



SSC MTS 2020 Tier I : 12

Oct S2

Mock Test Questions & Solutions

Mock Test Solutions in English

Questions

1. Identify the segment that contains a grammatical error. If there is no error, select 'No error'.

Children has to bring their own food.

- A. to bring
 - B. Children has
 - C. their own food
 - D. No error

2. Select the most appropriate meaning of the given idiom.

To be taken aback

- A. To be excited
 - B. To be irritated
 - C. To be nervous
 - D. To be surprised

3. Select the most appropriate synonym of the given word.

RAPTUROUS

4. Select the most appropriate option to fill in the blank.

Problems often _____ when you least expect them.

- | | |
|----------|-----------|
| A. raise | B. arise |
| C. rise | D. arouse |

5. Select the most appropriate word for the given group of words.

Imaginary line dividing Earth into northern and southern hemispheres

- | | |
|--------------|-------------|
| A. Longitude | B. Equator |
| C. Axis | D. Latitude |

6. Select the most appropriate option to fill in the blank.

_____ this water looks clean; it may be contaminated.

- C. Although D. Because

7. Select the INCORRECTLY spelt word.

A. Leave B. Lease

C. Leagend D. Legacy

8. Select the most appropriate option to substitute the underlined segment in the given sentence.

Srilekha is Mr. Singhs daughter.

9. Select the most appropriate word for the given group of words.

To get ready

- A. Pretend
 - B. Preserve
 - C. Protect
 - D. Prepare

10. Identify the segment that contains a grammatical error. If there is no error, select 'No error'.

I was watching a whole scene very carefully.

11. Select the most appropriate ANTONYM of the given word.

RADIANCE

- | | |
|---------------|------------|
| A. Brilliance | B. Glow |
| C. Dullness | D. Glitter |

12. Identify the segment that contains a grammatical error. If there is no error, select 'No error'.

Who has distributed these sweets among the children?

13. Select the most appropriate ANTONYM of the given word.

PRECISE

PACIFY

- | | |
|-----------|-------------|
| A. Upset | B. Irritate |
| C. Soothe | D. Excite |

21. Direction: In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

The department of post has (###Q1###) _____ inter-city road transport of parcels from Calcutta to Guwahati, Bhubaneswar and Patna. The inter-city (###Q2###) _____ of parcels by road (###Q3###) _____ amid the inability of the railways (###Q4###) _____ adequate space and the preference given (###Q5###) _____ the airways to perishable commodities.

Select the most appropriate option to fill in blank no. 1

- | | |
|-------------|----------------|
| A. started | B. start |
| C. starting | D. to starting |

22. Select the most appropriate option to fill in blank no. 2

- | | |
|-------------|-----------|
| A. moves | B. move |
| C. movement | D. moving |

23. Select the most appropriate option to fill in blank no. 3

- | | |
|---------------|----------|
| A. was coming | B. comes |
| C. is coming | D. come |

24. Select the most appropriate option to fill in blank no. 4

- | | |
|--------------|---------------|
| A. providing | B. provide |
| C. provided | D. to provide |

25. Select the most appropriate option to fill in blank no. 5

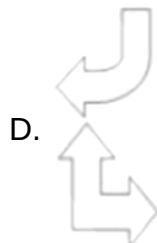
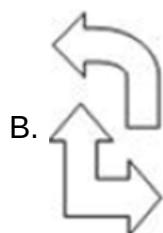
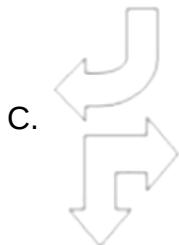
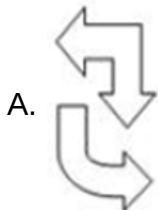
- | | |
|---------|---------|
| A. with | B. by |
| C. in | D. from |

26. Some persons are sitting beside a round table facing the centre. S is sitting just opposite of R, who is immediate left of Q. T is sitting immediate right of Q. If U is exactly in opposite of Q, then what is the sitting location of P?

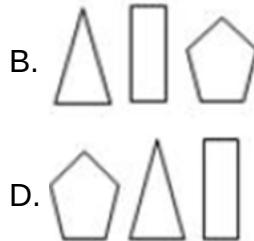
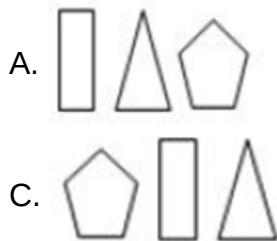
- | | |
|---------------|--------------------|
| A. Left of U | B. Between S and T |
| C. Right of R | D. Between U and R |

27. **Select the correct mirror image of the given figure when the mirror is placed to the right side of the**

figure.







31. Select the correct sequence of mathematical signs to replace the * signs so as to balance the given equation.

$$42 * 36 * 5 * 78 * (8 * 5) = 216$$

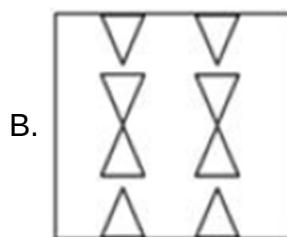
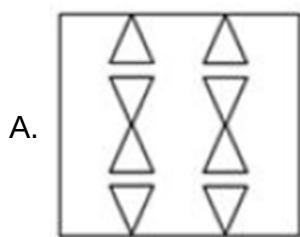
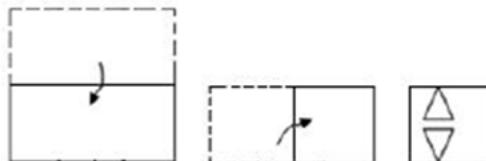
- A. $\div + \times + -$ B. $+ \times - \div +$
C. $\times \div + - +$ D. $- + \div \times +$

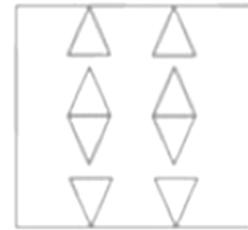
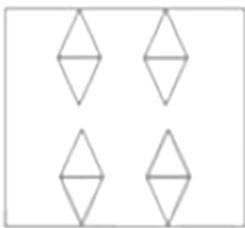
32. Which number will replace the question mark (?) in the following number series?

8, 16, 12, 32, 16, 64, ?

- A. 18 B. 32
C. 24 D. 20

33. A paper is folded and cut as shown in the following figures. How will it appear when unfolded?





Statements:

Some mobile phones are video games. All video games are remote control.

Conclusions:

- I. Some mobile phones are remote control.

II. Some remote controls are mobile phones.

A. Only conclusion I follows.

B. Neither conclusion I nor II follows.

C. Both conclusions I and II follow.

D. Only conclusion II follows.

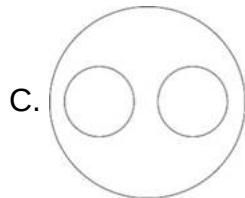
36. Select the option word that is related to the third word in the same way as the second word is related to the first word.

Watt : Power ; ; Volt :

- | | |
|-------------|--------------|
| A. Current | B. Potential |
| C. Strength | D. Ampere |

37. Select the Venn diagram that best illustrates the relationship between the following classes:

Months, Calendar, Days



38. In a certain code language if HIMSELF is written as FKKUCND, then how will OUTDOOR be written in the same code language?

- A. PWSDNOR
C. MVTGORP

- B. MWRFMQP
D. NWQFLQO

39. Select the correct alternative to indicate the sequential order of the following rivers of India. (North to South)

1. Kaveri

2. Narmada

3. Godavari

4. Ganges

5. Krishna

- A. 1 - 3 - 2 - 5 - 4
C. 2 - 3 - 4 - 1 - 5

- B. 4 - 3 - 2 - 1 - 5
D. 4 - 2 - 3 - 5 - 1

40. Which two digits and signs can be interchanged so as to balance the given equation?

$$36 \div 2 - 159 + 78 \times 18 = 135$$

- A. 8 and 2; \times and \div
C. 8 and 7; \times and \div
- B. 5 and 8; + and -
D. 6 and 8; + and -

41. Which number will replace the question mark (?) in the following number series?

54, 68, 78, 84, ?

42. Which letter cluster will replace the question mark (?) in the following letter series?

RUY, DGK, PSW, ?

- | | |
|--------|--------|
| A. ADG | B. ADH |
| C. BEI | D. BEH |

43. Select the option in which the numbers are related in the same way, as the numbers of the following set.

98 : 81 : 72

- A. 80 : 63 : 54 B. 68 : 56 : 46
C. 72 : 63 : 55 D. 68 : 54 : 44

44. If in a coding system MUSICAL is coded as 109 and RAISING is coded as 110, then how will FOURTH be coded in the same coding system?

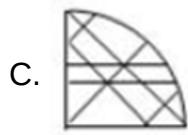
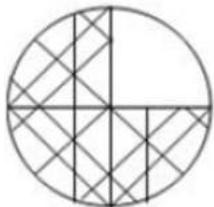
45. Select the option that is related to the third letter cluster in the same way as the second letter cluster is related to the first letter cluster.

RAILCAR : NEEPYEN :: ICESHOW :

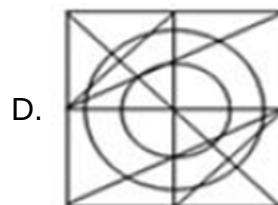
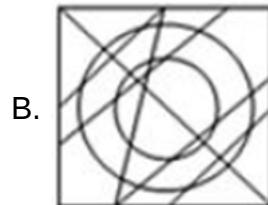
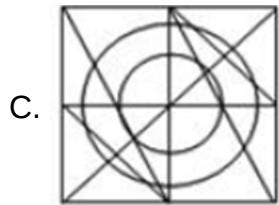
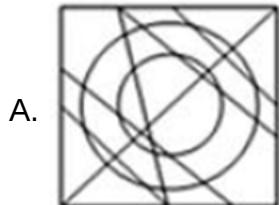
- | | |
|------------|------------|
| A. MZJOMKU | B. MYIOLKT |
| C. EGAWDSS | D. NZJPMLU |

46. If in a coding system SHELTER is coded as 6295793 and FISHERY is coded as 8162934, then how will FILTHY be coded in the same coding system?

47. Identify the option figure that completes the following pattern.



48. Identify the option in which following figure is embedded (rotation is NOT applicable):



49. In a certain code language if CONDENSE is written as OCDNNEES, then how will FACILITY be written in the same code language?

- A. AFYTICIL
C. AFICILYT

- B. YTILICAF
D. ICAFYTIL

50. Two statements are given, followed by two conclusions numbered I and II. Assuming the

statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All heads are tails.

All tails are bones.

Conclusions:

- I. All bones are heads.

- ## II. All heads are bones.

- A. Only conclusion I follows.

- B. Both conclusions I and II follow.

- D. Neither conclusion I nor II follows.

51. What is the average of the sixty terms given below?

$$\cos^2 x, \cos^2 2x, \cos^2 3x, \dots, \cos^2 30x, \sin^2 x, \sin^2 2x, \sin^2 3x, \dots, \sin^2 30x$$

- $$A_1 \cos^2 x$$

- B. 0.5

- G.1

- $$D \cos^2 x \sin^2 x$$

52. A wooden piece in the shape of a cuboid is divided into five equal by cutting it with four cuts perpendicular to its length, and it turns out that each piece is a cube of volume 27 cm^3 . What is the total surface area (in cm) of the cuboid?

- A. 150

- B. 174

- C. 216

- D. 198

53. The difference between a positive number and its reciprocal increases to a factor of $\frac{175}{144}$ when the number is made to increase by 20%. What is the number?

- A.7.5

- B. 6

- C. 2.5

- D.5

54. The simple interest on a sum is $\frac{1}{25}$ of the sum, where the number of years of investment is equal to the

rate percentage. For how many years was the sum invested?

A. 2

C. 2.5

B. 4.5

D. 5

61. If $\frac{a}{b} = \frac{b}{c} = \frac{c}{d}$, then $\frac{a}{d}$ in terms of b and c is equal to:

A. $\left(\frac{b}{c}\right)^3$

B. $\left(\frac{b}{c}\right)^2$

C. $\left(\frac{b}{c}\right)^{1.5}$

D. $\left(\frac{b}{c}\right)^{0.5}$

62. In what ratio should two varieties of tea at Rs. 300 and Rs. 400 per kg, respectively, be mixed so that the mixture is worth Rs. 320 per kg?

A. 1 : 5

B. 1 : 4

C. 5 : 1

D. 4 : 1

63. Simplify $\frac{10^2 \text{ of } \left(\frac{1}{5}\right)^3 \div \frac{1}{4} \times 4 - \frac{2}{5} \text{ of } 15}{\frac{4}{5} \left(5 \div 5 \text{ of } 12 + \frac{1}{6} \right)}$

A. $-\frac{65}{73}$

B. 34

C. $-\frac{147}{73}$

D. $-\frac{78}{73}$

64. If a person sells 80% of the number of toys for an amount with which he purchased all the toys, then what is his profit percentage?

A. 20

B. 22.5

C. 25

D. 40

65. X, Y, Z enter into a partnership venture with a capital of Rs. 1,20,000 in which the contribution of Y and Z are, respectively, 40% more and Rs. 1,000 more than that of X. The profit earned is 20% of the capital. Out of this profit, 10% goes towards some incidental expenses. What is the share (in Rs.) of X out of it?

A. 7,500

B. 4,800

C. 7,000

D. 6,300

66. The line graph that can replace a histogram is called a/an:

A. frequency polygon

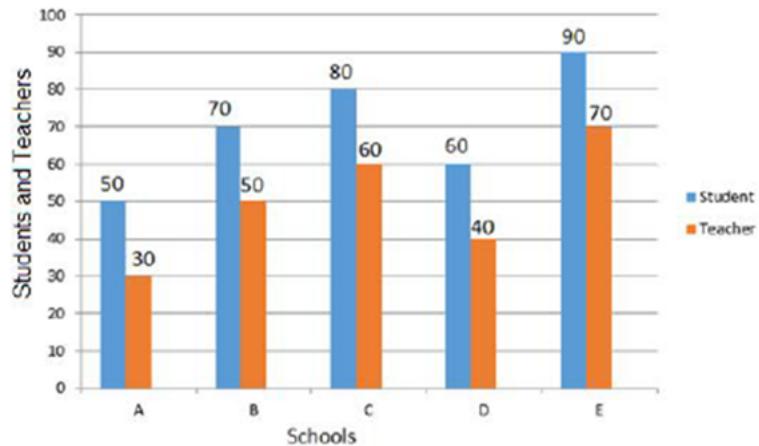
B. ogive

C. cumulative frequency less than type graph

D. cumulative frequency more than type graph

67. A certain sum was invested for three years in a scheme in which the interest is compounded annually.

During the first two years, the scheme provided growth at the rates of 80% and 60%, respectively, but during the third year there was a decline by 40%. What was the overall interest rate for three years?



If 20% of the students of E get transferred such that they get equally distributed among A and C, and 10% of their teacher are transferred to A, then which among the following schools will have its student to teacher ratio closest to that of D?

Solutions

1. B

Sol. The sentence is grammatically incorrect, and the error lies in **option B**. The error is related to **Subject Verb agreement**.

* As per the Subject Verb agreement, verb should be in accordance with the subject. Singular verb should be used with singular subject. Plural verb should be used with plural subject.

* "Child" is a singular noun and "Children" is a plural noun.

For example:

Children are sensitive to family attitudes and adjust their attitudes accordingly.

The child was found abandoned but unharmed.

* In the given sentence, we have erroneously used singular helping verb for a plural subject "children". Thus, plural helping verb "have" should be used in place of a singular helping verb "has".

* Hence, "**Children have**" is the correct substitution.

Thus, the correct sentence will be: **Children have to bring their own food.**

2. D

Sol. The idiom "**To be taken aback**" means to shock or surprise someone very much.

Example: He was **taken aback** by her sudden question.

Hence, **option D** is the correct answer.

3. A

Sol. Let's understand the meaning of the given words:

Rapturous= expressing extreme pleasure or enthusiasm for someone/something.

E.g.: Our team was given a **rapturous** welcome.

Delighted = very pleased.

E.g.: She was **delighted** by the news of the wedding.

Worried = thinking about unpleasant things that have happened or that might happen and therefore feeling unhappy and afraid.

Agitated = showing in your behaviour that you are anxious and nervous.

Disgusted = feeling or showing disgust i.e. a strong feeling of dislike for someone/something that you feel is unacceptable.

Hence, **option A** is the correct answer.

4. B

Sol. Let us understand the meaning of the given words:-

* *Raise* = to lift or move something to a higher level

* *Arise* = to happen; to start to exist; occur

* *Rise* = to come or go upwards

* *Arouse* = to make someone have a particular feeling or attitude.

Now let's find out the correct fit for the blank:

* "Raise" is used in context of "to lift something". Thus, option A is incorrect.

* "Rise" is used in context of "to come or go up". Thus, option C is incorrect.

* "Arouse" is used in context of "excite someone for a particular feeling". Thus, option D is incorrect.

* "Arise" is used in context of "occurrence of something".

* Here in the given sentence, it is used to mention that problems occur when you think that there is a least probability of their occurrence.

Thus, "arise" becomes the correct word to fill in the blank.

Thus, the correct sentence will be: **Problems often arise when you least expect them.**

Hence, **option B** is the correct answer.

5. B

Sol. Longitude: the distance of a place east or west of the Greenwich meridian, measured in

degrees.

Equator: an imaginary line around the earth at an equal distance from the North and South Poles

Axis: an imaginary line through the centre of an object, around which the object turns.

Latitude: the distance of a place north or south of the equator.

Hence, **option B** is the correct answer.

6. C

Sol. Let us understand the meaning of the given words:-

- * *In case* = (conjunction) used for showing “if something happens”.
- * *Despite* = (conjunction) used to show that something happened or is true although something else might have happened to prevent it.
- * *Although* = (conjunction) used for introducing a statement that makes the main statement in a sentence seem surprising.
- * *Because* = (conjunction) used for showing the meaning “for the reason that”

Now let's find out the correct fit for the blank:

- * “*In case*” as a conjunction is used for showing the meaning of “if something happens”. Thus, option A is incorrect.
- * “*Despite*” shows the meaning of “in spite of”. Thus, option B is incorrect.
- * “*Because*” as a conjunction is used for showing the meaning of “for the reason that”. Thus, option D is incorrect.
- * “*Although*” as a conjunction is used for showing the surprise element with the respect to what is being mentioned.
- * Here in the given sentence, it is used to introduce a statement “this water looks clean” that makes the main statement “it may be contaminated” seem surprising.
- * The clauses “water looks clean” and “may be contaminated” are actually the surprising to each other.

Thus, "Although" becomes the correct word to fill in the blank.

Thus the correct sentence will be: **Although this water looks clean, it may be contaminated.**

Hence, **option C** is the correct answer.

7. C

Sol. **Option C has incorrectly spelt word.**

"Legend" is the correct spelling of the incorrect word "Leagend". It means a story from ancient times about people and events that may or may not be true.

The meaning of other words are:

Leave: a period of time when you are allowed to be away from work.

Lease: a legal agreement that allows you to use a building, a piece of equipment for a period of time, usually in return for rent.

Legacy: money or property that is given to you by someone when they die.

8. C

Sol. **The underlined part of the sentence is grammatically incorrect.**

* Underlined part needs correction in possessive case of noun.

* We use "apostrophe s" i.e. 's for showing the possession of noun over something.

For example:

My father did all the cooking in my **mother's absence**.

* The underlined sentence needs possession of "Mr. Singh" over "daughter" i.e. to show the relation of "Srilekha" as a "daughter" to "Mr. Singh".

* Thus, "apostrophe s" should be used at the end of "Mr. Singh".

* Hence, "**Mr. Singh's**" is the correct substitution.

Thus, the correct sentence will be: **Srilekha is Mr. Singh's daughter.**

Hence, **option C** is the correct answer.

9. D

Sol. Pretend: to behave in a particular way, in order to make other people believe something that is not true.

Preserve: to keep a particular quality, feature, etc. to make sure that something is kept.

Protect: to make sure that someone/something is not harmed, injured, damaged etc.

Prepare: to make something or someone ready to be used or to do something.

Hence, **option D** is the correct answer.

10. B

Sol. The sentence is grammatically incorrect, and the error lies in **option B**. The error is related to **Article**.

