

Date: 08/11/2015

SOLUTIONS

1. Earlier Vivek _____ on 17th floor of a multi-storeyed building. So, he knows how to use a lift.
(1) live (2) lived (3) lives (4) is living

Ans. (2) lived

Sol. The time frame in reference is Simple Past, so 'lived' is the appropriate answer.

2. Sonali _____ an English newspaper daily.
(1) reads (2) read (3) was reading (4) were reading

Ans. (1) reads

Sol. Simple Present Tense is used to refer to 'Habits' or 'Activities' of daily routine as in this case.

3. Himani _____ this test recently.
(1) pass (2) passed (3) have passed (4) has passed

Ans. (4) has passed

Sol. Present Perfect Tense is used to refer to activities that have just been completed in the present.

4. Look before you _____.
(1) leap (2) leapt (3) are leaping (4) leaps

Ans. (1) leap

Sol. Commonly used Proverb : 'Look before you leap'

5. The senior staff _____ bonus by the company last year.
(1) is given (2) will be given (3) was given (4) has given

Ans. (3) was given

Sol. Passive verb form of Simple Past will be used in this case to refer to an action that happened in simple past.

6. A long bridge _____ over the village river presently.
(1) is being built (2) was being built (3) was built (4) will be built

Ans. (1) is being built

Sol. Passive verb form of Simple Present Continuous will be used in this case to refer to an action that is happening presently.

7. 'Vande Matram' song _____ by Bankim Chandra Chatterjee.
(1) is being written (2) was being written (3) had written (4) was written

Ans. (4) was written

Sol. Passive verb form of Simple Past will be used in this case to refer to an action that happened in remote past.

8. Second-hand books _____ on this foot-path every Sunday.
(1) bought and sold (2) is bought and sold (3) are bought and sold (4) will be bought and sold

Ans. (3) are bought and sold

Sol. Passive verb form of Simple Present will be used in this case to refer to an action that happens as a routine or schedule.

9. The watchman said to the lady, "I cannot stay here all the time."
The watchman told the lady that _____ all the time
(1) he cannot stay there (2) he could not stay there (3) he could not stay here (4) he cannot stay here

Ans. (2) he could not stay there

Sol. Indirect Speech uses the modal 'could' and place reference 'there' if 'can' and 'here' are used in Direct Speech. Place reference will be changed to 'there' because 'here' here does not refer to a place that would stand as an address or universally static place.

10. My sister said to me, "Please bring me a sketch-pen set."
My sister requested me _____ a sketch-pen set.
(1) that I should bring her (2) if I bring her (3) to bring her (4) to brought her

Ans. (3) to bring her

Sol. Indirect Speech of Imperative sentences making requests uses the 'to infinitive form'

11. The old lady said, "I am man going on a holiday."
The old lady said _____ on a holiday.
(1) that she was going (2) if she was going (3) that I am going (4) that I was going

Ans. (1) that she was going

Sol. Indirect Speech of Present Continuous uses Past Continuous verb form.

12. Lencho said to the post-office clerks, "You are a band of cheats."
Lencho blamed the post-office clerks that _____ a band of cheats.
(1) you are (2) you were (3) they are (4) they were

Ans. (4) they were

Sol. Third person plural pronoun is used in indirect speech when second person pronoun is used in Direct Speech, and Simple Present tense changes to Simple Past.

13. It is a difficult puzzle. You _____ also try it.
(1) could (2) may (3) shall (4) will.

Ans. (1) could

Sol. 'Could' as a modal will be used here to express a tentative possibility in hypothetical sense i.e they refer to something which is possible but unlikely.

14. Smoking is prohibited in school too. Nobody use tobacco products there.
(1) may (2) will (3) can (4) could

Ans. (3) can

Sol. Use of 'can' expresses the modality of Prohibition in this sentence

15. We love our country.
(1) should (2) may (3) will (4) can

Ans. (1) should

Sol. Use of 'should' expresses the modality of moral obligation/ a strong sense of moral duty in this sentence.

16. Religion helps us keep to the right path in life. So, we..... follow our religion.
(1) could (2) may (3) must (4) shall

Ans. (3) must

Sol. Use of 'must' here expresses the modality of deduction and inference which shows necessity in this sentence.

17. A bunch of grapes all that the fox wanted.
(1) is (2) am (3) was (4) were

Ans. (3) was

Sol. 'A bunch of grapes' is taken as a singular subject and will take the singular past form of verb in this sentence .

18. Coffee and biscuits a refreshing snack.

- (1) is (2) was (3) were (4) are

Ans. (1) is

Sol. Singular verbs in present form are used with subjects that express a single idea that stand true in any time reference.

19. One of the soldiers wounded last night.

- (1) is (2) am (3) was (4) were

Ans. (3) was

Sol. 'One of the soldiers' is taken as a singular subject and will take Singular past form of verb in this sentence.

20. A good number of patients diagnosed of Dengue last year.

- (1) is (2) are (3) was (4) were

Ans. (4) were

Sol. 'A good number' is taken as a Plural Subject and will take a Plural Past form of verb in this case.

21. 'Have you any sugar?'

'Yes. But i dont have

- (1) many (2) more (3) much (4) some

Ans. (3) much

Sol. 'Much' as a determiner is used with uncountable nouns.

22. The athletes were prepared to face challenge.

- (1) a (2) all (3) every (4) several

Ans. (3) every

Sol. 'EVERY' as a determiner is followed by Singular Nouns.

23. I quietly went out the door to see the snake.

- (1) into (2) to (3) from (4) through

Ans. (4) through

Sol. 'Through' as a preposition is used to denote- 'into something at one side and out of it at the other side'.

24. The rich man promised the warden to pay the poor girls.

- (1) in (2) on (3) for (4) of

Ans. (3) for

Sol. 'For' as a preposition is used in reference to payment, rewards, thanks and other exchanges.

25. We lived in an ancestral house made limestone.

- (1) in (2) of (3) from (4) by

Ans. (2) of

Sol. 'Of' as a preposition is used to specify the contents of a thing

26. Kishore was looking all for his lost ATM card.

- (1) in (2) near (3) around (4) about.

Ans. (3) around

Sol. 'Around' as a preposition is used to refer to surroundings.

27. The king lost all his resources his courage helped him regain his kingdom.

- (1) as (2) and (3) yet (4) so

Ans. (3) yet

Sol. 'Yet' as a coordinating conjunction is used to refer to situations- in spite of that, expressing contrast between two statements

28. of all his supports, he was left all alone is his odd times.
(1) Besides (2) Because (3) Despite (4) Instead

Ans. (2) because, (4) instead

Sol. As per all the international language sources from dictionaries, 'despite' is never followed by 'of'. Next best possibilities are (2) or (4).

29. Raghu had better at a boarding school.
(1) study (2) to study (3) studying (4) studied

Ans. (1) study

Sol. We use 'had better' to give strong advice or to tell people what to do, and it uses the infinitive form without 'to'.

30. She went to the village market the necessary commodities.
(1) for buy (2) to buy (3) buying (4) to be bought

Ans. (2) to buy

Sol. 'to infinitive form' will be used in this case to qualify a verb like an adverb.

31. Add a question tag :
I sold all my notes,
(1) ain't I ? (2) didn't I ? (3) did I ? (4) aren't I ?

Ans. (2) didn't I

Sol. In a Positive sentence where auxiliary verb is not used, a negative question tag using 'did' is used.

32. Add a question tag :
Never betray anyone,
(1) shall we ? (2) should we ? (3) shall they ? (4) should they ?

Ans. (2) should we

Sol. In this Sentence, Subject- Auxiliary combination of 'You should' is understood here, in addition 'Never' gives a negative connotation to the statement making us use the positive question tag 'Should we'.

33. to Anil / should / I / back / go
(a) (b) (c) (d) (e)
(1) (c) (b) (d) (d) (a) (2) (b) (c) (d) (e) (a) (3) (a) (b) (d) (c) (e) (4) (d) (b) (c) (e) (a)

Ans. (1) cbeda

Sol. The only logical sequence possible.

34. two dollars / down to / the bargain / he / managed
(a) (b) (c) (d) (e)
(1) (b) (a) (c) (d) (e) (2) (d) (e) (c) (b) (a) (3) (b) (c) (d) (e) (a) (4) (a) (e) (c) (b) (d)

Ans. (2) decba

Sol. The only logical sequence possible.

For Question Nos. 35-36 select the word that best expresses the meaning of the given word :

35. Stifled
(1) tough (2) suffocated (3) hard (4) free

Ans. (2) suffocated

Sol. The only word that best expresses the meaning of the given word.

36. Conceit
(1) pride (2) shame (3) hate (4) joy

Ans. (1) Pride

Sol. The only word that best expresses the meaning of the given word.

For Question Nos. 37-38 select the word which means the opposite to the given word :

37. Temporary
(1) stable (2) fix (3) permanent (4) mobile

Ans. (3) Permanent

Sol. The only word that means the opposite of the given word.

38. Kindle
(1) light (2) put out (3) put in (4) put up

Ans. (2) put out

Sol. The only word that means the opposite of the given word.

For Question No. 39-40 select the meaning of the given phrasal verbs.

