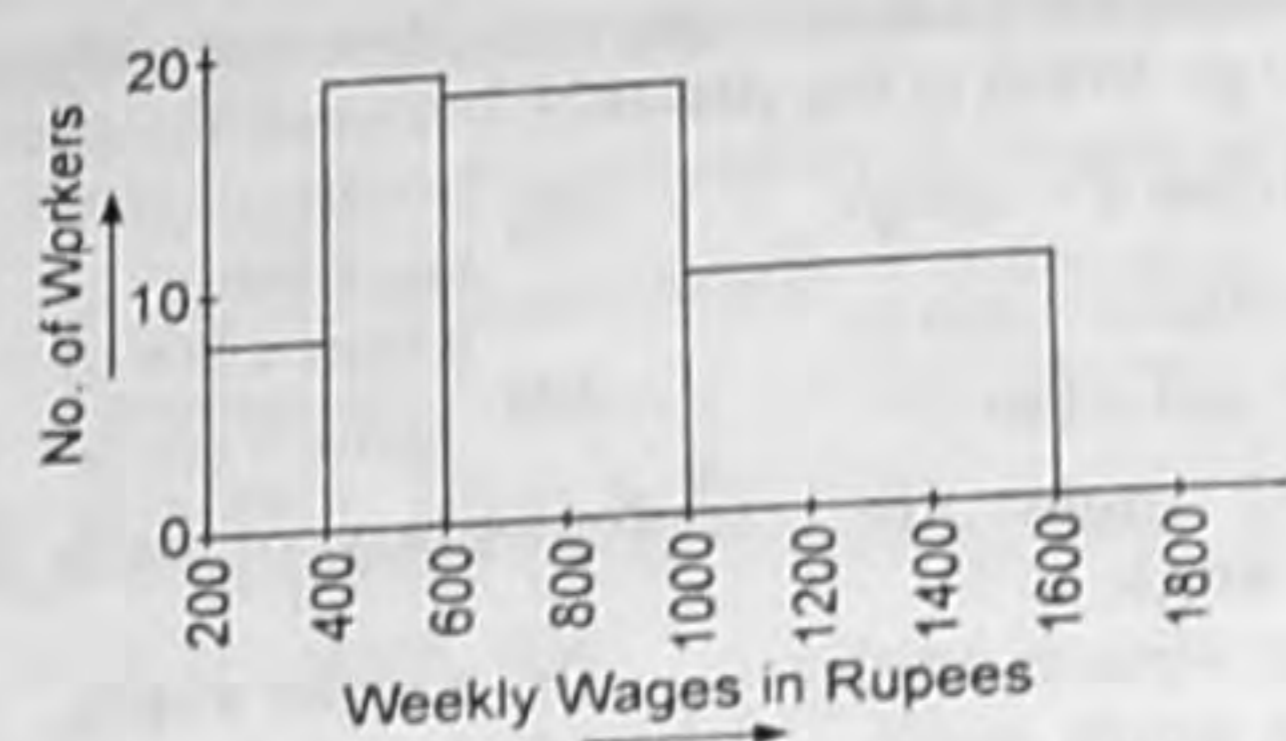
- (a) 9 (b) 12
 (c) 18 (d) 36

43. Given, $\frac{x}{2} + \frac{y}{4} = k$ and $\frac{2}{x} + \frac{4}{y} = \frac{k}{2}$.

What is the value of xy ? (k is a real number)

- (a) 1
 (b) 4
 (c) 16
 (d) Cannot be determined unless value of k is known

44.



Consider the histogram shown above with unequal class intervals representing weekly wages of workers of an industrial unit. What is the number of workers having wages between Rs 1,000 and Rs 1,600?

- (a) 10 (b) 15 (c) 25 (d) 30

45. What is the geometric mean of the series $1, 2, 4, 8, 16, \dots, 2^n$?

- (a) $2^{(n+1)/2}$ (b) $2^{n/2}$
 (c) $2^{(n-1)/2}$ (d) $(2^n + 1)/2$

46. The average salary of male employees in a firm is Rs. 520 and that of female employees is Rs 420. The mean salary of all the employees is Rs 500. What is the percentage of female employees?

