



SSC MTS 2020 Tier I : 7

Oct S2

Mock Test Questions & Solutions

Mock Test Solutions in English

Questions

- Select the INCORRECTLY spelt word.
 - Emmigrate
 - Emphasis
 - Eminent
 - Emergency
 - Direction:** Select the most appropriate option to fill in the blank.
_____ he was feeling sick, he ate all the food.
 - In case
 - So that
 - Although
 - Because
 - Direction:** Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'.
There is no need to make changes in many part of this sentence as it is grammatically correct.
 - No substitution required
 - all
 - any
 - that
 - Select the INCORRECTLY spelt word.
 - Invite
 - Invalid
 - Inwoke
 - Inward
 - Direction:** Select the most appropriate meaning of the given idiom.
Babe in the woods
 - A wise old person
 - A young defenceless person
 - A pale and sickly person
 - A foolish and stupid person
 - Direction:** Select the most appropriate ANTONYM of the given word.
PROTECT
 - Harm
 - Cover
 - Keep
 - Secure
 - Direction:** Select the most appropriate word for the given group of words.

A disease causing a person to fall unconscious involuntarily

- A. Insomnia
- B. Senility
- C. Epilepsy
- D. Dementia

8. **Direction:** Select the most appropriate option to fill in the blank.

Dhyan Chand is _____ one of the greatest hockey players of all time.

- A. thought
- B. observed
- C. considered
- D. believed

9. **Direction:** Select the most appropriate synonym of the given word.

IMPLORE

- A. Refuse
- B. Answer
- C. Plead
- D. Apologize

10. **Direction:** Select the most appropriate option to fill in the blank.

She _____ a lot about her health problems.

- A. concerns
- B. troubles
- C. suffers
- D. worries

11. **Direction:** Identify the segment that contains a grammatical error. If there is no error, select 'No error'.

Penguins have very shorter wings.

- A. Penguins have
- B. wings
- C. No error
- D. very shorter

12. **Direction:** Select the most appropriate ANTONYM of the given word.

CONTENTED

- A. Thankful
- B. Pleased
- C. Comfortable
- D. Dissatisfied

13. **Direction:** Identify the segment that contains a grammatical error. If there is no error, select 'No error'.

The breakdown in power supply was causing by a defective transformer.

- A. The breakdown
- B. No error
- C. was causing by
- D. in power supply

ANXIETY

- A. Delight
- B. Worry
- C. Calmness
- D. Faith

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.

Soon after the visitors left the room, the artist came in. He was ready (1)_____ on the portrait. He had always hoped that (2)_____ portrait would bring him great acclaim. It (3)_____ turning out really well. A smile appeared on (4)_____ face as he thought of it. Then he (5)_____ to the canvas and uncovered it. He was shocked to see that somebody had scratched the entire painting with a knife.

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

- A. to work
- B. worked
- C. working
- D. work

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

- A. it
- B. that
- C. this
- D. these

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

- A. is
- B. was
- C. were
- D. are

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

- A. his
- B. their
- C. its
- D. her

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

- A. appeared
- B. arrived
- C. reached
- D. came

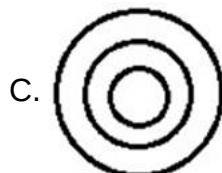
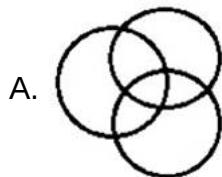
26. Which of the following numbers will replace the question mark (?) in the given series?

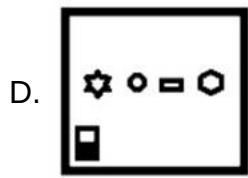
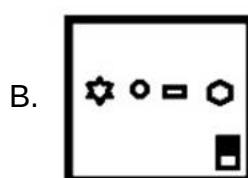
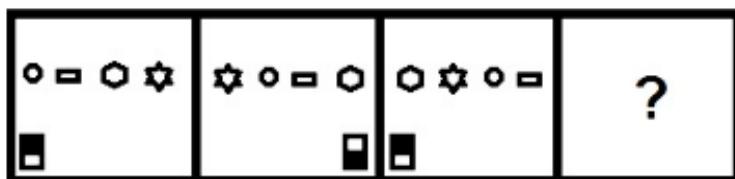
27, 29, 32, 37, 44, 55, 68, ?

- A. 85
- B. 71
- C. 80
- D. 90

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

Animals, Cattle, Cow





31. Which two numbers should be interchanged to make the given equation correct?

$$45 \div 5 \times 7 + 18 - 9 = 48$$

A. 45 and 9

C. 5 and 9

B. 9 and 7

D. 18 and 9

32. 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.

CROP : WVYJ :: NASTY :?

A. FAZKR

C. FAZHU

B. ZABHO

D. GABHV

33. Select the option figure in which the given figure (X) is embedded as its part (rotation is NOT allowed).



34. In a certain code language, 'ROSTED' is written as '91282054' and 'MYSTIC' is written as '14282093'. How will 'FLARED' be written in that language?

A. 2115011754

B. 6012261854

C. 2115261854

D. 2015260954

35. Which of the following numbers will replace the question mark (?) in the given series?

21, 26, 41, 76, 141, ?

A. 217

B. 203

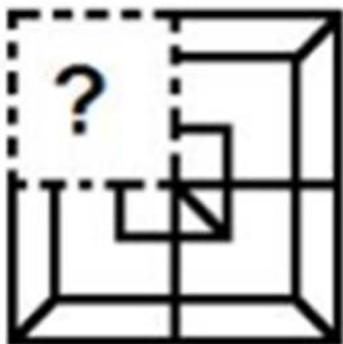
C. 177

D. 246

36. In a certain code language, 'FRINGE' is written as '61891475'. How will 'PLEASE' be written in that language?

- A. 111522119 B. 171512105
C. 161251195 D. 161251095

37. Select the option that will replace the question mark (?) in the figure given below to complete the pattern.



38. Study the given pattern carefully and select the number that can replace the question mark (?) in it.

28	45	22
20	36	?
64	81	16

Teacher · School · Nurse · ?

A. Hospital

C. Medicine

B. Treatment

D. Surgery

41. Two statements are given followed by three conclusions numbered I, II and III. 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:

No pen is a pencil.

All pencils are chalks.

Conclusions:

I. No chalk is a pen.

II. No pencil is a pen.

III. Some chalks are pencils.

A. Only conclusions I and III follow.

C. All of the conclusions follow.

B. Only conclusions II and III follow.

D. Only conclusions I and II follow.

42. If A denotes 'addition', B denotes 'multiplication', C denotes 'subtraction', and D denotes 'division', then what will be the value of the following expression?

17 C 12 A (6 B 4) D 8 A 15 D 5

A. 13

B. 21

C. 11

D. 17

43. 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 cars are buses.

Some cars are trucks.

Conclusions:

- I. Some trucks are cars.

II. Some buses are trucks.

A. Neither conclusion I nor II follows.

B. Both conclusions I and II follow.

C. Only conclusion II follows.

D. Only conclusion I follows.

44. Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.

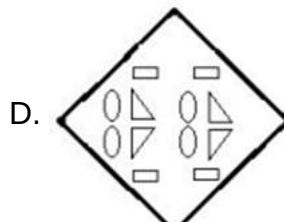
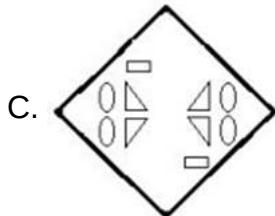
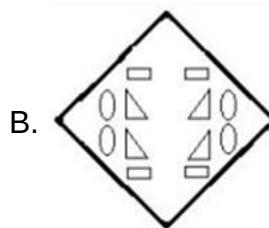
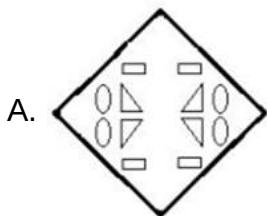
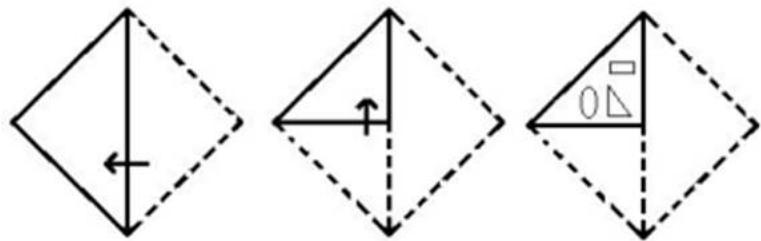


- A. **b f v v d b** B. **p t g v q b**
C. **p t g v v d b** D. **p t g v v q p**

45. In a certain code language, 'SERPENT' is written as 'RESPTNE'. How will 'CONTACT' be written in that language?

46. Seven girls A, B, C, D, E, F and G are sitting around a circular table facing the centre of the table. E is sitting between D and C. G is second to the right of E. A is third to the right of C. B is between A and D. A is second to the left of D. Who is at the third place to the right of F?

47. A paper is folded and cut as shown below. How will it appear when unfolded?



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

Complete : Unfinished :: Defeat : ?

- | | |
|-------------|------------|
| A. Sorrow | B. Victory |
| C. Opponent | D. Desire |

49. Which of the following letter-clusters will replace the question mark (?) in the given series?

HQMR, IRLQ, JSKP, KTJO, ?

- | | |
|---------|---------|
| A. LUIN | B. LUJO |
| C. MUJN | D. MUIO |

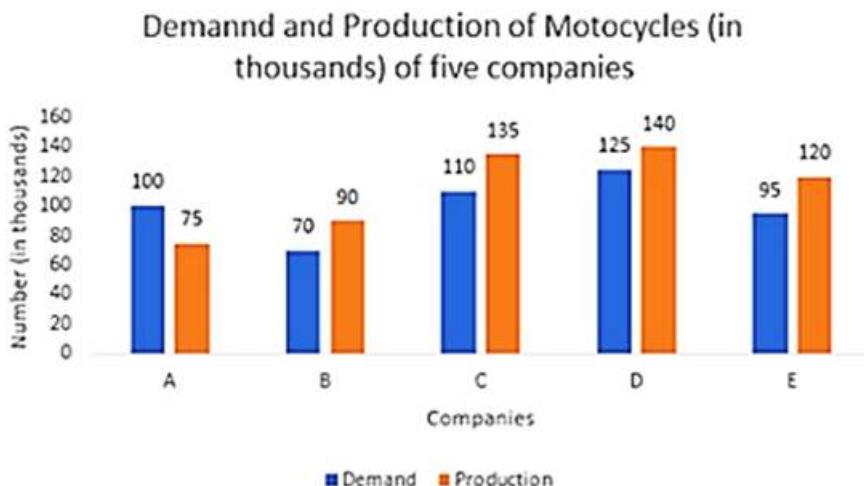
50. Select the option that is related to the third number in the same way as the second number is related to the first number.

11 : 242 :: 14 : ?

51. 15 men can do a job in 12 days and 18 women can do it in 15 days. How many days will 5 men and 3 women take to complete the job?
- A. $28\frac{5}{7}$ B. $25\frac{5}{7}$
C. $23\frac{5}{7}$ D. $27\frac{5}{7}$
52. If each side of a rectangle is increased by 12%, then by what percentage will its area increase?
- A. 12.65% B. 27.5%
C. 25.44% D. 18.54%
53. The profit earned by selling an article for ₹832 is equal to the loss incurred when the article is sold for ₹448. What should be the selling price (in ₹) for making 20% profit?
- A. 640 B. 768
C. 704 D. 720
54. A person sold an article at a loss of 7%. Had he sold it at a gain of 10.5%, he would have received ₹105 more. To gain 11%, he should have sold it (in ₹) for:
- A. 600 B. 666
C. 636 D. 642
55. The average of eleven numbers is 80. The average of the first four numbers is 74.5 and that of the next four numbers is 82.5. The ninth number is 6 more than the tenth number, and the tenth number is 6 less than the eleventh number. What is the average of the ninth and eleventh numbers?
- A. 87 B. 80
C. 86 D. 85
56. A can do one-fourth of a work in 5 days and B can do two-fifth of the work in 10 days. In how many days can both A and B together do the work?
- A. $12\frac{1}{9}$ B. $11\frac{1}{9}$
C. $13\frac{1}{9}$ D. $10\frac{1}{9}$
57. The least number which when divided by 15, 25, 35, 40 leaves remainders 10, 20, 30, 35, respectively, is:
- A. 4210 B. 4200
C. 4205 D. 4195
58. How much time (in years) will it take for an amount of ₹900 to yield ₹81 as interest at 4.5% per annum of

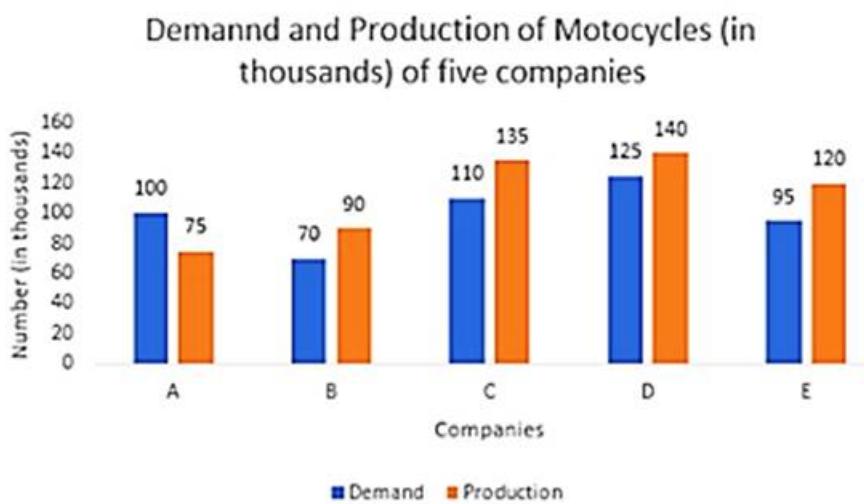
simple interest?

59. Study the following graph and answer the question that follows.



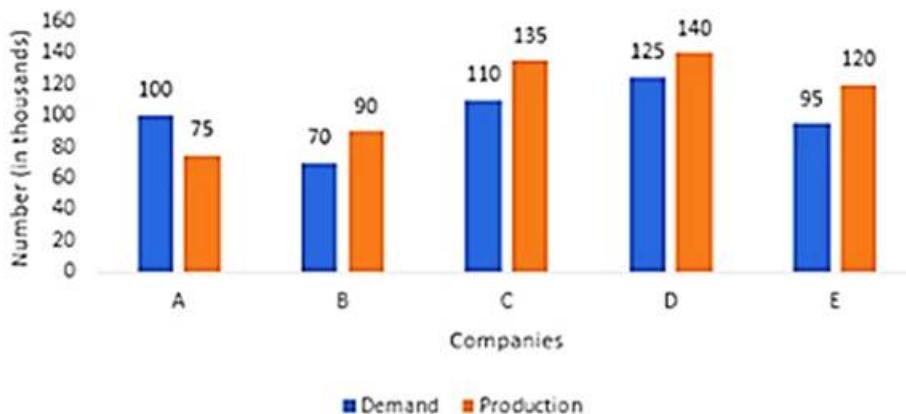
The company whose production of motorcycles is approximately 12% more than the demand is:

60. Study the following graph and answer the question that follows.



The average production of motorcycles of companies A, B and C is what percentage less than the demand of motorcycles of D?

Demand and Production of Motorcycles (in thousands) of five companies



The total production of motorcycles of companies B and E is what percentage of the demand of motorcycles of all the companies taken together?

77. Which of the following Union Ministries organises All India Whips' Conference to establish suitable links among the whips of various political parties at the centre and the states/union territories who are concerned with the practical working of the legislatures?
- A. Ministry of Home Affairs B. Ministry of Information and Broadcasting
C. Ministry of Parliamentary Affairs D. Ministry of Human Resource Development
78. Synthetic fibres catch fire easily. However, the uniforms of firemen have a coating of _____ plastic to make them flame resistant.
- A. nylon B. melamine
C. acrylic D. rayon
79. Who among the following is the author of the book 'The Testaments'?
- A. Jokha Alharthi B. Andrew Sean Greer
C. Anna Burns D. Margaret Atwood
80. Which of the following two nations will host the FIFA Women's World Cup 2023?
- A. Norway and Sweden B. Australia and New Zealand
C. The US and Canada D. Japan and South Korea
81. Which of the following are the cellular structures responsible for protein synthesis?
- A. Lysosomes B. Mitochondria
C. Golgi apparatus D. Ribosomes
82. Who among the following was elected as the President of the Indian National Congress in the year 1938 and 1939?
- A. Subhash Chandra Bose B. Dr. Rajendra Prasad
C. C Rajagopalachari D. Sardar Vallabhbhai Patel
83. The deficiency of Vitamin _____ causes Pellagra.
- A. B3 B. B6
C. B2 D. B12
84. Statistics Day of India is celebrated each year on 29 June to mark the birth anniversary of:
- A. KC Sreedharan Pillai B. CR Rao
C. Raghu Raj Bahadur D. PC Mahalanobis
85. Human Development Report is published by:
- A. United Nations Conference on Trade and Development B. United Nations Child and Education Fund

- C. United Nations Development Program D. United Nations Capital Development Fund
86. Which of the following ministries of the Government of India is the nodal Ministry for 'Garib Kalyan Rojgar Abhiyaan' launched in June 2020?
A. The Ministry of Rural Development B. The Ministry of Jal Shakti
C. The Ministry of Housing and Urban Affairs D. The Ministry of Labour and Employment
87. Which of the following teams won the inaugural Cricket World Cup in 1975?
A. East Africa B. Australia
C. England D. West Indies
88. As per the Constitution of India, what is the maximum number of states for which the same person can be appointed as Governor?
A. There is no limit B. One state
C. Two states D. Three states
89. Which of the following scripts is considered as the mother of all modern Indian scripts?
A. Harappan B. Brahmi
C. Devanagari D. Bengali-Assamese
90. Which of the following planets does NOT have any moon?
A. Saturn B. Venus
C. Uranus D. Jupiter
91. In which of the following states is Bishnupur, famous for terracotta temples, located?
A. Telangana B. Gujarat
C. West Bengal D. Meghalaya
92. Which of the following is the largest mangrove forest in the world?
A. Godavari-Krishna Mangroves B. Pichavaram Forest
C. Gulf of Panama Mangroves D. Sundarbans Reserve Forest
93. The All-India Muslim League was founded in 1906 at:
A. Lahore B. Bombay
C. Lucknow D. Dacca
94. Tsering Landol, who was one of the recipients of the Padma Bhushan 2020 award, hails from:
A. Sikkim B. Mizoram
C. Arunachal Pradesh D. Ladakh
95. Which of the following rivers flows into the Bay of Bengal?