39. Break away
(1) escape (2) split (3) end relationship (4) stop working

Ans. (1) escape

Sol. The meaning of the given phrasal verb.

40. Look out
(1) check (2) be careful (3) search (4) bring

Ans. (2) be careful

Sol. The meaning of the given phrasal verb.

41. Put the most suitable word :

Can you tell me you found my keys ?

(1) how (2) whose (3) which (4) who

Ans. (1) how

Sol. The only conjunctive adverb that best fits the sentence.

42. Fill in the blanks with correct determiner :

..... student in the class had a book.

(1) All (2) Every (3) Neither (4) Few

Ans. (2) Every

Sol. The only possible determiner that fits in the sentence .

43. Fill in the blank with correct modal :

I get there on time (determination)

(1) can (2) may (3) could (4) will

Ans. (4) will

Sol. Here , 'will' will be used to express modality of determination .

44. Use the appropriate preposition to complete the given sentence :

When the doctor arrived the patient was lyingthe floor.

(1) under (2) above (3) on (4) over

Ans. (3) on

Sol. The preposition ' on ' is used to show something which is in contact with something.

45. She is seeking admission any of the management colleges.

(1) by (2) at (3) for (4) to

Ans. (4) to

Sol. The preposition ' to ' follows the verb ' admission ' .

46. Choose the correctly punctuated sentence.

- (1) hari, latif, ali and I saw an old, lean weak bullock on the road.
- (2) Hari Latif Ali and I saw an old, lean, weak bullock on the road.
- (3) Hari, Latif, Ali and I saw an old, lean, weak bullock on the road.
- (4) Hari, Latif, Ali and I saw an old lean weak bullock on the road.

Ans. (3)

Sol. The only correctly punctuated sentence which considers old, lean, weak as 'Co-ordinate adjectives' thereby using commas in between the adjectives.

47. Choose the correct Negative sentence of the given Affirmative sentence.

Ram is the cleverest boy in the school.

- (1) No boy in the school is as clever as Ram
- (2) Ram is as clever as other boys
- (3) No boy is cleverest in school as Ram is
- (4) Ram is cleverest of all

Ans. (1)

Sol. The transformation of sentences employing superlative affirmative degrees into positive-degree sentences is done using 'no..as..as'

48. Fill in the blank with proper word from the options given below :

The bus has arrived, now the passengers are getting down.

- (1) while
- (2) just
- (3) since
- (4) because

Ans. (2) just

Sol. The only adverb of time that can be used in this sentence is 'just'.

49. Choose the correct noun form of the given adjective :

'Pure'

- (1) purify
- (2) purely
- (3) purification
- (4) purified

Ans. (3) purification

Sol. This is the correct noun form of the given adjective.

50. Give synonym of the given word

Pious

- (1) evil
- (2) holy
- (3) ill-will
- (4) vulgar

Ans. (2) holy

Sol. This is the correct synonym of the given word.



**ALLENTM NATIONAL TALENT SEARCH EXAMINATION
(NTSE-2016) STAGE -1
RAJASTHAN STATE : MAT (CODE : 98-A)**

Date: 08/11/2015

Max. Marks: 50

SOLUTIONS

Time allowed: 45 mins

Direction : In each of the questions 1 to 4 some of the letters are missing in the given series with one term missing shown by question mark (?). This term is one of the alternatives among the four groups of letters given under it. Find the right alternative.

1. Z, W, S, ?

- (1) P (2) O (3) N (4) Q

Ans. (3)

Sol. Difference between the terms is -3, -4, -5...

2. AN, CP, FS, ?

- (1) IV (2) JW (3) KX (4) LY

Ans. (2)

Sol. Ist letter of the terms difference is - +2, +3, +4....

IInd letter of the terms difference is - +2, +3, +4....

3. MYZ, LWX, ? , JST.

- (1) KUV (2) IQR (3) HOP (4) GMN

Ans. (1)

Sol. Ist letter of the terms difference is -1, -1, -1.....

IInd letter of the terms difference is -2, -2, -2...

IIIrd letter of the terms difference is -2, -2, -2.....

4. bdf, hjl, ? , tvx.

- (1) nrp (2) pnr (3) nqr (4) npr

Ans. (4)

Sol. There is difference of letters in each term is +6, +6, +6....

Direction : In each of the questions 5 to 8 some of the numbers are missing in the given series with one term missing shown by question mark (?). This term is one of the alternatives among the four numbers given under it. Find the right alternative.

5. 8, 27, 64, ? , 216, 343.

- (1) 125 (2) 81 (3) 100 (4) 196

Ans. (1)

Sol. Pattern is $2^3, 3^3, 4^3, 5^3, 6^3, 7^3$.

6. 5, 11, 19, ? , 41.

- (1) 28 (2) 29 (3) 30 (4) 35

Ans. (2)

Sol. Difference between the terms is +6, +8, +10, +12.

7. 120, ? , 24, 6, 0.

- (1) 100 (2) 70 (3) 60 (4) 20

Ans. (3)

Sol. Pattern is $5^3-5, 4^3-4, 3^3-3, 2^3-2, 1^3-1$.

8. $729, 81, 9, 1, \frac{1}{9}, \text{?}, \frac{1}{729}$.

(1) $\frac{1}{27}$

(2) $\frac{1}{81}$

(3) $\frac{1}{243}$

(4) $\frac{1}{486}$

Ans. (2)

Sol. Pattern is $\div 9, \div 9, \div 9, \div 9, \dots$

Direction : In each of the questions below are given two statements and two conclusions numbered I and II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the two given statements.

9. Statements (i) : All pencils are pens.

(ii) : All pens are markers.

Conclusions (I) : All pencils are markers.

(II) : Some pens are pencils.

(1) Only conclusion I is true

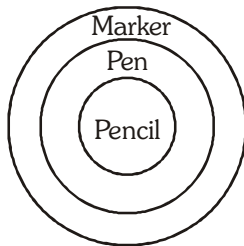
(2) Only conclusion II is true

(3) Both conclusions I and II are true

(4) Neither conclusion I nor conclusion II is true.

Ans. (3)

Sol.



The above figures show the relationship among Pencil, Pen & Markers.

Conclusion I, All pencils are markers follow from the diagram.

Conclusion II, Some pens are pencils follow from the diagram.

Hence, both conclusions I and II are true.

10. Statements (i) : Some players are singers.

(ii) : All singers are tall.

Conclusions (I) : Some players are tall.

(II) : All players are tall.

(1) Only conclusion I is true

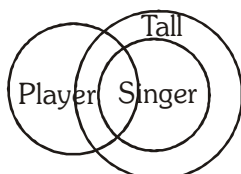
(2) Only conclusion II is true

(3) Both conclusions I and II are true

(4) Neither conclusion I nor conclusion II is true.

Ans. (1)

Sol.



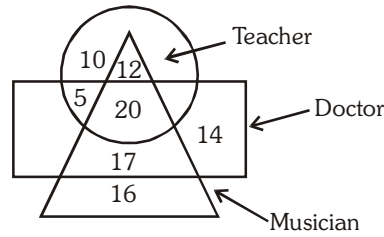
The above figures show the relationship among Player, Singer and Tall.

Conclusion I, Some players are tall follow from the diagram.

Conclusion II, All players are tall does not follow from the diagram.

Hence, only conclusion I is true.

Directions (Q.14 & Q.15): Given answer on the following Venn diagram :



14. How many persons are related to all three ?

- (1) 20 (2) 12 (3) 32 (4) 17

Ans. (1)

Sol. From the given Venn diagram 20 persons are related to teacher, doctor & musician.

15. How many persons are related to any two ?

- (1) 32 (2) 34 (3) 43 (4) 27

Ans. (2)

Sol. From the given Venn diagram 34 persons are related to any two.

Direction : In questions 16 to 19 three alternatives are alike in a certain way but the rest one is different. Find out the odd one and write correct answer.

- 16.** (1) ABNO (2) CDPQ (3) EFRS (4) GHUT

Ans. (4)

Sol. Difference between terms in all option is +1, +12, +1 except GHUT.

- 17.** (1) 144, 12 (2) 121, 11 (3) 80, 9 (4) 100, 10

Ans. (3)

Sol. All option except option 3 first number is square of the second number.

- 18.** (1) Pen (2) Pencil (3) Chalk (4) Blackboard

Ans. (4)

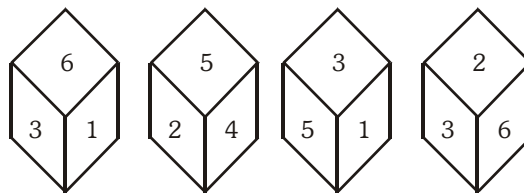
Sol. All option except option 4 are used to write.

- 19.** (1) Haryana (2) Gujrat (3) Rajasthan (4) Shimla

Ans. (4)

Sol. All option except option 4 are states.

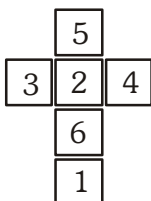
20. In the given dice the opposite side of the 3 face is having which number ?



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

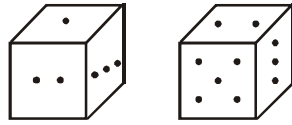
Ans. (3)

Sol. Expanded form from the given dice –



So, 4 is the opposite side of the face having 3.