- (a) 40% (b) 30% (c) 25% (d) 20%

47. A variate takes 11 values which are arranged in ascending order of their magnitudes. It is found that 4th, 6th and 8th observations are 8, 6 and 4 respectively. What is the median of the distribution?

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

48. The following table gives the areas of oceans of the world:

Ocean Area	(million km ²)
Pacific	70.8
Atlantic	41.2
Indian	28.5
Antarctic	7.6
Arctic	4.8

A pie diagram of this data is to be drawn. What is the angle which the sector representing Pacific Ocean subtends at the centre?

- (a) 167° (b) 97°
 (c) 67° (d) 18°

49. What type of classification is required to measure the production of food grains for the year 2004-05?

- (a) Geographical (b) Qualitative
 (c) Chronological (d) Quantitative

50. An equilateral triangle with side a is revolved about one of its sides as axis. What is the volume of the solid of revolution thus obtained?

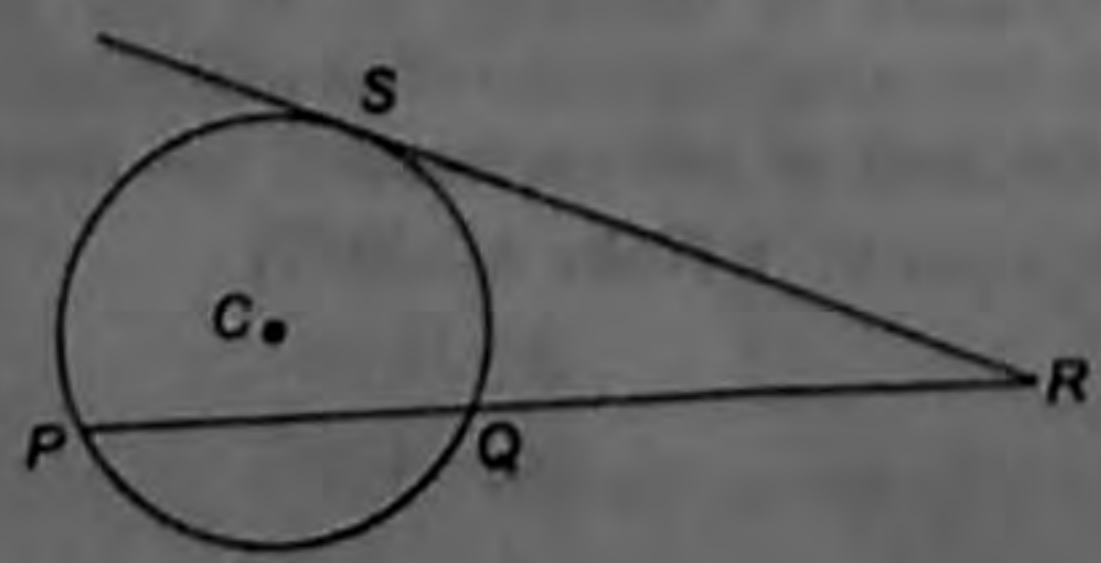
- (a) $\frac{\pi a^3}{4}$ (b) $\frac{\pi a^3}{6}$
 (c) $\frac{\pi a^3}{2}$ (d) $\frac{\pi a^3}{8}$

51. What is the value of n of a regular polygon of n sides for which its side is equal to the radius of the circumscribed circle?