A. Narmada

C. Tapi

B. Mahanadi

D. Indus

96. Which of the following Articles of the Constitution of India empowered the Parliament to provide by law for continued use of English for official purposes even after 25 January 1965?

A. Article 348 (2)

B. Article 348 (3)

C. Article 343 (3)

D. Article 343 (2)

97. Population Geography is a branch of _____.

A. Settlement Geography

B. Cultural Geography

C. Human Geography

D. Physical Geography

98. Which of the following texts gives the most detailed account of the history of Kashmir?

A. Ritusamhara

B. Rajatarangini

C. Abhijananashakuntalam

D. Meghadutam

99. With which of the following fields was Kishori Amonkar associated?

A. Indian classical music

B. Western music

C. Indian classical dance

D. Indian classical instrument

100. According to the UN Conference on Trade and Development (UNCTAD), India was the _____ largest recipient of Foreign Direct Investment (FDI) in the year 2019.

A. 7th

B. 8th

C. 9th

D. 10th

Solutions

1. A

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

“Emigrate” is the correct spelling of the incorrect word “Emmigrate”. It means to leave your own country to go and live permanently in another country.

The meaning of other words are:

Emphasis: special importance that is given to something

Eminent: famous and respected, especially in a particular profession

Emergency: a sudden serious and dangerous event or situation that needs immediate action to deal with it.

2. C

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

- *In case* = means because of the possibility of something happening.
- *So that* = means “in such a way that”
- *Although* = (conjunction) used for introducing a statement that makes the 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*” is used to state the possibility of something happening. Thus, option A is incorrect.

- “So that” shows the meaning of “in such a way that”. Thus, option B is incorrect.
- “Because” as a conjunction is used for showing the reason. Thus, option D is incorrect.
- “Although” as a relative pronoun is used for persons.
- Here in the given sentence, it is used for making the statement of “eating all food” surprising with “feeling sick”.

So, “Although” becomes the correct word to fill in the blank.

Thus, the correct sentence will be: **Although he was feeling sick, he ate all the food.**

3. C

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

- Underlined part needs correction in determiner.
- “Many” as a determiner is used with plural countable nouns.

For example:

Heavy rains in the city forced **many drivers** to abandon their vehicles.

- “Any” as a determiner is used with uncountable or plural nouns in negative sentences and questions

For example:

He abhors **any** form of **cruelty** towards dogs.

- The given sentence is a negative sentence because the word “No” is used.
- Also, the word “part” is uncountable. Thus, it is appropriate to use determiner “any” in place of “many”.

- So, “**any**” is the correct substitution.

Thus, the correct sentence will be: **There is no need to make changes in any part of this sentence as it is grammatically correct.**

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

4. C

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

“Invoke” is the correct spelling of the incorrect word “Inwoke”. It means to mention or use a law, rule etc. as a reason for doing something.

The meaning of other words are:

Invite: to ask someone to come to a social event.

Invalid: not legally or officially acceptable

Inward: towards the inside or center of something.

5. B

Sol. The idiom “**Babe in the woods**” means an innocent or naive person esp. one in a difficult or dangerous environment.

Example: An experienced member of our team is behaving like a **babe in the woods**.

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

6. A

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

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

E.g.: Our aim is to **protect** the jobs of our members.

Harm = to hurt or injure someone or to damage something.

E.g.: These allegations will **harm** her chances of winning the elections.

Cover = to place something over or in front of something in order to hide, protect it.

Keep = to continue to have something and not give it back or throw it away.

Secure = to obtain or achieve something esp. when this means using a lot of effort.

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

7. C

Sol. Insomnia: the condition of being unable to sleep

Senility: the condition of being senile (behaving in a confused or strange way)

Epilepsy: a disorder of the nervous system that cause a person to become unconscious suddenly, often with violent movements of body.

Dementia: a serious mental disorder caused by brain disease or injury that affects the ability to think, remember and behave normally.

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

8. C

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

- *Thought* = something that you think of or remember
- *Observed* = to see or notice someone/something.

- *Considered* = to think of someone/something in a particular way.
- *Believed* = to feel certain that something is true or that someone is telling you the truth.

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

- "*Thought*" is used in context of "remembering". Thus, option A is incorrect.
- "*Observed*" is used in context of "noticing something". Thus, option B is incorrect.
- "*Believed*" is used in context of "feel something as true". Thus, option D is incorrect.
- "*Considered*" is used in context of "think about someone in particular way".
- Here in the given sentence, "Dhyan Chand" is being thought in a particular way i.e. as "greatest players of all time".

So, "*Considered*" becomes the correct word to fill in the blank.

Thus, the correct sentence will be: **Dhyan Chand is considered one of the greatest hockey players of all time.**

9. C

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

Implore = to ask someone to do something in an anxious way because you want or need it very much

E.g.: Her beloved brother **implored** her to stay with family for at least two days.

Refuse = to say or show that you will not do something that someone has asked you to do

Answer = to say, write or do something as a reaction to a question or situation.

Plead = to ask someone for something in a very strong and serious way.

E.g.: He **pleaded** with her not to go.

Apologize = to say that you are sorry for doing something wrong or causing a problem.

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

10. D

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

- *Concerns* = to affect someone/something.
- *Troubles* = to make someone worried or upset.
- *Suffers* =to be badly affected by a disease, pain etc.
- *Worries* = to keep thinking about unpleasant things that might happen or about problems that you have.

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

- “*Concerns*” is used in context of “affecting someone” Thus, option A is incorrect.
- “*Troubles*” is used in context of “worry”. Thus, option B is incorrect.
- “*Suffers*” is used in context of “affected by disease”. Thus, option C is incorrect.
- “*Worries*” is used in context of “thinking about one’s problems”.
- Here in the given sentence, “She” is thinking a lot about her health problems.

So, “*Worries*” becomes the correct word to fill in the blank.

Thus the correct sentence will be: **She worries a lot about her health problems.**

11. D

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

- “Short” is an adjective and it means measuring or covering a small length or distance than usual.
- “Shorter” is the comparative degree. “Shortest” is the superlative degree.

For example:

She had a **short** curly hair.

Your next contract will be of **shorter** duration.

Which is the **shortest** day of the year?

- In the given sentence, we have used the comparative degree “shorter”. Comparative degree is used for comparison between two entities.
- But here, one entity (i.e. “Penguins”) is being talked about.
- Thus, there is a need of using a positive degree of adjective (i.e. smart) to qualify “wings” (a noun).
- Hence, “**very short**” is the correct substitution.

Thus, the correct sentence will be: **Penguins have very short wings.**

12. D

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

Contented = to accept and be satisfied with something and not try to have or do something better.

E.g.: She seemed more **content**, less bitter.

Thankful = pleased about something good that has happened or that something bad has not happened.

Pleased = feeling happy about something.

Comfortable = making you feel relaxed; pleasant to wear, sit on.

Dissatisfied = not happy or satisfied with someone/something

E.g.: Customers are requested to contact our customer care if they are **dissatisfied** with our services.

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

13. C

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

- In case of simple past tense,

The structures for active/passive voices are:

Active Voice: Subject + V2 + Object

Passive Voice: Object + was/were + Verb (V3 form) + by + Subject

For example:

They **opened** the shop.

The shop **was opened** by them.

- The given sentence is set in passive voice because here the actual doer of the action verb (“cause”) is not the subject.
- As per the passive verb structure, third form of verb should be used after the helping verb “was”.
- Thus, third form of the verb i.e. “caused” should be used in place of first form of verb “causing”.
- So, “**was caused by**” is the correct substitution.

The correct sentence will be: **The breakdown in power supply was caused by a defective transformer.**

14. D

Sol. Sprint: to run or swim a short distance very fast.

Rush: to move or to do something with great speed, often too fast.

Race: to compete against someone/something to see who can go faster or the fastest.

Pursue: to do something or try to achieve something over a period of time.

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

15. C

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

- “Keen to do something” is the correct phrase. It means wanting to do something or wanting something to happen very much.
- We can also say “Keen to do something”.

For example:

Ramesh was very **keen to** help.

- In the given sentence, preposition “to” should be used after the verb “keen”.
- Also, this way it forms an infinitive form i.e. “to + set” which is used to show the purpose of the verb “keen”.
- So, “**keen to set**” is the correct substitution.

Thus, the correct sentence will be: **He was keen to set an example for others.**

16. D

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

- Underlined part needs correction in helping verb.
- 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.

For example:

You are driving too fast on the road.

- In the underlined sentence, we need helping verb for the subject “You” (plural). Thus, plural helping verb “are” should be used.
- So, “**are not watching it**” is the correct substitution.

Thus, the correct sentence will be:

Switch off the television if you are not watching it.

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

17. B

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

- Underlined part needs correction in helping verb.
- 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.

For example:

I **was** surprised by the absence of any women on the board of directors.

- In the underlined sentence, we need helping verb for the subject “I” (singular) and also in accordance with the past tense.
- Thus, singular helping verb “was” should be used in plural helping verb “were”.
- So, “**was**” is the correct substitution.

Thus, the correct sentence will be: **They were not surprised by the results and nor was I.**

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

18. C

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

- *That* = (relative pronoun) is used when the noun (things, animals, persons) it refers is made specific by adding article “the” before it.
- *Whom* = (relative pronoun) is the objective case of “Who”.
- *Who* = (relative pronoun) is a subjective case used for persons.
- *Which* = (relative pronoun) is used for things.

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

- "That" as a relative pronoun is used for nouns that are specified. Thus, option A is incorrect.
- "Whom" is the objective case of "Who". Thus, option B is incorrect.
- "Which" as a relative pronoun is used for things. Thus, option D is incorrect.
- "Who" as a relative pronoun is used for persons.
- Here in the given sentence, it refers to the noun (antecedent) "Prem Chand".

So, "Who" becomes the correct word to fill in the blank.

Thus the correct sentence will be: **Prem Chand, who mainly wrote about rural India, was a great Hindi writer.**

19. C

Sol. The idiom "**Be all ears**" means to be waiting with interest to hear what someone has to say.

Example: Please narrate your story. I am **all ears**.

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

20. B

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

Anxiety = the state of feeling nervous or worried that something bad is going to happen

E.g.: Waiting for final results is an event of great **anxiety**.

Delight = a feeling of great pleasure

Worry =the state of worrying about something.

E.g.: Stress and **worry** increase the chances of having a heart attack.

Calmness = the quality of not being excited, nervous or upset.

Faith = trust in someone's ability or knowledge

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

21. A

Sol. The given passage is about "**Painting exhibition: Visitors and Artist**".

"Worked" is the third form of verb. Thus, option B is wrong.

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

"Work" is the first form of verb. Thus, option D is wrong.

"To work" is an infinitive form of verb. It is used to show the purpose.

Here in the given sentence, it shows the purpose of making the portrait.

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

22. C

Sol. The given passage is about "**Painting exhibition: Visitors and Artist**".

"It" as a pronoun is used to refer an animal or a thing that has already been mentioned. Thus, option A is wrong.

"That" as a determiner is used to refer to a person or thing that is not near the speaker or as near to the speaker as another. It is used for singular entities. Thus, option B is wrong.

"These" as a determiner is used to refer to a person or thing that is near the speaker or as near to the speaker as another. It is used for plural entities. Thus, option D is wrong.

"This" as a determiner is used to refer to a person or thing that is near the speaker or as near to the speaker as another.

It is used for singular entities.

Here in the given sentence, “portrait” is a singular entity.

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

23. B

Sol. The given passage is about “**Painting exhibition: Visitors and Artist**”.

“Is” is a singular helping verb and it is used in present tense. Thus, option A is wrong.

“Were” is a plural helping verb and it is used in past tense. Thus, option C is wrong.

“Are” is a plural helping verb and it is used in present tense. Thus, option D is wrong.

“Was” is a singular helping verb and it is used in past tense.

Here in the given sentence, it is used after the empty subject “It” and verb in such sentences (with empty subject) takes singular helping verb.

Also, note that whole paragraph is set in past tense.

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

24. A

Sol. The given passage is about “**Painting exhibition: Visitors and Artist**”.

“Their” is a possessive form of pronoun “They”. Thus, option B is wrong.

“Its” is a possessive form of pronoun “It”. Thus, option C is wrong.

“Her” is an objective case pronoun and used for feminine gender. Thus, option D is wrong.

“His” is a possessive form of pronoun “He”.

Here in the given sentence, it refers to the possession over “face” that belongs to “artist”.

Masculine gender of artist is evident from the usage of “his” after the filler.

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

25. D

Sol. The given passage is about “**Painting exhibition: Visitors and Artist**”.

“Appeared” means to start to be seen. Thus, option A is wrong.

“Arrived” means to get to a place. Thus, option B is wrong.

“Reached” means to arrive at the place that you have been travelling to. Thus, option C is wrong.

“Came” means to move to or towards a person/place/thing.

In the given sentence, it is used to mention that the “artist” move towards the “canvas”.

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

26. A

Sol. The pattern is as follows:

$$27 + 2 = 29$$

$$29 + 3 = 32$$

$$32 + 5 = 37$$

$$37 + 7 = 44$$

$$44 + 11 = 55$$

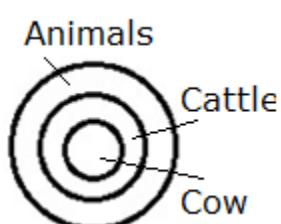
$$55 + 13 = 68$$

$$68 + 17 = 85$$

Hence, option A is the correct answer.

27. C

Sol. The given classes are best represented by the Venn-diagram as shown below:



Hence, option C is the correct answer.

28. D

Sol. As per the given information;

Poorvi
Lalit
Meenal
Varun
Vasu
Gaurav

Clearly, Lalit is sitting to the immediate left of Poorvi.

Hence, option D is the correct answer.

29. C

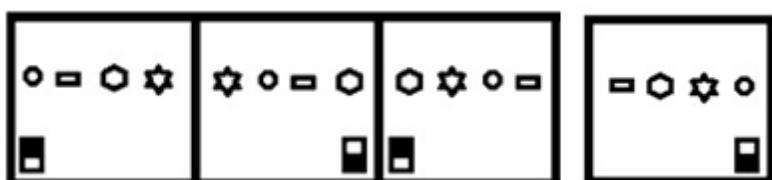
Sol. Given expressions: E > T = P > D > Q > Z = U

- A). U < D, true as per the given expressions as D > Q > Z = U
- B). Z < T, true as per the given expressions as T = P > D > Q > Z
- C). U > T, false as per the given expressions as T = P > D > Q > Z = U
- D). Q > U, true as per the given expressions as Q > Z = U

Hence, option C is the correct answer.

30. C

Sol. Logic: The last element is moving to the first place and rest of the elements moved to another place, the same pattern is repeating in other figures also the half-shaded rectangle is moving to and fro motion.



Hence, option C is the correct answer.

31. C

Sol. By checking all the options we get;

A). $9 \div 5 \times 7 + 18 - 45 = 48$

$\rightarrow 30.6 - 45 = 48$ (incorrect)

B). $45 \div 5 \times 9 + 18 - 7 = 48$

-> $92 = 48$ (incorrect)

C). $45 \div 9 \times 7 + 18 - 5 = 48$

-> $48 = 48$ (correct)

D). $45 \div 5 \times 7 + 9 - 18 = 48$

-> $54 = 48$ (incorrect)

Hence, option C is the correct answer.