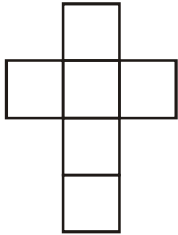
21. In the given two positions of a dice, when 2 is below the dice which number is on the dice ?



- (1) 3 (2) 5 (3) 1 (4) 6

Ans. (4)

Sol. When we expand the given dice



From the given option answer is 6.

Direction : Answer the questions on the basis of cube:

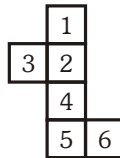
22. A cube of side 6 cm is divided in the cubes of side 2 cm. Then the total number of cubes is

- (1) 9 (2) 27 (3) 81 (4) 216

Ans. (2)

Sol. Total cubes = $\left(\frac{6}{2}\right)^3 = 3^3 = 27$.

23. In the given figure of cube which is opposite face of 3 ?



- (1) 1 (2) 4 (3) 5 (4) 6

Ans. (4)

Sol. From the given figure-

1 is opposite to 4

2 is opposite to 5

3 is opposite to 6

24. If in a coded language the word 'REKHA' is written as 'AHKER' then in the same code language 'HEMA' will be written as

- (1) AMEH (2) EMAH (3) MAHE (4) EAMH

Ans. (1)

Sol. REKHA $\xrightarrow{\text{Re verse}}$ AHKER

HEMA $\xrightarrow{\text{Re verse}}$ AMEH

25. If in a coded language the word CHILDREN is written as EJKNFTGP then TEACHER will be written as
 (1) VGCEJTG (2) VGCEJGT (3) VGCJEGT (4) VGCGEJT

Ans. (2)

Sol. CHILDREN $\xrightarrow[\text{each letter}]{+2 \text{ in}}$ EJKNFTGP

TEACHER $\xrightarrow[\text{each letter}]{+2 \text{ in}}$ VGCEJGT

26. In a coded language the given alphabets are written in special codes. Then code 973578 will be

A B C D E S U V M N
 7 9 1 3 4 2 0 6 5 8

- (1) BADMAN (2) BACMAN (3) DUEMAN (4) MANSDE

Ans. (1)

Sol. As per the Above given codes the code for 9 7 3 5 7 8 is BADMAN

27. In a coded language 'RUSTY' is written as 96872. Then in the same coded language 'ZXWV' will be written as
 (1) 1354 (2) 1543 (3) 1345 (4) 1534

Ans. (3)

Sol. 'RUSTY' is written as 96872 which is the reverse position value of the given alphabets.

So reverse position value for 'ZXWV' is 1345.

28. A is uncle of B, B is daughter of C, C is the wife of D's son. Then how is A related to D?

- (1) Son (2) Brother (3) Father (4) Maternal uncle

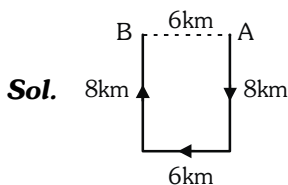
Ans. (1)

Sol. $\begin{array}{c} D \\ \downarrow \\ \text{Son} \times C(-) \\ \downarrow \\ B(-) \end{array}$ $\begin{array}{l} \times \rightarrow \text{Couple} \\ (+) \rightarrow \text{Male person} \\ (-) \rightarrow \text{Female person} \end{array}$

29. Ram travels 8 km to south, then moves to right and travels 6 km and at the end he again moves right and travels 8 km. Then the distance of Ram from initial point is

- (1) 6 km (2) 8 km (3) 10 km (4) 14 km

Ans. (1)



Distance of Ram from initial point A to final point B is $AB = 6 \text{ km}$.

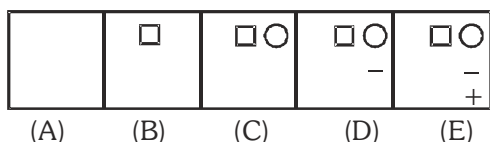
30. If the meaning of Δ is '+', θ is 'x', \square is ' \div ' and ϕ is '-', then the value of $24 \square 6 \Delta 5 \theta 6 \phi 14$ is
 (1) 34 (2) 20 (3) 14 (4) 2

Ans. (2)

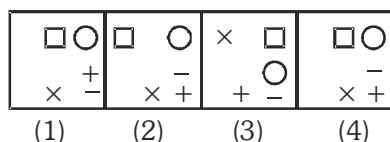
Sol. By converting the above symbols the value of expression is $24 \div 6 + 5 \times 6 - 14 = 20$.

Direction : In questions 31 to 34 there are two sets of figures, one set contains problem figures while the other has answer-figures. There is a sequence according to which the problem figures are arranged. You have to select an answer-figure which can be added in sequence in the problem-figures. Choose the correct figure.

31. Problem-figures



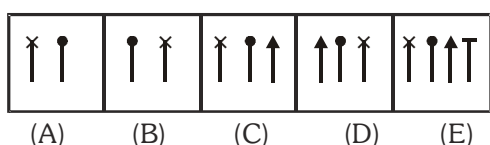
Answer-figure



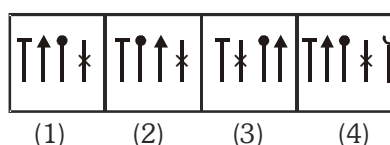
Ans. (4)

Sol. Each time a new symbol is added in the clockwise direction.

32. Problem-figures



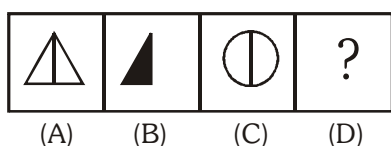
Answer-figure



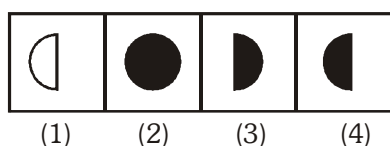
Ans. (1)

Sol. Figure (B) is mirror image of figure (A) & figure (C) is mirror image of figure (B) & new symbol added. This sequence of three is repeated next.

33. Problem-figures



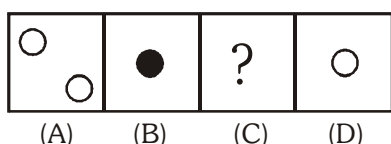
Answer-figure



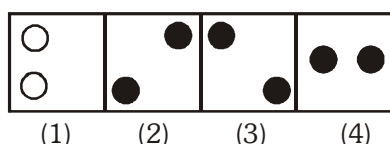
Ans. (4)

Sol. By observation half of circle is semi-circle is left side blacked semi-circle.

34. Problem-figures



Answer-figure



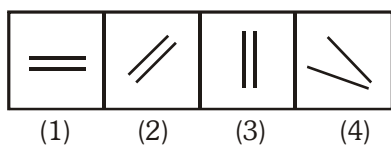
Ans. (3)

Sol. By observation from A to B the figure should be figure (3).

Questions (35 - 37)

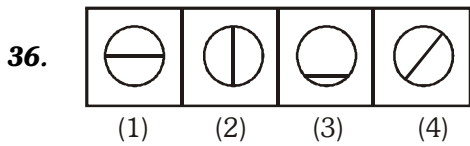
Direction :- In questions 35 to 37 there are four figures given. One of these does not correlate with the rest of the figures. Find out that odd figure.

35.



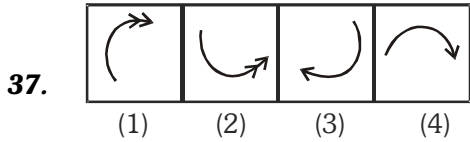
Ans. (4)

Sol. Lines are not parallel.



Ans. (3)

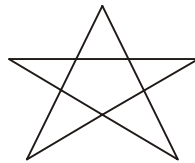
Sol. Figure is not divided into two equal halves.



Ans. (2)

Sol. All are pointing in the clockwise direction except (2).

38. How many triangles are there in the figure below?



(1) 5

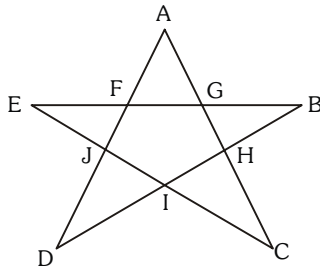
(2) 6

(3) 8

(4) 10

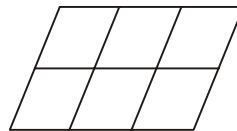
Ans. (4)

Sol. By counting the number of triangles are 10.



Triangles are AFG, GBH, HIC, DJI, EFJ, ADH, AJC, EBI, ECG, DFB

39. How many parallelograms are there in the figure below?



(1) 14

(2) 15

(3) 16

(4) 18

Ans. (4)

Sol. Total number of parallelograms = $\left(\frac{4 \times 3}{2}\right) \times \left(\frac{3 \times 2}{2}\right) = 18$.

Questions (40 – 42)

In questions 40 to 42 find the correct mirror image of the give figure.

40. Questions-figure

Answer-figure




(1)

(2)

(3)

(4)

Ans. (1)

Sol.  is the correct mirror image.

41. Question-figure



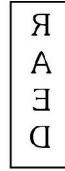
Answer-figures



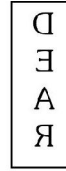
(1)



(2)




(3)



(4)

Ans. (4)

Sol.  is the correct mirror image.