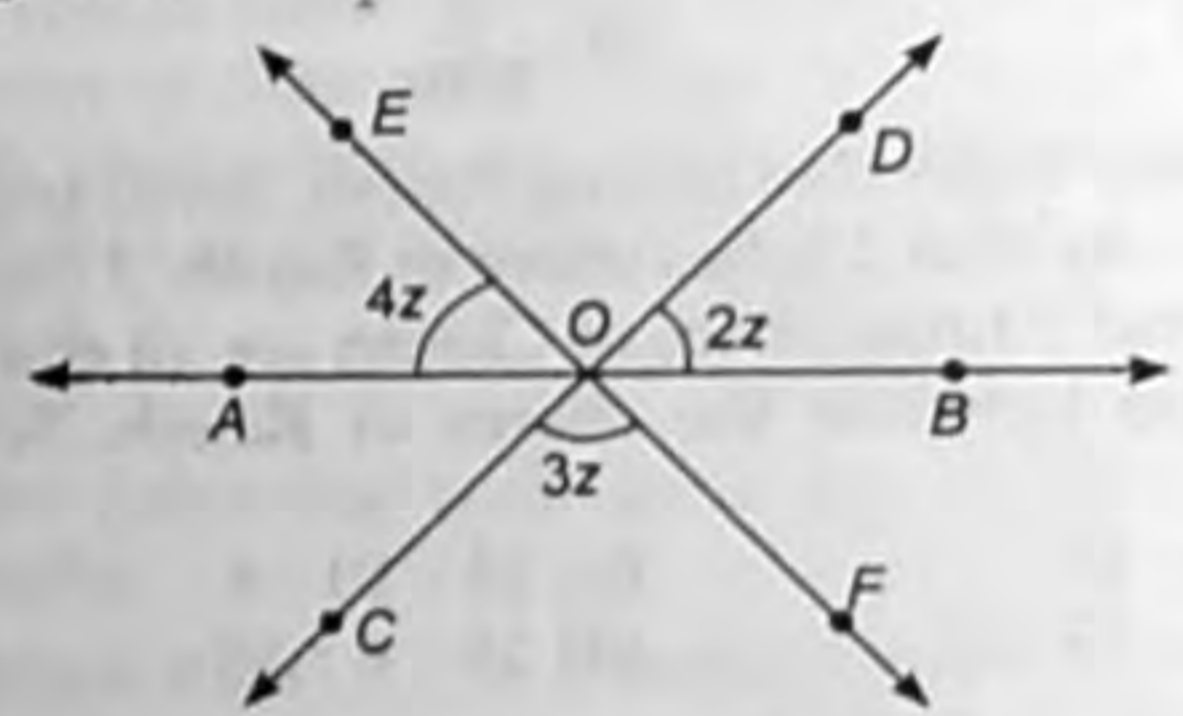
- (a) 3 (b) 4
 (c) 6 (d) 8

52. A cross is formed by adjoining faces of 5 unit cubes. What is the total surface area of exposed surfaces?
 (a) 18 unit (b) 20 unit
 (c) 22 unit (d) 26 unit
53. Two cubes, each with 12 cm edge, are joined end to end. What is the surface area of the resulting cuboid?
 (a) 720 cm^2 (b) 1296 cm^2
 (c) 1340 cm^2 (d) 1440 cm^2
54. A sphere of radius R has its surface area equal to the total surface area of a solid hemisphere of radius r . What is the value of R/r ?
 (a) 2 (b) $2/\sqrt{3}$
 (c) $\sqrt{3}/2$ (d) $\sqrt{2}$
55. If $\sqrt{1 - \sqrt{x^4 - x^2}} = x - 1$, then what is the value of x ?
 (a) $-5/4$ (b) $5/4$
 (c) $1/4$ (d) $-1/4$
56. By selling a watch for Rs 630, a person loses 10%. At what price should he sell it to gain 5%?
 (a) Rs 690 (b) Rs 735
 (c) Rs 710 (d) Rs 740
57. If a number x is added to y , then the total becomes $t\%$ of y ; then what is $x:y$?
 (a) $\frac{t}{100y}$ (b) $\frac{t-100}{100}$
 (c) $\frac{t+100}{100}$ (d) $\frac{ty}{100}$
58. Some money is divided among Rajesh, Sonal and Chetan in such a way that 2 times share of Rajesh, 3 times share of Sonal and 5 times share of Chetan are all equal. What is the ratio between the shares of Rajesh, Sonal and Chetan?
 (a) 10 : 6 : 15 (b) 15 : 10 : 6
 (c) 6 : 10 : 15 (d) 15 : 6 : 10
59. x varies inversely as square of y and $x=5$ when $y=4$. What is x when $y=2$?
 (a) 16 (b) 18
 (c) 20 (d) 25
60. If a natural number is divided by 7, the remainder is 5. What is the remainder, when the cube of that number is divided by 7?
 (a) 2 (b) 3
 (c) 5 (d) 6
61. What is the smallest natural number by which the number 1792 must be divided in order to make it a perfect square?
 (a) 2 (b) 4
 (c) 7 (d) 8
62. If $\cos \theta = \tan \theta$ ($0^\circ < \theta < 90^\circ$), what is the value of $\sin \theta$?
 (a) $\frac{\sqrt{5}-1}{4}$ (b) $\frac{\sqrt{5}-1}{2}$
 (c) $\frac{\sqrt{2}+1}{4}$ (d) $\frac{\sqrt{2}-1}{4}$
63. If $\sin \theta - \cos \theta = \frac{\sqrt{3}-1}{2}$, which one of the following is the value of θ ?
 (a) 30° (b) 45°
 (c) 60° (d) 90°
64. Four right angled triangles have the following lengths of base and hypotenuse respectively :