32. C

Sol. The pattern is as follows:

3	18	15	16
C	R	O	P
+7	+7	+7	+7
J	Y	V	W

\downarrow \downarrow \downarrow \downarrow

10 25 22 23

Now reverse the letter order so it will become: WVYJ

Similarly,

14	1	19	20	25
N	A	S	T	Y
+7	+7	+7	+7	+7
U	H	Z	A	F

\downarrow \downarrow \downarrow \downarrow \downarrow

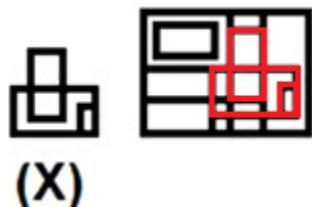
21 8 26 27 32

Now reverse the letter order so it will become: FAZHU

Hence, option C is the correct answer.

33. B

Sol. The given figure is perfectly embedded in the option figure (B) as shown below;



Hence, option B is the correct answer.

34. C

Sol. Logic: the coded number of first three letter is the place value of the opposite letter of the respective letter, and the coded number of the last three letters is the place value of that letter.

R	O	S	T	E	D
I	L	H			
9	12	8	20	5	4

Similarly,

M	Y	S	T	I	C
N	B	H			
14	2	8	20	9	3

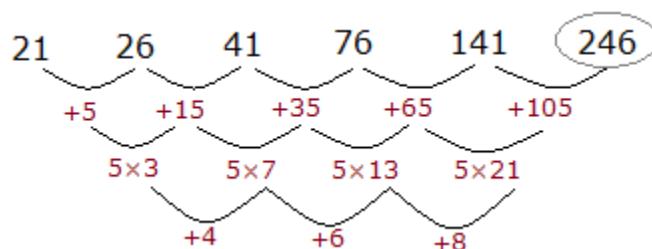
Therefore;

F	L	A	R	E	D
I					
21	15	26	18	5	4

Hence, option C is the correct answer.

35. D

Sol. The pattern is as follows:



Hence, option D is the correct answer.

36. C

Sol. The pattern is as follows; the coded number is the exact place value of the respective letter as per Alphabetical series.

F	R	I	N	G	E
6	18	9	14	7	5

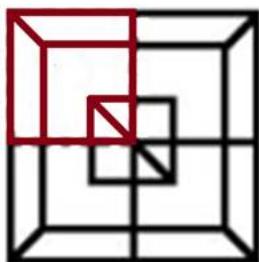
Similarly,

P	L	E	A	S	E
16	12	5	1	19	5

Hence, option C is the correct answer.

37. D

Sol. The figure given in option (D) will complete the given figure;



Hence, option D is the correct answer.

38. C

Sol. The pattern is as follows;

$$\text{Column I: } 28 - 20 = 8; 8 \times 8 = 64$$

$$\text{Column II: } 45 - 36 = 9; 9 \times 9 = 81$$

$$\text{Column III: } 22 - 18 = 4; 4 \times 4 = 16$$

Hence, option C is the correct answer.

39. D

Sol. Logic; the coded letter is the opposite letter of the respective letter as per Alphabetical order.

Letter	P	O	U	R
Opposite letter	K	L	F	I

Similarly,

Letter	P	R	O	J	E	C	T
Opposite letter	K	I	L	Q	V	X	G

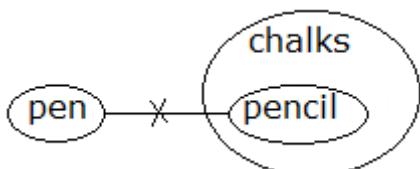
Hence, option D is the correct answer.

40. A

Sol. A teacher teaches in school, likewise a nurse works in a hospital.
Hence, option A is the correct answer.

41. B

Sol. The least possible Venn-diagram will be;



Conclusions:

- I. No chalk is a pen – It is not a definite case, hence false.
- II. No pencil is a pen – It is a definite case, hence true.
- III. Some chalks are pencils – It is a definite case, hence true.

Only conclusion II and III follow.

Hence, option B is the correct answer.

42. C

Sol. Given is:

A	B	C	D
+	\times	-	\div

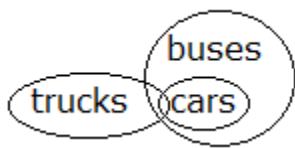
Thus, the expression becomes;

$$\begin{aligned}& \rightarrow 17 - 12 + (6 \times 4) \div 8 + 15 \div 5 \\& \rightarrow 17 - 12 + 24 \div 8 + 3 \\& \rightarrow 17 - 12 + 3 + 3 \\& \rightarrow 5 + 6 = 11\end{aligned}$$

Hence, option C is the correct answer.

43. B

Sol. The least possible Venn-diagram will be;



Conclusions:

- I. Some trucks are cars – It is a definite case, hence true.
- II. Some buses are trucks - It is a definite case, hence true.

Both conclusions I and II follow.

Hence, option B is the correct answer.

44. C

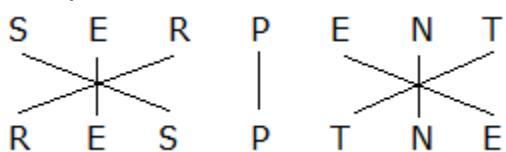
Sol. The correct mirror image is:



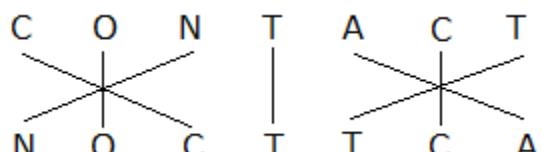
Hence, option C is the correct answer.

45. D

Sol. The pattern is as follows;



Similarly,



Hence, option D is the correct answer.

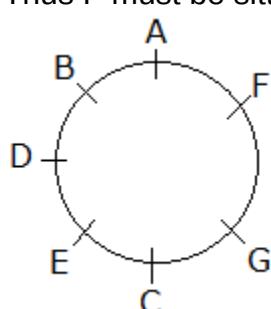
46. B

Sol. As the given information;

- 1). A is third to the right of C.

- 2). A is second to the left of D.
- 3). B is between A and D.
- 4). E is sitting between D and C.
- 5). G is second to the right of E.

Thus F must be sitting immediate right of G.

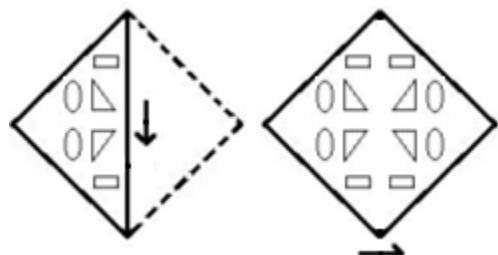


Clearly, D is at the third place to the right of F.

Hence, option B is the correct answer.

47. A

Sol. When the piece of paper is unfolded it will appear as;



Hence, option A is the correct answer.

48. B

Sol. The given word pair are the opposite words.

Complete is opposite word of Unfinished.

Similarly,

Defeat is the opposite word of Victory.

Hence, option B is the correct answer.

49. A

Sol. The pattern is as follows;

+1 { H +1 { Q -1 { M -1 { R
+1 { I +1 { R -1 { L -1 { Q
+1 { J +1 { S -1 { K -1 { P
+1 { K +1 { T -1 { J -1 { O
+1 { L +1 { U -1 { I -1 { N

Hence, option A is the correct answer.

50. B

Sol. The pattern is as follows;

$$11 \times 11 = 121 \times 2 = 242$$

Similarly,

$$14 \times 14 = 196 \times 2 = 392$$

Hence, option B is the correct answer.

51. B

Sol. Let efficiency of one man = M unit/day

Efficiency of one woman = W unit/day

We know that

$$\text{Total work} = \text{Efficiency} \times \text{Time taken}$$

15 men can do a job in 12 days and 18 women can do it in 15 days.

$$\Rightarrow 15M \times 12 = 18W \times 15$$

$$\Rightarrow 2M = 3W$$

$$\Rightarrow M = \frac{3}{2}W$$

Let 5 men and 3 women can complete the job in x days.

$$\Rightarrow (5M + 3W) \times x = 18W \times 15$$

$$\Rightarrow \left[5\left(\frac{3}{2}W\right) + 3W \right] \times x = 18W \times 15$$

$$\Rightarrow \left[\frac{15}{2}W + 3W \right] \times x = 18W \times 15$$

$$\Rightarrow \left[\frac{21}{2}W \right] \times x = 18W \times 15$$

$$\Rightarrow x = \frac{540}{21} = \frac{180}{7} = 25\frac{5}{7} \text{ days}$$

Hence, 5 men and 3 women can complete the job in $25\frac{5}{7}$ days.

52. C

Sol. Let length of rectangle = x unit

Breadth of rectangle = y unit

Area of rectangle = xy sq. unit

Each side of a rectangle is increased by 12%.

Resultant length of rectangle = $x + \frac{12x}{100} = \frac{112x}{100}$ unit

Resultant breadth of rectangle = $y + \frac{12y}{100} = \frac{112y}{100}$ unit

$$\text{Resultant area of rectangle} = \left(\frac{112x}{100}\right)\left(\frac{112y}{100}\right) = \frac{12544}{10000} xy \text{ sq. unit}$$

Percentage increment in area =

$$\frac{\frac{12544}{10000}xy - xy}{xy} \times 100 = \frac{12544xy - 10000xy}{10000xy} \times 100 = \frac{2544}{100} = 25.44\%$$

53. B

Sol. Let cost price of article = Rs. x

The profit earned by selling an article for ₹832 is equal to the loss incurred when the article is sold for ₹448.

$$\begin{aligned} \Rightarrow 832 - x &= x - 448 \\ \Rightarrow 2x &= 1280 \\ \Rightarrow x &= 640 \end{aligned}$$

Cost price of article = Rs. 640

If profit = 20%

$$\text{Selling price of article} = 640 \times \frac{120}{100} = \text{Rs.} 768$$

54. B

Sol. Let cost price of article = 100 unit

A person sold an article at a loss of 7%.

$$\text{Selling price of article} = 100 - 100 \times \frac{7}{100} = 93 \text{ unit}$$

Had he sold it at a gain of 10.5%, he would have received ₹105 more.

If gain is 10.5% then Selling price of article =

$$100 \text{ unit} + 100 \times \frac{10.5}{100} = 110.5 \text{ unit}$$

According to question:

$$\Rightarrow 110.5 \text{ unit} - 93 \text{ unit} = \text{Rs. } 105$$

$$\Rightarrow 17.5 \text{ unit} = \text{Rs. } 105$$

$$\Rightarrow 1 \text{ unit} = \text{Rs. } 6$$

$$\Rightarrow 100 \text{ unit} = \text{Rs. } 600$$

Hence, Cost price of article = Rs. 600

If gain = 11%

$$\text{Selling price of article} = 600 + 600 \times \frac{11}{100} = \text{Rs. } 666$$

55. C

Sol. The average of eleven numbers is 80.

We know that

$$\text{Sum of observation} = \text{Average} \times \text{Total number of observation}$$

Sum of 11 numbers = $11 \times 80 = 880$

The average of the first four numbers is 74.5 and that of the next four numbers is 82.5.

Sum of first eight numbers = $4 \times 74.5 + 4 \times 82.5 = 298 + 330 = 628$

Sum of last three numbers = $880 - 628 = 252$

The ninth number is 6 more than the tenth number, and the tenth number is 6 less than the eleventh number.

Let 10th number = x

9th number = x + 6

11th number = x + 6

Now, $x+6 + x + x+6 = 252$

$$\Rightarrow 3x + 12 = 252$$

$$\Rightarrow 3x = 240$$

$$\Rightarrow x = 80$$

$$\Rightarrow 9^{\text{th}} \text{ number} = 86$$

$$\Rightarrow 11^{\text{th}} \text{ number} = 86$$

$$\frac{86+86}{2} = 86$$

Now, Average of the ninth and eleventh numbers =

56. B

Sol. A can do one-fourth of a work in 5 days

Number of days taken by A to complete the work = $5 \times 4 = 20$ days

B can do two-fifth of the work in 10 days.

$$10 \times \frac{5}{2} = 25 \text{ days}$$

Number of days taken by B to complete the work =

Let total work = LCM (20,25) = 100 unit

$$\text{Efficiency of A} = \frac{100}{20} = 5 \text{ unit/day}$$

$$\text{Efficiency of B} = \frac{100}{25} = 4 \text{ unit/day}$$

Efficiency of A and B together = $5 + 4 = 9$ unit/day

$$\text{Number of days taken by A and B together to complete the whole work} = \frac{100}{9} = 11\frac{1}{9} \text{ days}$$

57. D

Sol. We are interested in finding out the least number which when divided by 15, 25, 35, 40 leaves remainders 10, 20, 30, 35 respectively.

Clearly, $15 - 10 = 25 - 20 = 35 - 30 = 40 - 35 = 5$

Therefore, Required number = LCM (15,25,35,40) – 5

$$15 = 5 \times 3$$

$$25 = 5 \times 5$$

$$35 = 5 \times 7$$

$$40 = 5 \times 2 \times 2 \times 2$$

$$\text{LCM} (15,25,35,40) = 5 \times 5 \times 3 \times 7 \times 2 \times 2 \times 2 = 4200$$

Hence, Required number = LCM (15,25,35,40) – 5 = 4200 – 5 = 4195

58. D

Sol. Simple Interest = Rs. 81

Principal = Rs. 900

Rate of interest = 4.5%

$$\text{Simple Interest} = \frac{\text{Principal} \times \text{Rate} \times \text{time}}{100}$$

$$\Rightarrow 81 = \frac{900 \times 4.5 \times t}{100}$$

$$\Rightarrow t = \frac{81}{9 \times 4.5} = 2 \text{ years}$$

Hence, Time taken = 2 years

59. A

Sol. Consider option A:

Production of motorcycles of company D = 140

Demand of motorcycles of company D = 125

% by which production of motorcycles is more than the demand =

$$\frac{140 - 125}{125} \times 100 = \frac{1500}{125} = 12\%$$

Hence, Company D's production of motorcycles is approximately 12% more than the demand.

60. A

Sol. Average production of motorcycles of companies A, B and C =

$$\frac{75 + 90 + 135}{3} = \frac{300}{3} = 100$$

Demand of motorcycles of D = 125

$$\text{Required percentage} = \frac{125 - 100}{125} \times 100 = 20\%$$

61. D

Sol. Let income of B be Rs. 100.

Income of A is 50% more than that of B.

$$\text{Income of A} = \text{Rs. } 100 + \frac{50}{100} \times 100 = 100 + 50 = \text{Rs. } 150$$

Combined income of A and B = Rs. 100 + Rs. 150 = Rs. 250

If the income of A is increased by 40% and the income of B is increased by 30%

$$\text{Resultant income of B} = \text{Rs. } 100 + \frac{30}{100} \times 100 = 100 + 30 = \text{Rs. } 130$$

$$\text{Resultant income of A} = \text{Rs. } 150 + \frac{40}{100} \times 150 = 150 + 60 = \text{Rs. } 210$$

Resultant combined income of A and B = Rs. 130 + Rs. 210 = Rs. 340

$$\text{Required percentage} = \frac{340 - 250}{250} \times 100 = \frac{9000}{250} = 36\%$$

62. A

Sol. Mode = 7.52

Median = 9.06

We know that:

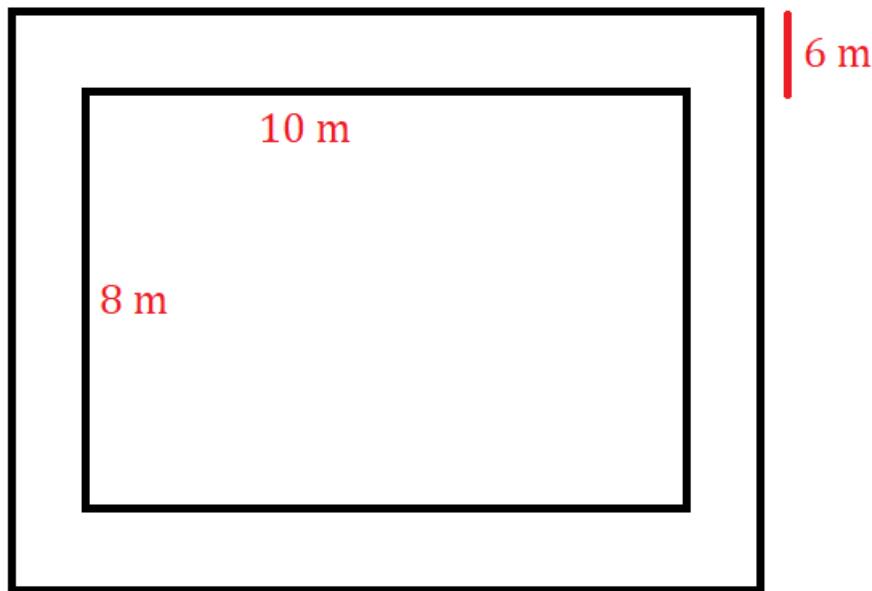
Mode = 3 Median – 2 Mean

$$\Rightarrow 7.52 = 3 \times 9.06 - 2 \times \text{Mean}$$

$$\Rightarrow \text{Mean} = \frac{\frac{27.18 - 7.52}{2}}{2} = \frac{19.66}{2} = 9.83$$

63. D

Sol. A path 6 m wide runs around and outside of a rectangular plot of length 10 m and breadth 8 m.



$$\text{Area (in } \text{m}^2\text{) of the path} = (10+6+6) \times (8+6+6) - 10 \times 8 = 22 \times 20 - 80 = 360 \text{ m}^2$$

64. A

Sol. We know that for a constant distance, speed is inversely proportional to the time taken.