42. Question-figure



Answer-figures



(1)



(2)





(3)



(4)

Ans. (3)

Sol.  is the correct mirror image.

43. The water image of the given figure  is



(1)



(2)





(3)



(4)

Ans. (4)

Sol.  is the correct water image.

44. The water image of the given figure  is



(1)



(2)




(3)



(4)

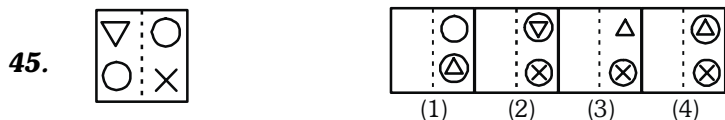
Ans. (1)

Sol.  is the correct water image.

Direction: In the following Questions 45 - 46, figures showing a sequence of folding a paper are given. Which could resemble the figure in the Answer-figures.

Question-figure

Answer-figures



Ans. (2)

Sol. After folding the paper option (2) is the correct situation.

46. Question-figures

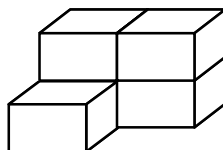
Answer-figures



Ans. (3)

Sol. After unfolding the paper there will be four × in the final figure.

47. Find the number of blocks when the given stack of blocks is separated :



(1) 3

(2) 4

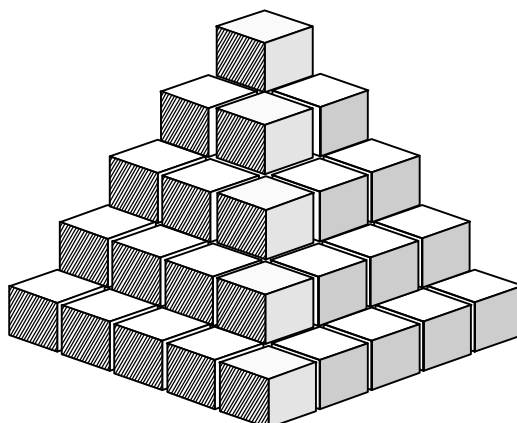
(3) 5

(4) 6

Ans. (3)

Sol. There are total $(2 \times 2 + 1) = 5$ blocks.

48. In the given figure, the total number of cubes is



(1) 25

(2) 55

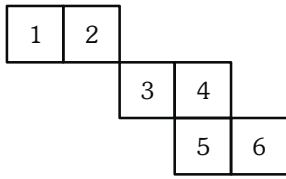
(3) 85

(4) 35

Ans. (2)

Sol. Total number of cubes = $5 \times 5 + 4 \times 4 + 3 \times 3 + 2 \times 2 + 1 = 55$.

49. In the given figure squares are folded and cube is formed. Then the number opposite to 2 is



(1) 1

(2) 3

(3) 5

(4) 6

Ans. (3)

Sol. 5 is opposite to 2 as 3 and 6, and 4 and 1 are opposite.

50. In the standard die the sum of opposite faces always remains

(1) 8

(2) 7

(3) 6

(4) 5

Ans. (2)

Sol. In the standard die the sum of opposite faces always remains 7.

* * * * *

Date: 08/11/2015

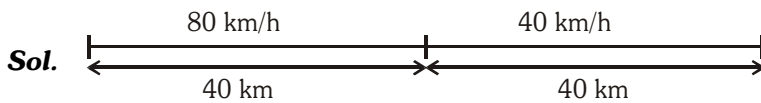
Max. Marks: 100

SOLUTIONS

Time allowed: 90 mins

1. A car travels 40 kms at an average speed of 80 km/h and then travels 40 kms at an average speed of 40 km/h. The average speed of the car for this 80 km trip is
 (1) 40 km/h (2) 45 km/h (3) 48 km/h (4) 53 km/h.

Ans. (4)



$$t_1 = \frac{\text{distance}}{\text{speed}} = \frac{40}{80} = 0.5 \text{ hr}$$

$$t_2 = \frac{\text{distance}}{\text{speed}} = \frac{40}{40} = 1 \text{ hr}$$

$$\text{Average speed} = \frac{\text{Total distance}}{\text{Total time}} = \frac{80 \text{ km}}{1.5 \text{ hr}} = 53.33 \text{ km/h} \approx 53 \text{ km/h}$$

2. The term 'mass' refers to the same physical concept as
 (1) weight (2) inertia (3) force (4) acceleration.

Ans. (2)

Sol. The term mass refers to the same physical concept as inertia.

3. A 5.0 kg object is moving horizontally at 6.0 m/s. In order to change its speed to 10.0 m/s, the net work done on the object must be
 (1) 40 J (2) 90 J (3) 160 J (4) 20 J.

Ans. (3)

Sol. Work done = ΔKE

$$= \frac{1}{2}mv^2 - \frac{1}{2}mu^2 = \frac{1}{2}m(v^2 - u^2)$$

$$= \frac{1}{2} \times 5 \times (10^2 - 6^2) = \frac{1}{2} \times 5 \times 64 = 160 \text{ J}$$

4. The momentum of an object at a given instant is independent of its
 (1) inertia (2) speed (3) velocity (4) acceleration

Ans. (4)

Sol. The momentum of a body is the product of its mass and its velocity at that instant. The momentum of an object at a given instant is independent of its acceleration.

5. The pressure exerted on the ground by a man is greatest when
 (1) he stands with both feet flat on ground (2) he stands flat on one foot
 (3) he stands on the toes of one foot (4) all the above yield the same pressure.

Ans. (3)

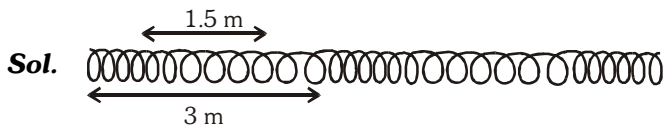
Sol. We know that $P = \frac{F}{A}$

$$P \propto \frac{1}{A} \text{ when } F = \text{constant}$$

6. A sound wave has a wavelength of 3.0 m. The distance from a compression centre to the adjacent rarefaction centre is

- (1) 0.75 m (2) 1.5 m (3) 3.0 m (4) 6.0 m.

Ans. (2)



7. Of the following, the copper conductor that has the least resistance is

- (1) thin, long and hot (2) thick, short and cool (3) thick, long and hot (4) thin, short and cool.

Ans. (2)

Sol. $R = \frac{\rho \ell}{A}$

$R \propto \ell$, $R \propto \frac{1}{A}$, $R \propto \rho$ or $R \propto T$ (for metals), thus for least resistance the length of the conductor should be less, area more and temperature low.

8. Four 20Ω resistors are connected in series and the combination is connected to a 20 V emf device. The potential difference across any one of the resistors is

- (1) 5 V (2) 2 V (3) 4 V (4) 20 V.

Ans. (1)

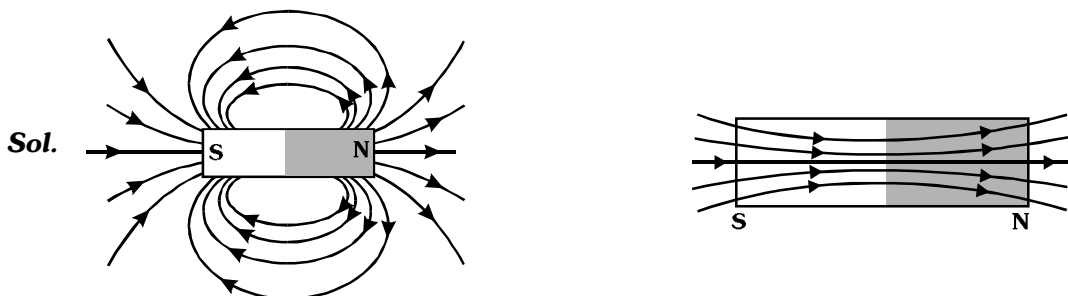
Sol. All are connected in series and have a same value of resistance so voltage will divide equally across all resistors.

$$V_1 = V_2 = V_3 = V_4 = \frac{V}{n} = \frac{20}{4} = 5 \text{ V}$$

9. The magnetic field lines due to an ordinary bar magnet

- (1) form closed curves
(2) cross one another near the poles
(3) are more numerous near the N-pole than near the S-pole.
(4) do not exist inside the magnet.

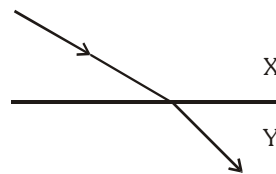
Ans. (1)



The magnetic field formed by a bar magnet inside and outside the magnet is shown in the figure above.

10. When light travels from medium X to medium Y as shown

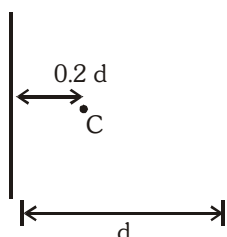
- (1) both the speed and the frequency decrease
- (2) both the speed and the frequency increase
- (3) both the speed and the wavelength decrease
- (4) both the wavelength and the frequency are unchanged.