 1 and $\sqrt{5}$, 2 and $\sqrt{13}$, 3 and 5, 4 and $\sqrt{41}$.
 If $\theta_1, \theta_2, \theta_3, \theta_4$ represent their respective included angles, then find the correct sequence in the ascending order of values of
 1. $\sin \theta_1$
 2. $\tan \theta_2$
 3. $\cos \theta_3$
 4. $\sec \theta_4$
 Select the correct answer using the code given below.
 Code :
 (a) 4-1-2-3 (b) 1-4-3-2
 (c) 3-1-2-4 (d) 3-1-4-2
65. If $\sin x = 3/5$, then for $0^\circ < x < 90^\circ$, what is the value of $\tan x + \sec x$?
 (a) $1/2$ (b) 2
 (c) $5/2$ (d) 3
66. Consider the following statements about the expression $\sin^3 \theta + 2 \sin^2 \theta + 3 \sin \theta$
 1. Maximum value of the expression is 6 for any $\theta \in R$.
 2. The expression cannot take value 0 for any $\theta \in R$.
 Which of the statement(s) is/are correct?
 (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2
67. ABC is a right angled triangle, right angled at B . If $\angle ACB = 60^\circ$, what is $AB : BC : CA$?
 (a) $\sqrt{3} : 1 : 2$ (b) $1 : \sqrt{3} : 2$
 (c) $1 : 1 : \sqrt{2}$ (d) $\sqrt{2} : 1 : \sqrt{3}$
68. If $0^\circ < \theta < 90^\circ$ and $\cos^2 \theta - \sin^2 \theta = \frac{1}{2}$, then what is the value of θ ?
 (a) 30° (b) 45°
 (c) 60° (d) 90°
69. If the length of a rectangle is $\sqrt{3}$ times its breadth, then what is the sum of the sine of the smaller angle made by the diagonal with one side and the cosine of the larger angle made by the diagonal with the other side?
 (a) $\frac{1}{\sqrt{2}}$ (b) 1
 (c) $\sqrt{2}$ (d) $\sqrt{3}$
70. The radius of the base of a cylinder is 2 m and its altitude is 3 m. What is the diagonal of an axial section?
 (a) 4 m (b) 5 m
 (c) 2.5 m (d) $\sqrt{13}$ m
71. If the sum of the lengths of the diagonals of a rhombus is 10 m and if its area is 9 m^2 , then what is the sum of the squares of the diagonals?
 (a) 36 m^2 (b) 64 m^2
 (c) 80 m^2 (d) 100 m^2
72. A circular tent of height $4x$ m is in the form of a right circular cylinder of diameter $8x$ m and height x m surmounted by a right circular cone of the same diameter. What is the cost of canvas needed for the tent at the rate of Rs x per m^2 ? (Take $\pi = 22/7$)
 (a) $21 \pi x^3$ (b) $24 \pi x^3$
 (c) $28 \pi x^3$ (d) $44 \pi x^3$