Speeds of three cars are in the ratio of 3 : 4 : 8.

Ratio of the time taken by these cars for travelling the same distance =

$$\frac{1}{3} : \frac{1}{4} : \frac{1}{8} = \frac{24}{3} : \frac{24}{4} : \frac{24}{8} = 8 : 6 : 3$$

65. A

Sol. A dealer bought an article at 10% discount on its marked price and sold it at a price which is 20% above the marked price.

Let marked price of article = Rs. 100

A dealer bought an article at 10% discount on its marked price.

$$\text{Cost price of article} = 100 - 100 \times \frac{10}{100} = 100 - 10 = \text{Rs. 90}$$

He sold it at a price which is 20% above the marked price.

$$\text{Selling price of article} = 100 + 100 \times \frac{20}{100} = 100 + 20 = \text{Rs. 120}$$

$$\text{Gain \%} = \frac{120 - 90}{90} \times 100 = 33\frac{1}{3}\% \approx 33\%$$

66. A

Sol. Excluding stoppages, the speed of a bus is 60 km/h and including stoppages, it is 51 km/h.

Excluding stoppages, distance covered by bus in 60 minutes = 60 km

Including stoppages, distance covered by bus in 60 minutes = 51 km

Number of minutes bus stopped per hour = $60 - 51 = 9$ minutes.

67. C

Sol. Total number of students in class A and B = 92

The number of students in A is 30% more than that in B.

$$\Rightarrow A = B + \frac{30B}{100} = \frac{13B}{10}$$

$$\text{Now, } A + B = 92$$

$$\begin{aligned}\Rightarrow \frac{13B}{10} + B &= 92 \\ \Rightarrow 23B &= 920 \\ \Rightarrow B &= 40\end{aligned}$$

$$\text{Hence, } A = 92 - B = 92 - 40 = 52$$

Average weight of all the students in A and B is 56 kg

$$\text{Sum of weight of all the students in A and B} = 56 \times 92 = 5152 \text{ kg}$$

Let average weight (in kg) of students in A = x kg

Let average weight (in kg) of students in B = y kg

The average weight (in kg) of students in B is 50% more than that of students in A.

$$y = x + \frac{50x}{100} = \frac{3}{2}x$$

Now, $52x + 40y = 5152$ kg

$$\begin{aligned} & \Rightarrow 52x + 40\left(\frac{3}{2}x\right) = 5152 \text{ kg} \\ & \Rightarrow 112x = 5152 \\ & \Rightarrow x = 46 \end{aligned}$$

$$\text{Now, } y = \frac{3}{2}(46) = 69 \text{ kg}$$

Hence, average weight (in kg) of students in B = 69 kg

68. B

Sol. The ratio of the present ages of A and B is 6 : 5.

Let present age of A = 6x

Present age of B = 5x

Four years ago, this ratio was 5 : 4.

According to question:

$$\begin{aligned}\Rightarrow \frac{6x-4}{5x-4} &= \frac{5}{4} \\ \Rightarrow 24x-16 &= 25x-20 \\ \Rightarrow x &= 4\end{aligned}$$

Present age of A = 24 years

Present age of B = 20 years

Ratio of the ages of A and B after ten years = $(24+10) : (20+10) = 34 : 30 = 17 : 15$

69. C

Sol. Volume of a metallic cylindrical pipe = 1232 cm^3

External radius of a metallic cylindrical pipe(R) = 7 cm

Thickness of of a metallic cylindrical pipe = 2 cm

Internal radius of a metallic cylindrical pipe(r) = $7 \text{ cm} - 2 \text{ cm} = 5 \text{ cm}$

$$\Rightarrow 1232 = \pi \times h \times (R^2 - r^2)$$

$$\Rightarrow 1232 = \frac{22}{7} \times h \times (7^2 - 5^2)$$

$$\Rightarrow h = \frac{1232 \times 7}{22 \times 24} = 16.33 \text{ cm}$$

Hence, length of the pipe = 16.3 cm

70. C

Sol. Sum of ₹x is divided among A, B and C such that the ratio of the shares of A and B is 7 : 12 and that of B and C is 8 : 5.

$$A : B = 7 : 12$$

$$\Rightarrow A : B = 14 : 24 \dots\dots\dots(1)$$

$$B : C = 8 : 5$$

$$\Rightarrow B : C = 24 : 15 \dots\dots\dots(2)$$

Combining (1) and (2)

$$A : B : C = 14 : 24 : 15$$

Difference in the shares of A and C is 219

$$\Rightarrow (15-14) \text{ unit} = 219$$

$$\Rightarrow 1 \text{ unit} = 219$$

$$\Rightarrow (14 + 24 + 15) \text{ unit} = 53 \text{ unit} = \text{Rs. } 11607$$

Hence, x = Rs. 11607

71. A

$$\text{Sol. } 0.\overline{423} - 0.2 \text{ of } 52.5 \div 0.84 = x^2 - (0.\overline{021} + 12.5)$$

$$\text{Let } 0.\overline{423} = x$$

$$0.423333\dots = x$$

$$42.3333\dots = 100x \dots \dots \dots (1)$$

Subtract (1) from (2)

$$\Rightarrow 381 = 900x$$

$$\Rightarrow x = \frac{381}{900}$$

$$\Rightarrow 0.42\bar{3} = \frac{381}{900}$$

Let $0.02\bar{1} = y$

$$\Rightarrow 2.1111\dots = 100y$$

$$\Rightarrow 21.111\dots = 1000y$$

Subtract (1) from (2)

$$\Rightarrow 19 = 900y$$

$$\Rightarrow y = \frac{19}{900}$$

$$0.02\bar{1} = \frac{19}{900}$$

Now, $0.42\bar{3} - 0.2 \text{ of } 52.5 \div 0.84 = x^2 - (0.02\bar{1} + 12.5)$

$$\Rightarrow \frac{381}{900} - \frac{1}{5} \text{ of } 52.5 \div 0.84 = x^2 - \left(\frac{19}{900} + 12.5 \right)$$

$$\Rightarrow \frac{381}{900} - 10.5 \div 0.84 = x^2 - \left(\frac{19}{900} + \frac{125}{10} \right)$$

$$\Rightarrow \frac{381}{900} - 12.5 = x^2 - \left(\frac{19}{900} + 12.5 \right)$$

$$\Rightarrow \frac{381}{900} - 12.5 = x^2 - \frac{19}{900} - 12.5$$

$$\Rightarrow \frac{381}{900} = x^2 - \frac{19}{900}$$

$$\Rightarrow x^2 = \frac{381}{900} + \frac{19}{900} = \frac{400}{900}$$

$$\Rightarrow x = \frac{2}{3}$$

$$\text{Now, } 3x = 3 \times \frac{2}{3} = 2$$

72. D

Sol. Total production of motorcycles of companies B and E = $90 + 120 = 210$

Demand of motorcycles of all the companies taken together = $100 + 70 + 110 + 125 + 95 = 500$

$$\text{Required percentage} = \frac{210}{500} \times 100 = 42\%$$

73. A

Sol. A sum of ₹7,500 amounts to ₹8,748 after 2 years at a certain rate per cent per annum compounded annually.

$$\text{Amount} = P \left(1 + \frac{\text{Rate}}{100}\right)^{\text{time}}$$

$$\Rightarrow 8748 = 7500 \left(1 + \frac{R}{100}\right)^2$$

$$\Rightarrow \left(1 + \frac{R}{100}\right)^2 = \frac{8748}{7500} = \frac{2187}{1875} = \frac{729}{625}$$

$$\Rightarrow \left(1 + \frac{R}{100}\right)^2 = \left(\frac{27}{25}\right)^2$$

$$\Rightarrow \left(1 + \frac{R}{100}\right) = \left(\frac{27}{25}\right)$$

$$\Rightarrow \frac{R}{100} = \frac{2}{25}$$

$$\Rightarrow R = 8\%$$

Now, Principal = Rs. 7500

Time = 3 years

Rate = $2 \times 8\% = 16\%$

$$\text{Simple Interest} = \frac{\text{Principal} \times \text{Rate} \times \text{time}}{100}$$

$$\text{Simple Interest} = \frac{7500 \times 16 \times 3}{100} = \text{Rs.} 3600$$

74. C

Sol. The speed of a boat in still water is 30 km/h

Speed of the current = 6 km/h

Speed of boat during upstream = $30 \text{ km/h} - 6 \text{ km/h} = 24 \text{ km/h}$

Distance (in km) travelled upstream in 5 minutes =

$$24 \times \frac{5}{60} = 2 \text{ Km}$$

75. A

$$\text{Sol. } 1\frac{19}{21} - \left[1\frac{10}{21} + \frac{1}{2} \text{ of } \frac{1}{3} \div \frac{7}{12} - \left(\frac{2}{7} \text{ of } \frac{1}{5} \right) \right]$$

Applying BODMAS:

$$\Rightarrow \frac{40}{21} - \left[\frac{31}{21} + \frac{1}{6} \div \frac{7}{12} - \left(\frac{2}{35} \right) \right]$$

$$\Rightarrow \frac{40}{21} - \left[\frac{31}{21} + \frac{2}{7} - \left(\frac{2}{35} \right) \right]$$

$$\Rightarrow \frac{40}{21} - \left[\frac{31}{21} + \frac{6}{21} - \left(\frac{2}{35} \right) \right]$$

$$\Rightarrow \frac{40}{21} - \left[\frac{37}{21} - \left(\frac{2}{35} \right) \right]$$

$$\Rightarrow \frac{40}{21} - \frac{37}{21} + \left(\frac{2}{35} \right) = \frac{3}{21} + \frac{2}{35} = \frac{1}{7} + \frac{2}{35} = \frac{5}{35} + \frac{2}{35} = \frac{7}{35} = \frac{1}{5}$$

76. B

- Sol. • **The virus is responsible for causing AIDS (acquired immunodeficiency syndrome).**
• HIV or Human Immunodeficiency virus is a retrovirus that was first found in 1983.
• There are two types of HIV; they are HIV-1 and HIV-2.
• World AIDS Day is celebrated on December 1 every year since 1988.
• It is dedicated to raise awareness, educate and improve the understanding of HIV as a global public health problem.

77. C

- Sol. • **The Ministry of Parliamentary Affairs organises the conference of Whips of All India Political Parties, at the Centre as well as in the States.**
• The 18th All India Whips' Conference, 2018 was organised in Udaipur, Rajasthan in January 2018.
• The Ministry of Parliamentary Affairs handles affairs relating to the Parliament of India.
• It works as a link between the two chambers, the Lok Sabha and the Rajya Sabha.
• It was created in 1949 as a department but later became a full ministry.
• Pralhad Venkatesh Joshi is the current union Minister of Parliamentary Affairs.

78. B

- Sol. • **Melamine** is a thermosetting plastic.
• It is coated on firemen's uniforms to protect them from the flames.
• It is also used to make floor tiles, all kinds of fire-resistant fabrics and kitchenware.
• Melamine is an organic compound with the formula **C₃H₆N₆**.

79. D

- Sol. • **The Testaments** is a **2019 novel by Margaret Atwood**.
• The Testaments was joint winner of the 2019 Booker Prize, alongside Bernardine Evaristo's novel Girl, Woman, Other.
• Margaret Atwood is a Canadian poet, novelist and an environmental activist.
• Since 1961, she has published 18 books of poetry, 18 novels and 11 books of non-fiction.

80. B

- Sol. • **The 2023 FIFA Women's World Cup will be jointly hosted by Australia and New Zealand.**
- It is scheduled to take place from 20 July to 20 August 2023.
 - It will be the 9th edition of the FIFA Women's World Cup.
 - The United States are the defending champions, having won the previous two tournaments in 2015 and 2019.
 - The competition has been held every four years.
 - The first FIFA Women's World Cup was held in China in 1991.

81. D

- Sol. • **A ribosome** is a cellular particle made of **RNA and protein**.
- It is responsible for protein synthesis.
 - The ribosome has two main components called the large subunit and the small subunit.
 - The main job of the ribosome is to make proteins for the cell.
 - Ribosomes were first discovered in 1955 by Romanian-American cell biologist George Emil Palade.

82. A

- Sol. • **Subhash Chandra Bose became the President of the Congress Party in 1938 and in 1939.**
- He was succeeded by Rajendra Prasad in 1939 as the President of the Indian National Congress.
 - The Indian National Congress was founded in 1885 by Allan Octavian Hume.
 - The first meeting of INC was organised by AO Hume in Bombay on December 28th, 1885.

83. A

- Sol. • **Pellagra** is a disease caused by **vitamin B-3**.
- Vitamin B-3 is also known as niacin.
 - Pellagra is defined by the systemic disease. It is characterized by dementia, diarrhea, and dermatitis.

- Niacin (Vitamin B-3) is required for the proper function of fats and sugars in the body and to maintain healthy cells.

84. D

Sol. • **Statistics Day of India** is celebrated each year on 29 June to mark the birth anniversary of Prasanta Chandra Mahalanobis.

- Prasanta Chandra Mahalanobis is also known as the 'father of Indian statistics'.
- He was born on June 29, 1893, in Calcutta, West Bengal.
- He founded the Indian Statistical Institute (ISI) in 1932.
- He was also a member of the Planning Commission in 1955 and continued till 1967.
- The Statistics Day, 2021 was organized by the NITI Aayog.

85. C

Sol. • The Human Development Report (HDR) is an annual Human Development Index report.
• It is published by the **Human Development Report Office of the United Nations Development Programme (UNDP)**.

- The first HDR was launched in 1990 by the Pakistani economist Mahbub ul Haq and Indian Nobel laureate Amartya Sen.
- The United Nations Development Programme (UNDP) was established on November 22, 1965.
- It is headquartered in New York, USA.

86. A

Sol. • The "Garib Kalyan Rojgar Abhiyaan" is a rural public works scheme.
• It was launched on 20 June 2020 with an initial funding of ₹50,000 crore.
• The **Ministry of Rural Development** is the nodal Ministry for 'Garib Kalyan Rojgar Abhiyaan'.
• Giriraj Singh is the current Minister of Rural Development.

87. D

Sol. • **West Indies** won the inaugural Cricket World Cup in 1975.
• West Indies won the title by defeating Australia by 17 runs in the final match.

- The 1975 Cricket World Cup (Prudential Cup '75) was the inaugural men's Cricket World Cup.
- It was the first major tournament in the history of One Day International (ODI) cricket.
- It was organized by the International Cricket Council (ICC) in England between 7 June and 21 June 1975.

88. A

- Sol.
- The correct answer is "There is no limit".
 - According to article 154 of Indian Constitution, A person can be appointed as the governor of more than one state.
 - According to article 153, the Governor is the Constitutional Head of the state.

89. B

- Sol.
- **The Brahmi script** is the earliest writing system developed in India after the Indus script.
 - It is the mother script of most of the present Indian scripts including Devanagari, Bengali, Tamil, and Malayalam, etc.
 - All modern Indian scripts and several hundred scripts found in Southeast and East Asia are derived from Brahmi script.

90. B

- Sol.
- **Venus** does not have any moons.
 - It is the second planet from the Sun.
 - It is named after the Roman goddess of love and beauty.
 - Saturn, Uranus and Jupiter have 82, 27 and 79 moons respectively.

91. C

- Sol.
- **Bishnupur** is a city and a municipality of Bankura district in the state of West Bengal.
 - It is famous for its terracotta temples built by the Malla rulers, historic Radha Krishna temples built during 1600–1800 CE and the Baluchari sarees.
 - The Malla rulers were Vaishnavites and built the famous terracotta temples during the 17th and 18th centuries at this place.
 - Bishnupur was ruled under the Gupta period by local Hindu kings.

92. D

- Sol. • **The Sundarbans Reserve Forest (SRF) is the largest contiguous mangrove forest in the world.**
• It is located in the south-west of Bangladesh between the river Baleswar in the East and the Harinbanga in the West.
• The Pichavaram Mangrove Forest near Chidambaran is the world's second largest mangrove forest.

93. D

- Sol. • **The All-India Muslim League was founded in 1906 at Dhaka (Bangladesh).**
• It was set-up under the leadership of Aga Khan, Nawab Salimullah of Dhaka and Nawab Mohsin-ul-Mulk.
• Aga Khan was the first president of the Muslim League.

94. D

- Sol. • Tsering Landol is an Indian gynecologist and one of the pioneers of women's health.
• She hails from **Ladakh**.
• She was awarded the Padma Shri, in 2006, and Padma Bhushan in 2020 for her contributions to Indian medicine.

95. B

- Sol. • **The Mahanadi flows through the states of Chhattisgarh and Odisha and finally merged with Bay of Bengal.**
• It has a total length of 900 kilometres.
• Hirakud Dam is built across the Mahanadi River.
• It is the longest earthen dam in the world.

96. C

- Sol. • **Article 343 (3)** of the Constitution of India empowered the Parliament to provide by law for continued use of English for official purposes even after 25 January 1965.
• According to article 343 (1), the official language of the Union shall be Hindi in Devanagari script.
• Part XVII of the Constitution deals with the official language in Article 343 to Article 351.