Ans. (3)

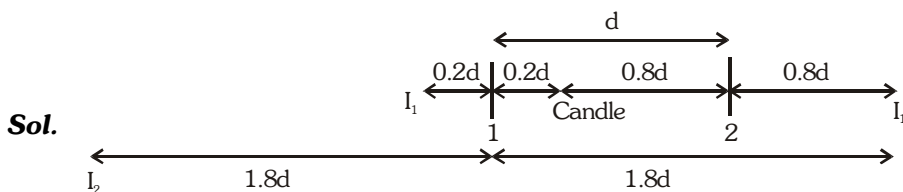
Sol. In the given figure the light ray travels from rarer to denser medium as the light ray bends towards the normal. The speed and the wavelength of the light ray decrease as light ray travels from optically rarer to optically denser medium.

11. A candle C is kept between two parallel mirrors, at a distance 0.2 d from the mirror 1. Here d is the distance between mirrors. Multiple images of the candle appear in both mirrors. How far behind mirror 1 are the nearest two images of the candle in that mirror ?



- (1) 0.2 d, 1.8 d
- (2) 0.2 d, 2.2 d
- (3) 0.2 d, 0.8 d
- (4) 0.2 d, 1.2 d

Ans. (1)



Sol.

Here I_1 is the image of candle in the mirror 1 and I_1' is the image of candle in the mirror 2.

I_1 will be formed at a distance of 0.2 d from the mirror 1. I_1' will be formed at a distance of 0.8 d from mirror 2. I_1' will serve as object for the formation of second image in mirror 1. The distance of I_1' from mirror 1 is 1.8 d. ($d + 0.8 d$). The image I_2 will form at same distance from mirror 1 as is I_1' i.e. 1.8 d.

12. For a 1 MW wind energy generator, the minimum land area required for establishment of wind energy farm is about

- (1) 100 hectares
- (2) 50 hectares
- (3) 20 hectares
- (4) 2 hectares.

Ans. (4)

Sol. Establishment of wind energy farms require large area of land. For a 1 MW generator, the farm needs about 2 hectares of land.

13. Milk of magnesia is an example of which type of colloid ?

- (1) Gel
- (2) Emulsion
- (3) Sol
- (4) Foam

Ans. (3)

Sol. In milk of magnesia, solid is dispersed in liquid so it is a sol type colloid.

14. The number of gram moles of aluminium ions present in 0.051 g of aluminium oxide is

- (1) 0.001
- (2) 0.051
- (3) 0.102
- (4) 2

Ans. (1)

Sol. Given mass - 0.051g

Molar mass of aluminium oxide - $Al_2O_3 \Rightarrow 2 \times 27 + 3 \times 16 \Rightarrow 102$ g

$$\text{Moles of aluminium ions in aluminium oxide} = \frac{0.051}{102} \times 2 \Rightarrow 0.001 \text{ mole}$$

15. Number of valence electrons in Cl atom is
(1) 16 (2) 7 (3) 17 (4) 18

Ans. (2)

Sol. Electronic configuration of ${}_{17}\text{Cl} = 2, 8, 7$
So valence electrons i.e. electrons in last shell are 7.

16. Isotopes of an element have
(1) the same physical properties (2) different chemical properties
(3) different number of neutrons (4) different atomic number.

Ans. (3)

Sol. Isotopes of an element have same chemical properties but different physical properties as they have different mass number due to different number of neutrons.

17. Which of the following hydrocarbons undergoes addition reactions?
(1) C_2H_6 (2) C_3H_8 (3) C_3H_6 (4) CH_4

Ans. (3)

Sol. As alkenes have double bonds so they give addition reaction as their general formula is C_nH_{2n} i.e. C_3H_6 .

18. Which of the following statements is not a correct statement about the trends when going from left to right across the periods of periodic table?
(1) The elements become less metallic in nature (2) The number of valence electrons increases
(3) The atoms lose their electrons more easily (4) The oxides become more acidic.

Ans. (3)

Sol. As we move from left to right in the periodic table, non metallic character increases, thus electron loosing tendency decreases.

19. Acetic acid, with the molecular formula CH_3COOH has
(1) 8 covalent bonds (2) 7 covalent bonds (3) 9 covalent bonds (4) 10 covalent bonds.

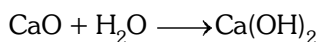
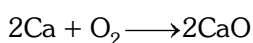
Ans. (1)

Sol. Acetic acid has 8 covalent bonds.

20. An element reacts with oxygen to give a compound with a high melting point. This compound is also soluble in water. The element is likely to be
(1) calcium (2) carbon (3) silicon (4) iron

Ans. (1)

Sol. Calcium

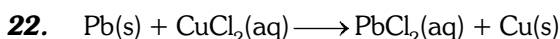


[soluble in water]

21. Metals in the middle of the activity series can be easily extracted from their
(1) Carbonates (2) Sulphides (3) Nitrates (4) Oxides

Ans. (4)

Sol. Metals in the middle of activity series can be easily extracted from their oxides.



The above reaction is an example of a

- (1) combination reaction (2) neutralisation reaction
(3) decomposition reaction (4) displacement reaction.

Ans. (4)

Sol. As Pb has displaced Cu from its aqueous solution, the reaction is displacement.

23. Adding an alpha particle to the nucleus of sodium atom produces which new element ?
(1) Mg (2) P (3) Al (4) Ne

Ans. (3)

Sol. ${}_{11}^{23}\text{Na} + {}_2^4\text{He} \longrightarrow {}_{13}^{27}\text{Al}$

24. Which among the following cell organelles is able to make its own proteins ?
(1) Lysosome (2) Golgi apparatus (3) Plastid (4) Endoplasmic reticulum.

Ans. (3)

Sol. Plastid has their own DNA and Ribosomes. So they can synthesise their own protein, it is also called semi autonomous cell organelles.

25. Intercalary meristem is present in.
(1) at the base of the leaves and both the sides of node
(2) in the roots
(3) at the tip of the leaves
(4) at the shoot apex.

Ans. (1)

Sol. Intercalary meristem presents at the nodes and internodes and give rise to leaves and branches.

26. Which among the following is an example of fungi ?
(1) Anabaena (2) Euglena (3) Mycoplasma (4) Agaricus.

Ans. (4)

Sol. Agaricus is an example of Fungi.

27. In plants transport of soluble products in the process of photosynthesis occurs in
(1) xylem (2) phloem (3) both of these (4) none of these.

Ans. (2)

Sol. By the process of photosynthesis plants prepare their own food in the form of sugar which is transported by phloem.

28. Which among the following hormones is associated with wilting of leaves ?
(1) Abscisic acid (2) Gibberellin (3) Cytokinin (4) Auxin.

Ans. (1)

Sol. Abscisic acid is also known as stress Hormone, which cause wilting.

29. Seed is modification of
(1) ovary (2) ovule (3) thalamus (4) all of these.

Ans. (2)

Sol. Seed is developed from ovule.

30. How many types of muscle tissue are found ?
(1) Striated and unstriated (2) Striated and cardiac
(3) Cardiac and unstriated (4) Striated, unstriated and cardiac.

Ans. (4)

Sol. In the Animals there are three types of muscles striated, unstriated and cardiac

31. Which characters are present in a vertebrate ?
(1) Notochord, triploblastic, coelomate and bilateral symmetry
(2) Notochord, diploblastic, coelomate and radial symmetry
(3) Notochord, triploblastic, acoelomate and bilateral symmetry
(4) Notochord, triploblastic, acoelomate and radial symmetry.

Ans. (1)

Sol. Vertebrate are chordate and they have notochord, triploblastic, coelomate and bilateral symmetry.

- 32.** Synapse is
 (1) gap between two muscle cells (2) gap between two bones
 (3) gap between two neurons (4) gap between muscle and bone.

Ans. (3)

Sol. The gap present between two neuron is known as synapse.

- 33.** Regeneration is found in
 (1) tapeworm (2) leech (3) hydra (4) ascaris.

Ans. (3)

Sol. Hydra has the power of regeneration.

- 34.** Which of the following groups constitutes a correct food chain ?

- (1) Grass → Rabbit → Snake → Eagle
 (2) Grass → Goat → Fox → Lion
 (3) Goat → Grass → Elephant → Snake
 (4) Grass → Wheat → Frog → Goat.

Ans. (2)

Sol. The Correct food chain is

Grass → Goat → Fox → Lion

[In this questions (1) option can be correct Grass → Rabbit → Snake → Eagle]

- 35.** Which cell organelle is known as "powerhouse of the cell" ?

- (1) Mitochondria (2) Lysosome (3) Golgi apparatus (4) Endoplasmic reticulum.

Ans. (1)

Sol. Mitochondria is known as power house of the cell.