73. The lateral surface of a cylinder develops into a rectangle whose diagonal is equal to 4π and forms an angle $\pi/6$ with the base. What is the volume of the cylinder?
 (a) $6\pi^2$ (b) $18\pi^2$
 (c) $36\pi^2$ (d) $72\pi^2$
74. A cubical tank of each edge of length 6 m contains 72 m^3 water in which a cube of edge 3 m is dropped which gets fully submerged. What is the height of water level that is raised in the tank?
 (a) $2/3$ m (b) $3/4$ m
 (c) 1 m (d) $5/4$ m
75. What is the time needed to empty a cuboidal water reservoir 10 m long, 9 m wide and 3 m deep at the rate of 45 L/m?
 (a) 100 h (b) 90 h
 (c) 80 h (d) 60 h
76. A cube of side y is converted to a cuboid in such a way that the three concurrent edges are in the ratio 1 : 2 : 4 and the shorter edge is x . What is the ratio of surface area of the cuboid to that of the cube?
 (a) $7/6$ (b) $7/12$
 (c) $11/10$ (d) $10/11$
77. If the area of a circle is reduced to 25%, then its circumference will be reduced to what percentage?
 (a) 50% (b) 20%
 (c) 25% (d) 10%
78. The ratio of the surface areas of two spheres is $x:y$. What is the ratio of their volumes?
 (a) x/y (b) x^3/y^3
 (c) $x^{3/2}/y^{3/2}$ (d) x^2/y^2
79. A solid metallic cube of side a is melted and recast into a solid sphere of radius r . Which one of the following is correct?
 (a) $\frac{r}{a} < \frac{1}{4}$ (b) $\frac{1}{4} < \frac{r}{a} < \frac{1}{2}$
 (c) $\frac{1}{2} < \frac{r}{a} < \frac{3}{4}$ (d) $\frac{r}{a} > \frac{3}{4}$
80. If the radius of the base of a right circular cylinder is halved, keeping the height same, what is the ratio of the volume of the reduced cylinder to that of the original one?
 (a) 1 : 2 (b) 1 : 3
 (c) 1 : 4 (d) 2 : 5
81. A point A is 6.5 cm from the centre of a circle. The length of the tangent drawn from A to the circle is 6 cm. What is the radius of the circle?
 (a) 5 cm (b) 4 cm
 (c) 3.5 cm (d) 2.5 cm
82. In the parallelogram $ABCD$, M is the mid point of BD and BM bisects $\angle B$. Then, what is $\angle AMB$ equal to?
 (a) 45° (b) 60°
 (c) 90° (d) 120°



- In the figure given above, C is the centre of the circle. If tangent $SR = 18$ cm and $QR = 12$ cm, what is the length of chord PQ ?
 (a) 8 cm (b) 10 cm
 (c) 12 cm (d) 15 cm
84. In $\triangle ABC$, $\angle ABC = 60^\circ$ and AD is the perpendicular from A on BC . $AB = x$ and $AC = 3x/2$. What is CD equal to?
 (a) $x/2$ (b) $\sqrt{3}x/2$
 (c) $3x/\sqrt{2}$ (d) $\sqrt{3/2}x$
85. If one of the interior angles of a regular polygon is equal to $7/6$ times one of the interior angles of a regular hexagon, then what is the number of sides of the polygon?
 (a) 7 (b) 8
 (c) 9 (d) 10
86. The sides of a triangle are 20 cm, 16 cm and 13 cm respectively. Which one of the following is correct?
 (a) The triangle is obtuse angled
 (b) The triangle is right angled
 (c) The triangle is acute angled
 (d) Cannot be determined
87. If the angles of a triangle are in the ratio 5 : 3 : 10, what is the difference between the largest angle and the smallest angle?
 (a) 20° (b) 30° (c) 50° (d) 70°
88. In the figure given above, what is the value of z in degrees?