97. C

Sol. • **Population geography is a branch of human geography.**

- It is focused on the scientific study of people, their spatial distributions and density.
- Geography is divided into two main branches: human geography and physical geography.
- Human geography is concerned with the study of people and their communities, cultures, economies, and interactions with the environment by studying their relations with and across space and place.
- Physical geography is concerned with the study of processes and patterns in the natural environment like the atmosphere, hydrosphere, biosphere, and geosphere.

98. B

Sol. • **Rajatarangini** is the oldest and fullest record of Kashmir history.

- It provides the earliest source on **Kashmir**.
- The work consists of 7826 verses, which are divided into eight books called Tarangas ("waves").
- It was written in Sanskrit by Kashmiri historian Kalhana in the 12th century CE.

99. A

Sol. • **Gaansaraswati Kishori Amonkar** was a leading Indian classical vocalist.

- She belonged to the Jaipur gharana.
- She was a performer of the classical genre 'khyal' and the light classical genres 'thumri' and 'bhajan'.
- She was awarded the Padma Bhushan, in 1987, and Padma Vibhushan in 2002.
- She was awarded the Sangeet Natak Akademi Award in 1985 and the Sangeet Natak Akademi Fellowship in 2009.

100. C

Sol. • **According to the UN Conference on Trade and Development (UNCTAD), India was the 9th largest recipient of Foreign Direct Investment (FDI) in the year 2019.**

- In the "Development Asia" region, India was among top 5 host economies for FDI according to this report.

- The United Nations Conference on Trade and Development (UNCTAD) was established in 1964.
- It is headquartered in Geneva, Switzerland.
- Rebeca Grynspan has been serving as Secretary General of the United Nations Conference on Trade and Development (UNCTAD) since 13 September 2021.

Mock Test Solutions in Hindi

Questions

- Select the INCORRECTLY spelt word.
 - Emmigrate
 - Emphasis
 - Eminent
 - Emergency
 - Direction:** Select the most appropriate option to fill in the blank.

_____ he was feeling sick, he ate all the food.

 - In case
 - So that
 - Although
 - Because
 - Direction:** Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'.

There is no need to make changes in many part of this sentence as it is grammatically correct.

 - No substitution required
 - all
 - any
 - that
 - Select the INCORRECTLY spelt word.
 - Invite
 - Invalid
 - Inwoke
 - Inward
 - Direction:** Select the most appropriate meaning of the given idiom.

Babe in the woods

 - A wise old person
 - A young defenceless person
 - A pale and sickly person
 - A foolish and stupid person
 - Direction:** Select the most appropriate ANTONYM of the given word.

PROTECT

 - Harm
 - Cover
 - Keep
 - Secure
 - Direction:** Select the most appropriate word for the given group of words.

A disease causing a person to fall unconscious involuntarily

- A. Insomnia
- B. Senility
- C. Epilepsy
- D. Dementia

8. **Direction:** Select the most appropriate option to fill in the blank.

Dhyan Chand is _____ one of the greatest hockey players of all time.

- A. thought
- B. observed
- C. considered
- D. believed

9. **Direction:** Select the most appropriate synonym of the given word.

IMPLORE

- A. Refuse
- B. Answer
- C. Plead
- D. Apologize

10. **Direction:** Select the most appropriate option to fill in the blank.

She _____ a lot about her health problems.

- A. concerns
- B. troubles
- C. suffers
- D. worries

11. **Direction:** Identify the segment that contains a grammatical error. If there is no error, select 'No error'.

Penguins have very shorter wings.

- A. Penguins have
- B. wings
- C. No error
- D. very shorter

12. **Direction:** Select the most appropriate ANTONYM of the given word.

CONTENTED

- A. Thankful
- B. Pleased
- C. Comfortable
- D. Dissatisfied

13. **Direction:** Identify the segment that contains a grammatical error. If there is no error, select 'No error'.

The breakdown in power supply was causing by a defective transformer.

- A. The breakdown
- B. No error
- C. was causing by
- D. in power supply

ANXIETY

- A. Delight
- B. Worry
- C. Calmness
- D. Faith

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.

Soon after the visitors left the room, the artist came in. He was ready (1)_____ on the portrait. He had always hoped that (2)_____ portrait would bring him great acclaim. It (3)_____ turning out really well. A smile appeared on (4)_____ face as he thought of it. Then he (5)_____ to the canvas and uncovered it. He was shocked to see that somebody had scratched the entire painting with a knife.

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

- A. to work
- B. worked
- C. working
- D. work

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

- A. it
- B. that
- C. this
- D. these

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

- A. is
- B. was
- C. were
- D. are

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

- A. his
- B. their
- C. its
- D. her

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

- A. appeared
- B. arrived
- C. reached
- D. came

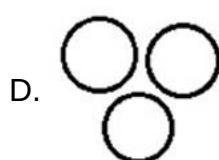
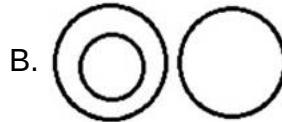
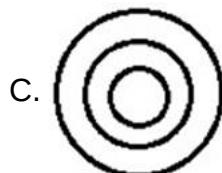
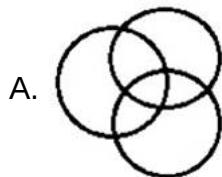
26. निम्न में से कौन सी संख्या दी गई श्रृंखला में प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगी?

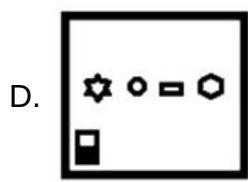
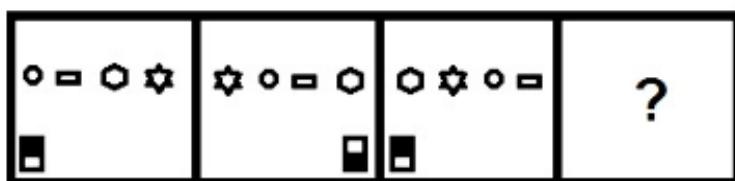
27, 29, 32, 37, 44, 55, 68, ?

- A. 85
- B. 71
- C. 80
- D. 90

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

पशु, मवेशी, गाय





31. दिए गए समीकरण को सही बनाने के लिए किन दो संख्याओं को आपस में बदला जाना चाहिए?

$$45 \div 5 \times 7 + 18 - 9 = 48$$

A. 45 और 9

C. 5 और 9

B. 9 और 7

D. 18 और 9

32. उस विकल्प का चयन करें जो तीसरे अक्षर-समूह से उसी प्रकार संबंधित है जिस प्रकार दूसरा अक्षर-समूह पहले अक्षर-समूह से संबंधित है।

CROP : WVYJ :: NASTY :?

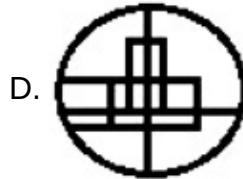
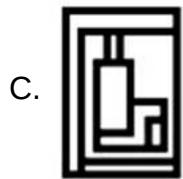
A. FAZKR

C. FAZHU

B. ZABHO

D. GABHV

33. उस विकल्प आकृति का चयन करें जिसमें दी गई आकृति (X) उसके भाग के रूप में अंतर्निहित है (रोटेशन की अनुमति नहीं है)।



34. एक निश्चित कूट भाषा में, 'ROSTED' को '91282054' के रूप में तथा 'MYSTIC' को '14282093' के रूप में लिखा जाता है। तो उसी भाषा में 'FLARED' को कैसे लिखा जाएगा?

A. 2115011754

B. 6012261854

C. 2115261854

D. 2015260954

35. निम्न में से कौन सी संख्या दी गई शृंखला में प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगी?

21, 26, 41, 76, 141, ?

A. 217

B. 203

C. 177

D. 246

36. एक निश्चित कूट भाषा में, 'FRINGE' को '61891475' के रूप में लिखा जाता है। तो उसी भाषा में 'PLEASE' को कैसे लिखा जाएगा?

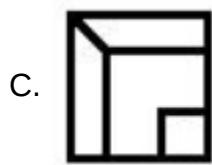
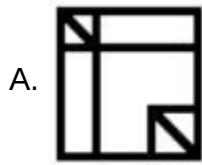
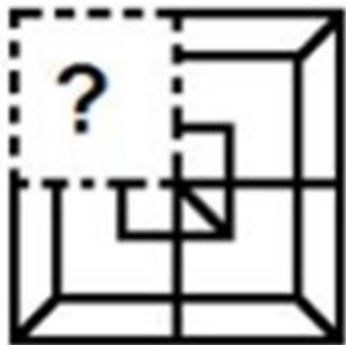
A. 111522119

B. 171512105

C. 161251195

D. 161251095

37. उस विकल्प का चयन करें जो पैटर्न को पूरा करने के लिए नीचे दी गई आकृति में प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगा।



38. दिए गए पैटर्न का ध्यानपूर्वक अध्ययन करें और उस संख्या का चयन करें जो उसमें प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित कर सकती है।

28	45	22
20	36	?
64	81	16

A. 34

B. 20

C. 18

D. 36

39. एक निश्चित कूट भाषा में, 'POUR' को 'KLFI' के रूप में लिखा जाता है। तो उसी भाषा में 'PROJECT' को कैसे लिखा जाएगा?

A. KMBTIJR

B. KILPUYG

C. KJLRVXH

D. KILQVXG

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

शिक्षक : विद्यालय :: नर्स : ?

A. अस्पताल

B. उपचार

C. औषधि

D. सर्जरी

41. दो कथनों के बाद तीन निष्कर्ष I, II और III 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:

कोई पेन, पेंसिल नहीं है।

सभी पेंसिल, चॉक हैं।

निष्कर्ष:

I. कोई चॉक, पेन नहीं है।

II. कोई पेंसिल, पेन नहीं है।

III. कुछ चॉक, पेंसिल हैं।

A. केवल निष्कर्ष I और III अनुसरण करते हैं

C. सभी निष्कर्ष अनुसरण करते हैं

B. केवल निष्कर्ष II और III अनुसरण करते हैं

D. केवल निष्कर्ष I और II अनुसरण करते हैं

42. यदि A 'जोड़' को दर्शाता है, B 'गुणा' को दर्शाता है, C 'घटा' को दर्शाता है, और D 'भाग' को दर्शाता है, तो निम्नलिखित अभिव्यक्ति का मान क्या होगा?

17 C 12 A (6 B 4) D 8 A 15 D 5

A. 13

B. 21

C. 11

D. 17

43. दो कथनों के बाद दो निष्कर्ष I और II 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 कार, बसें हैं।

कुछ कार, ट्रक हैं।

निष्कर्ष:

I. कुछ ट्रक, कार हैं।

II. कुछ बर्से, द्रक हैं।

A. न तो निष्कर्ष | न ही || अनुसरण करता है

C. केवल निष्कर्ष || अनुसरण करता है

B. दोनों निष्कर्ष | और || अनुसरण करते हैं

D. केवल निष्कर्ष | अनुसरण करता है

44. दी गई आकृति के सही दर्पण प्रतिबिम्ब का चयन करें जब दर्पण को रेखा MN पर स्थापित किया जाता है जैसा कि नीचे दिखाया गया है।



- A. **b t l v d b**
C. **p t l v d b**

- B. **p t l v q b**
D. **p t l v q p**

45. एक निश्चित कूट भाषा में, 'SERPENT' को 'RESPTNE' के रूप में लिखा जाता है। तो उसी भाषा में 'CONTACT' को कैसे लिखा जाएगा?

A. MOCTTDB

B. CPOUBDU

C. NCOTTAD

D. NOCTTCA

46. सात लड़कियाँ A, B, C, D, E, F और G एक वृत्ताकार मेज की चारों ओर मेज के केंद्र की ओर मुख करके बैठी हैं। E, D और C के मध्य में बैठा है। G, E की दाईं ओर से दूसरे स्थान पर है। A, C की दाईं ओर से तीसरे स्थान पर है। B, A और D के मध्य में है। A, D की बाईं ओर से दूसरे स्थान पर है। F की दाईं ओर से तीसरे स्थान पर कौन बैठा है?

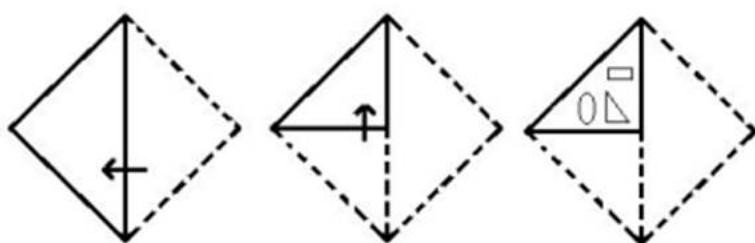
A. B

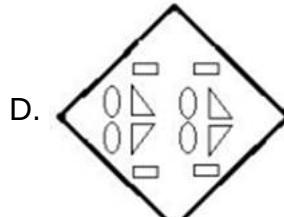
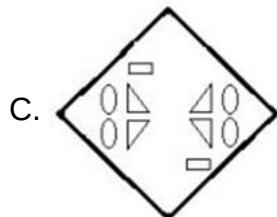
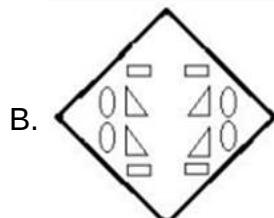
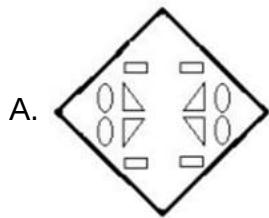
B. D

C. E

D. A

47. एक कागज को नीचे दर्शाए अनुसार मोड़ा और काटा जाता है। कागज खोले जाने पर कैसा दिखाई देगा?





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

Complete : Unfinished :: Defeat : ?

- | | |
|-------------|------------|
| A. Sorrow | B. Victory |
| C. Opponent | D. Desire |

49. निम्न में से कौन सा अक्षर-समूह दी गई शृंखला में प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगा?

HQMR, IRLQ, JSKP, KTJO, ?

- | | |
|---------|---------|
| A. LUIN | B. LUJO |
| C. MUJN | D. MUIO |

50. उस विकल्प का चयन करें जो तीसरी संख्या से उसी प्रकार संबंधित है जिस प्रकार दूसरी संख्या पहली संख्या से संबंधित है।

11 : 242 :: 14 : ?

- | | |
|--------|--------|
| A. 288 | B. 392 |
| C. 289 | D. 882 |

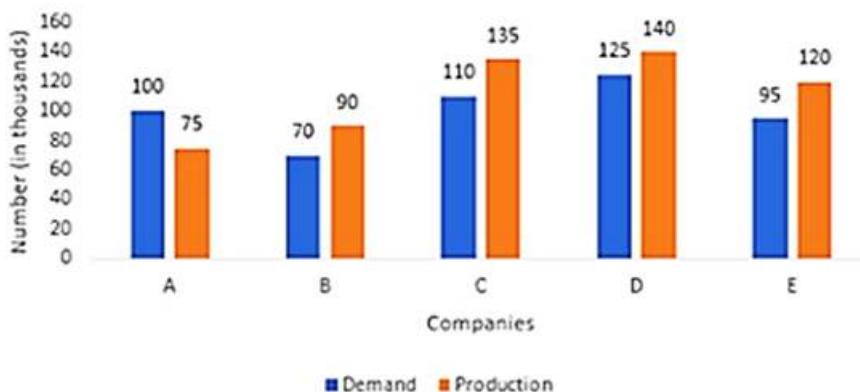
51. 15 पुरुष किसी काम को 12 दिनों में और 18 महिलाएं 15 दिनों में कर सकती हैं। 5 पुरुष और 3 महिलाएं कार्य को पूरा करने में कितने दिन लेंगे?

- | | |
|--------------------|--------------------|
| A. $28\frac{5}{7}$ | B. $25\frac{5}{7}$ |
| C. $23\frac{5}{7}$ | D. $27\frac{5}{7}$ |

52. यदि एक आयत की प्रत्येक भुजा में 12% की वृद्धि की जाती है, तो उसके क्षेत्रफल में कितने प्रतिशत की वृद्धि होगी?

- | | |
|-----------|-----------|
| A. 12.65% | B. 27.5% |
| C. 25.44% | D. 18.54% |

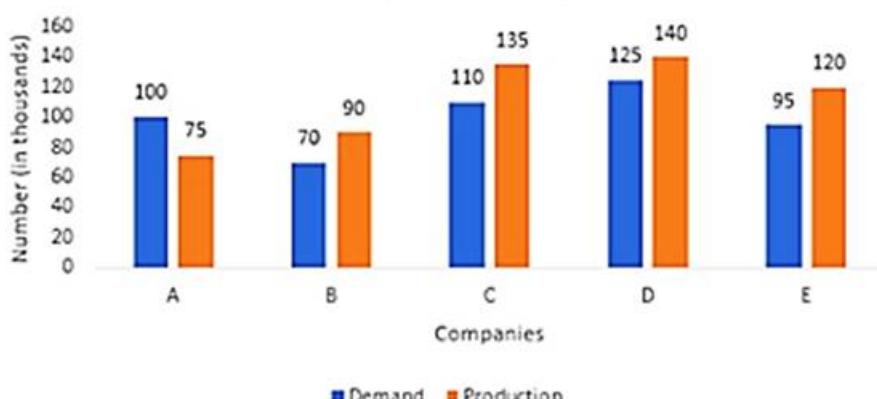
Demand and Production of Motorcycles (in thousands) of five companies



जिस कंपनी का मोटरसाइकिल का उत्पादन मांग से लगभग 12% अधिक है, वह है:

60. निम्नलिखित ग्राफ का अध्ययन करें और नीचे दिए गए प्रश्न का उत्तर दें।

Demand and Production of Motorcycles (in thousands) of five companies



कंपनियों A, B और C की मोटरसाइकिलों का औसत उत्पादन D की मोटरसाइकिलों की मांग से कितना प्रतिशत कम है?