- 36.** If $(1^2 + 2^2 + 3^2 + \dots + 12^2) = 650$, then the value of

$(2^2 + 4^2 + 6^2 + \dots + 24^2)$ is

- (1) 1300 (2) 2600 (3) 2500 (4) 42250

Ans. (2)

Sol. $1^2 + 2^2 + 3^2 + \dots + 12^2 = 650$

So, $(2^2 + 4^2 + 6^2 + \dots + 24^2)$

$= 2^2 (1^2 + 2^2 + 3^2 + \dots + 12^2)$

$= 2^2 \times (650) = 4 \times 650 = 2600$

- 37.** The square root of $x^{b^2} x^{b^{2+2ab}} x^{a^2-b^2}$ is

- (1) $x^{2(a+b)}$ (2) $x^{\frac{a+b}{2}}$ (3) $x^{\frac{(a+b)^2}{2}}$ (4) x^{a+b}

Ans. NA

Sol. $x^{b^2} x^{b^{2(1+ab)}} x^{a^2-b^2}$

$\Rightarrow x^{\{b^2+b^{2(1+ab)}+a^2-b^2\}}$

$\Rightarrow x^{\{b^{2(1+ab)}+a^2\}} \Rightarrow x^{\{a^2+b^{2(1+ab)}\}}$

None of the given options is correct.

- 38.** If $(x + 2)$ is a factor of $2x^3 - 5x + k$, then the value of k is

- (1) 6 (2) -6 (3) 26 (4) -26

Ans. (1)

Sol. As $x + 2$ is a factor, so on putting $x = -2$ in $2x^3 - 5x + k$ we get

$2(-2)^2 + -5(-2) + k = 0$

$\Rightarrow -16 + 10 + k = 0$

$k = 6$

39. For which value of p the following pair of linear equations $3x + py = 7$, $px + 3y = 15$ will have no solutions?
 (1) ± 9 (2) ± 5 (3) ± 3 (4) ± 4 ,

Ans. (3)

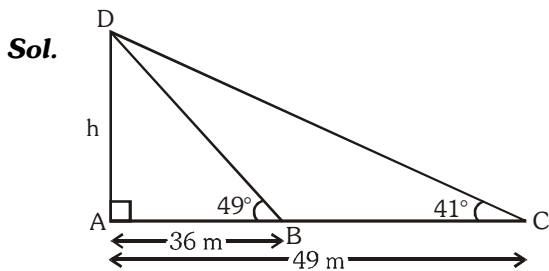
Sol. For no solution we have $\frac{3}{p} = \frac{p}{3} \neq \frac{7}{15}$

So, $p^2 = 9$

$p = \pm 3$

40. A tower is on a horizontal plane. The angles of elevation of top of the tower from two points on a line passing through the foot of the tower at distances 49 m and 36 m are 41° and 49° . The height of the tower is
 (1) 40 m (2) 42 m (3) 44 m (4) 46 m

Ans. (2)



$\tan 49^\circ = \frac{h}{36}$... (i)

$\tan 41^\circ = \frac{h}{49}$ $\Rightarrow \tan (90^\circ - 49^\circ) = \frac{h}{49}$

$\Rightarrow \cot 49^\circ = \frac{h}{49}$... (ii)

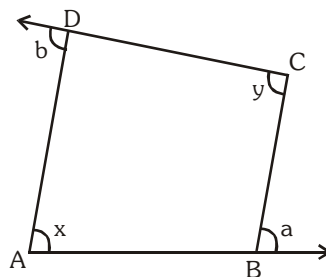
multiply eq. (i) and eq. (ii), we get

$\tan 49^\circ \cdot \cot 49^\circ = 1 = \frac{h^2}{36 \times 49}$

$h^2 = 36 \times 49$

$h = 6 \times 7 = 42 \text{ m}$

41. Sides AB and CD of a quadrilateral ABCD are extended as in figure. Then $a + b$ is equal to



- (1) $x+2y$ (2) $x-y$ (3) $x+y$ (4) $2x + y$

Ans. (3)

Sol. $\angle D = 180^\circ - b$

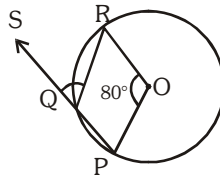
$\angle B = 180^\circ - a$

So, $\angle A + \angle B + \angle C + \angle D = 360^\circ$

$x + 180^\circ - a + y + 180^\circ - b = 360^\circ$

$\Rightarrow x + y = a + b$

42. In the figure O is the centre of the circle and $\angle POR = 80^\circ$. Then $\angle RQS$ is



- (1) 30° (2) 40° (3) 140° (4) 50°

Ans. (2)

Sol. Reflex $\angle O = 360^\circ - 80^\circ = 280^\circ$

So, $\angle RQP = \frac{1}{2}$ reflex $\angle O = 140^\circ$

$\therefore \angle RQS = 180^\circ - 140^\circ = 40^\circ$

43. If every side of a triangle is doubled then a new triangle is formed. The ratio of areas of these two triangles is

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

Ans. (3)

Sol. $s = \frac{a+b+c}{2}$

Area (A_1) = $\sqrt{s(s-a)(s-b)(s-c)}$... (i)

so, if the sides are doubled, then

new, $s' = \frac{2a+2b+2c}{2} = a+b+c = 2s$

New area (A_2) = $\sqrt{s'(s'-2a)(s'-2b)(s'-2c)} = 2 \times 2 \sqrt{s(s-a)(s-b)(s-c)}$

$A_2 = 4A_1$ (from equation (i))

$\therefore \frac{A_1}{A_2} = \frac{1}{4} \Rightarrow 1 : 4$

44. If the difference of two numbers is 5 and difference of their squares is 300 then sum of the numbers is

- (1) 1500 (2) 6 (3) 12 (4) 60

Ans. (4)

Sol. $a - b = 5$... (i)

and $a^2 - b^2 = 300$... (ii)

as $a^2 - b^2 = (a-b)(a+b)$

$300 = 5 \times (a+b)$ From equation (i) and (ii)

$(a+b) = 60$

45. If the equation $ax^2 + 2x - 2 = 0$ has real and distinct roots, then the value of a is

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

Ans. (1)

Sol. For real and distinct roots, Discriminant > 0 or $D > 0$

So, $(2)^2 - 4(a)(-2) > 0$

$\Rightarrow 4 + 8a > 0$

$\Rightarrow 4 < -8a$

$a > \frac{-1}{2}$

46. If $a + b + c = 0$, then the value of

$$\frac{(a+b)^2}{ab} + \frac{(b+c)^2}{bc} + \frac{(c+a)^2}{ca} \text{ is}$$

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

Ans. (3)

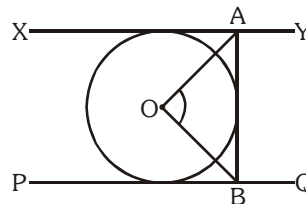
Sol. $a + b + c = 0$

$$\text{then, } \frac{(-c)^2}{ab} + \frac{(-a)^2}{bc} + \frac{(-b)^2}{ac}$$

$$= \frac{c^2}{ab} + \frac{a^2}{bc} + \frac{b^2}{ac}$$

$$= \frac{a^3 + b^3 + c^3}{abc} = \frac{3abc}{abc} = 3 \quad (\text{using identity if } a + b + c = 0 \text{ then } a^3 + b^3 + c^3 = 3abc)$$

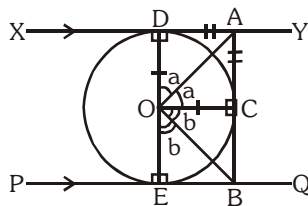
47. In the given figure O is the centre of a circle, XY, PQ, AB are tangents of the circle. If $XY \parallel PQ$, then the value of $\angle AOB$ is



- (1) 80° (2) 90° (3) 70° (4) 100°

Ans. (2)

Sol.



As $\triangle ODA$ and $\triangle OCA$ are congruent by SSS.

$$\therefore \angle DOA = \angle COA = a$$

similarly, $\angle EOB = \angle COB = b$

$$\therefore 2a + 2b = 180^\circ$$

$$a + b = 90^\circ$$

$$\text{i.e. } \angle AOB = 90^\circ$$

48. $\frac{\cos \theta}{1 - \tan \theta} - \frac{\sin \theta}{\cot \theta - 1}$ is equal to

- (1) $\sin \theta + \cos \theta$ (2) $\cos \theta - \sin \theta$ (3) $2 \sin \theta$ (4) $\frac{1}{\cot \theta - \sin \theta}$

Ans. (1)

Sol.

$$\frac{\cos \theta}{1 - \frac{\sin \theta}{\cos \theta}} - \frac{\sin \theta}{\frac{\cos \theta}{\sin \theta} - 1}$$

$$= \frac{\cos^2 \theta}{\cos \theta - \sin \theta} - \frac{\sin^2 \theta}{\cos \theta - \sin \theta}$$

$$= \frac{\cos^2 \theta - \sin^2 \theta}{\cos \theta - \sin \theta} = \cos \theta + \sin \theta$$

49. A card is drawn from a well shuffled pack of 52 cards. The probability that card is a red ace is

- (1) $\frac{1}{13}$ (2) $\frac{1}{26}$ (3) $\frac{3}{52}$ (4) $\frac{1}{2}$

Ans. (2)

Sol. Number of favourable outcomes = 2

Number of total outcomes = 52

$$\text{so, probability of red ace} = \frac{2}{52} = \frac{1}{26}$$

50. Value of $\tan 20^\circ \tan 40^\circ \tan 50^\circ \tan 70^\circ$ is

- (1) 0 (2) $\frac{1}{\sqrt{3}}$ (3) $\sqrt{3}$ (4) 1

Ans. (4)