* Article “A” is comparatively a weaker form than Article “the” when adjectives like Whole, Only, Same etc. are used. This is because such types of adjectives convey a specific and absolute meaning. Also, usage of article “the” before such adjectives goes in consonance with the usage of article “the” before the nouns that are specific.

* **For example:**

There were **a whole** lot of people I didn’t know.

Here, usage of article “a” before adjective “whole” simply shows the meaning of “a large number or amount”.

I have sold **the whole** lot.

Here, usage of article “the” before adjective “whole” shows the meaning of “everything; all of something” which is in absolute sense.

* In the given sentence, the usage of adjective “whole” and the word “carefully” invokes the sense of absoluteness and seriousness.

- * Usage of article “a” will not match up with this absolute sense. Also, it will not make the noun (“scene”) specific.
- * Thus, definite article “the” should be used in place of indefinitely article “a”.
- * Hence, “**the whole scene**” is the correct substitution.

Thus, the correct sentence will be: **I was watching the whole scene very carefully.**

11. C

Sol. Let's understand the meaning of the given words:

Radiance= a special bright quality that shows in someone's face, for example because they are very happy or healthy.

E.g.: A strange **radiance** illumined his face.

Brilliance = in quality of being extremely impressive, intelligent or skilful.

Glow = a steady light that is not too bright, like the light from a fire that has stopped producing flames.

Dullness =the fact of not being interesting or exciting or shiny.

E.g.: The sky was bright, contrasting with the **dullness** of the bare branches reaching upwards.

Glitter = bright light consisting of many little flashes.

Hence, **option C** is the correct answer.

12. A

Sol. The sentence is grammatically correct, and hence **option A** is correct.

13. D

Sol. Let's understand the meaning of the given words:

Precise= clear and accurate

E.g.: I can be reasonably **precise** about the time of the incident.

Actual = used to emphasize something that is real or exists in fact.

Correct = accurate or true, without any mistakes.

Definite = sure or certain; unlikely to change.

Vague = not clear in person's mind or not having enough information about something.

E.g.: She is a little **vague** about her plans for next year.

Hence, **option D** is the correct answer.

14. A

Sol. Let us understand the meaning of the given words:-

- * *At* = (preposition) used to show the location which is relatively small or unknown or not so popular.
- * *On* = (preposition) is used to show into a position covering, touching or forming a part of a surface.
- * *In* =(preposition) is used to show “at a point within an area”
- * *By* = (preposition) is used to show how or in what way something is done.

Now let's find out the correct fit for the blank:

- * “*On*” as a preposition is used in the context of “touching a surface”. Thus, option B is incorrect.
- * “*In*” as a preposition is used to show “at a point within an area”. Thus, option C is wrong.
- * “*By*” as a preposition is used to show “how something is done”. Thus, option D is wrong.
- * “*At*” is used in context of location which is small or not much popular.
- * Here in the given sentence, it is used to show the location where speaker was staying i.e. at “uncle’s house” which is relatively small or local location.

Thus, “*At*” becomes the correct word to fill in the blank.

Thus the correct sentence will be: **I stayed at my uncle’s house last night.**

Hence, **option A** is the correct answer.

15. D

Sol. **The underlined part of the sentence is grammatically incorrect.**

- * Underlined part needs correction in verb form.
- * "Had" is the past form of possessive verb "has/have". It is used to own or possess something.

For example:

He **had** a new car and a boat.

* "Was" is the past form of "Be" verb (is/am/are). As a verb it complements the subject i.e. adds more information about the subject after it.

For example:

Susan **is** a doctor.

It **was** really hot in the sauna.

The coffee **was** too hot to drink.

* The underlined sentence needs correction in verb form because the adjective phrase "strong enough" is adding some information about the subject ("Priya") of the sentence. Thus, "was" should be used in place of "had".

Note: Above sentence is set as per pattern "adjective + to infinitive" structure:

It's too difficult to work the figures out in your head.

* Hence, "**was strong**" is the correct substitution.

Thus, the correct sentence will be: **Priya was strong enough to fight all odds and succeed in meeting her goals in life.**

Hence, **option D** is the correct answer.

16. A

Sol. Let us understand the meaning of the given words:-

- * **Serves** = to be useful to someone in providing something.
- * **Makes** = to create or prepare something by combining materials.

- * *Supports* = to help or encourage someone/something by saying or showing that you agree with them.
- * *Finds* =to discover someone/something unexpectedly

Now let's find out the correct fit for the blank:

- * "Makes" is used in context of "preparing something". Thus, option B is incorrect.
- * "Supports" is used in context of "help someone". Thus, option C is incorrect.
- * "Finds" is used in context of "discover something". Thus, option D is incorrect.
- * "*If my memory serves me well, correctly etc.*" is an idiom. It means "If I remember correctly".
- * Here in the given sentence, it is used to connect the speakers' statement i.e. "Abhimanyu....warriors" with the speaker's memory i.e. memory being correct or not with the actual reality.

Thus, "Serves" becomes the correct word to fill in the blank.

Thus, the correct sentence will be: **If my memory serves me right, Abhimanyu was not killed by one person but by seven warriors.**

Hence, **option A** is the correct answer.

17. C

Sol. **The underlined part of the sentence is grammatically incorrect.**

- * Underlined part needs correction in adverb, degree of adjective.
- * "Large" is an adjective (positive degree). It means big in size or quantity. "Larger" is the comparative degree and "Largest" is the superlative degree.

For example:

Drought hit **large** parts of the country.

The population of India is **larger than** that of Canada.

During the 1980s it was one of the **largest** computer companies in the world.

* “Much” is an adverb and it means “to a great degree”. It is usually used before the comparative degrees.

For example:

Divorce is **much** more socially acceptable than it is used to be.

* “Very” as an adverb is usually used before the positive degrees or before “own”.

For example:

We have **very little** information at present on the incident.

At last he had his **very own** car.

* In the underlined sentence we have erroneously used positive degree of adjective “large” when there is comparison of size between two entities i.e. “Earth” and “Sun”.

* Thus, comparative degree “larger” should be used in place of “large”.

* Also, with comparative degrees we use the adverb “much”. Thus, adverb “much” should be used in place of adverb “very”.

* Hence, “**much larger than**” is the correct substitution.

Thus, the correct sentence will be: **The sun is much larger than Earth.**

Hence, **option C** is the correct answer.

18. C

Sol. **Option C has incorrectly spelt word.**

“Offence” is the correct spelling of the incorrect word “Offance”. It means an illegal act.

The meaning of other words are:

Offshoot: a thing that develops from something, especially a small organisation that develops from a larger one.

Officiate: to act as an official in charge of something, especially a sports event.

Offspring: a child of a particular person or couple.

19. C

Sol. The idiom “**in the eye of the storm**” means deeply involved in a difficult or controversial situation which affects a lot of people.

Example: He was often **in the eye of the storm** of congressional debates related to national security.

Hence, **option C** is the correct answer.

20. C

Sol. Let's understand the meaning of the given words:

Pacify= to make someone who is angry or upset become calm and quiet.

E.g.: The baby could not be **pacified**.

Upset = unhappy or disappointed because of something unpleasant that has happened.

Irritate = to annoy someone, especially by something you continuously do.

Soothe = to make someone who is anxious, upset, etc. feel calmer.

E.g.: The music **soothed** her for a while.

Excite = to make someone feel very pleased, interested or enthusiastic.

Hence, **option C** is the correct answer.

21. A

Sol. The given passage is about "**Inter-city road transport by the department of Post**".

"Start" is the first form of verb (plural). Thus, option B is wrong.

"Starting" is the continuous form of verb. Thus, option C is wrong.

"To starting" is "to + Gerund" structure of verb which is used after the verbs like admit to, object to etc. Thus, option D is wrong.

"Started" is the third form of verb.

Here in the given sentence, we need third form of verb after the helping verb "has" as per the present perfect structure.

Hence, **option A** is the correct answer.

22. C

Sol. The given passage is about "**Inter-city road transport by the department of Post**".

"Moves" is the first form of verb (singular). Thus, option A is wrong.

“Move” is the first form of verb (plural). Thus, option B is wrong.

“Moving” is the continuous form of verb. Thus, option D is wrong.

“Movement” is a noun and it means an act of movement from one place to another.

Here in the given sentence, we need a noun so that an adjective “inter-city” can qualify it.

Hence, **option C** is the correct answer.

23. B

Sol. The given passage is about “**Inter-city road transport by the department of Post**”.

“Was coming” is the continuous form of verb that is used in past continuous tense. Thus, option A is wrong.

“Is coming” is the continuous form of verb that is used in present continuous tense. Thus, option C is wrong.

“Come” is the first form of verb (plural). Thus, option D is wrong.

“Comes” is the first form of verb (singular).

Here in the given sentence, we need a singular verb that can be used for the singular subject “movement” as per the subject verb agreement.

Hence, **option B** is the correct answer.

24. D

Sol. The given passage is about “**Inter-city road transport by the department of Post**”.

“Providing” is the continuous form of verb. Thus, option A is wrong.

“Provide” is the first form of verb (plural). Thus, option B is wrong.

“Provided” is the third form of verb. Thus, option C is wrong.

“To provide” is an infinitive verb structure. Infinitive is used to qualify a Noun or a Noun phrase.

Here in the given sentence, it is used to qualify the noun phrase “the inability of the railways”.

Hence, **option D** is the correct answer.

25. B

Sol. The given passage is about “**Inter-city road transport by the department of Post**”.

“With” as a preposition is used to show carrying something. Thus, option A is wrong.

“In” as a preposition is used to show “at a point within an area”. Thus, option C is wrong.

“From” as a preposition is used to show where someone/something starts. Thus, option D is wrong.

“By” as a preposition is used for showing who or what does, creates, or causes something. Here in the given sentence, it is used to mention that “preference to perishable commodities” is done by “airways”.

Hence, **option B** is the correct answer.

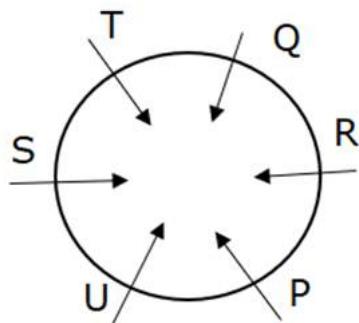
26. D

Sol. * S is sitting just opposite of R, who is immediate left of Q.

* T is sitting immediate right of Q.

* U is exactly in opposite of Q.

So, final arrangement is:

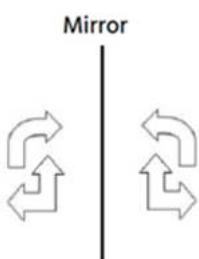


So, P is sitting between U and R.

Hence, option D is the correct answer.

27. B

Sol. In a plane mirror, a mirror image is a reflected duplication of an object that appears almost identical, but it is reversed in the direction perpendicular to the mirror surface. As an optical effect it results from reflection of substances such as a mirror or water.



Hence, option B is the correct answer.

28. C

Sol. Rank of Sheetal from the top = $42-34+1=9$

So, Number of students between Ritika and Sheetal = Rank of Ritika from the top – 9
 $=13-9=4$

Hence, option C is the correct answer.

29. B

Sol. as,

$$84+12=96$$

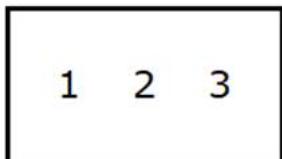
similarly,

$$64+12=76$$

Hence, option B is the correct answer.

30. B

Sol.



Moving order of  is: 1 2 3 1

Moving order of  is: 2 3 1 2

Moving order of  is: 3 1 2 3

so, the next figure is-



Hence, Option B is the correct answer.

31. B

Sol. **By checking option A:**

$$42 * 36 * 5 * 78 * (8 * 5) = 216$$

After interchanging:

$$42 \div 36 + 5 \times 78 + (8 - 5) = 216$$

here, 42 is perfectly not divisible by 36, so it will result in decimal.

so, its not correct option.

By checking option B:

$$42 * 36 * 5 * 78 * (8 * 5) = 216$$

After interchanging:

$$42 + 36 \times 5 - 78 \div (8 + 5) = 216$$

$$\text{or, } 42 + 180 - 78 \div 13 = 216$$

$$\text{or, } 42 + 180 - 6 = 216$$

$$\text{or, } 216 = 216$$

so, its correct option.

as, we found the correct answer, so no need to check more options.

Hence, option B is the correct answer.

32. D

Sol. pattern is:

$$8 \times 2 = 16$$

$$8 + 4 = 12$$

$$8 \times 4 = 32$$

$$8 + 8 = 16$$

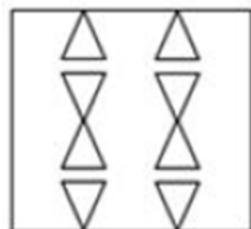
$$8 \times 8 = 64$$

$$8 + 12 = 20$$

Hence, option D is the correct answer.

33. A

Sol. As given in the figure, we need to fold it in the given(gift packing) manner and Option A would appear when unfolded.



Hence, option A is the correct answer.

34. A

Sol. As,

'Puppy' is the young one of a 'Dog'.

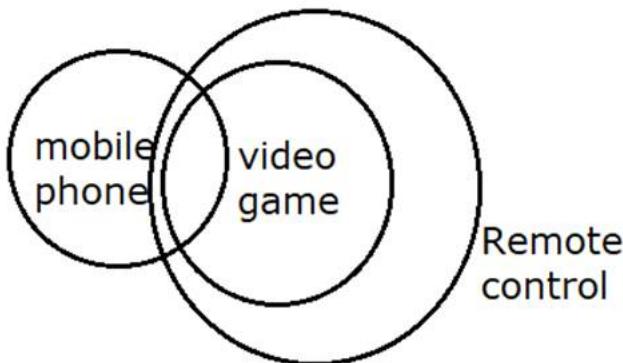
Similarly,

'Lamb' is the young one of a 'Sheep'

Hence, option A is the correct answer.

35. C

Sol. Minimum Possible diagram is-



Conclusions:

- I. Some mobile phones are remote control. (It follows because some mobile phones are video games and All video games are remote control.)
- II. Some remote controls are mobile phones. (It also follows because some mobile phones are video games and All video games are remote control.)

So, both conclusions I and II follow.

Hence, option C is the correct answer.

36. B

Sol. As,

Watt is the unit of Power.

Similarly,

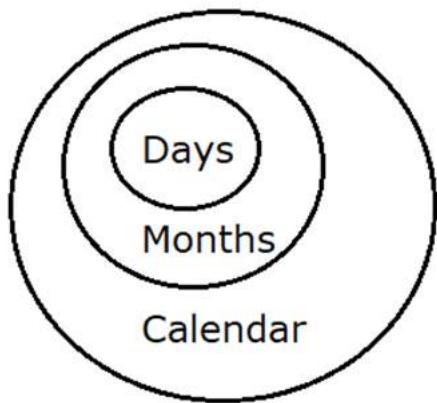
Volt is the unit of Potential.

Hence, option B is the correct answer.

37. D

Sol. Calendar contains months and Month contains days.

So, the best representation is:



Hence, option D is the correct answer.

38. B

Sol. as,

| | | | | | | |
|----|----|----|----|----|----|----|
| H | I | M | S | E | L | F |
| -2 | +2 | -2 | +2 | -2 | +2 | -2 |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| F | K | K | U | C | N | D |

similarly,

| | | | | | | |
|----|----|----|----|----|----|----|
| O | U | T | D | O | Q | R |
| -2 | +2 | -2 | +2 | -2 | +2 | -2 |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| M | W | R | F | M | Q | P |

Hence, option B is the correct answer.

39. B

Sol. Correct order of rivers of India (North to South) is:

4. Ganges

3. Godavari

2. Narmada

1. Kaveri

5. Krishna

Hence, option B is the correct answer.

40. A

Sol. **By checking option A:**

$$36 \div 2 - 159 + 78 \times 18 = 135$$

After interchanging:

$$36 \times 8 - 159 + 72 \div 12 = 135$$

$$\text{or, } 288 - 159 + 6 = 135$$

$$\text{or, } 135=135$$

so, its correct option.

as, we found the correct answer, so no need to check more options.

Hence, option A is the correct answer.

41. A

Sol. Pattern is:

$$54+14=68$$

$$68+10=78$$

$$78+6=84$$

$$84+2=86$$

Hence, option A is the correct answer.

42. C

Sol. Pattern is:

$$\begin{array}{c} +3 \quad +4 \\ R \longrightarrow U \longrightarrow Y \\ D \xrightarrow{+3} G \xrightarrow{+4} K \\ P \xrightarrow{+3} S \xrightarrow{+4} W \\ B \xrightarrow{+3} E \xrightarrow{+4} I \end{array}$$

Hence, option C is the correct answer.

43. A

Sol. as,

$$72+9=81$$

$$81+17=98$$

similarly,

$$54+9=63$$

$$63+17=80$$

Hence, option A is the correct answer.

44. A

Sol. as,

$$\text{MUSICAL}=14+6+8+18+24+26+15=111, 111-2=109$$

and

$$\text{RAISING}=9+26+18+8+18+13+20=112, 112-2=110$$

similarly,

$$\text{FOURTH}=21+12+6+9+7+19=74, 74-2=72$$

Hence, option A is the correct answer.

45. C

Sol. as,

| R | A | I | L | C | A | R |
|----|----|----|----|----|----|----|
| -4 | +4 | -4 | +4 | -4 | +4 | -4 |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

| | | | | | | |
|------------|---|---|---|---|---|---|
| N | E | E | P | Y | E | N |
| similarly, | | | | | | |

| I | C | E | S | H | O | W |
|----|----|----|----|----|----|----|
| -4 | +4 | -4 | +4 | -4 | +4 | -4 |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

| | | | | | | |
|---|---|---|---|---|---|---|
| E | G | A | W | D | S | S |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

Hence, option C is the correct answer.

46. A

Sol. Logic: Take corresponding letter code.

as,

| | | | | | | |
|---|---|---|---|---|---|---|
| S | H | E | L | T | E | R |
| 6 | 2 | 9 | 5 | 7 | 9 | 3 |

and

| | | | | | | |
|---|---|---|---|---|---|---|
| F | I | S | H | E | R | Y |
| 8 | 1 | 6 | 2 | 9 | 3 | 4 |

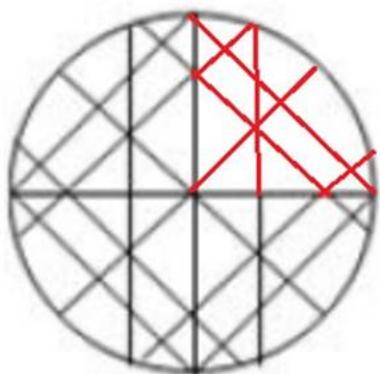
therefore,

| | | | | | |
|---|---|---|---|---|---|
| F | I | L | T | H | Y |
| 8 | 1 | 5 | 7 | 2 | 4 |

Hence, option A is the correct answer.

47. D

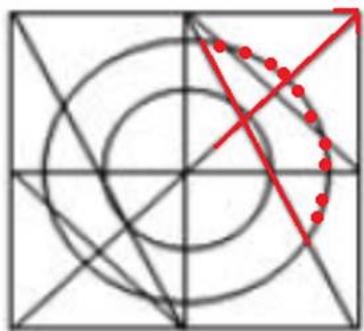
Sol. Complete figure is:



Hence, option D is the correct answer.

48. C

Sol. After carefully observing the figures given in the question and answers, it is very clear that the question figure given is embedded in the answer figure C. It is shown as given below:

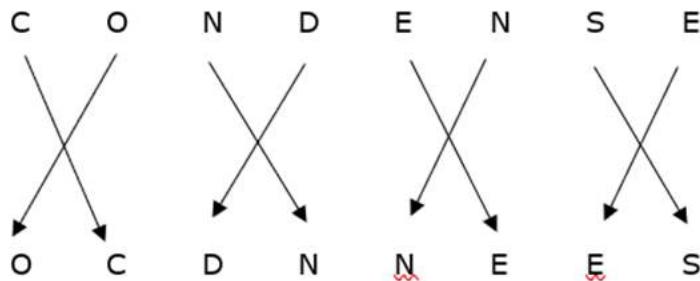


Hence, option C is the correct answer.