61. A की आय B की आय से 50% अधिक है। यदि A की आय में 40% की वृद्धि होती है और B की आय में 30% की वृद्धि होती है, तो उनकी संयक्त आय में परतिशत वृद्धि है:

- A. 24% B. 32%
C. 40% D. 36%

62. मध्यम वितरण में बहुलक और माध्यिका के मान क्रमशः 7.52 और 9.06 हैं। वितरण का माध्य है:
A. 9.83 B. 8.67
C. 10.23 D. 9.5

63. 10 मीटर लंबाई और 8 मीटर चौड़ाई वाले आयताकार भूखंड के चारों ओर और बाहर 6 मीटर चौड़ा एक रास्ता चलता है। पथ का क्षेत्रफल (वर्ग मीटर में) है:
A. 440 B. 600
C. 80 D. 360

64. तीन कारों की गति का अनुपात 3:4:8 है। इन कारों द्वारा समान दूरी तय करने में लिए गए समय का अनुपात है:
A. 8 : 6 : 3 B. 6 : 8 : 3
C. 8 : 3 : 6 D. 6 : 3 : 8

65. एक डीलर ने एक वस्तु को उसके अंकित मूल्य पर 10% की छूट पर खरीदा और उसे अंकित मूल्य से 20% अधिक मूल्य पर बेचा। लाभ प्रतिशत (निकटतम पूर्णांक के लिए सही) है:
A. 33% B. 35%
C. 25% D. 28%

66. स्टॉपेज को छोड़कर, बस की गति 60 किमी/घंटा है और स्टॉपेज सहित, यह 51 किमी/घंटा है। बस प्रति घंटे कितने मिनट के लिए रुकती है?
A. 9 B. 12
C. 8 D. 10

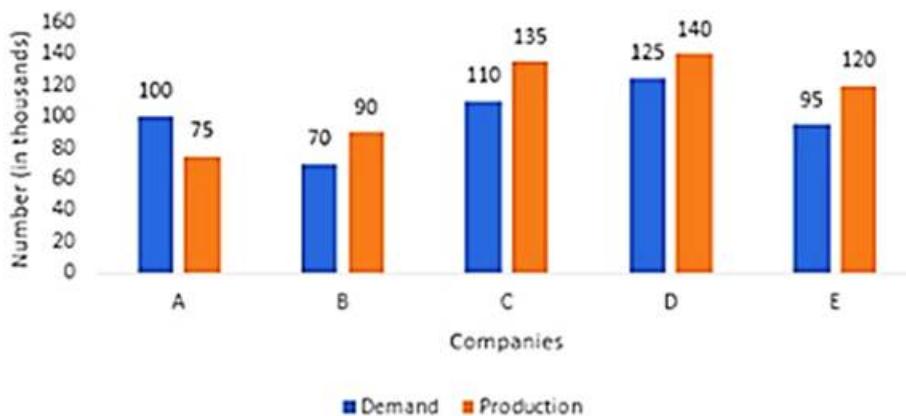
67. कक्षा A और B में छात्रों की कुल संख्या 92 है। A में छात्रों की संख्या B की तुलना में 30% अधिक है। B में छात्रों का औसत वजन (किलो में) A में छात्रों की तुलना में 50% अधिक है। यदि A और B में सभी छात्रों का औसत वजन 56 किग्रा है, तो B में छात्रों का औसत वजन (किलो में) क्या है?
A. 46 B. 40
C. 69 D. 52

68. A और B की वर्तमान आयु का अनुपात 6:5 है। चार वर्ष पहले यह अनुपात 5:4 था। दस वर्ष बाद A और B की आयु का अनुपात क्या होगा?
A. 11 : 15 B. 17 : 15
C. 15 : 11 D. 15 : 17

69. एक धातु के बेलनाकार पाइप का आयतन 1232 सेमी³ है। यदि इसकी बाहरी त्रिज्या 7 सेमी और मोटाई 2 सेमी है, तो पाइप की लंबाई

(दशमलव के एक स्थान तक सही) (सेमी में) है: ($\pi = \frac{22}{7}$ लेने पर)

Demand and Production of Motorcycles (in thousands) of five companies



कंपनियों B और E की मोटरसाइकिलों का कुल उत्पादन सभी कंपनियों की मोटरसाइकिलों की कुल मांग का कितना प्रतिशत है?

- A. सुभाष चंद्र बोस
C. सी राजगोपालाचारी
83. विटामिन _____ की कमी से पेलाग्रा (Pellagra) होता है।
A. B3
B. B6
C. B2
D. B12
84. भारत का सांख्यिकी दिवस प्रत्येक वर्ष 29 जून को किसकी जयंती के रूप में मनाया जाता है?
A. केसी श्रीधरन पिल्लै (KC Sreedharan Pillai)
B. सीआर राव (CR Rao)
C. रघु राज बहादुर (Raghu Raj Bahadur)
D. पीसी महालनोबिस (PC Mahalanobis)
85. मानव विकास रिपोर्ट किसके द्वारा प्रकाशित की जाती है?
A. संयुक्त राष्ट्र व्यापार और विकास सम्मेलन
B. संयुक्त राष्ट्र बाल और शिक्षा कोष
C. संयुक्त राष्ट्र विकास कार्यक्रम
D. संयुक्त राष्ट्र पूँजी विकास कोष
86. भारत सरकार का निम्नलिखित में से कौन सा मंत्रालय जून 2020 में शुरू किए गए 'गरीब कल्याण रोजगार अभियान' के लिए नोडल मंत्रालय है?
A. ग्रामीण विकास मंत्रालय
B. जल शक्ति मंत्रालय
C. आवास और शहरी मामलों का मंत्रालय
D. श्रम एवं रोजगार मंत्रालय
87. निम्नलिखित में से किस टीम ने 1975 में पहला क्रिकेट विश्व कप जीता था?
A. पूर्वी अफ्रीका
B. ऑस्ट्रेलिया
C. इंग्लैंड
D. वेस्टइंडीज
88. भारत के संविधान के अनुसार, एक ही व्यक्ति को राज्यपाल के रूप में नियुक्त करने वाले राज्यों की अधिकतम संख्या कितनी है?
A. कोई सीमा नहीं है
B. एक राज्य
C. दो राज्य
D. तीन राज्य
89. निम्नलिखित में से किस लिपि को सभी आधुनिक भारतीय लिपियों की जननी माना जाता है?
A. हड्डपा
B. ब्राह्मी
C. देवनागरी
D. बंगाली-असमिया
90. निम्नलिखित में से किस ग्रह का कोई चन्द्रमा नहीं है?
A. शनि
B. शुक्र
C. अरुण
D. बृहस्पति
91. टेराकोटा मंदिरों (terracotta temple) के लिए प्रसिद्ध बिष्णुपुर (Bishnupur) निम्नलिखित में से किस राज्य में स्थित है?
A. तेलंगाना
B. गुजरात
C. पश्चिम बंगाल
D. मेघालय
92. निम्नलिखित में से कौन सा विश्व का सबसे बड़ा मैंग्रोव (mangrove) वन है?

- A. गोदावरी-कृष्णा मैंग्रेव
C. पनामा मैंग्रेव की खाड़ी
93. अखिल भारतीय मुस्लिम लीग की स्थापना 1906 में _____ में हुई थी।
A. लाहौर
C. लखनऊ
94. सेरिंग लैंडोल (Tsering Landol), जो पद्म भूषण 2020 पुरस्कार प्राप्त करने वालों में से एक थे, वह _____ की रहने वाली है।
A. सिकिम
C. अरुणाचल प्रदेश
95. निम्नलिखित में से कौन सी नदी बंगाल की खाड़ी में गिरती है?
A. नर्मदा
C. तापी
96. भारत के संविधान के निम्नलिखित में से किस अनुच्छेद ने संसद को 25 जनवरी 1965 के बाद भी आधिकारिक उद्देश्यों के लिए अंगरेजी के निरंतर उपयोग हेतु कानून द्वारा प्रदान करने का अधिकार दिया?
A. अनुच्छेद 348 (2)
C. अनुच्छेद 343 (3)
97. जनसंख्या भूगोल _____, की एक शाखा है।
A. अधिवास भूगोल
C. मानव भूगोल
98. निम्नलिखित में से कौन सा ग्रन्थ कश्मीर के इतिहास का सबसे विस्तृत विवरण देता है?
A. ऋतुसंहार (Ritusamhara)
C. अभिज्ञानशाकुन्तलम् (Abhijananashakuntalam)
99. किशोरी अमोनकर (Kishori Amonkar) का संबंध निम्नलिखित में से किस क्षेत्र से था?
A. भारतीय शास्त्रीय संगीत
C. भारतीय शास्त्रीय नृत्य
100. व्यापार और विकास पर संयुक्त राष्ट्र सम्मेलन (UNCTAD) के अनुसार, भारतवर्ष 2019 में प्रत्यक्ष विदेशी निवेश (FDI) का _____ सबसे बड़ा प्राप्तकर्ता था।
A. 7वां
C. 9वां
- B. पिचवरम वन
D. सुंदरवन आरक्षित वन
- B. बॉम्बे
D. ढाका
- B. मिजोरम
D. लद्दाख
- B. महानदी
D. सिंधु
- B. अनुच्छेद 348 (3)
D. अनुच्छेद 343 (2)
- B. सांस्कृतिक भूगोल
D. भौतिक भूगोल
- B. राजतरंगिणी (Rajatarangini)
D. मेघदूतम् (Meghadutam)
- B. पाश्चात्य संगीत
D. भारतीय शास्त्रीय वाद्य यंत्र

Solutions

1. A

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

“Emigrate” is the correct spelling of the incorrect word “Emmigrate”. It means to leave your own country to go and live permanently in another country.

The meaning of other words are:

Emphasis: special importance that is given to something

Eminent: famous and respected, especially in a particular profession

Emergency: a sudden serious and dangerous event or situation that needs immediate action to deal with it.

2. C

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

- *In case* = means because of the possibility of something happening.
- *So that* = means “in such a way that”
- *Although* = (conjunction) used for introducing a statement that makes the 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*” is used to state the possibility of something happening. Thus, option A is incorrect.

- “So that” shows the meaning of “in such a way that”. Thus, option B is incorrect.
- “Because” as a conjunction is used for showing the reason. Thus, option D is incorrect.
- “Although” as a relative pronoun is used for persons.
- Here in the given sentence, it is used for making the statement of “eating all food” surprising with “feeling sick”.

So, “Although” becomes the correct word to fill in the blank.

Thus, the correct sentence will be: **Although he was feeling sick, he ate all the food.**

3. C

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

- Underlined part needs correction in determiner.
- “Many” as a determiner is used with plural countable nouns.

For example:

Heavy rains in the city forced **many drivers** to abandon their vehicles.

- “Any” as a determiner is used with uncountable or plural nouns in negative sentences and questions

For example:

He abhors **any** form of **cruelty** towards dogs.

- The given sentence is a negative sentence because the word “No” is used.
- Also, the word “part” is uncountable. Thus, it is appropriate to use determiner “any” in place of “many”.

- So, “**any**” is the correct substitution.

Thus, the correct sentence will be: **There is no need to make changes in any part of this sentence as it is grammatically correct.**

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

4. C

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

“Invoke” is the correct spelling of the incorrect word “Inwoke”. It means to mention or use a law, rule etc. as a reason for doing something.

The meaning of other words are:

Invite: to ask someone to come to a social event.

Invalid: not legally or officially acceptable

Inward: towards the inside or center of something.

5. B

Sol. The idiom “**Babe in the woods**” means an innocent or naive person esp. one in a difficult or dangerous environment.

Example: An experienced member of our team is behaving like a **babe in the woods**.

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

6. A

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

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

E.g.: Our aim is to **protect** the jobs of our members.

Harm = to hurt or injure someone or to damage something.

E.g.: These allegations will **harm** her chances of winning the elections.

Cover = to place something over or in front of something in order to hide, protect it.

Keep = to continue to have something and not give it back or throw it away.

Secure = to obtain or achieve something esp. when this means using a lot of effort.

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

7. C

Sol. Insomnia: the condition of being unable to sleep

Senility: the condition of being senile (behaving in a confused or strange way)

Epilepsy: a disorder of the nervous system that cause a person to become unconscious suddenly, often with violent movements of body.

Dementia: a serious mental disorder caused by brain disease or injury that affects the ability to think, remember and behave normally.

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

8. C

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

- *Thought* = something that you think of or remember
- *Observed* = to see or notice someone/something.

- *Considered* = to think of someone/something in a particular way.
- *Believed* = to feel certain that something is true or that someone is telling you the truth.

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

- "*Thought*" is used in context of "remembering". Thus, option A is incorrect.
- "*Observed*" is used in context of "noticing something". Thus, option B is incorrect.
- "*Believed*" is used in context of "feel something as true". Thus, option D is incorrect.
- "*Considered*" is used in context of "think about someone in particular way".
- Here in the given sentence, "Dhyan Chand" is being thought in a particular way i.e. as "greatest players of all time".

So, "*Considered*" becomes the correct word to fill in the blank.

Thus, the correct sentence will be: **Dhyan Chand is considered one of the greatest hockey players of all time.**

9. C

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

Implore = to ask someone to do something in an anxious way because you want or need it very much

E.g.: Her beloved brother **implored** her to stay with family for at least two days.

Refuse = to say or show that you will not do something that someone has asked you to do

Answer = to say, write or do something as a reaction to a question or situation.

Plead = to ask someone for something in a very strong and serious way.

E.g.: He **pleaded** with her not to go.

Apologize = to say that you are sorry for doing something wrong or causing a problem.

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

10. D

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

- *Concerns* = to affect someone/something.
- *Troubles* = to make someone worried or upset.
- *Suffers* =to be badly affected by a disease, pain etc.
- *Worries* = to keep thinking about unpleasant things that might happen or about problems that you have.

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

- “*Concerns*” is used in context of “affecting someone” Thus, option A is incorrect.
- “*Troubles*” is used in context of “worry”. Thus, option B is incorrect.
- “*Suffers*” is used in context of “affected by disease”. Thus, option C is incorrect.
- “*Worries*” is used in context of “thinking about one’s problems”.
- Here in the given sentence, “She” is thinking a lot about her health problems.

So, “*Worries*” becomes the correct word to fill in the blank.

Thus the correct sentence will be: **She worries a lot about her health problems.**

11. D

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

- “Short” is an adjective and it means measuring or covering a small length or distance than usual.
- “Shorter” is the comparative degree. “Shortest” is the superlative degree.

For example:

She had a **short** curly hair.

Your next contract will be of **shorter** duration.

Which is the **shortest** day of the year?

- In the given sentence, we have used the comparative degree “shorter”. Comparative degree is used for comparison between two entities.
- But here, one entity (i.e. “Penguins”) is being talked about.
- Thus, there is a need of using a positive degree of adjective (i.e. smart) to qualify “wings” (a noun).
- Hence, “**very short**” is the correct substitution.

Thus, the correct sentence will be: **Penguins have very short wings.**

12. D

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

Contented = to accept and be satisfied with something and not try to have or do something better.

E.g.: She seemed more **content**, less bitter.

Thankful = pleased about something good that has happened or that something bad has not happened.

Pleased = feeling happy about something.

Comfortable = making you feel relaxed; pleasant to wear, sit on.

Dissatisfied = not happy or satisfied with someone/something

E.g.: Customers are requested to contact our customer care if they are **dissatisfied** with our services.

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

13. C

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

- In case of simple past tense,

The structures for active/passive voices are:

Active Voice: Subject + V2 + Object

Passive Voice: Object + was/were + Verb (V3 form) + by + Subject

For example:

They **opened** the shop.

The shop **was opened** by them.

- The given sentence is set in passive voice because here the actual doer of the action verb (“cause”) is not the subject.
- As per the passive verb structure, third form of verb should be used after the helping verb “was”.
- Thus, third form of the verb i.e. “caused” should be used in place of first form of verb “causing”.
- So, “**was caused by**” is the correct substitution.

The correct sentence will be: **The breakdown in power supply was caused by a defective transformer.**

14. D

Sol. Sprint: to run or swim a short distance very fast.

Rush: to move or to do something with great speed, often too fast.

Race: to compete against someone/something to see who can go faster or the fastest.

Pursue: to do something or try to achieve something over a period of time.

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

15. C

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

- “Keen to do something” is the correct phrase. It means wanting to do something or wanting something to happen very much.
- We can also say “Keen to do something”.

For example:

Ramesh was very **keen to** help.

- In the given sentence, preposition “to” should be used after the verb “keen”.
- Also, this way it forms an infinitive form i.e. “to + set” which is used to show the purpose of the verb “keen”.
- So, “**keen to set**” is the correct substitution.