Sol. $\tan 20^\circ \tan 40^\circ \tan 50^\circ \tan 70^\circ$
 $= \tan(90^\circ - 70^\circ) \tan(90^\circ - 50^\circ) \tan 50^\circ \tan 70^\circ$
 $= \cot 70^\circ \cot 50^\circ \tan 50^\circ \tan 70^\circ$
 $= (\cot 70^\circ \tan 70^\circ) (\cot 50^\circ \tan 50^\circ)$
 $= 1 \times 1 = 1$

51. Sum of last two terms of an A.P. is 60. If first term is 11 and common difference is 2, then the number of terms in the A.P. is

- (1) 22 (2) 20 (3) 11 (4) 19

Ans. (3)

Sol. $a = 11$

$d = 2$

Given :

$$a + (n - 2) d + a + (n - 1) d = 60$$

$$2a + d[n - 2 + n - 1] = 60$$

$$2(11) + 2(2n - 3) = 60$$

$$2(2n - 3) = 38$$

$$2n - 3 = 19$$

$$2n = 22$$

$$n = 11$$

52. If the difference of circumference and diameter of a circle is 60 cm, then the area of the circle is

- (1) $49 \pi \text{ cm}^2$ (2) $14 \pi \text{ cm}^2$ (3) $196 \pi \text{ cm}^2$ (4) $\frac{49}{4} \pi \text{ cm}^2$

Ans. (3)

Sol. Given :

$$2\pi r - 2r = 60$$

$$2r \left(\frac{22}{7} - 1 \right) = 60$$

$$2r \left(\frac{15}{7} \right) = 60$$

$$r = 14 \text{ cm.}$$

$$\text{Area} = \pi r^2$$

$$= \pi(14)^2$$

$$= 196 \pi$$

53. If the areas of three adjoining faces of a cuboid are a^2 , b^2 and c^2 respectively, then the volume of the cuboid is
 (1) $a^2b^2c^2$ (2) abc (3) $a^3b^3c^3$ (4) \sqrt{abc}

Ans. (2)

Sol. Given :

$$L \cdot B = a^2 \quad \dots(1)$$

$$B \cdot H = b^2 \quad \dots(2)$$

$$L \cdot H = c^2 \quad \dots(3)$$

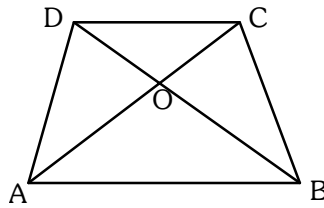
$L \rightarrow$ length; $B \rightarrow$ breadth; $H \rightarrow$ height

Eq. (1) \times (2) \times (3)

$$L^2 B^2 H^2 = a^2 \cdot b^2 \cdot c^2$$

$$\text{Volume} = LBH = abc$$

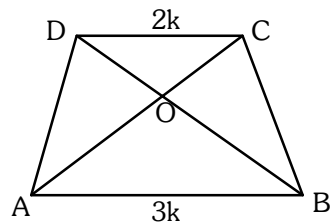
54. In the given figure ABCD is a trapezium in which $AB \parallel DC$ and $AB : DC = 3 : 2$. The ratio of the areas of $\triangle AOB$ and $\triangle COD$ is



- (1) 3 : 2 (2) 2 : 3 (3) 4 : 9 (4) 9 : 4

Asn. (4)

Sol.



$\triangle AOB \sim \triangle COD$ (AA similarity)

$$\frac{\text{area}(\triangle AOB)}{\text{area}(\triangle COB)} = \frac{(3k)^2}{(2k)^2} = \frac{9k^2}{4k^2} = \frac{9}{4}$$

55. If the mean of 5, 9, x, 7, 4, y is 7, then relation between x and y is
 (1) $x + y = 42$ (2) $x + y = 17$ (3) $x - y = 10$ (4) $x - y = 42$

Ans. (2)

Sol.
$$\frac{5 + 9 + x + 7 + 4 + y}{6} = 7$$

$$x + y + 25 = 7 \times 6$$

$$x + y = 42 - 25$$

$$x + y = 17$$

56. Tithe is
 (1) religious tax (2) implied tax (3) taille tax (4) feudal tax

Ans. (1)

Sol. Tithe is religious tax which was one-tenth part of agriculture income.

57. Who was Rasputin?
 (1) King (2) Monk (3) Revolutionary (4) Rime Minister

Ans. (2)

Sol. Rasputin was Monk

58. The railway line which was to be constructed between Multan and Sukkur was
 (1) North Valley Railway (2) Indus Valley Railway
 (3) Southern Valley Railway (4) West Valley Railway

Ans. (2)

Sol. Indus Valley Railway constructed between Multan and Sukkur.

59. Who adopted the 'Scorched Earth Policy'?

- (1) Portuguese (2) French (3) Dutch (4) German

Ans. (3)

Sol. 'Scorched Earth Policy' was adopted by Dutch in Indonesia.

60. Raikas belong to the state of

- (1) Rajasthan (2) Bihar (3) Uttar Pradesh (4) Karnataka

Ans. (1)

Sol. Raikas are the pastoralist of Rajasthan.

61. Young Italy, a secret society was formed by

- (1) Metternich (2) Giuseppe Mazzini (3) Bismarck (4) Hitler

Ans. (2)

Sol. Young Italy, a secret society was formed by Giuseppe Mazzini.

62. The thinker Confucius belonged to the country

- (1) England (2) America (3) China (4) Japan

Ans. (3)

Sol. The thinker Confucius belonged to the country China

63. Jallianwala Bag incident took place on

- (1) 10th April, 1919 (2) 13th April, 1919 (3) 14th April, 1919 (4) 18th April, 1919

Ans. (2)

Sol. Jallianwala Bag incident took place on 13th April, 1919

64. Dandi is located in

- (1) Gujarat (2) Rajasthan (3) Maharashtra (4) Punjab

Ans. (1)

Sol. Dandi is located in Gujarat

65. The Great Depression began in

- (1) 1927 AD (2) 1929 AD (3) 1930 AD (4) 1931 AD

Ans. (2)

Sol. The Great Depression began in 1929 AD

66. Which island was known as Amindiv whose name was changed in 1973?

- (1) Lakshadweep (2) Maldives (3) New Moore island (4) Car - Nicobar

Ans. (1)

Sol. Amindiv was the name of Lakshadweep.

67. Match List - I with List - II correctly and choose the correct code from the following :

List - I

- (A) Kaveri
(B) Godavari
(C) Tapi
(D) Krishna

List - II

- (i) Nasik
(ii) Betul
(iii) Brahmagiri
(iv) Mahabaleshwar

Code :

- | | A | B | C | D |
|-----|----------|----------|----------|----------|
| (1) | i | ii | iii | iv |
| (2) | iii | i | ii | iv |
| (3) | ii | iii | i | iv |
| (4) | iv | iii | ii | i |

Ans. (2)

Sol. Rivers Origin point

Kaveri	Brahmagiri
Godavari	Nasik
Tapi	Betul
Krishna	Mahabaleshwar

68. Stalagmite and Stalactite caves are located in
(1) Mawsynram (2) Cherrapunji (3) Shimla (4) Jammu and Kashmir

Ans. (1)

Sol. Stalagmite and Stalactite caves are located in Mawsynram

69. Which state(s) has/have the highest reserved forest ratio?
(1) Kerala (2) West Bengal (3) Jammu and Kashmir (4) Maharashtra

Choose the correct answer from the codes given below

- (1) Only (2) (2) (1) and (4) (3) (1) and (3) (4) all of these

Ans. (4)

70. With reference to water availability per person per year India's rank in the world is

- (1) 131st (2) 133rd (3) 137th (4) 157th.

Ans. (2)

71. Roof water harvesting system is a compulsory structure in which state?

- (1) Bihar (2) Meghalaya (3) Tamil Nadu (4) Karnataka

Ans. (3)

Sol. Roof water harvesting system is a compulsory in Tamil Nadu.

72. Match List - I with List - II correctly and choose the correct code from the following :

List - I

- (1) Waler
(2) Dahiya
(3) Khil
(4) Kuruwa

List - II

- (i) Jharkhand
(ii) Himalayan region
(iii) Madhya Pradesh
(iv) S.E. Rajasthan

Code :

	A	B	C	D
(1)	i	ii	iii	iv
(2)	iv	iii	i	ii
(3)	ii	i	iii	iv
(4)	iv	iii	ii	i

Ans. (4)

73. Rubber is related to which type of vegetation?

- (1) Tundra (2) Tropical rain forest (3) Mountain forest (4) Tropical deciduous forest

Ans. (2)

Sol. Rubber is tropical vegetation.

74. Koderma mines located in Jharkhand is rich in which minerals?

- (1) Bauxite (2) Mica (3) Iron ore (4) Copper

Ans. (2)

Sol. Koderma mines located in Jharkhand is rich in Mica.

75. Which of the following states is not connected with Hajira-Vijaypur-Jagdishpur pipeline?

- (1) Madhya Pradesh (2) Maharashtra (3) Gujarat (4) Uttar Pradesh

Ans. (2)

Sol. Maharashtra is not connected with HV J pipeline.