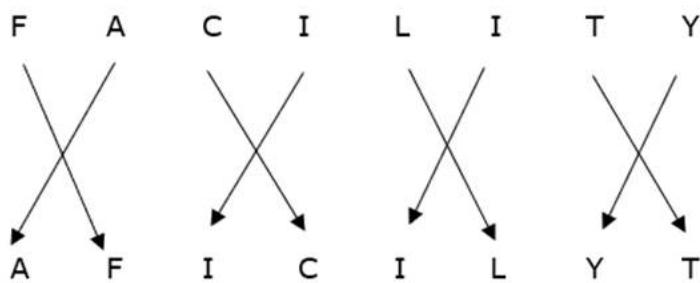
49. C

Sol.

as,



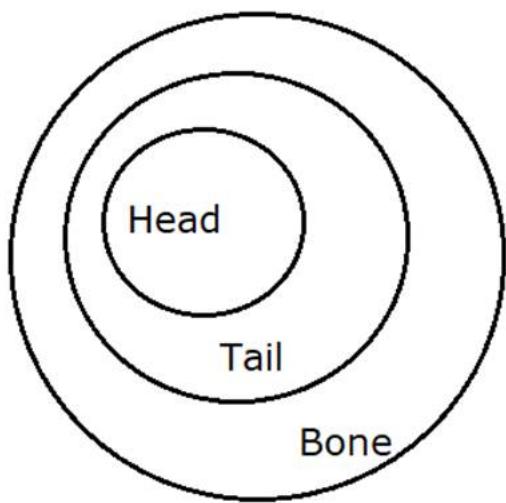
similarly,



Hence, option C is the correct answer.

50. C

Sol. Minimum Possible diagram is-



Conclusions:

- I. All bones are heads. (It does not follow as its just a possibility, not surety.)

II. All heads are bones.(It follows because All heads are tails and All tails are bones.)

So, Only conclusion II follows.

Hence, option C is the correct answer.

51. B

Sol.

$$\text{Average} = \frac{\text{Sum of terms}}{\text{No. of terms}}$$

$$= \frac{\cos^2 x + \cos^2 2x + \cos^2 3x + \dots + \cos^2 30x + \sin^2 x + \sin^2 2x + \sin^2 3x + \dots + \sin^2 30x}{60}$$

$$= \frac{\cos^2 x + \sin^2 x + \cos^2 2x + \sin^2 2x + \dots + \cos^2 30x + \sin^2 30x}{60}$$

$$= \frac{1+1+1+\dots \text{30times}}{60}$$

$$= \frac{30}{60} = 0.5$$

Hence, option B is the correct answer.

52. D

Sol.

Since volume of cube is 27 cm^3 ,

$$\therefore \text{side}^3 = 27 \text{ cm}^3$$

$$\therefore \text{side} = 3 \text{ cm}$$

Also, one side contains 5 cubes so length of that side = $5 \times 3 = 15 \text{ cm}$

Therefore, sides of cuboid are 15 cm, 3 cm and 3 cm

$$\text{Total surface area of cuboid} = 2 \times \{(15 \times 3) + (15 \times 3) + (3 \times 3)\}$$

$$= 2 \times (45 + 45 + 9) = 2 \times (99) = 198 \text{ cm}^2$$

Hence, option D is the correct answer.

53. D

Sol. Let the number be x

Then its reciprocal is $\frac{1}{x}$

$$\text{Difference between number and its reciprocal} = x - \frac{1}{x} = \frac{x^2 - 1}{x}$$

$$\text{New number} = (x) \times \left(\frac{100 + 20}{100} \right) = \frac{6}{5}x$$

$$\frac{1}{\frac{6}{5}x} = \frac{5}{6x}$$

$$\text{Reciprocal of new number} = \frac{5}{6x}$$

$$\text{New difference} = \frac{6}{5}x - \frac{5}{6x} = \frac{36x^2 - 25}{30x}$$

According to question,

$$\frac{36x^2 - 25}{30x} = \left(\frac{175}{144} \right) \left(\frac{x^2 - 1}{x} \right)$$

$$\therefore 5184x^2 - 3600 = 5250x^2 - 5250$$

$$\therefore 5250 - 3600 = 5250x^2 - 5184x^2$$

$$\therefore 66x^2 = 1650$$

$$\therefore x^2 = 25$$

$$\therefore x = 5$$

Hence, option D is the correct answer.

54. A

Sol. Let the rate percentage be $x = \text{no. of years}$.

Simple interest = $(x) \times (x) = x^2$ percentage of sum

Also simple interest = $\frac{1}{25} \text{sum}$ = 4% of sum

So, $x^2 = 4$

$\sqrt{x} = 2$

Hence, option A is the correct answer.

55. C

Sol. Let the efficiencies of P, Q, R and S be $x, 2x, 3x$ & $4x$.

Work done in a week = $x + 2x + 3x + x + 2x + 3x + 4x = 16x$

Total work in 15 days = $16x + 16x + x = 33x$

Time taken by R alone to complete the work = $33x/3x = 11$ days.

Hence, option C is the correct answer.

56. C

Sol. LCM of 12, 15, 20 and 30 = $3 \times 4 \times 5 = 60$

Numbers divided by 60 between 500 and 900 = 540, 600, 660, 720, 780, 840, 900

So, total 7 numbers

Hence, option C is the correct answer.

57. C

Sol. Total work = $24 \times 15 \times 12 = 4320$ man-hours

Time taken by 36 men working 10 hours a day doing twice the work

$$= \frac{2 \times 4320}{36 \times 10} = 24 \text{ days}$$

Hence, option C is the correct answer

58. C

Sol. Let the length of cylindrical shell = L

Since no material is lost so, volume is same

Therefore,

Volume of shell = volume of sphere

$$\tilde{A} \pi(b^2 - (b-a)^2)L = \frac{4}{3}\pi r^3$$

$$\tilde{A} (b^2 - b^2 + a^2 - 2ba)L = \frac{4}{3}r^3$$

$$\tilde{A} a(2b-a)L = \frac{4}{3}r^3$$

$$\tilde{A} L = \frac{4}{3a(2b-a)}r^3$$

Hence, option C is the correct answer.

59. C

Sol. Let speed be y and time t and new time be T

So, distance = yt

$$\text{New speed} = \left(\frac{100-25}{100}\right)y = \frac{3}{4}y$$

Since distance is same

Therefore,

$$\left(\frac{3}{4}y\right) \times T = yt$$

$$\tilde{A}T = \frac{4}{3}t$$

So, she will be late by $\frac{4}{3}t - t = \frac{1}{3}t$ or $1/3$ fraction of time.

Hence, option C is the correct answer.

60. C

Sol. Let the cost price of each be 100

$$\text{Selling price of 1^{st} item} = \left(\frac{100 + 25}{100}\right)^{100} = 125$$

$$\text{Selling price of 2^{nd} item} = \left(\frac{100 - 20}{100}\right)^{100} = 80$$

Profit = Total selling price – total cost price

$$= 125 + 80 - 200 = 5$$

$$\text{Profit \%} = \frac{\text{Profit}}{\text{cost price}} \times 100 = \frac{5}{200} \times 100 = 2.5\%$$

Hence, option C is the correct answer.

61. A

$$\text{Sol. } \frac{a}{b} = \frac{b}{c} = \frac{c}{d}$$

So,

$$\frac{a}{b} = \frac{b}{c}; \frac{b}{c} = \frac{c}{d}$$

$$\tilde{A} a = \frac{b^2}{c} ; d = \frac{c^2}{b}$$

Now, required

$$\frac{a}{d} = \frac{\frac{b^2}{c}}{\frac{c^2}{d}}$$

$$\tilde{A} \frac{a}{d} = \frac{b^3}{c^3} = \left(\frac{b}{c}\right)^3$$

Hence, option A is the correct answer.

62. D

Sol. Let the ratio be $a : b$

Therefore,

$$\frac{300a + 400b}{a + b} = 320$$

$$\tilde{A} 320a + 320b = 300a + 400b$$

$$\tilde{A} 20a = 80b$$

$$\tilde{A} \frac{a}{b} = \frac{80}{20} = \frac{4}{1}$$

So, $a : b = 4 : 1$

Hence, option D is the correct answer.

63. B

Sol.

$$\frac{10^2 \text{ of } \left(\frac{1}{5}\right)^3 \div \frac{1}{4} \times 4 - \frac{2}{5} \text{ of } 15}{\frac{4}{5} \left(5 \div 5 \text{ of } 12 + \frac{1}{6}\right)}$$

$$= \frac{\frac{100}{125} \div \frac{1}{4} \times 4 - 6}{\frac{4}{5} \left(5 \div 60 + \frac{1}{6} \right)}$$

$$= \frac{\frac{4}{5} \times 4 \times 4 - 6}{\frac{4}{5} \left(\frac{1}{12} + \frac{1}{6} \right)}$$

$$= \frac{\frac{64}{5} - 6}{\frac{4}{5} \left(\frac{1+2}{12} \right)}$$

$$= \frac{\frac{64-30}{5}}{\frac{4}{5} \times \frac{3}{12}}$$

$$= \frac{\frac{34}{5}}{\frac{1}{5}} = 34$$

Hence, option B is the correct answer.

64. C

Sol. According to question,

$$80\% \text{ of toys} \times \text{selling price} = 100\% \text{ of toys} \times \text{cost price}$$

$$\tilde{A} \frac{80}{100} SP = \frac{100}{100} CP$$

$$\tilde{A} SP = \frac{100}{80} CP$$

$$\left(\frac{SP - CP}{CP} \right) \times 100 = \left(\frac{\frac{100}{80} CP - CP}{CP} \right) \times 100$$

Profit percentage =

$$= \frac{20}{80} \times 100 = 25\%$$

Hence, option C is the correct answer.

65. D

Sol. Let the contribution of X be a

$$\text{So, contribution of Y} = \frac{7}{5}a$$

$$\text{Also, contribution of Z} = 1000 + a$$

$$\text{Since, } X + Y + Z = 120000$$

$$\tilde{A} a + \frac{7}{5}a + 1000 + a = 120000$$

$$\tilde{A} a \left(\frac{5+7+5}{5} \right) = 119000$$

$$\tilde{A} \frac{17}{5}a = 119000$$

$$\tilde{A} a = 35000 = X$$

$$Y = \frac{7}{5}a = \frac{7}{5} \times 35000 = 49000$$

$$Z = 36000$$

$$\text{Ratio of capital of X, Y and Z} = 35000 : 49000 : 36000 = 35 : 49 : 36$$

$$\text{Total dividable profit} = \frac{20}{100} \times \left(\frac{100 - 90}{100} \right) \times 120000 = 21600$$

$$\text{Share of X} = \frac{35}{120} \times 21600 = 6300$$

Hence, option D is the correct answer.

66. A

Sol. Frequency polygon

A frequency polygon is a line graph of class frequency plotted against class mid-point. It can be obtained by connecting the mid-points of the tops of the rectangles in the histogram.

Hence, option A is the correct answer.

67. B

Sol.

$$\text{Amount after 3 years} = \left(\frac{100+80}{100} \right) \left(\frac{100+60}{100} \right) \left(\frac{100-40}{100} \right) \text{principal}$$

$$= \left(\frac{9}{5} \right) \left(\frac{8}{5} \right) \left(\frac{3}{5} \right) \text{principal}$$

$$= \frac{216}{125} \text{principal}$$

$$= \left(\frac{6}{5} \right)^3 \text{principal}$$

$$= \left(1 + \frac{1}{5} \right)^3 \text{principal}$$

$$= \left(1 + \frac{20}{100} \right)^3 \text{principal}$$

So, interest rate = 20%

Hence, option B is the correct answer.

68. C

Sol. Let the radius of smaller circle be r and bigger circle be R

$$\pi r^2 + \pi R^2 = 74\pi$$

$$\therefore r^2 + R^2 = 74 \dots\dots\dots(1)$$

Also,

Distance between centers = 12

$$\therefore r + R = 12 \dots\dots\dots(2)$$

On squaring both sides

$$r^2 + R^2 + 2rR = 144$$

Putting value from eq.(1)

$$2rR + 74 = 144$$

$$\therefore 2rR = 70$$

Now,

$$(R - r)^2 = r^2 + R^2 - 2rR$$

$$\therefore (R - r)^2 = 74 - 70 = 4$$

$$\therefore R - r = 2 \dots\dots\dots(3)$$

$$\text{Eq. (2) - (3)}$$

$$2r = 10$$

$$\therefore r = 5 \text{ cm}$$

Hence, option C is the correct answer.

69. A

Sol. Total days in February 2020 = 29

Total expenditure of first 15 days = $142 \times 15 = 2130$

Total expenditure of last 15 days = $96 \times 15 = 1440$

Total expenditure = $120 \times 29 = 3480$

Expenditure on 15th February = Total expenditure of first 15 days + Total expenditure of last 15 days – Total expenditure

$$= 2130 + 1440 - 3480 = 90$$

Hence, option A is the correct answer.

70. B

Sol. Let the rate percentage of third discount = r

According to question,

$$12500 - 2366.8 = \left(\frac{88}{100} \right) \left(\frac{94}{100} \right) \left(\frac{100-r}{100} \right) \times 12500$$

$$\tilde{A} \left(\frac{22}{25} \right) \left(\frac{47}{50} \right) \left(\frac{100-r}{100} \right) \times 12500 = 10133.2$$

$$\tilde{A} 1034(100-r) = 101332$$

$$\tilde{A} 100-r = 98$$

$$\tilde{A} r = 2\%$$

Hence, option B is the correct answer.

71. D

$$\text{Sol. } \left(120 \div \frac{5}{4} \right) - \left\{ \left(105 - 5 \times 3 + 2 \text{ of } 17 \div \frac{1}{6} \right) \div \left(5 + \frac{1}{4} \right) \right\}$$

$$= \left(120 \times \frac{4}{5} \right) - \left\{ \left(105 - 5 \times 3 + 34 \div \frac{1}{6} \right) \div \left(5 + \frac{1}{4} \right) \right\}$$

$$= 96 - \left\{ (105 - 5 \times 3 + 204) \div \left(\frac{21}{4} \right) \right\}$$

$$= 96 - \left\{ (105 - 15 + 204) \div \left(\frac{21}{4} \right) \right\}$$

$$= 96 - \left\{ 294 \div \frac{21}{4} \right\}$$

$$= 96 - 56 = 40$$

Hence, option D is the correct answer.

72. B

Sol. 20% of students of E = $90/5 = 18$

10% of teachers of E = $70/10 = 7$

New student teacher ratios

$$D = 60/40 = 1.5$$

$$A = (50+9)/(30+7) = 59/37 = 1.6$$

$$B = 70/50 = 1.4$$

$$C = (80+9)/60 = 89/60 = 1.48$$

$$E = (90 - 18)/63 = 72/63 = 1.14$$

Since 1.48 is nearest to 1.5 So C school

Hence, option B is the correct answer.

73. B

Sol. Teacher to student ratios

$$B = 50/70 = 0.714$$

$$C = 60/80 = 0.75$$

$$D = 40/60 = 0.666$$

$$E = 70/90 = 0.777$$

Therefore, school E has the highest ratio

Hence, option B is the correct answer.

74. C

Sol. Proportion of student to teacher ratio across schools A, D, B ,C and E =

$$\frac{50}{30} : \frac{60}{40} : \frac{70}{50} : \frac{80}{60} : \frac{90}{70}$$

$$= 5 \times 140 : 6 \times 105 : 7 \times 84 : 8 \times 70 : 9 \times 60$$

$$= 700 : 630 : 588 : 560 : 540$$

$$= 350 : 315 : 294 : 280 : 270$$

Hence, option C is the correct answer.

75. C

Sol. Given:

Two clocks were synchronized at 11 a. m. on a Sunday

Now, time in clocks at 11 a.m. actual time on Friday (5 days from Sunday),

First clock = 11 a.m. + 5 minutes = 11:05 a.m.

Second clock = 11 a.m. – 5 minutes = 10:55 a.m.

Actual time gained by first clock to reach at 10 p.m. on Friday from 11:05 a.m. on Friday =

$$\frac{10 \text{ pm} - 11:05 \text{ am}}{24 \text{ h}} \times \frac{1440}{1441}$$

$$= \frac{10 \text{ h } 55 \text{ minutes}}{24 \text{ h}} \times \frac{1440}{1441}$$

$$= \frac{655}{1440} \times \frac{1440}{1441}$$

$$= \frac{5}{11} \text{ minutes}$$

Same time will be lost by second clock in this duration.

Therefore, time shown by second clock when the first clock shown 10 p.m. on the next Friday

$$= 10 \text{ p.m.} - 5 \text{ minutes} - \frac{5}{11} \text{ minutes} = 9 \text{ hours } 49\frac{1}{11} \text{ minutes p.m.}$$

Hence, option C is the correct answer.

76. D

Sol. • **Angstrom** is the unit to measure the wavelength of light.

- The **wavelength of light** is the distance between the two successive crests or troughs of the light wave.
- It is an **attribute of both travelling and standing waves**.
- **Dyne** is a **derived unit of force specified in the CGS system of units**.
- It was **first proposed as a CGS unit of force in 1873**.
- **Candela** is the **base unit of luminous intensity** and It is **used to measure the visual intensity of light sources**.
- **Faraday** is the **SI derived unit of electrical capacitance**.

77. C

Sol. • **LE Waterman invented the capillary feed fountain pen**.

- He held **multiple fountain pen patents** and was the **founder of the Waterman Pen Company**.
- He was **inducted into the National Inventors Hall of Fame in 2006**.
- **David Hughes** was known for his work on the printing telegraph and the microphone.
- **Ian Donald** was most notable for pioneering the diagnostic use of ultrasound in obstetrics, enabling the visual discovery of abnormalities in pregnancy.

- Alfred Nobel is best known for his invention of dynamite and an explosive device.

78. C

- Sol.
- Ganges–Brahmaputra Delta is the world's largest delta.
 - It is situated in Asia where the Ganges and Brahmaputra rivers discharge into the Bay of Bengal.
 - It is the floodplain of three great rivers: the Ganges, the Brahmaputra and the Megna.
 - It is among the most fertile regions in the world and it belongs to the most densely populated areas in the world.
 - Rhine-Meuse Delta is a river delta in the Netherlands formed by the confluence of the Rhine and the Meuse.
 - Amazon Delta is a huge river delta formed by the Amazon River and Tocantins River in northern South America.

79. A

- Sol.
- Rishi Singh Gherwal wrote the book 'Kundalini: The Mother of the Universe', which includes an English translation of 'Lalita Sahasranama'.
 - Lalita Sahasranama is a Hindu text from the Brahmanda Purana.
 - It is a sacred text for the Hindu worshippers of the Goddess Lalita Devi.
 - Rabindranath Tagore was the first non-European writer to be awarded the Nobel Prize for Literature.
 - Vikram Seth is among the most celebrated Indian novelists and poets.
 - Dr S Radha Krishnan served as the second president of India and the first vice-president of India.

80. B

- Sol.
- Part XI of the Constitution of India deals with the relation between the Union and the States.

- **Part VII of the Indian Constitution** is known as **The States in Part B of the First Schedule.**
- It **defines** and **specifies the allocation of powers & functions between the Union & States.**
- **Part VIII of the Constitution of India** deals with the **Union territories.**
- **Part IX** provides for a **3 tier Panchayat system, which would be constituted in every state at the village level, intermediate level and district level.**

81. D

- Sol.
- **The Planning Commission was established by an executive decision of the Government of India in 1950.**
 - It was an **institution in the Government of India, which formulated India's Five-Year Plans, among other functions.**
 - It was an **extra-constitutional and non-statutory body formed by the resolution of the Government of India in March 1950.**
 - It was an **advisory body to the Government of India on an array of issues of economic development.**
 - It is **responsible to formulate five years plan for social and economic development in India.**

82. C

- Sol.
- **Kul dip Nayar is the author of the book 'Beyond the Lines'.**
 - He is **India's most well known and widely syndicated journalist.**
 - The book **Beyond the Lines** is a **great account of post-independence Indian politics: what went right and what went wrong.**
 - **Omar Khayyam** is most notable for his work on the classification and **solution of cubic equations.**
 - **V. V. Giri** was the **only president to be elected as an independent candidate.**
 - He was the **3rd vice president of India from 13 May 1967 to 3 May 1969.**

83. D

- Sol. • **Filmmaker Utpal Borpujari's documentary, 'Songs of the Blue Hills' is based on the folksongs and culture of the Naga tribes.**
• It is a new documentary that explores contemporary Naga folk music, is touring five international festivals.
• **Utpal Borpujari is a double National Film Award winner; one, as a film critic, and the other, as a filmmaker.**
• **Nagaland has one of the utmost beauties of the Purvanchal Himalayas Mountain Ranges in India.**
• It boasts nature, lakes, rivers, waterfalls, accessible mountain peaks, and valleys.