Thus, the correct sentence will be: **He was keen to set an example for others.**

16. D

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

- Underlined part needs correction in helping verb.
- 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.

For example:

You are driving too fast on the road.

- In the underlined sentence, we need helping verb for the subject “You” (plural). Thus, plural helping verb “are” should be used.
- So, “**are not watching it**” is the correct substitution.

Thus, the correct sentence will be:

Switch off the television if you are not watching it.

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

17. B

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

- Underlined part needs correction in helping verb.
- 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.

For example:

I **was** surprised by the absence of any women on the board of directors.

- In the underlined sentence, we need helping verb for the subject “I” (singular) and also in accordance with the past tense.
- Thus, singular helping verb “was” should be used in plural helping verb “were”.
- So, “**was**” is the correct substitution.

Thus, the correct sentence will be: **They were not surprised by the results and nor was I.**

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

18. C

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

- *That* = (relative pronoun) is used when the noun (things, animals, persons) it refers is made specific by adding article “the” before it.
- *Whom* = (relative pronoun) is the objective case of “Who”.
- *Who* = (relative pronoun) is a subjective case used for persons.
- *Which* = (relative pronoun) is used for things.

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

- "That" as a relative pronoun is used for nouns that are specified. Thus, option A is incorrect.
- "Whom" is the objective case of "Who". Thus, option B is incorrect.
- "Which" as a relative pronoun is used for things. Thus, option D is incorrect.
- "Who" as a relative pronoun is used for persons.
- Here in the given sentence, it refers to the noun (antecedent) "Prem Chand".

So, "Who" becomes the correct word to fill in the blank.

Thus the correct sentence will be: **Prem Chand, who mainly wrote about rural India, was a great Hindi writer.**

19. C

Sol. The idiom "**Be all ears**" means to be waiting with interest to hear what someone has to say.

Example: Please narrate your story. I am **all ears**.

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

20. B

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

Anxiety = the state of feeling nervous or worried that something bad is going to happen

E.g.: Waiting for final results is an event of great **anxiety**.

Delight = a feeling of great pleasure

Worry =the state of worrying about something.

E.g.: Stress and **worry** increase the chances of having a heart attack.

Calmness = the quality of not being excited, nervous or upset.

Faith = trust in someone's ability or knowledge

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

21. A

Sol. The given passage is about "**Painting exhibition: Visitors and Artist**".

"Worked" is the third form of verb. Thus, option B is wrong.

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

"Work" is the first form of verb. Thus, option D is wrong.

"To work" is an infinitive form of verb. It is used to show the purpose.

Here in the given sentence, it shows the purpose of making the portrait.

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

22. C

Sol. The given passage is about "**Painting exhibition: Visitors and Artist**".

"It" as a pronoun is used to refer an animal or a thing that has already been mentioned. Thus, option A is wrong.

"That" as a determiner is used to refer to a person or thing that is not near the speaker or as near to the speaker as another. It is used for singular entities. Thus, option B is wrong.

"These" as a determiner is used to refer to a person or thing that is near the speaker or as near to the speaker as another. It is used for plural entities. Thus, option D is wrong.

"This" as a determiner is used to refer to a person or thing that is near the speaker or as near to the speaker as another.

It is used for singular entities.

Here in the given sentence, “portrait” is a singular entity.

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

23. B

Sol. The given passage is about “**Painting exhibition: Visitors and Artist**”.

“Is” is a singular helping verb and it is used in present tense. Thus, option A is wrong.

“Were” is a plural helping verb and it is used in past tense. Thus, option C is wrong.

“Are” is a plural helping verb and it is used in present tense. Thus, option D is wrong.

“Was” is a singular helping verb and it is used in past tense.

Here in the given sentence, it is used after the empty subject “It” and verb in such sentences (with empty subject) takes singular helping verb.

Also, note that whole paragraph is set in past tense.

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

24. A

Sol. The given passage is about “**Painting exhibition: Visitors and Artist**”.

“Their” is a possessive form of pronoun “They”. Thus, option B is wrong.

“Its” is a possessive form of pronoun “It”. Thus, option C is wrong.

“Her” is an objective case pronoun and used for feminine gender. Thus, option D is wrong.

“His” is a possessive form of pronoun “He”.

Here in the given sentence, it refers to the possession over “face” that belongs to “artist”.

Masculine gender of artist is evident from the usage of “his” after the filler.

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

25. D

Sol. The given passage is about “**Painting exhibition: Visitors and Artist**”.

“Appeared” means to start to be seen. Thus, option A is wrong.

“Arrived” means to get to a place. Thus, option B is wrong.

“Reached” means to arrive at the place that you have been travelling to. Thus, option C is wrong.

“Came” means to move to or towards a person/place/thing.

In the given sentence, it is used to mention that the “artist” move towards the “canvas”.

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

26. A

Sol. पैटर्न इस प्रकार है:

$$27 + 2 = 29$$

$$29 + 3 = 32$$

$$32 + 5 = 37$$

$$37 + 7 = 44$$

$$44 + 11 = 55$$

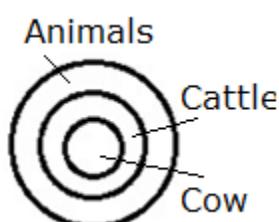
$$55 + 13 = 68$$

$$68 + 17 = 85$$

इसलिए, विकल्प A सही उत्तर है।

27. C

Sol. दिए गए वर्गों को वेन-आरेख द्वारा सर्वोत्तम रूप से दर्शाया गया है जैसा कि नीचे दिखाया गया है:



इसलिए, विकल्प C सही उत्तर है।

28. D

Sol. दी गई जानकारी के अनुसार;

Poorvi
Lalit
Meenal
Varun
Vasu
Gaurav

स्पष्ट है, कि ललित, पूर्वी की ठीक बाई ओर बैठा है।

इसलिए, विकल्प D सही उत्तर है।

29. C

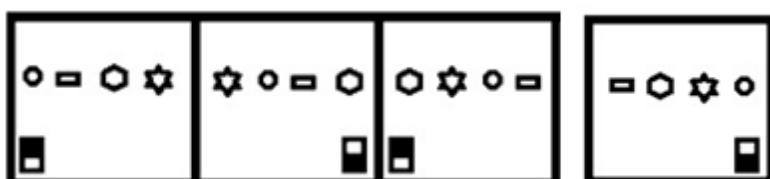
Sol. दी गई अभिव्यक्ति: E > T = P > D > Q > Z = U

- A). U < D, दी गई अभिव्यक्ति के अनुसार सही है जैसे D > Q > Z = U
- B). Z < T, दी गई अभिव्यक्ति के अनुसार सही है जैसे T = P > D > Q > Z
- C). U > T, दी गई अभिव्यक्ति के अनुसार गलत है जैसे T = P > D > Q > Z = U
- D). Q > U, दी गई अभिव्यक्ति के अनुसार सही है जैसे Q > Z = U

इसलिए, विकल्प C सही उत्तर है।

30. C

Sol. तर्क: अंतिम तत्व पहले स्थान पर जाता है और शेष तत्व दूसरे स्थान पर जाते हैं, समान पैटर्न अन्य आकृतियों में भी दोहराया गया है, अर्ध-छायांकित आयत आगे और पीछे गति करता है।



इसलिए, विकल्प C सही उत्तर है।

31. C

Sol. सभी विकल्पों की जांच करके, हमें प्राप्त होता है;

$$\begin{aligned} \text{A). } 9 \div 5 \times 7 + 18 - 45 &= 48 \\ \rightarrow 30.6 - 45 &= 48 \text{ (गलत)} \end{aligned}$$

B). $45 \div 5 \times 9 + 18 - 7 = 48$

-> $92 = 48$ (गलत)

C). $45 \div 9 \times 7 + 18 - 5 = 48$

-> $48 = 48$ (सही)

D). $45 \div 5 \times 7 + 9 - 18 = 48$

-> $54 = 48$ (गलत)

इसलिए, विकल्प C सही उत्तर है।

32. C

Sol. पैटर्न इस प्रकार है:

3	18	15	16
C	R	O	P
+7	+7	+7	+7
J	Y	V	W
10	25	22	23

अब अक्षर क्रम को उलट दें तो यह बन जाएगा: WVYJ

इसी तरह,

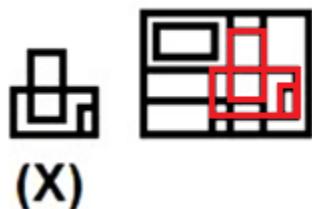
14	1	19	20	25
N	A	S	T	Y
+7	+7	+7	+7	+7
U	H	Z	A	F
21	8	26	27	32

अब अक्षर क्रम को उलट दें तो यह बन जाएगा: FAZHU

इसलिए, विकल्प C सही उत्तर है।

33. B

Sol. दी गई आकृति विकल्प आकृति (B) में पूर्णतः अंतर्निहित है जैसा कि नीचे दिखाया गया है:



इसलिए, विकल्प B सही उत्तर है।

34. C

Sol. तर्कः पहले तीन अक्षरों की कूटबद्ध संख्या संबंधित अक्षर के विपरीत अक्षर का स्थानीय मान है, तथा अंतिम तीन अक्षरों की कूटबद्ध संख्या उस अक्षर का स्थानीय मान है।

R	O	S	T	E	D
I	L	H			
9	12	8	20	5	4

इसी तरह,

M	Y	S	T	I	C
N	B	H			
14	2	8	20	9	3

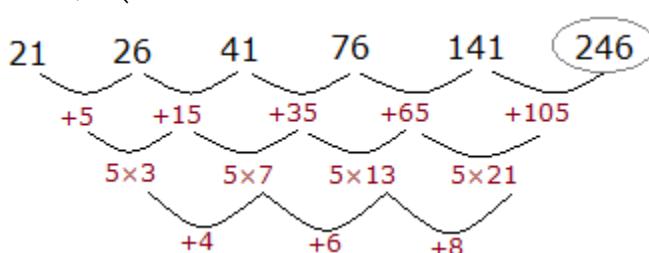
अतः;

F	L	A	R	E	D
21	15	26	18	5	4

इसलिए, विकल्प C सही उत्तर है।

35. D

Sol. पैटर्न इस प्रकार है:



इसलिए, विकल्प D सही उत्तर है।

36. C

Sol. पैटर्न इस प्रकार है; कूटबद्ध संख्या वर्णमाला शृंखला के अनुसार संबंधित अक्षर का स्टीक स्थानिक मान है।

F	R	I	N	G	E
6	18	9	14	7	5

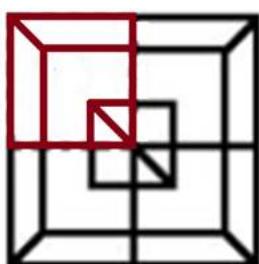
इसी तरह,

P	L	E	A	S	E
16	12	5	1	19	5

इसलिए, विकल्प C सही उत्तर है।

37. D

Sol. विकल्प (D) में दी गई आकृति दी गई आकृति को पूरा करेगी;



इसलिए, विकल्प D सही उत्तर है।

38. C

Sol. पैटर्न इस प्रकार है;

कॉलम I: $28 - 20 = 8$; $8 \times 8 = 64$

कॉलम II: $45 - 36 = 9$; $9 \times 9 = 81$

कॉलम III: $22 - 18 = 4$; $4 \times 4 = 16$

इसलिए, विकल्प C सही उत्तर है।

39. D

Sol. तर्क: कूटबद्ध अक्षर वर्णनुक्रम के अनुसार संबंधित अक्षर का विपरीत अक्षर है।

अक्षर	P	O	U	R
विपरीत अक्षर	K	L	F	I

इसी तरह,

अक्षर	P	R	O	J	E	C	T
विपरीत अक्षर	K	I	L	Q	V	X	G

इसलिए, विकल्प D सही उत्तर है।

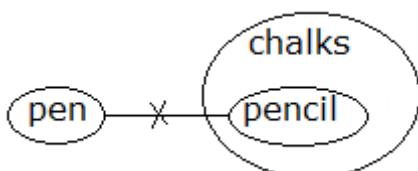
40. A

Sol. एक शिक्षक विद्यालय में पढ़ाता है, वैसे ही एक नर्स अस्पताल में काम करती है।

इसलिए, विकल्प A सही उत्तर है।

41. B

Sol. न्यूनतम संभावित वेन आरेख होगा;



निष्कर्ष:

I. कोई चॉक, पेन नहीं है – यह एक निश्चित मामला नहीं है, इसलिए गलत है।

II. कोई पेंसिल, पेन नहीं है – यह एक निश्चित मामला है, इसलिए सही है।

III. कुछ चॉक, पेंसिल हैं – यह एक निश्चित मामला है, इसलिए सही है।

केवल निष्कर्ष II और III अनुसरण करते हैं।

इसलिए, विकल्प B सही उत्तर है।

42. C

Sol. दिया है:

A	B	C	D
+	×	-	÷

इस प्रकार, अभिव्यक्ति हो जाती है;

$$\rightarrow 17 - 12 + (6 \times 4) \div 8 + 15 \div 5$$

$$\rightarrow 17 - 12 + 24 \div 8 + 3$$

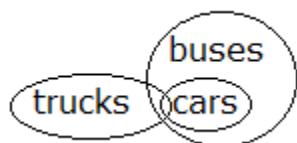
$$\rightarrow 17 - 12 + 3 + 3$$

$$\rightarrow 5 + 6 = 11$$

इसलिए, विकल्प C सही उत्तर है।

43. B

Sol. न्यूनतम संभावित वेन-आरेख होगा;



निष्कर्षः

I. कुछ ट्रक, कार हैं – यह एक निश्चित मामला है, इसलिए सही है।

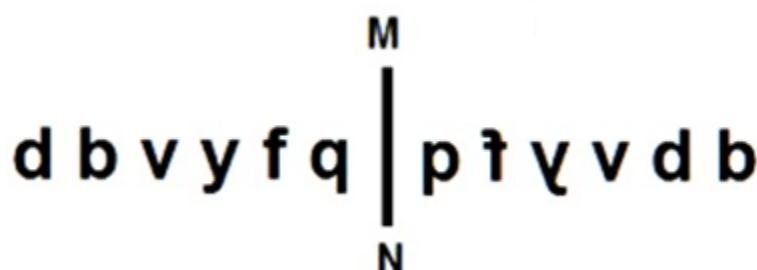
II. कुछ बसें, ट्रक हैं - यह एक निश्चित मामला है, इसलिए सही है।

दोनों निष्कर्ष I और II अनुसरण करते हैं।

इसलिए, विकल्प B सही उत्तर है।

44. C

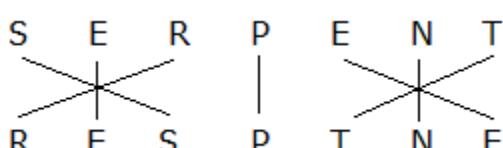
Sol. सही दर्पण छवि है:



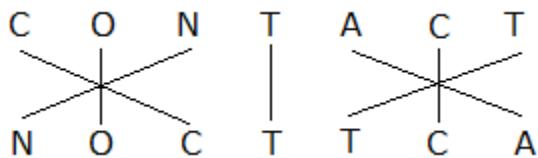
इसलिए, विकल्प C सही उत्तर है।

45. D

Sol. पैटर्न इस प्रकार है;



इसी तरह,



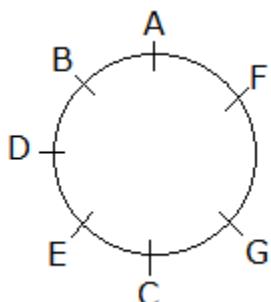
इसलिए, विकल्प D सही उत्तर है।

46. B

Sol. दी गई जानकारी के अनुसार;

- 1). A, C की दाईं ओर से तीसरे स्थान पर है
- 2). A, D की बाईं ओर से दूसरे स्थान पर है
- 3). B, A और D के मध्य में है
- 4). E, D और C के मध्य बैठी है
- 5). G, E की दाईं ओर से दूसरे स्थान पर है

इस प्रकार, F अवश्य ही G की ठीक दाईं ओर बैठी होगी।

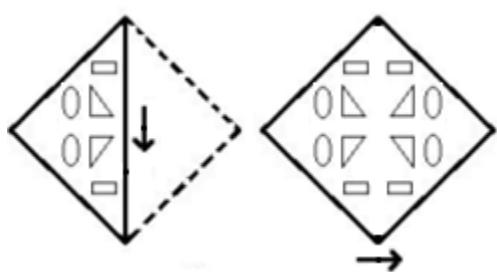


स्पष्ट रूप से, D, F की दाईं ओर से तीसरे स्थान पर है।

इसलिए, विकल्प B सही उत्तर है।

47. A

Sol. जब कागज के टुकड़े को खोला जाता है तो यह दिखाई देगा;



इसलिए, विकल्प A सही उत्तर है।

48. B

Sol. दिए गए शब्द युग्म विपरीत शब्द हैं।

Complete, Unfinished का विपरीतार्थक शब्द है।

इसी तरह,
Defeat, Victory का विपरीतार्थक शब्द है।
इसलिए, विकल्प B सही उत्तर है।

49. A

Sol. पैटर्न इस प्रकार है;