76. Which among the following is not correctly matched?

- | | | |
|-----------------------------------|---|------------------|
| (1) Popular unity | — | Salvador Alende |
| (2) Solidarnosc or solidarity | — | Lech Pinochet |
| (3) National League for Democracy | — | Augusto Pinochet |
| (4) Bath party | — | Saddam Hussein |

Ans. (3)

Sol. National League for Democracy belongs to Aung Sang Suu Chi.

77. Identify the correct order regarding the granting of universal adult franchise :

- | | |
|--|--|
| (1) Argentina, India, Malaysia, Greece | (2) Malaysia, Greece, India, Argentina |
| (3) India, Argentina, Greece, Malaysia | (4) Greece, Malaysia, India, Argentina |

Ans. (3)

Sol. India-1950, Argentina-1951, Greece-1952, Malaysia-1955.

78. Find out the wrong explanation of functioning of United Nations :

- (1) Who lends money to governments when they need it ? International Monetary Fund (I.M.F.) does so.
- (2) What happens when a country attacks another country in an unjust manner ? The U.N. Security Council, an organ of U.N. is responsible for maintaining peace and security among countries
- (3) The weightage of vote of every member of International Monetary Fund is equal.
- (4) Each permanent member of Security Council has veto power.

Ans. (3)

Sol. The weightage of vote of every member of International Monetary Fund is not equal.

79. Find out the correct explanation :

- (1) Referendum – Only used for a specific government policy.
- (2) Coup – A coup is legal system, in which system the government hands over all rights and powers to the military.
- (3) Martial law – A system of rules, that takes effect when a military authority takes control of the normal administration of justice.
- (4) Communist State – In communist state all political parties have complete liberty to compete for power.

Ans. (3)

Sol. Martial law – A system of rules, that takes effect when a military authority takes control of the normal administration of justice.

80. Pay attention on the following points :

- (A) A democratic government is a better government because it is a more accountable form of government.
- (B) Democracy improves the quality of decision making.
- (C) Democracy provides a method to deal with the differences and conflicts.
- (D) Democracy enhances the dignity of citizens.

Which are the factors involved in comprising Indian democracy ?

- | | | | |
|-------------|-------------|----------------|-------------------|
| (1) A and B | (2) A and C | (3) A, B and C | (4) A, B, C and D |
|-------------|-------------|----------------|-------------------|

Ans. (4)

Sol. All are correct

81. Which among the following statements is a moral reason regarding the desirability of power sharing ?

- (1) Power sharing is good because it helps to reduce the possibility of conflict between social groups
- (2) Social conflict often leads to violence and political instability. Hence power sharing is a good way to ensure the stability of political order.
- (3) Tyranny of the majority is not just oppressive for the minority, it often brings ruin to the majority as well.
- (4) A democratic rule involves sharing power with those affected by its exercise and who have to live with its effects.

Ans. (4)

Sol. A democratic rule involves sharing power with those affected by its exercise and who have to live with its effects. This is moral reason.

82. Let us look at some of the key features of federalism :

- (A) There are two or more levels (or tiers) of government.
- (B) Different tiers of government govern the same citizens, but each tier has its own jurisdiction.
- (C) The existence and authority of each tier of government is constitutionally guaranteed.
- (D) All states in the Indian Union have identical powers.

Which facts are correct regarding Indian Federalism:

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

Ans. (3)

Sol. All states in the Indian Union doesn't have identical powers.

Jammu Kashmir has separate constitution under Article 370.

83. Find the correct sequence of languages in the ascending order according the proportion of speakers as described in 8th Schedule of the Constitution of India :

- (1) Hindi, Marathi, Telugu, Bangla (2) Hindi, Bangla, Telugu, Marathi
(3) Hindi, Telugu, Bangla, Marathi (4) Hindi, Bangla, Marathi, Telugu

Ans. (Bonus)

Sol. Hindi-41.03%, Bangla-8.11%, Telugu-7.19%, Marathi-6.99%

In option (2) these are given in descending order whereas question requires ascending order.

84. Match the following and choose the correct answer from the code:

List - I

List-II

- | | |
|--|---------------------------------------|
| (A) Power is shared among different organs of government such as the legislature, executive and judiciary | (i) Community Government |
| (B) Power is shared among different social groups | (ii) Horizontal distribution of power |
| (C) The fundamental provisions of the constitution cannot be unilaterally changed by one level of government | (iii) In 1992 |
| (D) The constitutionalisation of 3rd tier of Indian democratic system | (iv) Federalism |

Code:

- | | A | B | C | D |
|-----|----------|----------|----------|----------|
| (1) | (ii) | (i) | (iv) | (iii) |
| (2) | (i) | (ii) | (iii) | (iv) |
| (3) | (i) | (iii) | (ii) | (iv) |
| (4) | (ii) | (iv) | (i) | (iii) |

Ans. (1)

Sol. Taken from Federalism.

85. Match the following and choose the correct answer from the given code:

List - I

List-II

- | | |
|----------------------|-----------------------|
| (A) Union list | (i) Computer software |
| (B) State list | (ii) Banking |
| (C) Concurrent list | (iii) Education |
| (D) Residuary powers | (iv) Police |

Code:

- | | A | B | C | D |
|-----|----------|----------|----------|----------|
| (1) | (iii) | (ii) | (i) | (iv) |
| (2) | (ii) | (iii) | (iv) | (i) |
| (3) | (iii) | (i) | (ii) | (iv) |
| (4) | (ii) | (iv) | (iii) | (i) |

Ans. (4)

Sol. Taken from Federalism.

86. Which one of the following is an activity of the tertiary sector?
(1) Mining (2) Tourism (3) Dairy (4) Agriculture

Ans. (2)

Sol. Service Industry always come in tertiary sector.

87. In which state of India, is Amul Dairy situated?
(1) Rajasthan (2) Bihar (3) Gujarat (4) Karnataka

Ans. (3)

Sol. Amul is co-operative which operates from Anand, Gujarat.

88. The 'National Consumers' Day' is celebrated on
(1) 24th December (2) 24th November (3) 24th September (4) 24th October

Ans. (1)

Sol. 24th December is celebrated as the National Consumer day as on this day the Indian parliament enacted Consumer Protection Right acts in India.

89. National income of any country is divided by its total population, we get
(1) personal income (2) gross domestic product (3) private income (4) per capita income

Ans. (4)

Sol. Per capita income = National income/total population.

90. Among the following which is the method to estimate the poverty line?
(1) Investment method (2) Income method (3) Capital method (4) All of these

Ans. (2)

Sol. Income method (per capita income) is used for analysing poverty line.

91 Which of the following statements is correct?
(1) Centre of curvature of a concave mirror lies in front of it whereas that of convex mirror lies behind the mirror.
(2) Centre of curvature of a concave mirror lies behind it whereas that of convex mirror lies in front of the mirror.
(3) Centre of curvature of both concave and convex mirrors lie in front of the mirror.
(4) Centres of curvature of both concave and convex mirrors lie behind the mirror.

Ans. (1)

Sol. Centre of curvature of a concave mirror lies in front of it whereas that of convex mirror lies behind the mirror.

92. Element X forms a chloride with the formula XCl_2 which is solid with a melting point. X would belong to the same group of periodic table as

(1) Na (2) Mg (3) Al (4) Si

Ans. (2)

Sol. Magnesium forms $MgCl_2$.

93. Calculate the number of molecules in 8g O_2 .
(1) 8×10^{23} (2) 6.02×10^{23} (3) 1.51×10^{23} (4) 8

Ans. (3)

Sol. Number of molecules = $\frac{\text{Given mass}}{\text{Molar mass}} \times N_A$.

$$\text{So, Number of molecules} = \frac{8}{32} \times 6.02 \times 10^{23} = 1.51 \times 10^{23}$$

94. Which of the following is correct for Fungi?
(1) Prokaryotic and saprophytic (2) Eukaryotic and autotrophic
(3) Prokaryotic and autotrophic (4) Eukaryotic and saprophytic

Ans. (4)

Sol. Fungi are eukaryotic and saprophytic.

95. Iodine is essential for the synthesis of which hormone?

- (1) Adrenaline (2) Thyroxine (3) Insulin (4) Oxytocin

Ans. (2)

Sol. Iodine is essential for synthesis of thyroxine hormone.

96. 'Oriental Cricket Club' the first Indian Cricket Club was founded at

- (1) Madras (2) Bombay (3) Kanpur (4) Calcutta

Ans. (2)

Sol. 'Oriental Cricket Club' the first Indian Cricket Club was founded at Bombay by Parsis.

97. Which of the following is not associated with Coriolis force?

- (1) Cyclones (2) Ocean currents (3) Prevailing winds (4) Jet streams

Ans. N/A

Sol. All are correct

98. The local government structure goes right up to thelevel.

- (1) Village (2) Ward (3) State (4) District

Ans. (4)

Sol. District level → Block level → Village level → Ward level.

99. In which state of India maximum fair price shops are run by the co-operatives?

- (1) Maharashtra (2) Delhi (3) Tamil Nadu (4) Gujarat

Ans. (3)

Sol. Out of all fair price shops running in Tamil Nadu, around 94% are being run by the co-operatives.

100. Informal sources of credit do not include

- (1) Moneylenders (2) Cooperatives (3) Traders (4) Friends.

Ans. (2)

Sol. All the others except co-operative societies are come under informal sources of credit.

* * * * *