84. D

- Sol. • **EPF stands for Employees' Provident Fund in economics.**
• It is the **statutory body under the Government of India's Ministry of Labour and Employment.**
• It is **responsible for the regulation and management of provident funds in India.**
• It also **manages social security agreements with other countries.**
• It is a **retirement benefits scheme for salaried employees in the private sector.**
• The **employees who fall under the EPF scheme make a fixed contribution of 12% of the basic salary and the dearness allowance towards the scheme.**

85. B

- Sol. • **The La Liga Trophy is associated with Football.**
• It was **administered by the Liga Nacional de Futbol Profesional.**
• It is the **eighth-highest of any domestic professional sports league in the world.**
• It is the **third-highest of any professional association football league in the world.**
• It is also the **sixth wealthiest professional sports league in the world by revenue.**
• **La Liga is one of the most popular professional sports leagues globally.**

86. B

- Sol.
- **Rauf and Hikat** are the dance forms of Jammu and Kashmir.
 - The **Rauf dance** is a highly appreciated and acclaimed folk dance form of the Muslim community.
 - It is a traditional and rhythmic dance of Jammu & Kashmir.
 - It is performed by Kashmiri women or girls on different occasions in Kashmir like Eid, Ramdan, harvesting season.
 - The **Hikat dance** form is a very old form of folk dance that is being performed by young girls in marriage ceremonies.
 - This dance is a modified version of the games played by young children.

87. D

- Sol.
- **Gupta Dynasty** ruled India between 320 AD and 550 AD.
 - This period is considered the **Golden Age of India** by historians.
 - The **Hoysala Empire** was a Kannadiga power originating from the Indian subcontinent.
 - It was an important period in the development of art, architecture and religion in South India.
 - **Magadha Empire** ruled from 684 B.C - 320 B.C in India and It played an important role in the development of Jainism and Buddhism.
 - The **Mauryan Empire** formed around 321 B.C.E. and ended in 185 B.C.E.
 - **Chandragupta Maurya** is the founder of the Mauryan dynasty.

88. B

- Sol.
- 'Pandavani' is the most celebrated folklore of Chattisgarh.
 - It is a style of folk singing which includes narration of tales from the Mahabharata.
 - It is also popular in the neighbouring tribal areas of Odisha and Andhra Pradesh.
 - It is narrated in a very lively form, almost constructing the scenes in the minds of the audience.

- Jhaduram Dewangan and Teejan Bai are the most renowned singers of this style.

89. D

- Sol. • The 'Procedure for Amendment of the Constitution in the Indian Constitution is borrowed from Canada.
- Federation with a strong Centre, Vesting of residuary powers with the Centre, Appointment of state Governors by the Centre are also borrowed from Canada.
 - Suspension of Fundamental rights during Emergency are borrowed from Germany.
 - The Constitution of India is the **lengthiest written constitution in the world**.
 - Federation with a strong Centre, Vesting of residuary powers with the Centre, Appointment of state Governors by the Centre are borrowed from Canadian Constitution.

90. C

- Sol. • The first battle of Panipat was fought in 1526.
- It was fought between the invading forces of Babur and the Lodi dynasty.
 - It took place in North India and marked the beginning of the Mughal Empire and the end of the Delhi Sultanate.
 - It was one of the earliest battles involving gunpowder firearms and field artillery in the Indian subcontinent.
 - It is estimated that Babur's forces numbered around 15,000 men and had between 20 to 24 pieces of field artillery.
 - The Second Battle of Panipat was fought on 5 November 1556 and The Third Battle of Panipat took place on 14 January 1761.

91. D

- Sol. • A pyrometer is used to measure very high temperatures.

- It is a type of remote-sensing thermometer used to measure the temperature of distant objects.
- They can be broadly classified into two categories:
 - a) Optical pyrometers
 - b) Infrared pyrometers
- **The manometer** is an instrument used to measure and indicate pressure.
- There are two types of manometers:
 - a) analog
 - b) digital
- A fathometer is used to measure Ocean Depth.
- Salinometer is a device used to measure the salinity of a solution.

92. B

- Sol.
- Sesamum is a Kharif crop in the north and a Rabi crop in south India.
 - It is a leguminous crop and genus of about 20 species in the flowering plant family Pedaliaceae.
 - The plants are annual or perennial herbs with edible seeds.
 - Ragi is an annual herbaceous plant widely grown as a cereal crop.
 - It is a tetraploid and self-pollinating species and It is native to the Ethiopian and Ugandan highlands.
 - The sunflower is an annual plant with a large daisy-like flower face and they are iconic, easy-to-grow plants enjoyed by gardeners in every state.
 - Sugarcane is a species of tall, perennial grass that is used for sugar production.

93. A

- Sol.
- Sama Veda dealt with music.
 - It is the Veda of melodies & chants and set important foundations for the subsequent Indian music.
 - It is an ancient Vedic Sanskrit text and part of the scriptures of Hinduism.

- The **Rigveda** is the oldest known Vedic Sanskrit text and It is an ancient Indian collection of Vedic Sanskrit hymns.
- The **Yajurveda** is the Veda primarily of prose mantras for worship rituals.
- **Atharva Veda** is the knowledge storehouse of atharvanas, the procedures for everyday life.

94. A

- Sol.
- Vitamin K deficiency in our body leads to delayed clotting of blood.
 - It is an important nutrient that plays a vital role in bone and heart health.
 - The most common foods with high vitamin K are kale, collard greens, broccoli, spinach, cabbage and lettuce.
 - Night blindness is caused by vitamin A deficiency and The sole symptom of night blindness is difficulty seeing in the dark.
 - Scurvy is caused by vitamin C deficiency.
 - It can lead to anaemia, debility, exhaustion, spontaneous bleeding, pain in the limbs and especially the legs, swelling in some parts of the body.

95. C

- Sol.
- Infant Mortality Rate (or IMR) indicates the number of children that die before the age of 1 year as a proportion of 1000 live children born in that particular year.
 - It is the death of an infant before his or her first birthday.
 - It is an important marker of the overall health of a society.
 - It is an important factor in understanding a population's overall health because many factors that contribute to infant deaths also affect the health of everyone in a population.
 - There are several causes of infant mortality, including poor sanitation, poor water quality, malnourishment of the mother & infant, inadequate prenatal and medical care.

96. C

- Sol. • 'Kolkali' is one of the traditional folk dances of **Kerala**.
• It is a **folk art performed in the Malabar region of Kerala, India**.
• The **dance performers move in a circle, striking small sticks and keeping rhythm with special steps**.
• There are two styles of Kolkali:
a) **Actual Kolkali**
b) **Thekkan Kolali**
• It has **become one of the attractions of Lakshadweep among tourists**.
• It is a **group dance and is believed to be in existence for more than a millennium**.

97. C

- Sol. • **Edward Jenner** discovered the smallpox vaccine.
• The **smallpox vaccine** was the **first vaccine to be developed against a contagious disease**.
• It is **administered by puncturing the skin multiple times with a bifurcated needle containing a small quantity of vaccine**.
• **Louis Pasteur** is regarded as **one of the founders of modern bacteriology and the father of bacteriology**.
• He was **responsible for disproving the doctrine of spontaneous generation**.
• **Edward Jenner** is often called the **father of immunology**.
• **Jonas Salk** developed **one of the first successful polio vaccines**.

98. B

- Sol. • **Anju Bobby George** is associated with **Athletics**.
• She became the **first Indian athlete ever to win a medal in a World Championships in Athletics jumping 6.70 m.**
• She won the **BBC lifetime achievement award for best athlete in India in march 2021**.
• She is **currently the Chairperson of the Target Olympic Podium Scheme**.

- She is also the **Executive Member of the Khelo India project instituted by the Government of India.**
- **Shooting** is a sport that needs both physical and mental preparation.

99. C

Sol. • Article 21 of the Indian Constitution deal with the Right to life.

- It states that **no person shall be deprived of his life or personal liberty except according to a procedure established by law.**
- It secures the **Right to life** and the **Right to personal liberty**.
- It is a **fundamental right** and is **included in Part-III of the Indian Constitution**.
- It is **available to all citizens as well as non-citizens alike** and **described as the heart of fundamental rights**.
- It guarantees the **right to a dignified life** and **It cannot be suspended during an emergency**.

100. D

Sol. • Alluvial soil is widespread in the northern plains and the river valleys and covers about 40% of the total area of India.

- It is **one of the best soils**, requiring the least water due to its high porosity.
- It has **very soft strata with the lowest proportion of nitrogen and humus** but with an adequate amount of phosphate.
- Red soil contains thin organic and organic-mineral layers of highly leached soil resting on a red layer of alluvium.
- Laterite soil is rich in iron oxide and derived from a wide variety of rocks weathering under strongly oxidizing and leaching conditions.
- Black soil is ideal for growing crops that are cotton, sugarcane, tobacco, wheat, millets, and oilseeds.

Mock Test Solutions in Hindi

Questions

1. Identify the segment that contains a grammatical error. If there is no error, select 'No error'.

Children has to bring their own food.

- A. to bring
 - B. Children has
 - C. their own food
 - D. No error

2. Select the most appropriate meaning of the given idiom.

To be taken aback

- A. To be excited
 - B. To be irritated
 - C. To be nervous
 - D. To be surprised

3. Select the most appropriate synonym of the given word.

RAPTUROUS

4. Select the most appropriate option to fill in the blank.

Problems often _____ when you least expect them.

- | | |
|----------|-----------|
| A. raise | B. arise |
| C. rise | D. arouse |

5. Select the most appropriate word for the given group of words.

Imaginary line dividing Earth into northern and southern hemispheres

- | | |
|--------------|-------------|
| A. Longitude | B. Equator |
| C. Axis | D. Latitude |

6. Select the most appropriate option to fill in the blank.

this water looks clean; it may be contaminated.

- C. Although D. Because

7. Select the INCORRECTLY spelt word.

A. Leave B. Lease

C. Leagend D. Legacy

8. Select the most appropriate option to substitute the underlined segment in the given sentence.

Srilekha is Mr. Singhs daughter.

9. Select the most appropriate word for the given group of words.

To get ready

- A. Pretend
 - B. Preserve
 - C. Protect
 - D. Prepare

10. Identify the segment that contains a grammatical error. If there is no error, select 'No error'.

I was watching a whole scene very carefully.

11. Select the most appropriate ANTONYM of the given word.

RADIANCE

- | | |
|---------------|------------|
| A. Brilliance | B. Glow |
| C. Dullness | D. Glitter |

12. Identify the segment that contains a grammatical error. If there is no error, select 'No error'.

Who has distributed these sweets among the children?

13. Select the most appropriate ANTONYM of the given word.

PRECISE

PACIFY

- | | |
|-----------|-------------|
| A. Upset | B. Irritate |
| C. Soothe | D. Excite |

21. Direction: In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

The department of post has (###Q1###) _____ inter-city road transport of parcels from Calcutta to Guwahati, Bhubaneswar and Patna. The inter-city (###Q2###) _____ of parcels by road (###Q3###) _____ amid the inability of the railways (###Q4###) _____ adequate space and the preference given (###Q5###) _____ the airways to perishable commodities.

Select the most appropriate option to fill in blank no. 1

- | | |
|-------------|----------------|
| A. started | B. start |
| C. starting | D. to starting |

22. Select the most appropriate option to fill in blank no. 2

- | | |
|-------------|-----------|
| A. moves | B. move |
| C. movement | D. moving |

23. Select the most appropriate option to fill in blank no. 3

- | | |
|---------------|----------|
| A. was coming | B. comes |
| C. is coming | D. come |

24. Select the most appropriate option to fill in blank no. 4

- | | |
|--------------|---------------|
| A. providing | B. provide |
| C. provided | D. to provide |

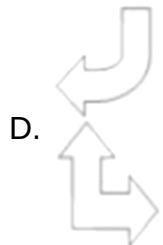
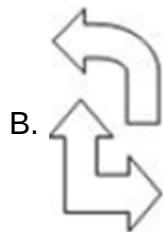
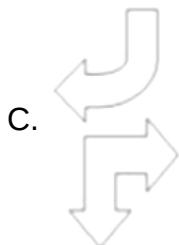
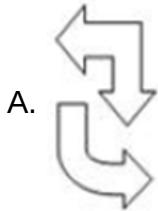
25. Select the most appropriate option to fill in blank no. 5

- | | |
|---------|---------|
| A. with | B. by |
| C. in | D. from |

26. कुछ व्यक्ति केंद्र की ओर मुख करके एक गोल मेज की चारों ओर बैठे हैं। S, R, जो Q की ठीक बाईं ओर है, के ठीक विपरीत बैठा है। T, Q की ठीक दाईं ओर बैठा है। यदि U, Q के ठीक विपरीत बैठा है, तो P के बैठने का स्थान क्या है?

- | | |
|--------------|-------------------|
| A. U के बाएं | B. S और T के मध्य |
| C. R के दाएं | D. U और R के मध्य |

27. दी गई आकृति की सही दर्पण छवि का चयन करें जब दर्पण को आकृति की दाईं ओर स्थापित किया जाता है।



84 : 96

30. उस विकल्प आकृति का चयन करें जो निम्नलिखित आकृति शरूँखला में प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगी।





31. दिए गए समीकरण को संतुलित करने हेतु * प्रतीकों को प्रतिस्थापित करने के लिए गणितीय प्रतीकों के सही अनुक्रम का चयन करें।

$$42 * 36 * 5 * 78 * (8 * 5) = 216$$

A. $\div + \times + -$

B. $+ \times - \div +$

C. $\times \div + - +$

D. $- + \div \times +$

32. निम्नलिखित संख्या शृंखला में कौन सी संख्या प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगी?

8, 16, 12, 32, 16, 64, ?

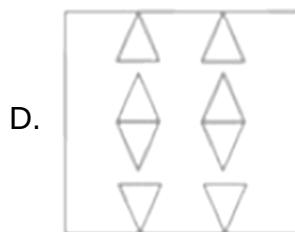
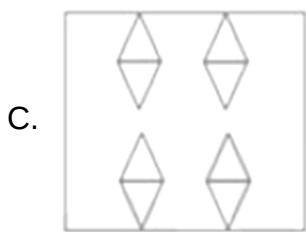
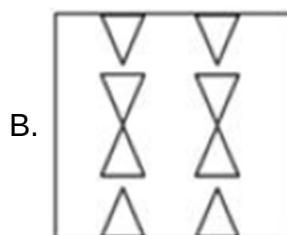
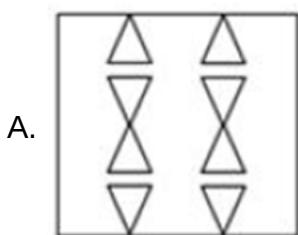
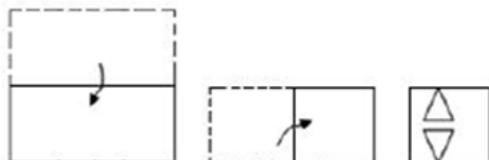
A. 18

B. 32

C. 24

D. 20

33. निम्नलिखित आकृतियों में दर्शाए अनुसार एक कागज को मोड़ा और काटा जाता है। कागज खोले जाने पर कैसा दिखाई देगा?



34. जिस प्रकार 'कुत्ते' का संबंध 'पिल्ले' से है, उसी प्रकार 'भेड़' का संबंध किससे है।

A. मेमना

B. बच्चा

C. बछड़ा

D. पशुशावक

35. दो कथन दिए गए हैं, जिसके बाद दो निष्कर्ष संख्या । और ॥ दिए गए हैं । कथनों को सत्य मानते हुए, भले ही वे सामान्यतः ज्ञात तथ्यों से भिन्न प्रतीत होते हों, निर्णय लें कि कौन सा/से निष्कर्ष दिए गए कथनों का तार्किक रूप से अनुसरण करता है/हैं ।

कथन:

कुछ मोबाइल फोन, वीडियो गेम हैं । सभी वीडियो गेम, रिमोट कंट्रोल हैं ।

निष्कर्ष:

I. कुछ मोबाइल फोन, रिमोट कंट्रोल हैं ।

II. कुछ रिमोट कंट्रोल, मोबाइल फोन हैं ।

A. केवल निष्कर्ष । अनुसरण करता है ।

B. न तो निष्कर्ष । न ही ॥ अनुसरण करता है ।

C. दोनों निष्कर्ष । और ॥ अनुसरण करते हैं ।

D. केवल निष्कर्ष ॥ अनुसरण करता है ।

36. उस विकल्प शब्द का चयन करें जो तीसरे शब्द से उसी प्रकार संबंधित है जिस प्रकार दूसरा शब्द पहले शब्द से संबंधित है ।

वॉट : पावर :: वाल्ट : _____.

A. करंट

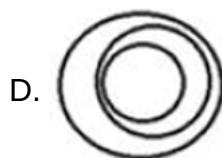
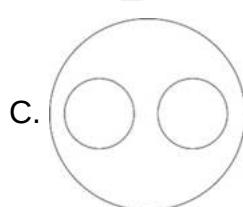
B. विभव (पोटेंशियल)

C. शक्ति

D. एम्पीयर

37. उस वेन आरेख का चयन करें जो निम्नलिखित वर्गों के बीच के संबंध को सर्वोत्तम रूप से दर्शाता है:

महीने, कैलेंडर, दिन



38. एक निश्चित कूट भाषा में यदि HIMSELF को FKKUCND के रूप में लिखा जाता है, तो उसी कूट भाषा में OUTDOOR को किस

प्रकार लिखा जाएगा?

- | | |
|------------|------------|
| A. PWSDNOR | B. MWRFMQP |
| C. MVTGORP | D. NWQFLQO |

39. भारत की निम्नलिखित नदियों के अनुक्रमिक क्रम को दर्शाने हेतु सही विकल्प का चयन करें। (उत्तर से दक्षिण तक)

- ## 1. कावेरी

2. ਨਮਦਾ

3. गोदावरी

4. गंगा

40. दिए गए समीकरण को संतुलित करने के लिए किन दो अंकों और पर्याक्रमों को आपस में बदला जा सकता है?

$$36 \div 2 - 159 + 78 \times 18 = 135$$

41. निम्नलिखित संख्या शरूंखला में कौन सी संख्या प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगी?

54, 68, 78, 84, ?

42. निम्नलिखित अक्षर शृंखला में कौन सा अक्षर समूह प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगा?

RUY, DGK, PSW, ?

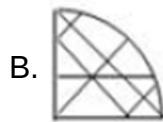
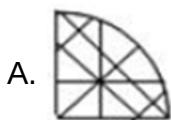
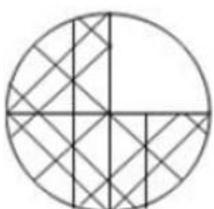
- | | |
|--------|--------|
| A. ADG | B. ADH |
| C. BEI | D. BEH |

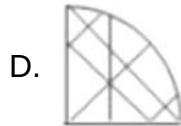
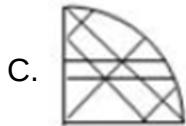
RAILCAR : NEEPYEN :: ICESHOW :

46. यदि एक कूटबद्ध प्रणाली में SHELTER को 6295793 के रूप में कूटबद्ध किया जाता है तथा FISHERY को 8162934 के रूप में कूटबद्ध किया जाता है, तो उसी कूटबद्ध प्रणाली में FILTHY को किस प्रकार कूटबद्ध किया जाएगा?