- (a) 10° (b) 20° (c) 30° (d) 40°
89. A road which is 7 m wide surrounds a circular park whose circumference is 35π m. What is the surface area of the road?
 (a) 2618 m^2 (b) 1323 m^2
 (c) 1127 m^2 (d) 927 m^2
90. A triangular region ABC whose height AD is $20\sqrt{2}$ cm is to be divided into two regions of equal area by drawing a straight line L parallel to the straight line BC . What is the perpendicular distance of L from the point A ?
 (a) 10 cm (b) $10\sqrt{2}$ cm
 (c) 15 cm (d) 20 cm
91. If $a = \sqrt{b} = \sqrt[3]{c} = \sqrt[4]{d} = \sqrt[5]{e}$, then what is the value of $\log_a(abcde)$?
 (a) 10 (b) 11 (c) 12 (d) 15
92. If $\left(x^2 + \frac{1}{x^2}\right) = p$, then what is the value of $\left(x^3 + \frac{1}{x^3}\right)$?
 (a) $p^{3/2}$ (b) $(p+1)\sqrt{p+2}$
 (c) $(p-1)\sqrt{p+2}$ (d) $(p+1)\sqrt{p-2}$
93. What is the HCF of $(x^6 + 1)$ and $(x^4 - x^2 + 1)^2$?
 (a) $x^2 + 1$ (b) $x^4 - x^2 + 1$
 (c) $x^4 + x^2 + 1$ (d) $x^3 + 1$

94. Consider the following statements :
- $x^8 + y^8 + x^4y^4$ is divisible by $(x^4 + y^4 + x^2y^2)$.
 - $x^8 + y^8 + x^4y^4$ is divisible by $(x^4 + y^4 - x^2y^2)$.
- Which of the statement(s) given above is/are correct ?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

95. If $a + b + c = 0$, then what is the value of

$$\frac{a^2 + b^2 + c^2}{(a-b)^2 + (b-c)^2 + (c-a)^2} ?$$

- (a) 1 (b) 3
(c) 1/3 (d) 0
96. Consider the following statements :
- $ax^3 + bx^2 - ax - b$ is divisible by
- $(x - 1)$ for all real values of a, b .
 - $(x + 1)$ for all real values of a, b .
- Which of the statement(s) given above is/are correct ?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
97. If a set A contains 11 elements and another set B contains

5 elements such that $B \subset A$, then what is the number of elements in $A \cup B$?

- (a) 5 (b) 6
(c) 11 (d) 16

98. If $\frac{x}{y} = \frac{z}{w}$,

then what is $\frac{x^m + y^m + z^m + w^m}{x^{-m} + y^{-m} + z^{-m} + w^{-m}}$ equal to ?

- (a) 0 (b) 1
(c) $(xyzw)^m$ (d) $(xyzw)^{m/2}$

99. If $y = \left(x + \frac{1}{x}\right)$, then $x^4 + x^3 - 4x^2 + x + 1 = 0$ can be reduced to which one of the following ? ($x \neq 0$)

- (a) $y^2 + y - 2 = 0$ (b) $y^2 + y - 4 = 0$
(c) $y^2 + y - 6 = 0$ (d) $y^2 + y + 6 = 0$

100. If α and β are the roots of the equation $ax^2 + bx - 6 = 0$ such that $\alpha^3 + \beta^3 = 0$, then what is the value of b ?
- (a) 0 (b) 1
(c) -1 (d) Cannot be determined