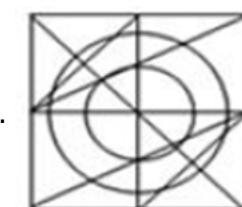
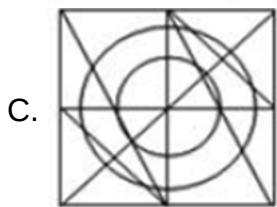
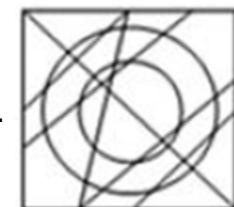
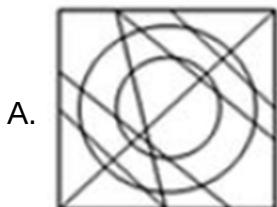
- | | |
|-----------|-----------|
| A. 815724 | B. 812457 |
| C. 157842 | D. 581724 |

47. उस विकल्प आकृति की पहचान करें जो निम्नलिखित पैटर्न को पुरा करती है।





48. उस विकल्प की पहचान करें जिसमें निम्नलिखित आकृति अंतर्निहित है (रोटेशन की अनुमति नहीं है)।



49. एक निश्चित कूट भाषा में यदि CONDENSE को OCDNNEES के रूप में लिखा जाता है, तो उसी कूट भाषा में FACILITY को किस प्रकार लिखा जाएगा?

A. AFYTICIL

B. YTILICAF

C. AFICILYT

D. ICAFYTIL

50. दो कथन दिए गए हैं, जिसके बाद दो निष्कर्ष संख्या । और ॥ दिए गए हैं । कथनों को सत्य मानते हुए, भले ही वे सामान्यतः ज्ञात तथ्यों से भिन्न प्रतीत होते हों, निर्णय लें कि कौन सा/से निष्कर्ष दिए गए कथनों का तार्किक रूप से अनुसरण करता है/हैं ।

कथन:

सभी हेड, टेल हैं ।

सभी टेल, बोन हैं ।

निष्कर्ष:

I. सभी बोन, हेड हैं।

II. सभी हेड, बोन हैं।

A. केवल निष्कर्ष | अनुसरण करता है।

C. केवल निष्कर्ष || अनुसरण करता है।

B. दोनों निष्कर्ष | और || अनुसरण करते हैं।

D. न तो निष्कर्ष | न ही || अनुसरण करता है।

51. नीचे दिए गए साठ पदों का औसत क्या है?

$$\cos^2 x, \cos^2 2x, \cos^2 3x, \dots, \cos^2 30x, \sin^2 x, \sin^2 2x, \sin^2 3x, \dots, \sin^2 30x$$

A. $\cos^2 x$

B. 0.5

C. 1

D. $\cos^2 x \sin^2 x$

52. एक घनाभ के आकार के एक लकड़ी के टुकड़े को उसकी लंबाई के लंबवत चार बार काट कर उसे पाँच बराबर हिस्सों में बांटा जाता है और उसके प्रत्येक टुकड़े का आयतन 27 सेमी³ का एक घन बन जाता है। घनाभ का कुल पृष्ठीय क्षेत्रफल (सेमी में) कितना है?

A. 150

B. 174

C. 216

D. 198

53. एक धनात्मक संख्या और उसके व्युत्क्रम के बीच के अंतर में $\frac{175}{144}$ के गुणनखंड से वृद्धि होती है यदि संख्या में 20% की वृद्धि की जाती है तो संख्या क्या होगी?

A. 7.5

B. 6

C. 2.5

D. 5

54. एक राशि पर साधारण ब्याज राशि का $\frac{1}{25}$ है, जहां निवेश के वर्षों की संख्या दर प्रतिशत के बराबर है। राशि कितने वर्षों के लिए निवेश की गई थी?

A. 2

B. 5

C. 3

D. 4

55. चार व्यक्ति P, Q, R, S एक कार्य को करने के लिए इस शर्त के साथ लगे हुए थे कि P, Q, R, S क्रमशः (सोमवार, गुरुवार) को कार्य करते हैं; (मंगलवार, शुक्रवार); (बुधवार, शनिवार); (रविवार)। कार्य सोमवार को शुरू किया गया था और 15 वें दिन पूरा हुआ, वह दिन भी सोमवार था। यदि इस कार्य को करने के संदर्भ में P, Q, R, S की क्षमता 1: 2: 3: 4 के अनुपात में थी, तो R बिना रुके अकेले कार्य करते हुए, कार्य को कितने दिनों में पूरा कर सकता है?

A. 13

B. 10

C. 11

D. 12

56. 500 और 900 के बीच कितनी संख्याएं, दोनों को मिलाकर, सभी संख्याओं 12, 15, 20 और 30 से पूर्णतः विभाजित हैं?

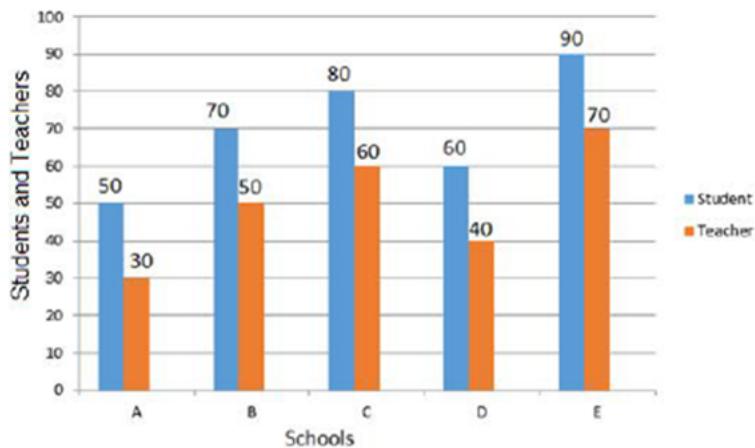
A. 4

B. 5

C. 7

D. 6

जहां संख्या को दस के गुणज के रूप में प्रस्तुत किया गया है। बार ग्राफ का अध्ययन करें और नीचे दिए गए प्रश्न का उत्तर दें।



यदि E के 20% छात्र इस प्रकार स्थानांतरित हो जाते हैं कि वे A और C के बीच समान रूप से वितरित हो जाते हैं और उनके 10% शिक्षक A में स्थानांतरित हो जाते हैं, तो निम्नलिखित में से किस स्कूल में छात्र-शिक्षक अनुपात D के निकट होगा?

- C. डाइन
D. एंस्ट्रॉम

77. केशिका (कैपिलरी) फीड फाउंटेन पेन का आविष्कार किसने किया था?
 A. डेविड ह्यूजेस
 B. इयान डोनाल्ड
 C. एलई वाटरमैन
 D. अल्फ्रेड नोबेल

78. निम्नलिखित में से कौन सा विश्व का सबसे बड़ा डेल्टा है?
 A. इरावदी डेल्टा
 B. राइन-म्यूज डेल्टा
 C. गंगा-ब्रह्मपुत्र डेल्टा
 D. अमेझन डेल्टा

79. 'कुंडलिनी': द मदर ऑफ द यूनिवर्स' पुस्तक किसने लिखी, जिसमें 'ललिता सहस्रनाम' का अंग्रेजी अनुवाद शामिल है?
 A. ऋषि सिंह घेरवाल
 B. रविंद्रनाथ टैगोर
 C. विक्रम सेठ
 D. डॉ. एस राधा कृष्णन

80. भारत के संविधान का कौन सा भाग संघ और राज्यों के बीच संबंधों से संबंधित है?
 A. भाग VIII
 B. भाग XI
 C. भाग VII
 D. भाग IX

81. योजना आयोग की स्थापना _____ में भारत सरकार के एक कार्यकारी निर्णय द्वारा की गई थी।
 A. 1955
 B. 1945
 C. 1960
 D. 1950

82. 'बियॉन्ड द लाइन्स' पुस्तक के लेखक कौन हैं?
 A. विष्णु शर्मा
 B. उमर खयाम
 C. कुलदीप नैयर
 D. वी.वी. गिरि

83. फिल्म निर्माता उत्पल बोरपुजारी की डॉक्यूमेंट्री, 'सॉन्स ऑफ द _____' नागा जनजातियों के लोकगीतों और संस्कृति पर आधारित है।
 A. ब्लू रीवर
 B. ब्लू स्काई
 C. ब्लू अर्थ
 D. ब्लू हिल्स

84. अर्थशास्त्र के संदर्भ में, EPF में P का क्या अर्थ है?
 A. प्लानिंग
 B. प्रॉफिट
 C. प्रमोशन
 D. प्रोविडेंट

85. ला लीगा ट्रॉफी (La Liga Trophy) का संबंध किस खेल से है?
 A. टेनिस
 B. फुटबॉल
 C. भारोत्तोलन
 D. क्रिकेट

86. रजफ और हिकत _____ के नृत्य रूप हैं।
 A. ओडिशा
 B. जम्मू और कश्मीर
 C. मणिपुर
 D. सिक्किम

87. 320 ईस्वी से 550 ईस्वी के बीच भारत पर किस राजवंश का शासन था?

A. मौर्य वंश B. होयसल वंश
C. मगध वंश D. गुप्त वंश

88. 'पंडवानी' _____ की सबसे प्रसिद्ध लोककथा है।

A. महाराष्ट्र B. छत्तीसगढ़
C. राजस्थान D. कर्नाटक

89. भारतीय संविधान में संविधान के संशोधन की प्रक्रिया निम्नलिखित में से किस देश के संविधान से ली गई?

A. रूस B. जर्मनी
C. दक्षिण अफ्रीका D. कनाडा

90. पानीपत का प्रथम युद्ध कब लड़ा गया था?

A. 1479 B. 1326
C. 1526 D. 1632

91. अत्यधिक उच्च तापमान मापने के लिए किस यंत्र का उपयोग किया जाता है?

A. फैदोमीटर B. मैनोमीटर
C. सैलिनोमीटर D. पाइरोमीटर

92. निम्नलिखित में से कौन सी उत्तर भारत में खरीफ की फसल और दक्षिण भारत में रबी की फसल है?

A. रागी B. तिल
C. सूरजमुखी D. गन्ना

93. निम्नलिखित में से कौन सा वेद संगीत से संबंधित है?

A. सामवेद B. ऋग्वेद
C. यजुर्वेद D. अथर्ववेद

94. हमारे शरीर में विटामिन K की कमी से क्या होता है ?

A. रक्त का थक्का जमने में देरी होना B. प्रजनन के साथ हस्तक्षेप
C. रत्तौंधी D. स्कर्वी

95. शिशु मृत्यु दर (या IMR) उस विशेष वर्ष में पैदा हुए 1000 जीवित बच्चों के अनुपात के रूप में _____ की आयु से पहले मरने वाले बच्चों

A. 6 महीने B. 3 महीने
C. 1 वर्ष D. 3 वर्ष

96. 'कोलकली' किस राज्य के पारंपरिक लोक नृत्यों में से एक है?

A. आंध्र प्रदेश B. नागालैंड
C. केरल D. अरुणाचल प्रदेश

97. चेचक के टीके की खोज किसने की?
- A. जोनास सॉल्क
 - B. लुई पास्चर
 - C. एडवर्ड जेनर
 - D. लियोन कैल्मेट
98. अंजू बॉबी जॉर्ज निम्नलिखित में से किस खेल से संबंधित हैं?
- A. मुक्केबाज़ी
 - B. एथलेटिक्स
 - C. शूटिंग
 - D. हॉकी
99. भारतीय संविधान का अनुच्छेद 21 किससे संबंधित है?
- A. संपत्ति का अधिकार
 - B. मौलिक कर्तव्य
 - C. जीवन का अधिकार
 - D. राष्ट्रीय आपातकाल
100. कौन सी मिट्टी उत्तरी मैदानों और नदी घाटियों में फैली हुई है और भारत के कुल क्षेत्रफल का लगभग 40% है?
- A. काली मिट्टी
 - B. लैटेराइट मिट्टी
 - C. लाल मिट्टी
 - D. जलोढ़ मिट्टी

Solutions

1. B

Sol. The sentence is grammatically incorrect, and the error lies in **option B**. The error is related to **Subject Verb agreement**.

- * As per the Subject Verb agreement, verb should be in accordance with the subject. Singular verb should be used with singular subject. Plural verb should be used with plural subject.
- * "Child" is a singular noun and "Children" is a plural noun.

For example:

Children are sensitive to family attitudes and adjust their attitudes accordingly.

The child was found abandoned but unharmed.

* In the given sentence, we have erroneously used singular helping verb for a plural subject "children". Thus, plural helping verb "have" should be used in place of a singular helping verb "has".

* Hence, "**Children have**" is the correct substitution.

Thus, the correct sentence will be: **Children have to bring their own food.**

2. D

Sol. The idiom "**To be taken aback**" means to shock or surprise someone very much.

Example: He was **taken aback** by her sudden question.

Hence, **option D** is the correct answer.

3. A

Sol. Let's understand the meaning of the given words:

Rapturous= expressing extreme pleasure or enthusiasm for someone/something.

E.g.: Our team was given a **rapturous** welcome.

Delighted = very pleased.

E.g.: She was **delighted** by the news of the wedding.

Worried = thinking about unpleasant things that have happened or that might happen and therefore feeling unhappy and afraid.

Agitated = showing in your behaviour that you are anxious and nervous.

Disgusted = feeling or showing disgust i.e. a strong feeling of dislike for someone/something that you feel is unacceptable.

Hence, **option A** is the correct answer.

4. B

Sol. Let us understand the meaning of the given words:-

* *Raise* = to lift or move something to a higher level

* *Arise* = to happen; to start to exist; occur

* *Rise* = to come or go upwards

* *Arouse* = to make someone have a particular feeling or attitude.

Now let's find out the correct fit for the blank:

* "*Raise*" is used in context of "to lift something". Thus, option A is incorrect.

* "*Rise*" is used in context of "to come or go up". Thus, option C is incorrect.

* "*Arouse*" is used in context of "excite someone for a particular feeling". Thus, option D is incorrect.

* "*Arise*" is used in context of "occurrence of something".

* Here in the given sentence, it is used to mention that problems occur when you think that there is a least probability of their occurrence.

Thus, "*arise*" becomes the correct word to fill in the blank.

Thus, the correct sentence will be: **Problems often arise when you least expect them.**

Hence, **option B** is the correct answer.

5. B

Sol. Longitude: the distance of a place east or west of the Greenwich meridian, measured in

degrees.

Equator: an imaginary line around the earth at an equal distance from the North and South Poles

Axis: an imaginary line through the centre of an object, around which the object turns.

Latitude: the distance of a place north or south of the equator.

Hence, **option B** is the correct answer.

6. C

Sol. Let us understand the meaning of the given words:-

- * *In case* = (conjunction) used for showing “if something happens”.
- * *Despite* = (conjunction) used to show that something happened or is true although something else might have happened to prevent it.
- * *Although* = (conjunction) used for introducing a statement that makes the main statement in a sentence seem surprising.
- * *Because* = (conjunction) used for showing the meaning “for the reason that”

Now let's find out the correct fit for the blank:

- * “*In case*” as a conjunction is used for showing the meaning of “if something happens”. Thus, option A is incorrect.
- * “*Despite*” shows the meaning of “in spite of”. Thus, option B is incorrect.
- * “*Because*” as a conjunction is used for showing the meaning of “for the reason that”. Thus, option D is incorrect.
- * “*Although*” as a conjunction is used for showing the surprise element with the respect to what is being mentioned.
- * Here in the given sentence, it is used to introduce a statement “this water looks clean” that makes the main statement “it may be contaminated” seem surprising.
- * The clauses “water looks clean” and “may be contaminated” are actually the surprising to each other.

Thus, "Although" becomes the correct word to fill in the blank.

Thus the correct sentence will be: **Although this water looks clean, it may be contaminated.**

Hence, **option C** is the correct answer.

7. C

Sol. **Option C has incorrectly spelt word.**

"Legend" is the correct spelling of the incorrect word "Leagend". It means a story from ancient times about people and events that may or may not be true.

The meaning of other words are:

Leave: a period of time when you are allowed to be away from work.

Lease: a legal agreement that allows you to use a building, a piece of equipment for a period of time, usually in return for rent.

Legacy: money or property that is given to you by someone when they die.

8. C

Sol. **The underlined part of the sentence is grammatically incorrect.**

* Underlined part needs correction in possessive case of noun.

* We use "apostrophe s" i.e. 's for showing the possession of noun over something.

For example:

My father did all the cooking in my **mother's absence**.

* The underlined sentence needs possession of "Mr. Singh" over "daughter" i.e. to show the relation of "Srilekha" as a "daughter" to "Mr. Singh".

* Thus, "apostrophe s" should be used at the end of "Mr. Singh".

* Hence, "**Mr. Singh's**" is the correct substitution.

Thus, the correct sentence will be: **Srilekha is Mr. Singh's daughter.**

Hence, **option C** is the correct answer.

9. D

Sol. Pretend: to behave in a particular way, in order to make other people believe something that is not true.

Preserve: to keep a particular quality, feature, etc. to make sure that something is kept.

Protect: to make sure that someone/something is not harmed, injured, damaged etc.

Prepare: to make something or someone ready to be used or to do something.

Hence, **option D** is the correct answer.

10. B

Sol. The sentence is grammatically incorrect, and the error lies in **option B**. The error is related to **Article**.

* Article “A” is comparatively a weaker form than Article “the” when adjectives like Whole, Only, Same etc. are used. This is because such types of adjectives convey a specific and absolute meaning. Also, usage of article “the” before such adjectives goes in consonance with the usage of article “the” before the nouns that are specific.

* **For example:**

There were **a whole** lot of people I didn’t know.

Here, usage of article “a” before adjective “whole” simply shows the meaning of “a large number or amount”.

I have sold **the whole** lot.

Here, usage of article “the” before adjective “whole” shows the meaning of “everything; all of something” which is in absolute sense.

* In the given sentence, the usage of adjective “whole” and the word “carefully” invokes the sense of absoluteness and seriousness.

- * Usage of article “a” will not match up with this absolute sense. Also, it will not make the noun (“scene”) specific.
- * Thus, definite article “the” should be used in place of indefinitely article “a”.
- * Hence, “**the whole scene**” is the correct substitution.

Thus, the correct sentence will be: **I was watching the whole scene very carefully.**

11. C

Sol. Let's understand the meaning of the given words:

Radiance= a special bright quality that shows in someone's face, for example because they are very happy or healthy.

E.g.: A strange **radiance** illumined his face.

Brilliance = in quality of being extremely impressive, intelligent or skilful.

Glow = a steady light that is not too bright, like the light from a fire that has stopped producing flames.

Dullness =the fact of not being interesting or exciting or shiny.

E.g.: The sky was bright, contrasting with the **dullness** of the bare branches reaching upwards.

Glitter = bright light consisting of many little flashes.

Hence, **option C** is the correct answer.

12. A

Sol. The sentence is grammatically correct, and hence **option A** is correct.

13. D

Sol. Let's understand the meaning of the given words:

Precise= clear and accurate

E.g.: I can be reasonably **precise** about the time of the incident.

Actual = used to emphasize something that is real or exists in fact.

Correct = accurate or true, without any mistakes.

Definite = sure or certain; unlikely to change.

Vague = not clear in person's mind or not having enough information about something.

E.g.: She is a little **vague** about her plans for next year.

Hence, **option D** is the correct answer.

14. A

Sol. Let us understand the meaning of the given words:-

- * *At* = (preposition) used to show the location which is relatively small or unknown or not so popular.
- * *On* = (preposition) is used to show into a position covering, touching or forming a part of a surface.
- * *In* =(preposition) is used to show “at a point within an area”
- * *By* = (preposition) is used to show how or in what way something is done.

Now let's find out the correct fit for the blank:

- * “*On*” as a preposition is used in the context of “touching a surface”. Thus, option B is incorrect.
- * “*In*” as a preposition is used to show “at a point within an area”. Thus, option C is wrong.
- * “*By*” as a preposition is used to show “how something is done”. Thus, option D is wrong.
- * “*At*” is used in context of location which is small or not much popular.
- * Here in the given sentence, it is used to show the location where speaker was staying i.e. at “uncle’s house” which is relatively small or local location.

Thus, “*At*” becomes the correct word to fill in the blank.

Thus the correct sentence will be: **I stayed at my uncle’s house last night.**

Hence, **option A** is the correct answer.

15. D

Sol. **The underlined part of the sentence is grammatically incorrect.**

- * Underlined part needs correction in verb form.
- * "Had" is the past form of possessive verb "has/have". It is used to own or possess something.

For example:

He **had** a new car and a boat.

* "Was" is the past form of "Be" verb (is/am/are). As a verb it complements the subject i.e. adds more information about the subject after it.

For example:

Susan **is** a doctor.

It **was** really hot in the sauna.

The coffee **was** too hot to drink.

* The underlined sentence needs correction in verb form because the adjective phrase "strong enough" is adding some information about the subject ("Priya") of the sentence. Thus, "was" should be used in place of "had".

Note: Above sentence is set as per pattern "adjective + to infinitive" structure:

It's too difficult to work the figures out in your head.

* Hence, "**was strong**" is the correct substitution.

Thus, the correct sentence will be: **Priya was strong enough to fight all odds and succeed in meeting her goals in life.**

Hence, **option D** is the correct answer.

16. A

Sol. Let us understand the meaning of the given words:-

- * **Serves** = to be useful to someone in providing something.
- * **Makes** = to create or prepare something by combining materials.

- * *Supports* = to help or encourage someone/something by saying or showing that you agree with them.
- * *Finds* =to discover someone/something unexpectedly

Now let's find out the correct fit for the blank:

- * "Makes" is used in context of "preparing something". Thus, option B is incorrect.
- * "Supports" is used in context of "help someone". Thus, option C is incorrect.
- * "Finds" is used in context of "discover something". Thus, option D is incorrect.
- * "*If my memory serves me well, correctly etc.*" is an idiom. It means "If I remember correctly".
- * Here in the given sentence, it is used to connect the speakers' statement i.e. "Abhimanyu....warriors" with the speaker's memory i.e. memory being correct or not with the actual reality.

Thus, "Serves" becomes the correct word to fill in the blank.

Thus, the correct sentence will be: **If my memory serves me right, Abhimanyu was not killed by one person but by seven warriors.**

Hence, **option A** is the correct answer.

17. C

Sol. **The underlined part of the sentence is grammatically incorrect.**

- * Underlined part needs correction in adverb, degree of adjective.
- * "Large" is an adjective (positive degree). It means big in size or quantity. "Larger" is the comparative degree and "Largest" is the superlative degree.

For example:

Drought hit **large** parts of the country.

The population of India is **larger than** that of Canada.

During the 1980s it was one of the **largest** computer companies in the world.

* “Much” is an adverb and it means “to a great degree”. It is usually used before the comparative degrees.

For example:

Divorce is **much** more socially acceptable than it is used to be.

* “Very” as an adverb is usually used before the positive degrees or before “own”.

For example:

We have **very little** information at present on the incident.

At last he had his **very own** car.

* In the underlined sentence we have erroneously used positive degree of adjective “large” when there is comparison of size between two entities i.e. “Earth” and “Sun”.

* Thus, comparative degree “larger” should be used in place of “large”.

* Also, with comparative degrees we use the adverb “much”. Thus, adverb “much” should be used in place of adverb “very”.

* Hence, “**much larger than**” is the correct substitution.

Thus, the correct sentence will be: **The sun is much larger than Earth.**

Hence, **option C** is the correct answer.

18. C

Sol. **Option C has incorrectly spelt word.**

“Offence” is the correct spelling of the incorrect word “Offance”. It means an illegal act.

The meaning of other words are:

Offshoot: a thing that develops from something, especially a small organisation that develops from a larger one.

Officiate: to act as an official in charge of something, especially a sports event.

Offspring: a child of a particular person or couple.

19. C

Sol. The idiom “**in the eye of the storm**” means deeply involved in a difficult or controversial situation which affects a lot of people.

Example: He was often **in the eye of the storm** of congressional debates related to national security.

Hence, **option C** is the correct answer.

20. C

Sol. Let's understand the meaning of the given words:

Pacify= to make someone who is angry or upset become calm and quiet.

E.g.: The baby could not be **pacified**.

Upset = unhappy or disappointed because of something unpleasant that has happened.

Irritate = to annoy someone, especially by something you continuously do.

Soothe = to make someone who is anxious, upset, etc. feel calmer.

E.g.: The music **soothed** her for a while.

Excite = to make someone feel very pleased, interested or enthusiastic.

Hence, **option C** is the correct answer.

21. A

Sol. The given passage is about "**Inter-city road transport by the department of Post**".

"Start" is the first form of verb (plural). Thus, option B is wrong.

"Starting" is the continuous form of verb. Thus, option C is wrong.

"To starting" is "to + Gerund" structure of verb which is used after the verbs like admit to, object to etc. Thus, option D is wrong.

"Started" is the third form of verb.

Here in the given sentence, we need third form of verb after the helping verb "has" as per the present perfect structure.

Hence, **option A** is the correct answer.

22. C

Sol. The given passage is about "**Inter-city road transport by the department of Post**".

"Moves" is the first form of verb (singular). Thus, option A is wrong.

“Move” is the first form of verb (plural). Thus, option B is wrong.

“Moving” is the continuous form of verb. Thus, option D is wrong.

“Movement” is a noun and it means an act of movement from one place to another.

Here in the given sentence, we need a noun so that an adjective “inter-city” can qualify it.

Hence, **option C** is the correct answer.

23. B

Sol. The given passage is about “**Inter-city road transport by the department of Post**”.

“Was coming” is the continuous form of verb that is used in past continuous tense. Thus, option A is wrong.

“Is coming” is the continuous form of verb that is used in present continuous tense. Thus, option C is wrong.

“Come” is the first form of verb (plural). Thus, option D is wrong.

“Comes” is the first form of verb (singular).

Here in the given sentence, we need a singular verb that can be used for the singular subject “movement” as per the subject verb agreement.

Hence, **option B** is the correct answer.

24. D

Sol. The given passage is about “**Inter-city road transport by the department of Post**”.

“Providing” is the continuous form of verb. Thus, option A is wrong.

“Provide” is the first form of verb (plural). Thus, option B is wrong.

“Provided” is the third form of verb. Thus, option C is wrong.

“To provide” is an infinitive verb structure. Infinitive is used to qualify a Noun or a Noun phrase.

Here in the given sentence, it is used to qualify the noun phrase “the inability of the railways”.

Hence, **option D** is the correct answer.

25. B

Sol. The given passage is about “**Inter-city road transport by the department of Post**”.

“With” as a preposition is used to show carrying something. Thus, option A is wrong.

“In” as a preposition is used to show “at a point within an area”. Thus, option C is wrong.

“From” as a preposition is used to show where someone/something starts. Thus, option D is wrong.

“By” as a preposition is used for showing who or what does, creates, or causes something. Here in the given sentence, it is used to mention that “preference to perishable commodities” is done by “airways”.

Hence, **option B** is the correct answer.

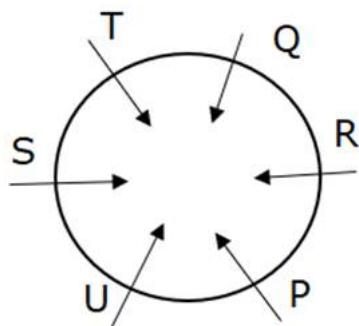
26. D

Sol. * S, R के ठीक विपरीत बैठा है, जो Q की ठीक बाईं ओर है।

* T, Q की ठीक दाईं ओर बैठा है।

* U, Q के ठीक विपरीत है।

तो, अंतिम व्यवस्था है:

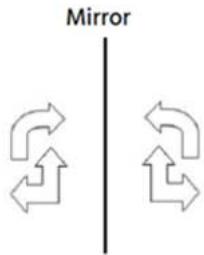


अतः, P, U और R के मध्य बैठा है।

इसलिए, विकल्प D सही उत्तर है।

27. B

Sol. एक समतल दर्पण में, एक दर्पण छवि किसी वस्तु का परावर्तित प्रतिबिम्ब होती है जो लगभग समान दिखाई देती है, लेकिन यह दर्पण की सतह की लम्बवत दिशा में उलटी होती है। एक ऑप्टिकल प्रभाव के रूप में यह दर्पण या पानी जैसे पदार्थों के प्रतिबिंब के परिणामस्वरूप उत्पन्न होती है।



इसलिए, विकल्प B सही उत्तर है।

28. C

Sol. ऊपर स शीतल की रैंक = $42 - 34 + 1 = 9$

तो, रितिका और शीतल के मध्य छात्रों की संख्या = ऊपर से रितिका की रैंक – 9

$$= 13 - 9 = 4$$

इसलिए, विकल्प C सही उत्तर है।

29. B

Sol. जैसाकि,

$$84 + 12 = 96$$

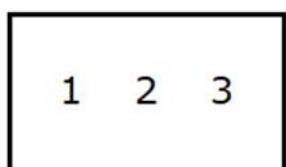
इसी प्रकार,

$$64 + 12 = 76$$

इसलिए, विकल्प B सही उत्तर है।

30. B

Sol.



 का गतिमान क्रम है: 1 2 3 1

 का गतिमान क्रम है: 2 3 1 2

 का गतिमान क्रम है: 3 1 2 3

तो, अगली आकृति है -



इसलिए, विकल्प B सही उत्तर है।

31. B

Sol. विकल्प A की जांच करने पर:

$$42 * 36 * 5 * 78 * (8 * 5) = 216$$

परस्पर बदलाव के बाद:

$$42 \div 36 + 5 \times 78 + (8 - 5) = 216$$

यहाँ 42, 36 से पूर्णतः विभाज्य नहीं है, इसलिए इसका परिणाम दशमलव में होगा।

तो, यह सही विकल्प नहीं है।

विकल्प B की जांच करने पर:

$$42 * 36 * 5 * 78 * (8 * 5) = 216$$

परस्पर बदलाव के बाद:

$$42 + 36 \times 5 - 78 \div (8 + 5) = 216$$

$$\text{या, } 42 + 180 - 78 \div 13 = 216$$

$$\text{या, } 42 + 180 - 6 = 216$$

$$\text{या, } 216 = 216$$

तो, यह सही विकल्प है।

जैसा कि, हमें सही उत्तर प्राप्त हो गया है, इसलिए अधिक विकल्पों की जांच करने की आवश्यकता नहीं है।

इसलिए, विकल्प B सही उत्तर है।

32. D

Sol. पैटर्न इस प्रकार है:

$$8 \times 2 = 16$$

$$8 + 4 = 12$$

$$8 \times 4 = 32$$

$$8 + 8 = 16$$

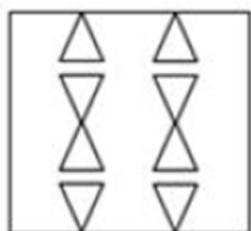
$$8 \times 8 = 64$$

$$8 + 12 = 20$$

इसलिए, विकल्प D सही उत्तर है।

33. A

Sol. जैसा कि आकृति में दिया गया है, हमें इसे दिए गए (गिफ्ट पैकिंग) तरीके से मोड़ने की आवश्यकता है और इसे खोले जाने पर विकल्प A दिखाई देगा।



इसलिए, विकल्प A सही उत्तर है।

34. A

Sol. जैसाकि,

'पिल्ला' एक 'कुत्ते' का बच्चा है।

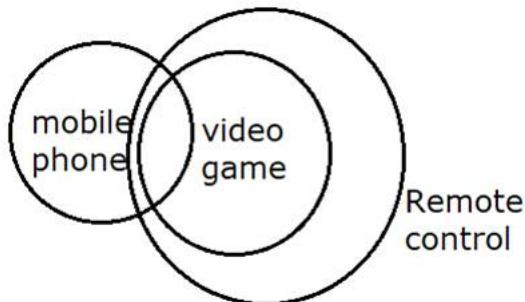
इसी प्रकार,

'मेमना' एक 'भेड़' का बच्चा है

इसलिए, विकल्प A सही उत्तर है।

35. C

Sol. न्यूनतम संभावित आरेख होगा -



निष्कर्ष:

I. कुछ मोबाइल फोन, रिमोट कंट्रोल हैं। (यह अनुसरण करता है क्योंकि कुछ मोबाइल फोन, वीडियो गेम हैं और सभी वीडियो गेम, रिमोट कंट्रोल हैं।)

II. कुछ रिमोट कंट्रोल, मोबाइल फोन हैं। (यह भी अनुसरण करता है क्योंकि कुछ मोबाइल फोन, वीडियो गेम हैं और सभी वीडियो गेम, रिमोट कंट्रोल हैं।)

अतः, दोनों निष्कर्ष | और || अनुसरण करते हैं।

इसलिए, विकल्प C सही उत्तर है।

36. B

Sol. जैसाकि,

वाट, शक्ति की इकाई है।

इसी प्रकार,

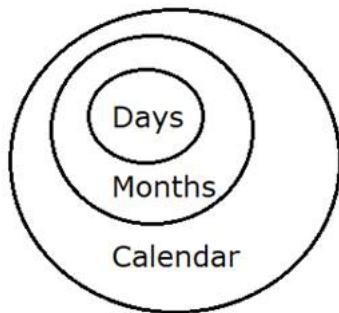
वाल्ट विभव की इकाई है।

इसलिए, विकल्प B सही उत्तर है।

37. D

Sol. कैलेंडर में महीने होते हैं और महीने में दिन होते हैं।

अतः, सबसे अच्छा प्रतिनिधित्व होगा:



इसलिए, विकल्प D सही उत्तर है।

38. B

Sol. as,

| H | I | M | S | E | L | F |
|------------|----|----|----|----|----|----|
| -2 | +2 | -2 | +2 | -2 | +2 | -2 |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| similarly, | | | | | | |
| O | U | T | D | O | Q | R |
| -2 | +2 | -2 | +2 | -2 | +2 | -2 |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| M | W | R | F | M | Q | P |

इसलिए, विकल्प B सही उत्तर है।

39. B

Sol. भारत की नदियों का सही क्रम (उत्तर से दक्षिण तक) है:

4. गंगा
3. गोदावरी
2. नर्मदा
1. कावेरी
5. कृष्णा

इसलिए, विकल्प B सही उत्तर है।

40. A

Sol. विकल्प A की जांच करने पर:

$$36 \div 2 - 159 + 78 \times 18 = 135$$

परस्पर बदलाव के बाद:

$$36 \times 8 - 159 + 72 \div 12 = 135$$

$$\text{या, } 288 - 159 + 6 = 135$$

$$\text{या, } 135=135$$

तो, यह सही विकल्प है।

जैसा कि, हमें सही उत्तर प्राप्त हो गया है, इसलिए अधिक विकल्पों की जांच करने की आवश्यकता नहीं है।

इसलिए, विकल्प A सही उत्तर है।

41. A

Sol. पैटर्न इस प्रकार है:

$$54+14=68$$

$$68+10=78$$

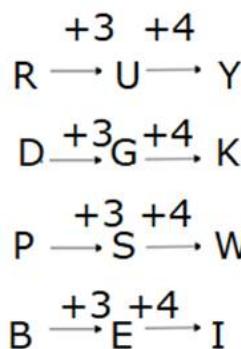
$$78+6=84$$

$$84+2=86$$

इसलिए, विकल्प A सही उत्तर है।

42. C

Sol. पैटर्न इस प्रकार है:



इसलिए, विकल्प C सही उत्तर है।

43. A

Sol. जैसाकि,

$$72+9=81$$

$$81+17=98$$

इसी प्रकार,

$$54+9=63$$

$$63+17=80$$

इसलिए, विकल्प A सही उत्तर है।

44. A

Sol. जैसाकि,

$$\text{MUSICAL}=14+6+8+18+24+26+15=111, 111-2=109$$

और

RAISING=9+26+18+8+18+13+20=112, 112-2=110

इसी प्रकार,

FOURTH =21+12+6+9+7+19 = 74, 74-2=72

इसलिए, विकल्प A सही उत्तर है।

45. C

Sol. as,

| R | A | I | L | C | A | R |
|----|----|----|----|----|----|----|
| -4 | +4 | -4 | +4 | -4 | +4 | -4 |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

N E E P Y E N

similarly,

| I | C | E | S | H | O | W |
|----|----|----|----|----|----|----|
| -4 | +4 | -4 | +4 | -4 | +4 | -4 |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

E G A W D S S

इसलिए, विकल्प C सही उत्तर है।

46. A

Sol. तर्क : संबंधित अक्षर कूट लें:

चूंकि,

| | | | | | | |
|---|---|---|---|---|---|---|
| S | H | E | L | T | E | R |
| 6 | 2 | 9 | 5 | 7 | 9 | 3 |

और

| | | | | | | |
|---|---|---|---|---|---|---|
| F | I | S | H | E | R | Y |
| 8 | 1 | 6 | 2 | 9 | 3 | 4 |

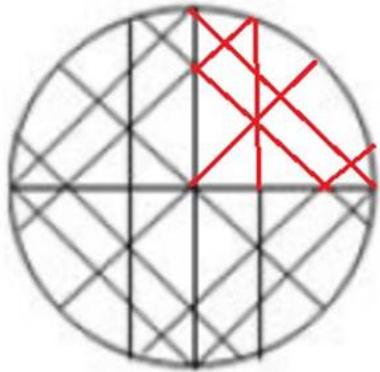
अतः,

| | | | | | |
|---|---|---|---|---|---|
| F | I | L | T | H | Y |
| 8 | 1 | 5 | 7 | 2 | 4 |

इसलिए, विकल्प A सही उत्तर है।

47. D

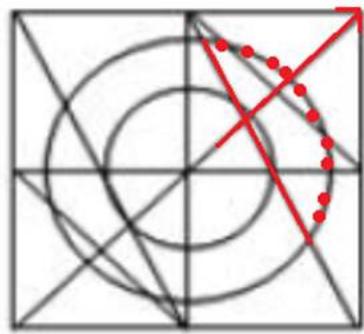
Sol. पूर्ण आकृति है:



इसलिए, विकल्प D सही उत्तर है।

48. C

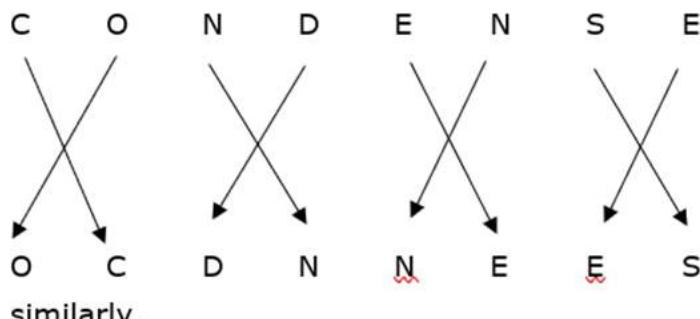
Sol. प्रश्न और उत्तरों में दी गई आकृतियों को ध्यान से देखने के बाद, यह बहुत स्पष्ट है कि दी गई प्रश्न आकृति उत्तर आकृति C में अंतर्निहित है। इसे नीचे दिए अनुसार दर्शाया गया है:



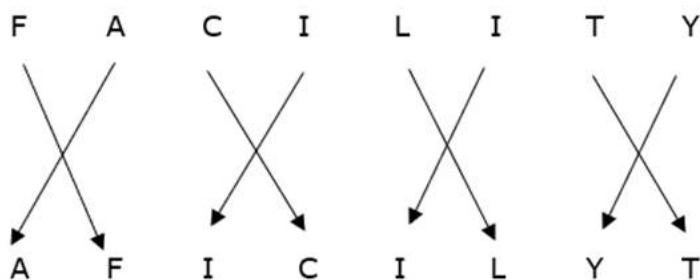
इसलिए, विकल्प C सही उत्तर है।

49. C

Sol. as,



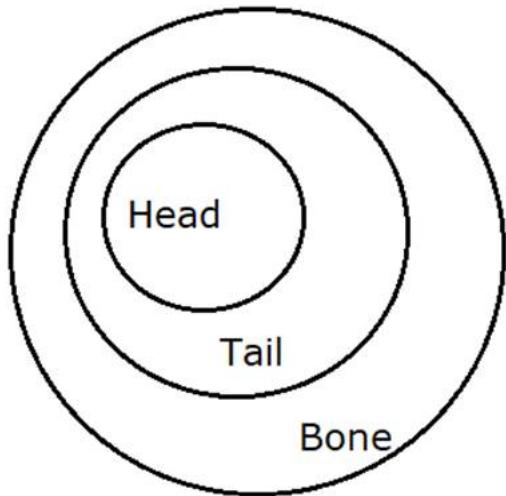
similarly,



इसलिए, विकल्प C सही उत्तर है।

50. C

Sol. न्यूनतम संभावित आरेख होगा-



निष्कर्षः

- I. सभी बोन, हेड हैं। (यह अनुसरण नहीं करता है क्योंकि यह केवल एक संभावना है, सुनिश्चितता नहीं है।)
- II. सभी हेड, बोन हैं। (यह अनुसरण करता है क्योंकि सभी हेड, टेल हैं और सभी टेल, बोन हैं।)

अतः, केवल निष्कर्ष II अनुसरण करता है।

इसलिए, विकल्प C सही उत्तर है।

51. B

$$\text{Sol. औसत} = \frac{\text{पदों का योग}}{\text{पदों की संख्या}}$$

$$\begin{aligned}
 &= \frac{\cos^2 x + \cos^2 2x + \cos^2 3x + \dots + \cos^2 30x + \sin^2 x + \sin^2 2x + \sin^2 3x + \dots + \sin^2 30x}{60} \\
 &= \frac{\cos^2 x + \sin^2 x + \cos^2 2x + \sin^2 2x + \dots + \cos^2 30x + \sin^2 30x}{60} \\
 &= \frac{1+1+1+\dots+30 \text{ बार}}{60} \\
 &= \frac{30}{60} = 0.5
 \end{aligned}$$

अतः विकल्प B सही उत्तर है।

52. D

Sol. जैसा की घन का आयतन 27 सेमी³ है,

$$\text{A भुजा}^3 = 27 \text{ सेमी}^3$$

$$\text{A भुजा} = 3 \text{ सेमी}$$

साथ ही, एक भुजा में 5 घन हैं तो उस भुजा की लंबाई = $5 \times 3 = 15$ सेमी

अतः घनाभ की भुजाएँ 15 सेमी, 3 सेमी और 3 सेमी हैं

$$\text{घनाभ का कुल पृष्ठीय क्षेत्रफल} = 2 \times \{(15 \times 3) + (15 \times 3) + (3 \times 3)\}$$

$$= 2 \times (45 + 45 + 9) = 2 \times (99) = 198 \text{ सेमी}^2$$

अतः विकल्प D सही उत्तर है।

53. D

Sol. माना कि संख्या x है,

तो उसका व्युत्क्रम $\frac{1}{x}$

$$\text{संख्या और उसके व्युत्क्रम के बीच अंतर} = x - \frac{1}{x} = \frac{x^2 - 1}{x}$$

$$\text{नई संख्या} = (x) \times \left(\frac{100+20}{100}\right) = \frac{6}{5}x$$

$$\text{नयी संख्या का व्युत्क्रम} = \frac{1}{\frac{6}{5}x} = \frac{5}{6x}$$

$$\text{नया अंतर} = \frac{6}{5}x - \frac{5}{6x} = \frac{36x^2 - 25}{30x}$$

प्रश्न के अनुसार,

$$\frac{36x^2 - 25}{30x} = \left(\frac{175}{144}\right) \left(\frac{x^2 - 1}{x}\right)$$

$$\text{A } 5184x^2 - 3600 = 5250x^2 - 5250$$

$$\text{A } 5250 - 3600 = 5250x^2 - 5184x^2$$

$$\text{A } 66x^2 = 1650$$

$$\bar{A} x^2 = 25$$

$$\bar{A} x = 5$$

अतः विकल्प D सही उत्तर है।

54. A

Sol. माना दर प्रतिशत x है = वर्षों की संख्या

साधारण ब्याज = $(x) \times (x) = x^2$ राशि का प्रतिशत

साधारण ब्याज = $\frac{1}{25}$ राशि = राशि का 4%

$$\text{तो, } x^2 = 4$$

$$\bar{A} x = 2$$

अतः विकल्प A सही उत्तर है।

55. C

Sol. माना P, Q, R और S की क्षमताएँ $x, 2x, 3x$ और $4x$ हैं।

एक सप्ताह में किया गया कार्य = $x + 2x + 3x + x + 2x + 3x + 4x = 16x$

15 दिनों में कुल कार्य = $16x + 16x + x = 33x$

अकेले R द्वारा कार्य पूरा करने में लिया गया समय = $33x/3x = 11$ दिन।

अतः विकल्प C सही उत्तर है।

56. C

Sol. 12, 15, 20 और 30 का लCM = $3 \times 4 \times 5 = 60$

500 और 900 के बीच 60 से विभाजित संख्या = 540, 600, 660, 720, 780, 840, 900

तो कुल 7 संख्याएँ हैं,

अतः विकल्प C सही उत्तर है।

57. C

Sol. कुल कार्य = $24 \times 15 \times 12 = 4320$ व्यक्ति-घंटे

36 पुरुषों द्वारा प्रतिदिन 10 घंटे कार्य करके दो बार कार्य करने में लिया गया समय

$$= \frac{2 \times 4320}{36 \times 10} = 24 \text{ दिन}$$

अतः विकल्प C सही उत्तर है।

58. C

Sol. मानें बेलनाकार खोल की लंबाई = L

चूँकि कोई सामग्री नष्ट नहीं होती है, इसलिए आयतन समान है

इसलिए,

खोल का आयतन = गोले का आयतन

$$\tilde{A} \pi(b^2 - (b-a)^2)L = \frac{4}{3}\pi r^3$$

$$\tilde{A} (b^2 - b^2 + a^2 + 2ba)L = \frac{4}{3}r^3$$

$$\tilde{A} a(2b-a)L = \frac{4}{3}r^3$$

$$\tilde{A} L = \frac{4}{3a(2b-a)}r^3$$

अतः विकल्प C सही उत्तर है।

59. C

Sol. माना गति y और समय t और नया समय T है

तो, दूरी = yt

$$\text{नई गति} = \left(\frac{100-25}{100}\right)y = \frac{3}{4}y$$

जैसा की दूरी समान है

इसलिए,

$$\left(\frac{3}{4}y\right) \times T = yt$$

$$\tilde{A} T = \frac{4}{3} t$$

तो, उस देरी होगी $\frac{4}{3} t - t = \frac{1}{3} t$ या समय $1/3$ अंश

अतः विकल्प C सही उत्तर है।

60. C

Sol. मानें प्रत्येक का क्रय मूल्य 100 है

$$\text{पहली वस्तु का विक्रय मूल्य} = \left(\frac{100+25}{100}\right) 100 = 125$$

$$\text{दूसरी वस्तु का विक्रय मूल्य} = \left(\frac{100-20}{100}\right) 100 = 80$$

$$\text{लाभ} = \text{कुल विक्रय मूल्य} - \text{कुल क्रय मूल्य}$$

$$= 125 + 80 - 200 = 5$$

$$\text{लाभ \%} = \frac{\text{लाभ}}{\text{क्रय मूल्य}} \times 100 = \frac{5}{200} \times 100 = 2.5\%$$

अतः विकल्प C सही उत्तर है।

61. A

$$\text{Sol. } \frac{a}{b} = \frac{b}{c} = \frac{c}{d}$$

तो,

$$\frac{a}{b} = \frac{b}{c}; \frac{b}{c} = \frac{c}{d}$$

$$\tilde{A} a = \frac{b^2}{c}; d = \frac{c^2}{b}$$

अब, आवश्यक है

$$\frac{a}{d} = \frac{\frac{b^2}{c}}{\frac{c^2}{b}}$$

$$\tilde{A} \frac{a}{d} = \frac{b^3}{c^3} = \left(\frac{b}{c}\right)^3$$

अतः विकल्प A सही उत्तर है।

62. D

Sol. मानें अनुपात $a : b$ है

अतः,

$$\frac{300a + 400b}{a + b} = 320$$

$$\therefore 320a + 320b = 300a + 400b$$

$$\therefore 20a = 80b$$

$$\therefore \frac{a}{b} = \frac{80}{20} = \frac{4}{1}$$

$$\text{तो, } a : b = 4 : 1$$

अतः विकल्प D सही उत्तर है।

63. B

$$\begin{aligned} \text{Sol. } & \frac{10^2 \text{ of } \left(\frac{1}{5}\right)^3 \div \frac{1}{4} \times 4 - \frac{2}{5} \text{ of } 15}{\frac{4}{5} \left(5 \div 5 \text{ of } 12 + \frac{1}{6}\right)} \\ &= \frac{\frac{100}{125} \div \frac{1}{4} \times 4 - 6}{\frac{4}{5} \left(5 \div 60 + \frac{1}{6}\right)} \end{aligned}$$

$$= \frac{\frac{4}{5} \times 4 \times 4 - 6}{\frac{4}{5} \left(\frac{1}{12} + \frac{1}{6}\right)}$$

$$= \frac{\frac{64}{5} - 6}{\frac{4}{5} \left(\frac{1+2}{12}\right)}$$

$$= \frac{\frac{64-30}{5}}{\frac{4}{5} \times \frac{3}{12}}$$

$$= \frac{\frac{34}{5}}{\frac{1}{5}} = 34$$

अतः विकल्प B सही उत्तर है।

64. C

Sol. प्रश्न के अनुसार,

खिलौनों का $80\% \times$ विक्रय मूल्य = खिलौनों का $100\% \times$ क्रय मूल्य

$$\tilde{A} \frac{80}{100} SP = \frac{100}{100} CP$$

$$\tilde{A} SP = \frac{100}{80} CP$$

$$\text{लाभ प्रतिशत} = \left(\frac{SP - CP}{CP} \right) \times 100 = \left(\frac{\frac{100}{80} CP - CP}{CP} \right) \times 100 \\ = \frac{20}{80} \times 100 = 25\%$$

अतः विकल्प C सही उत्तर है।

65. D

Sol. माना X का योगदान a है

$$\text{तो, } Y \text{ का योगदान} = \frac{7}{5}a$$

$$\text{और } Z \text{ का योगदान} = 1000 + a$$

$$\text{जैसा कि, } X + Y + Z = 120000$$

$$\tilde{A} a + \frac{7}{5}a + 1000 + a = 120000$$

$$\tilde{A} a \left(\frac{5+7+5}{5} \right) = 119000$$

$$\tilde{A} \frac{17}{5}a = 119000$$

$$\tilde{A} a = 35000 = X$$

$$Y = \frac{7}{5}a = \frac{7}{5} \times 35000 = 49000$$

$$Z = 36000$$

$$X, Y \text{ और } Z \text{ की पूँजी का अनुपात} = 35000 : 49000 : 36000 = 35 : 49 : 36$$

$$\text{कुल विभाज्य लाभ} = \frac{20}{100} \times \left(\frac{100-90}{100} \right) \times 120000 = 21600$$

$$X \text{ का हिस्सा} = \frac{35}{120} \times 21600 = 6300$$

अतः विकल्प D सही उत्तर है।

66. A

Sol. आवृत्ति बहुभुज

एक बारंबारता बहुभुज वर्ग बारंबारता का एक रेखा ग्राफ होता है जिसे वर्ग मध्य-बिंदु के विरुद्ध आलेखित किया जाता है। इसे हिस्टोग्राम में आयतों के शीर्ष के मध्य-बिंदुओं को जोड़कर प्राप्त किया जा सकता है।

अतः विकल्प A सही उत्तर है।

67. B

$$\text{Sol. } 3 \text{ वर्ष के बाद राशि} = \left(\frac{100+80}{100} \right) \left(\frac{100+60}{100} \right) \left(\frac{100-40}{100} \right) \text{मूलधन}$$

$$= \left(\frac{9}{5} \right) \left(\frac{8}{5} \right) \left(\frac{3}{5} \right) \text{मूलधन}$$

$$= \frac{216}{125} \text{मूलधन}$$

$$= \left(\frac{6}{5} \right)^3 \text{मूलधन}$$

$$= \left(1 + \frac{1}{5} \right)^3 \text{मूलधन}$$

$$= \left(1 + \frac{20}{100} \right)^3 \text{मूलधन}$$

तो, ब्याज दर = 20%

अतः विकल्प B सही उत्तर है।

68. C

Sol. माना छोटे वृत्त की त्रिज्या r है और बड़े वृत्त की त्रिज्या R है

$$pr^2 + pR^2 = 74p$$

$$\therefore r^2 + R^2 = 74 \dots\dots\dots (1)$$

तो,

$$\text{केन्द्रों के बीच दूरी} = 12$$

$$\therefore r + R = 12 \dots\dots\dots (2)$$

दोनों ओर वर्ग करने पर

$$r^2 + R^2 + 2rR = 144$$

समीकरण (1) से मान रखने पर,

$$2rR + 74 = 144$$

$$\therefore 2rR = 70$$

अब,

$$(R - r)^2 = r^2 + R^2 - 2rR$$

$$\therefore (R - r)^2 = 74 - 70 = 4$$

$$\therefore R - r = 2 \dots\dots(3)$$

समीकरण (2) – (3)

$$2r = 10$$

$$\therefore r = 5 \text{ सेमी}$$

अतः विकल्प C सही उत्तर है।

69. A

Sol. फरवरी 2020 में कुल दिन = 29

$$\text{पहले } 15 \text{ दिनों का कुल व्यय} = 142 \times 15 = 2130$$

$$\text{अंतिम } 15 \text{ दिनों का कुल व्यय} = 96 \times 15 = 1440$$

$$\text{कुल व्यय} = 120 \times 29 = 3480$$

$$15 \text{ फरवरी को व्यय} = \text{पहले } 15 \text{ दिनों का कुल व्यय} + \text{अंतिम } 15 \text{ दिनों का कुल व्यय} - \text{कुल व्यय}$$

$$= 2130 + 1440 - 3480 = 90$$

अतः विकल्प A सही उत्तर है।

70. B

Sol. माना तीसरी छूट का दर प्रतिशत = r

प्रश्न के अनुसार,

$$12500 - 2366.8 = \left(\frac{88}{100}\right) \left(\frac{94}{100}\right) \left(\frac{100-r}{100}\right) \times 12500$$

$$\Rightarrow \left(\frac{22}{25}\right) \left(\frac{47}{50}\right) \left(\frac{100-r}{100}\right) \times 12500 = 10133.2$$

$$\Rightarrow 1034(100 - r) = 101332$$

$$\Rightarrow 100 - r = 98$$

$$\Rightarrow r = 2\%$$

अतः विकल्प B सही उत्तर है।

71. D

$$\text{Sol. } \left(120 \div \frac{5}{4}\right) - \left\{ \left(105 - 5 \times 3 + 2 \times 17 \div \frac{1}{6}\right) \div \left(5 + \frac{1}{4}\right) \right\}$$

$$= \left(120 \times \frac{4}{5}\right) - \left\{ \left(105 - 5 \times 3 + 34 \div \frac{1}{6}\right) \div \left(5 + \frac{1}{4}\right) \right\}$$

$$= 96 - \left\{ (105 - 5 \times 3 + 204) \div \left(\frac{21}{4}\right) \right\}$$

$$= 96 - \left\{ (105 - 15 + 204) \div \left(\frac{21}{4}\right) \right\}$$

$$= 96 - \left\{ 294 \div \frac{21}{4} \right\}$$

$$= 96 - 56 = 40$$

अतः विकल्प D सही उत्तर है।

72. B

Sol. E के 20% छात्र = $90/5 = 18$

E के 10% शिक्षक = $70/10 = 7$

नया छात्र-शिक्षक अनुपात

$$D = 60/40 = 1.5$$

$$A = (50+9)/(30+7) = 59/37 = 1.6$$

$$B = 70/50 = 1.4$$

$$C = (80+9)/60 = 89/60 = 1.48$$

$$E = (90 - 18)/63 = 72/63 = 1.14$$

चूंकि 1.48, 1.5 के सबसे निकट है

तो स्कूल C

अतः विकल्प B सही उत्तर है।

73. B

Sol. शिक्षक से छात्र अनुपात,

$$B = 50/70 = 0.714$$

$$C = 60/80 = 0.75$$

$$D = 40/60 = 0.666$$

$$E = 70/90 = 0.777$$

इसलिए, स्कूल E का अनुपात सबसे अधिक है,

अतः विकल्प B सही उत्तर है।

74. C

Sol. पांच स्कूलों A, D, B ,C और E में छात्र से शिक्षक के अनुपात का समानुपात =

$$\frac{50}{30} : \frac{60}{40} : \frac{70}{50} : \frac{80}{60} : \frac{90}{70}$$

$$= 5 \times 140 : 6 \times 105 : 7 \times 84 : 8 \times 70 : 9 \times 60$$

$$= 700 : 630 : 588 : 560 : 540$$

$$= 350 : 315 : 294 : 280 : 270$$

अतः विकल्प C सही उत्तर है।

75. C

Sol. दिया गया है:

रविवार सुबह 11 बजे दो घड़ियों को समक्रमिक किया गया,

अब, सुबह 11 बजे घड़ियों में समय शुक्रवार को वास्तविक समय (रविवार से 5 दिन),

$$\text{पहली घड़ी} = \text{सुबह } 11 \text{ बजे} + 5 \text{ मिनट} = \text{सुबह } 11:05 \text{ बजे}$$

$$\text{दूसरी घड़ी} = \text{सुबह } 11 \text{ a.m.} - 5 \text{ मिनट} = \text{सुबह } 10:55 \text{ बजे}$$

पहली घड़ी में वास्तविक समय शुक्रवार को सुबह 11:05 बजे से, 10 बजे मध्याह्न तक जाता है

$$\text{शुक्रवार को} = \frac{10 \text{ pm} - 11:05 \text{ am}}{24 \text{ h}} \times \frac{1440}{1441}$$

$$= \frac{10 \text{ घं 55 मिनट}}{24 \text{ h}} \times \frac{1440}{1441}$$

$$= \frac{655}{1440} \times \frac{1440}{1441}$$

$$= \frac{5}{11} \text{ मिनट}$$

इस अवधि में दूसरी घड़ी तक उतना ही समय नष्ट हो जाएगा।

इसलिए, दूसरी घड़ी द्वारा दिखाया गया समय जब पहली घड़ी अगले शुक्रवार को रात 10 बजे दिखाई देती है = 10 मध्याह्न - 5 मिनट - $\frac{5}{11}$ मिनट = 9 घंटे $49\frac{1}{11}$ मिनट मध्याह्न।

अतः विकल्प C सही उत्तर है।

76. D

Sol. • एंगस्ट्रॉम प्रकाश की तरंग दैर्घ्य को मापने की इकाई है।

• प्रकाश की तरंगदैर्घ्य प्रकाश तरंग के दो क्रमागत शिखरों या गर्तों के बीच की दूरी है।

- यह संचरित और स्थायी दोनों तरंगों का गुण है।
- डाइन, सीजीएस प्रणाली की इकाइयों में निर्दिष्ट बल की एक व्युत्पन्न इकाई है।
- इसे पहली बार 1873 में बल की सीजीएस इकाई के रूप में प्रस्तावित किया गया था।
- केंडेला चमकदार तीव्रता की आधार इकाई है और इसका उपयोग प्रकाश स्रोतों की दृश्य तीव्रता को मापने के लिए किया जाता है।
- फैराड विद्युत धारिता की एसआई व्युत्पन्न इकाई है।

77. C

Sol. • एलई वाटरमैन ने केशिका (कैपिलरी) फीड फाउंटेन पेन का आविष्कार किया।

- उनके पास कई फाउंटेन पेन पेटेंट थे और वे वाटरमैन पेन कंपनी के संस्थापक थे।
- उन्हें 2006 में नेशनल इन्वेंटर्स हॉल ऑफ फ्रेम में शामिल किया गया था।
- डेविड ह्यूजेस प्रिंटिंग टेलीग्राफ और माइक्रोफोन पर अपने काम के लिए जाने जाते थे।
- इयान डोनाल्ड गर्भावस्था में असामान्यताओं की दृश्य खोज को सक्षम करने, प्रसूति में अल्ट्रासाउंड के नैदानिक उपयोग को अग्रणी बनाने के लिए सबसे उल्लेखनीय थे।
- अल्फ्रेड नोबेल को उनके डायनामाइट और विस्फोटक यंत्र के आविष्कार के लिए जाना जाता है।

78. C

Sol. • गंगा-ब्रह्मपुत्र डेल्टा विश्व का सबसे बड़ा डेल्टा है।

- यह एशिया में स्थित है जहाँ गंगा और ब्रह्मपुत्र नदियाँ बंगाल की खाड़ी में गिरती हैं।
- यह तीन वृहत नदियों: गंगा, ब्रह्मपुत्र और मेघना, का बाढ़ क्षेत्र है।
- यह विश्व के सबसे उपजाऊ क्षेत्रों में से एक है और यह विश्व के सबसे धनी आबादी वाले क्षेत्रों में से एक है।
- राइन-स्यूज डेल्टा नीदरलैंड में राइन और स्यूज के संगम द्वारा गठित एक नदी डेल्टा है।
- अमेझॉन डेल्टा उत्तरी दक्षिण अमेरिका में अमेझॉन नदी और टोकैंटिन (Tocantin) नदी द्वारा गठित एक विशाल नदी डेल्टा है।

79. A

Sol. • ऋषि सिंह घेरवाल ने 'कुंडलिनी: द मदर ऑफ द यूनिवर्स' पुस्तक लिखी, जिसमें 'ललिता सहस्रनाम' का अंग्रेजी अनुवाद शामिल है।

- ललिता सहस्रनाम ब्रह्माण्ड पुराण का एक हिंदू ग्रंथ है।

- यह देवी ललिता देवी के हिंदू उपासकों के लिए एक पवित्र ग्रन्थ है।
- रवींद्रनाथ टैगोर साहित्य के नोबेल पुरस्कार से सम्मानित होने वाले पहले गैर-यूरोपीय लेखक थे।
- विक्रम सेठ सबसे प्रसिद्ध भारतीय उपन्यासकारों और कवियों में से हैं।
- डॉ. एस राधा कृष्णन ने भारत के दूसरे राष्ट्रपति और भारत के पहले उपराष्ट्रपति के रूप में कार्य किया।

80. B

Sol. • भारत के संविधान का भाग XI संघ और राज्यों के बीच संबंधों से संबंधित है।

- भारतीय संविधान के भाग VII को पहली अनुसूची के भाग B में राज्यों के रूप में जाना जाता है।
- यह संघ और राज्यों के बीच शक्तियों और कार्यों के आवंटन को परिभाषित और निर्दिष्ट करता है।
- भारत के संविधान का भाग VIII केंद्र शासित प्रदेशों से संबंधित है।
- भाग IX में 3 स्तरीय पंचायत प्रणाली का प्रावधान है, जो प्रत्येक राज्य में ग्राम स्तर, मध्यवर्ती स्तर और जिला स्तर पर गठित की जाएगी।

81. D

Sol. • योजना आयोग की स्थापना 1950 में भारत सरकार के एक कार्यकारी निर्णय द्वारा की गई थी।

- यह भारत सरकार की एक संस्था थी, जिसने अन्य कार्यों के साथ-साथ भारत की पंचवर्षीय योजनाएँ तैयार कीं।
- यह मार्च 1950 में भारत सरकार के संकल्प द्वारा गठित एक अतिरिक्त-संवैधानिक और गैर-सांविधिक निकाय था।
- यह आर्थिक विकास के कई मुद्दों पर भारत सरकार का एक सलाहकार निकाय था।
- यह भारत में सामाजिक और आर्थिक विकास के लिए पंचवर्षीय योजना तैयार करने के लिए जिम्मेदार है।

82. C

Sol. • कुलदीप नैयर 'बियॉन्ड द लाइन्स' पुस्तक के लेखक हैं।

- वह भारत के सबसे प्रसिद्ध और व्यापक रूप से सिंडिकेटेड पत्रकार हैं।
- बियॉन्ड द लाइन्स पुस्तक स्वतंत्रता के बाद की भारतीय राजनीति का एक बड़ा लेखा-जोखा है कि: क्या सही हुआ और क्या गलत।
- उपर ख्याम घन समीकरणों के वर्गीकरण और समाधान पर अपने काम के लिए सबसे उल्लेखनीय हैं।
- वी. वी. गिरी निर्दलीय उम्मीदवार के रूप में चुने जाने वाले एकमात्र राष्ट्रपति थे।

- वह 13 मई 1967 से 3 मई 1969 तक भारत के तीसरे उपराष्ट्रपति थे।

83. D

Sol. • फिल्म निर्माता उत्पल बोरपुजारी की डॉक्यूमेंट्री, 'सॉन्स ऑफ द ब्लू हिल्स' नागा जनजातियों के लोकगीतों और संस्कृति पर आधारित है।

- यह एक नया वृत्तचित्र है जो समकालीन नागा लोक संगीत की खोज करता है जो पांच अंतरराष्ट्रीय समारोहों का दौरा कर रहा है।
- उत्पल बोरपुजारी, डबल राष्ट्रीय फिल्म पुरस्कार विजेता; एक फिल्म समीक्षक के रूप में और दूसरा फिल्मकार के रूप में, हैं।
- नागालैंड भारत में पूर्वांचल हिमालय पर्वत शृंखला के परम सौंदर्य में से एक है।
- यह प्रकृति, झीलों, नदियों, झारनों, सुलभ पर्वत चोटियों और घाटियों को समेटे हुए है।

84. D

Sol. • अर्थशास्त्र में EPF का अर्थ एम्प्लॉई प्रोविडेंट फंड है।

- यह भारत सरकार के शरम और रोजगार मंत्रालय के तहत वैधानिक निकाय है।
- यह भारत में भविष्य निधि के नियमन और प्रबंधन के लिए जिम्मेदार है।
- यह अन्य देशों के साथ सामाजिक सुरक्षा समझौतों का भी प्रबंधन करता है।
- यह निजी क्षेत्र में वेतनभोगी कर्मचारियों के लिए एक सेवानिवृत्ति लाभ योजना है।
- EPF योजना के तहत आने वाले कर्मचारी मूल वेतन का 12% और योजना के लिए महंगाई भत्ता का एक निश्चित योगदान करते हैं।

85. B

Sol. • ला लीगा ट्रॉफी (La Liga Trophy) का संबंध फुटबॉल से है।

- यह लीगा नैशनल डी फुटबॉल प्रोफेशनल द्वारा प्रशासित किया गया था।
- यह विश्व में किसी भी घरेलू पेशेवर खेल लीग का आठवां सबसे ऊंचा स्थान है।
- यह विश्व में किसी भी पेशेवर एसोसिएशन फुटबॉल लीग की तीसरी सबसे बड़ी लीग है।
- यह राजस्व के हिसाब से विश्व की छठी सबसे धनी पेशेवर खेल लीग भी है।
- ला लीगा विश्व स्तर पर सबसे लोकप्रिय पेशेवर खेल लीगों में से एक है।

86. B

Sol. • रऊफ और हिकत जम्मू और कश्मीर के नृत्य रूप हैं।

- रजुफ नृत्य मुस्लिम समुदाय का एक अत्यधिक प्रशंसित और अनुमोदित लोक नृत्य है।
- यह जम्मू और कश्मीर का एक पारंपरिक और लयबद्ध नृत्य है।
- यह कश्मीरी महिलाओं या लड़कियों द्वारा कश्मीर में अलग-अलग मौकों जैसे ईद, रमजान, फसल कटाई के मौसम में किया जाता है।
- हिकत नृत्य रूप लोक नृत्य का एक बहुत पुराना रूप है जो युवा लड़कियों द्वारा विवाह समारोहों में किया जाता है।
- यह नृत्य छोटे बच्चों द्वारा खेले जाने वाले खेलों का संशोधित रूप है।

87. D

Sol. • गुप्त वंश ने 320 ईस्वी से 550 ईस्वी के बीच भारत पर शासन किया।

- इतिहासकारों द्वारा इस काल को भारत का स्वर्ण युग माना जाता है।
- होयसल साम्राज्य भारतीय उपमहाद्वीप से उत्पन्न एक कन्नड़िगा शक्ति थी।
- यह दक्षिण भारत में कला, वास्तुकला और धर्म के विकास में महत्वपूर्ण काल था।
- मगध साम्राज्य ने भारत में 684 ईसा पूर्व - 320 ईसा पूर्व शासन किया और इसने जैन धर्म और बौद्ध धर्म के विकास में महत्वपूर्ण भूमिका निभाई।
- मौर्य साम्राज्य का गठन 321 ईसा पूर्व के आसपास हुआ और 185 ईसा पूर्व में समाप्त हुआ।
- मौर्य वंश के संस्थापक चंद्रगुप्त मौर्य हैं।

88. B

Sol. • 'पंडवानी' छत्तीसगढ़ की सबसे प्रसिद्ध लोककथा है।

- यह लोक गायन की एक शैली है जिसमें महाभारत की कहानियों का वर्णन शामिल है।
- यह ओडिशा और आंध्र प्रदेश के पड़ोसी आदिवासी क्षेत्रों में भी लोकप्रिय है।
- यह दर्शकों के मन में लगभग दृश्यों का निर्माण करते हुए बहुत ही जीवंत रूप में वर्णित है।
- झाड़ुराम देवांगन और तीजन बाई इस शैली की सबसे प्रसिद्ध गायिका हैं।

89. D

Sol. • भारतीय संविधान में संविधान के संशोधन की प्रक्रिया कनाडा से ली गई है।

- एक मजबूत केंद्र के साथ संघ, केंद्र के साथ अवशिष्ट शक्तियों का निहित होना, केंद्र द्वारा राज्यों के राज्यपालों की नियुक्ति जैसी विशेषता भी कनाडा से अंगीकार की गई है।
- आपातकाल के दौरान मौलिक अधिकारों का निलंबन जर्मनी से लिया गया है।
- भारत का संविधान विश्व का सबसे लंबा लिखित संविधान है।

एक मजबूत केंद्र के साथ संघ, केंद्र के साथ अवशिष्ट शक्तियों का निहित होना, केंद्र द्वारा राज्यों के राज्यपालों की नियुक्ति जैसी विशेषता भी कनाडा के संविधान से अंगीकार की गई है।

90. C

Sol. • पानीपत की पहली लड़ाई 1526 में लड़ी गई थी।

- यह बाबर की आक्रमणकारी सेना और लोटी वंश के बीच लड़ा गया था।
- यह उत्तर भारत में हुआ और मुगल साम्राज्य की शुरुआत व दिल्ली सल्तनत के अंत का प्रतीक था।
- यह भारतीय उपमहाद्वीप में बारुद की आगनेयास्तरों और फील्ड आर्टिलरी से जुड़ी सबसे शुरुआती लड़ाई में से एक थी।
- ऐसा अनुमान है कि बाबर की सेना की संख्या लगभग 15,000 थी और उसके पास 20 से 24 फील्ड आर्टिलरी थे।
- पानीपत की दूसरी लड़ाई 5 नवंबर 1556 को लड़ी गई थी और पानीपत की तीसरी लड़ाई 14 जनवरी 1761 को हुई थी।

91. D

Sol. • पाइरोमीटर का प्रयोग अत्यधिक उच्च तापमान को मापने के लिए किया जाता है।

- यह एक प्रकार का रिमोट-सेंसिंग थर्मोमीटर है जिसका उपयोग दूर की वस्तुओं के तापमान को मापने के लिए किया जाता है।
- इन्हें मोटेटौर पर दो श्रेणियों में वर्गीकृत किया जा सकता है:
 - ऑप्टिकल पाइरोमीटर
 - इन्फरारेड पाइरोमीटर
- मैनोमीटर एक प्रकार का उपकरण है जिसका उपयोग दबाव को मापने और इंगित करने के लिए किया जाता है।
- मैनोमीटर दो प्रकार के होते हैं:
 - एनालॉग

b) डिजिटल

- महासागर की गहराई को मापने के लिए फैदोमीटर का उपयोग किया जाता है।
- सैलिनोमीटर एक ऐसा उपकरण है जिसका उपयोग किसी विलयन की लवणता को मापने के लिए किया जाता है।

92. B

Sol. • तिल उत्तर भारत में खरीफ की फसल और दक्षिण भारत में रबी की फसल है।

- यह एक फलीदार फसल है और फूलों के पौधे, परिवार पेडलियासीए में लगभग 20 प्रजातियों के वंश है।
- ये पौधे खाद्य बीज के साथ वार्षिक या बारहमासी औषधि हैं।
- रागी एक वार्षिक धास से परिपूर्ण पौधा है जिसे व्यापक रूप से अनाज की फसल के रूप में उगाया जाता है।
- यह एक टेट्राप्लोइड और स्व-परागण प्रजाति है और यह इथियोपियाई और यह इथियोपियाई व युगांडा के हाइलैंड्स के मूल हैं।
- सूरजमुखी एक बड़े डेज़ी-जैसे फूल के मुख वाला वार्षिक पौधा है और ये प्रतिष्ठित, आसानी से विकसित होने वाले पौधे हैं जो हर राज्य में बागवानों द्वारा पसंद किए जाते हैं।
- गन्ना लंबी, बारहमासी धास की एक प्रजाति है जिसका उपयोग चीनी उत्पादन के लिए किया जाता है।

93. A

Sol. • सामवेद संगीत से संबंधित था।

- यह धुनों और मंत्रों का वेद है और इसने अनुवर्ती भारतीय संगीत के लिए महत्वपूर्ण नींव रखी।
- यह एक प्राचीन वैदिक संस्कृत पाठ है और हिंदू धर्म के शास्त्रों का हिस्सा है।
- ऋग्वेद सबसे पुराना ज्ञात वैदिक संस्कृत पाठ है और यह वैदिक संस्कृत भजनों का प्राचीन भारतीय संग्रह है।
- यजुर्वेद पूजा अनुष्ठानों के लिए मुख्य रूप से गद्य मंत्रों का वेद है।
- अथर्ववेद दैनिक जीवन की प्रक्रियाओं के लिए अथर्वों का ज्ञान भंडार है।

94. A

Sol. • हमारे शरीर में विटामिन K की कमी से रक्त का थक्का बनने में देरी होती है।

- यह एक महत्वपूर्ण पोषक तत्व है जो हड्डी और हृदय के स्वास्थ्य में महत्वपूर्ण भूमिका निभाता है।
- उच्च विटामिन K वाले सबसे आम खाद्य पदार्थ काएल, कोलार्ड साग, ब्रोकली, पालक, पत्तागोभी और सलाद पत्ता हैं।

- रत्तौंधी विटामिन A की कमी के कारण होती है और रत्तौंधी का एकमात्र लक्षण अंधेरे में देखने में कठिनाई है।
- स्कर्वी विटामिन C की कमी से होता है।
- यह एनीमिया, दुर्बलता, थकावट, सहज रक्तस्राव, अंगों और विशेष रूप से पैरों में दर्द, शरीर के कुछ हिस्सों में सूजन का कारण बन सकता है।

95. C

- Sol. • शिशु मृत्यु दर (या IMR) उस विशेष वर्ष में पैदा हुए 1000 जीवित बच्चों के अनुपात के रूप में 1 वर्ष की आयु से पहले मरने वाले बच्चों की संख्या को दर्शाता है।
- यह अपने प्रथम जन्मदिन से पहले शिशु की मृत्यु है।
 - यह समाज के समग्र स्वास्थ्य का एक महत्वपूर्ण मार्कर है।

- जनसंख्या के समग्र स्वास्थ्य को समझने में यह एक महत्वपूर्ण कारक है क्योंकि शिशु मृत्यु में योगदान करने वाले कई कारक जनसंख्या में सभी के स्वास्थ्य को भी प्रभावित करते हैं।
- शिशु मृत्यु दर के कई कारण हैं, जिनमें खराब स्वच्छता, खराब पानी की गुणवत्ता, मां और शिशु का कुपोषण, अपर्याप्त प्रसवपूर्व और चिकित्सा देखभाल शामिल हैं।

96. C

- Sol. • 'कोलकली' केरल के पारंपरिक लोक नृत्यों में से एक है।

- यह भारत के केरल के मालाबार क्षेत्र में प्रदर्शित एक लोक कला है।
- नृत्य कलाकार छोटे-छोटे डंडों को टकराते हुए और विशेष कदमों के साथ ताल रखते हुए एक घरे में चलते हैं।
- कोलकली की दो शैलियाँ हैं:

a) वास्तविक कोलकली

b) थेक्कन कोलकली

- यह पर्यटकों के बीच लक्ष्यीप के आकर्षणों में से एक बन गया।
- यह एक समूह नृत्य है और माना जाता है कि यह एक सहस्राब्दी से अधिक समय से अस्तित्व में है।

97. C

- Sol. • एडवर्ड जेनर ने चेचक के टीके की खोज की।

- चेचक का टीका एक संक्रामक बीमारी के खिलाफ विकसित होने वाला पहला टीका था।
- यह छोटी मात्रा में टीके युक्त एक द्विभाजित सुई से त्वचा को कई बार चुभाकर प्रशासित किया जाता है।
- लुई पाश्चर को आधुनिक जीवाणु विज्ञान के संस्थापकों में से एक और जीवाणु विज्ञान के जनक के रूप में माना जाता है।
- वह सहज पीढ़ी के सिद्धांत का खंडन करने के लिए उत्तरदायी था।
- एडवर्ड जेनर को बहुधा इम्यूनोलॉजी का जनक कहा जाता है।
- जोनास सॉल्क ने पोलियो के पहले सफल टीकों में से एक को विकसित किया।

98. B

Sol. ● अंजू बॉबी जॉर्ज एथलेटिक्स से संबंधित हैं।

- वह एथलेटिक्स में 6.70 मीटर की छलांग लगाते हुए विश्व चैंपियनशिप में पदक जीतने वाली पहली भारतीय एथलीट बनीं।
- उन्होंने मार्च 2021 में भारत में सर्वश्रेष्ठ एथलीट के लिए BBC लाइफटाइम अचीवमेंट अवार्ड जीता।
- वह वर्तमान में लक्ष्य ओलंपिक पोडियम योजना की अध्यक्ष हैं।
- वह भारत सरकार द्वारा स्थापित खेलो इंडिया परियोजना की कार्यकारी सदस्य भी हैं।
- निशानेबाजी एक ऐसा खेल है जिसमें शारीरिक और मानसिक दोनों तरह की तैयारी की जरूरत होती है।

99. C

Sol. ● भारतीय संविधान का अनुच्छेद 21 जीवन के अधिकार से संबंधित है।

- इसमें कहा गया है कि कानून द्वारा स्थापित प्रक्रिया के अनुसार किसी भी व्यक्ति को उसके जीवन या व्यक्तिगत स्वतंत्रता से वंचित नहीं किया जाएगा।
- यह जीवन के अधिकार और व्यक्तिगत स्वतंत्रता के अधिकार को सुरक्षित करता है।
- यह एक मौलिक अधिकार है और भारतीय संविधान के भाग-III में शामिल है।
- यह सभी नागरिकों के साथ-साथ गैर-नागरिकों के लिए समान रूप से उपलब्ध है और इसे मौलिक अधिकारों के केंद्र के रूप में वर्णित किया गया है।
- यह एक सम्मानजनक जीवन के अधिकार की गारंटी देता है और इसे किसी आपात स्थिति के दौरान निलंबित नहीं किया जा सकता है।

100. D

- Sol. • जलोढ़ मिट्टी उत्तरी मैदानों और नदी घाटियों में फैली हुई है और भारत के कुल क्षेत्रफल का लगभग 40% है।
- यह अपनी उच्च सरंधरता के कारण कम से कम पानी की आवश्यकता वाली सबसे अच्छी मिट्टी में से एक है।
 - इसमें नाइट्रोजन और ह्यूमस के न्यूनतम अनुपात के साथ बहुत नरम परतें होती हैं है लेकिन पर्याप्त मात्रा में फॉर्स्फेट होता है।
 - लाल मिट्टी में जलोढ़ की लाल परत पर टिकी हुई अत्यधिक निक्षालित मिट्टी की पतली कार्बनिक और कार्बनिक-खनिज परतें होती हैं।
 - लैटेराइट मिट्टी आयरन ऑक्साइड से भरपूर होती है और अत्यधिक ऑक्सीकरण और लीचिंग परिस्थितियों में अपक्षय वाली विभिन्न प्रकार की चट्टानों से प्राप्त होती है।
 - काली मिट्टी कपास, गन्ना, तंबाकू, गेहूं, बाजरा और तिलहन जैसी फसलों को उगाने के लिए बेहतर है।