+1 { H +1 { Q -1 { M -1 { R
+1 { I +1 { R -1 { L -1 { Q
+1 { J +1 { S -1 { K -1 { P
+1 { K +1 { T -1 { J -1 { O
+1 { L +1 { U -1 { I -1 { N

इसलिए, विकल्प A सही उत्तर है।

50. B

Sol. पैटर्न इस प्रकार है;

$$11 \times 11 = 121 \times 2 = 242$$

इसी प्रकार,

$$14 \times 14 = 196 \times 2 = 392$$

इसलिए, विकल्प B सही उत्तर है।

51. B

Sol. माना पुरुष की दक्षता = M इकाई/दिन

महिला की दक्षता = W इकाई/दिन

हम जानते हैं,

कुल कार्य = दक्षता \times लिया गया समय

15 पुरुष किसी काम को 12 दिनों में और 18 महिलाएं 15 दिनों में कर सकती हैं।

$$\Rightarrow 15M \times 12 = 18W \times 15$$

$$\Rightarrow 2M = 3W$$

$$\Rightarrow M = \frac{3}{2}W$$

माना 5 पुरुष और 3 महिलाएं कार्य को x दिनों में पूरा कर सकते हैं।

$$\Rightarrow (5M + 3W) \times x = 18W \times 15$$

$$\Rightarrow \left[5\left(\frac{3}{2}W\right) + 3W \right] \times x = 18W \times 15$$

$$\Rightarrow \left[\frac{15}{2}W + 3W\right] \times x = 18W \times 15$$

$$\Rightarrow \left[\frac{21}{2}W\right] \times x = 18W \times 15$$

$$\Rightarrow x = \frac{540}{21} = \frac{180}{7} = 25\frac{5}{7} \text{ दिनों}$$

अतः, 5 पुरुष और 3 महिलाएं $25\frac{5}{7}$ "दिनों" में काम पूरा कर सकते हैं।

52. C

Sol. माना आयत की लंबाई = x इकाई

आयत की चौड़ाई = y इकाई

आयत का क्षेत्रफल = xy वर्ग इकाई

एक आयत की प्रत्येक भुजा में 12% की वृद्धि की जाती है।

आयत की परिणामी लंबाई = $x + \frac{12x}{100} = \frac{112x}{100}$ इकाई

आयत की परिणामी चौड़ाई = $y + \frac{12y}{100} = \frac{112y}{100}$ इकाई

आयत का परिणामी क्षेत्रफल = $\left(\frac{112x}{100}\right)\left(\frac{112y}{100}\right) = \frac{12544}{10000} xy$ वर्ग इकाई

क्षेत्र में प्रतिशत वृद्धि =

$$\frac{\frac{12544}{10000}xy - xy}{xy} \times 100 = \frac{12544xy - 10000xy}{10000xy} \times 100 = \frac{2544}{100} = 25.44\%$$

53. B

Sol. माना वस्तु का क्रय मूल्य = x रुपये

किसी वस्तु को ₹832 में बेचने पर अर्जित लाभ उस वस्तु को ₹448 में बेचने पर हुई हानि के बराबर है।

$$\Rightarrow 832 - x = x - 448$$

$$\Rightarrow 2x = 1280$$

$$\Rightarrow x = 640$$

वस्तु का क्रय मूल्य = 640 रुपये

यदि लाभ = 20%

$$\text{वस्तु का विक्रय मूल्य} = 640 \times \frac{120}{100} = 768 \text{ रुपये}$$

54. B

Sol. माना वस्तु का क्रय मूल्य = 100 इकाई

एक व्यक्ति ने एक वस्तु को 7% की हानि पर बेचा।

$$\text{वस्तु का विक्रय मूल्य} = 100 - 100 \times \frac{7}{100} = 93 \text{ इकाई}$$

यदि वह इसे 10.5% के लाभ पर बेचता, तो उसे ₹105 अधिक प्राप्त होते।

यदि लाभ 10.5% है तो वस्तु का विक्रय मूल्य =

$$100 \text{ इकाई} + 100 \times \frac{10.5}{100} = 110.5 \text{ इकाई}$$

प्रश्नानुसार:

$$\Rightarrow 110.5 \text{ इकाई} - 93 \text{ इकाई} = 105 \text{ रुपये}$$

$$\Rightarrow 17.5 \text{ इकाई} = 105 \text{ रुपये}$$

$$\Rightarrow 1 \text{ इकाई} = 6 \text{ रुपये}$$

$$\Rightarrow 100 \text{ इकाई} = 600 \text{ रुपये}$$

अतः, वस्तु का क्रय मूल्य = 600 रुपये

प्राप्त लाभ = 11%

वस्तु का विक्रय मूल्य = $600 + 600 \times \frac{11}{100} = 666$ रुपये

55. C

Sol. ग्यारह संख्याओं का औसत 80 है।

हम जानते हैं कि

अवलोकनों का योग = औसत × अवलोकनों की कुल संख्या

11 संख्याओं का योग = $11 \times 80 = 880$

पहली चार संख्याओं का औसत 74.5 है और अगली चार संख्याओं का औसत 82.5 है।

पहली आठ संख्याओं का योग = $4 \times 74.5 + 4 \times 82.5 = 298 + 330 = 628$

अंतिम तीन संख्याओं का योग = $880 - 628 = 252$

नौवीं संख्या दसवीं संख्या से 6 अधिक है, और दसवीं संख्या ग्यारहवीं संख्या से 6 कम है।

माना 10वीं संख्या = x

9 वीं संख्या = x + 6

11 वीं संख्या = x + 6

अब, $x+6 + x + x+6 = 252$

$\Rightarrow 3x + 12 = 252$

$\Rightarrow 3x = 240$

$\Rightarrow x = 80$

$\Rightarrow 9$ वीं संख्या = 86

$\Rightarrow 11$ वीं संख्या = 86

अब, नौवीं और चौथाईवीं संख्याओं का औसत = $\frac{86+86}{2} = 86$

56. B

Sol. A एक काम का एक चौथाई 5 दिनों में कर सकता है

कार्य को पूरा करने में A द्वारा लिए गए दिनों की संख्या = $5 \times 4 = 20$ दिनों

B उस कार्य का 2/5वां भाग 10 दिनों में कर सकता है।

B द्वारा कार्य को पूरा करने में लिए गए दिनों की संख्या = $10 \times \frac{5}{2} = 25$ दिनों

माना कुल कार्य = LCM (20,25) = 100 इकाई

A की दक्षता = $\frac{100}{20} = 5$ इकाई/दिन

B की दक्षता = $\frac{100}{25} = 4$ इकाई/दिन

A और B की संयुक्त दक्षता = $5 + 4 = 9$ इकाई/दिन

A और B द्वारा एक साथ कार्य को पूरा करने में लिए गए दिनों की संख्या = $\frac{100}{9} = 11\frac{1}{9}$ दिन

57. D

Sol. हम वह छोटी से छोटी संख्या ज्ञात करने में रुचि रखते हैं जिसे 15, 25, 35, 40 से विभाजित करने पर क्रमशः 10, 20, 30, 35 शेषफल प्राप्त होता है।

स्पष्ट है, $15 - 10 = 25 - 20 = 35 - 30 = 40 - 35 = 5$

इसलिए, अभीष्ट संख्या = LCM (15,25,35,40) - 5

$$15 = 5 \times 3$$

$$25 = 5 \times 5$$

$$35 = 5 \times 7$$

$$40 = 5 \times 2 \times 2 \times 2$$

$$\text{LCM} (15,25,35,40) = 5 \times 5 \times 3 \times 7 \times 2 \times 2 \times 2 = 4200$$

अतः, अभीष्ट संख्या = LCM (15, 25, 35, 40) – 5 = 4200 – 5 = 4195

58. D

Sol. साधारण ब्याज = 81 रुपये

मूलधन = 900 रुपये

ब्याज की दर = 4.5%

$$\text{साधारण ब्याज} = \frac{\text{मूलधन} \times \text{दर} \times \text{समय}}{100}$$

$$\Rightarrow 81 = \frac{900 \times 4.5 \times t}{100}$$

$$\Rightarrow t = \frac{81}{9 \times 4.5} = 2 \text{ वर्ष}$$

अतः, लिया गया समय = 2 वर्ष

59. A

Sol. विकल्प A पर विचार करने पर:

कंपनी D की मोटरसाइकिलों का उत्पादन = 140

कंपनी D की मोटरसाइकिलों की मांग = 125

% जिससे मोटरसाइकिल का उत्पादन मांग से अधिक है =

$$\frac{140 - 125}{125} \times 100 = \frac{1500}{125} = 12\%$$

इसलिए, कंपनी D का मोटरसाइकिलों का उत्पादन मांग से लगभग 12% अधिक है।

60. A

Sol. कंपनियों A, B और C की मोटरसाइकिलों का औसत उत्पादन =

$$\frac{75 + 90 + 135}{3} = \frac{300}{3} = 100$$

D की मोटरसाइकिलों की मांग = 125

$$\text{अभीष्ट प्रतिशत} = \frac{125-100}{125} \times 100 = 20\%$$

61. D

Sol. माना B की आय 100 रुपये है।

A की आय B की आय से 50% अधिक है।

$$A \text{ की आय} = 100 + \frac{50}{100} \times 100 = 100 + 50 = 150 \text{ रुपये}$$

$$A \text{ और } B \text{ की संयुक्त आय} = 100 + 150 = 250 \text{ रुपये}$$

यदि A की आय में 40% की वृद्धि होती है और B की आय में 30% की वृद्धि होती है

$$B \text{ की परिणामी आय} = 100 + \frac{30}{100} \times 100 = 100 + 30 = 130 \text{ रुपये}$$

$$A \text{ की परिणामी आय} = 150 + \frac{40}{100} \times 150 = 150 + 60 = 210 \text{ रुपये}$$

$$A \text{ और } B \text{ की परिणामी संयुक्त आय} = 130 + 210 = 340 \text{ रुपये}$$

$$\text{अभीष्ट प्रतिशत} = \frac{340-250}{250} \times 100 = \frac{9000}{250} = 36\%$$

62. A

Sol. मोड़ = 7.52

$$\text{माध्यम} = 9.06$$

हम जानते हैं कि:

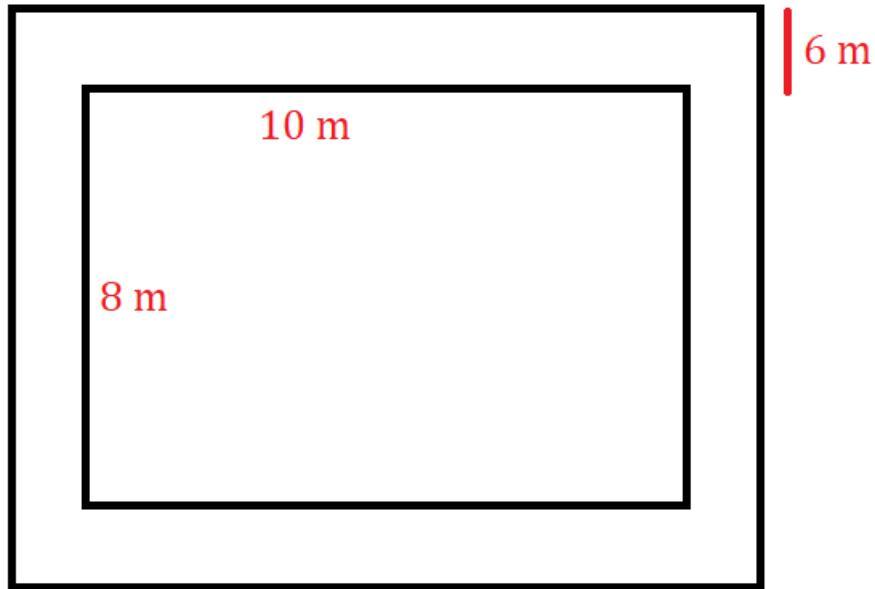
$$\text{बहुलक} = 3 \text{ माध्यम} - 2 \text{ माध्य}$$

$$\Rightarrow 7.52 = 3 \times 9.06 - 2 \times \text{माध्य}$$

$$\Rightarrow \text{माध्य} = \frac{27.18 - 7.52}{2} = \frac{19.66}{2} = 9.83$$

63. D

Sol. 10 मीटर लंबाई और 8 मीटर चौड़ाई वाले आयताकार भूखंड के चारों ओर और बाहर 6 मीटर चौड़ा एक रास्ता है।



$$\text{पथ का क्षेत्रफल (मी}^2\text{ में)} = (10 + 6 + 6) \times (8 + 6 + 6) - 10 \times 8 = 22 \times 20 - 80 = 360 \text{ मी}^2$$

64. A

Sol. हम जानते हैं कि एक नियत दूरी के लिए, गति लिए गए समय के व्युत्क्रमानुपाती होती है।

तीन कारों की गति 3:4:8 के अनुपात में है।

इन कारों द्वारा समान दूरी तय करने में लिए गए समय का अनुपात =

$$\frac{1}{3} : \frac{1}{4} : \frac{1}{8} = \frac{24}{3} : \frac{24}{4} : \frac{24}{8} = 8:6:3$$

65. A

Sol. एक डीलर ने एक वस्तु को उसके अंकित मूल्य पर 10% की छूट पर खरीदा और उसे अंकित मूल्य से 20% अधिक मूल्य पर बेचा।

माना वस्तु का अंकित मूल्य = 100 रुपये

एक डीलर ने एक वस्तु को उसके अंकित मूल्य पर 10% की छूट पर खरीदा।

$$\text{वस्तु का क्रय मूल्य} = 100 - 100 \times \frac{10}{100} = 100 - 10 = 90 \text{ रुपये}$$

उसने इसे अंकित मूल्य से 20% अधिक कीमत पर बेचा।

$$\text{वस्तु का विक्रय मूल्य} = 100 + 100 \times \frac{20}{100} = 100 + 20 = 120 \text{ रुपये}$$

$$\text{लाभ \%} = \frac{120 - 90}{90} \times 100 = 33\frac{1}{3}\% \approx 33\%$$

66. A

Sol. स्टॉपेज को छोड़कर, बस की गति 60 किमी/घंटा है और स्टॉपेज सहित, यह 51 किमी/घंटा है।

स्टॉपेज को छोड़कर, बस द्वारा 60 मिनट में तय की गई दूरी = 60 किमी

स्टॉपेज सहित, बस द्वारा 60 मिनट में तय की गई दूरी = 51 किमी

परति घंटे रुकी बस की मिनटों की संख्या = $60 - 51 = 9$ मिनट।

67. C

Sol. कक्षा A और B में कुल छात्रों की संख्या = 92

A में छात्रों की संख्या B की तुलना में 30% अधिक है।

$$\Rightarrow A = B + \frac{30B}{100} = \frac{13B}{10}$$

$$\text{अब, } A + B = 92$$

$$\Rightarrow \frac{13B}{10} + B = 92$$

$$\Rightarrow 23B = 920$$

$$\Rightarrow B = 40$$

$$\text{अतः, } A = 92 - B = 92 - 40 = 52$$

A और B में सभी छात्रों का औसत वजन 56 किग्रा है

A और B में सभी विद्यार्थियों के वजन का योग = $56 \times 92 = 5152$ किग्रा

माना A में विद्यार्थियों का औसत भार (किग्रा में) = x किग्रा

माना B में विद्यार्थियों का औसत भार (किलो में) = y किग्रा

B में छात्रों का औसत वजन (किलो में) A में छात्रों की तुलना में 50% अधिक है।

$$y = x + \frac{50x}{100} = \frac{3}{2}x$$

अब, $52x + 40y = 5152$ किग्रा

$$\Rightarrow 52x + 40\left(\frac{3}{2}x\right) = 5152 \text{ किग्रा}$$

$$\Rightarrow 112x = 5152$$

$$\Rightarrow x = 46$$

$$\text{तथा, } y = \frac{3}{2}(46) = 69 \text{ किग्रा}$$

अतः, B में छातरों का औसत वजन (किलो में) = 69 kg

68. B

Sol. A और B की वर्तमान आयु का अनुपात 6:5 है।

माना A की वर्तमान आयु = $6x$

B की वर्तमान आयु = $5x$

चार वर्ष पहले यह अनुपात 5:4 था।

प्रश्नानुसार:

$$\Rightarrow \frac{6x-4}{5x-4} = \frac{5}{4}$$

$$\Rightarrow 24x - 16 = 25x - 20$$

$$\Rightarrow x = 4$$

A की वर्तमान आयु = 24 वर्ष

B की वर्तमान आयु = 20 वर्ष

दस वर्ष बाद A और B की आयु का अनुपात = $(24+10) : (20+10) = 34 : 30 = 17 : 15$

69. C

Sol. धातु के बेलनाकार पाइप का आयतन = 1232 सेमी³

एक धात्विक बेलनाकार पाइप (R) की बाहरी तिरज्या = 7 सेमी

धातु के बेलनाकार पाइप की मोटाई = 2 सेमी

धात्विक बेलनाकार पाइप की आंतरिक त्रिज्या (r) = 7 सेमी – 2 सेमी = 5 सेमी

$$\Rightarrow 1232 = \pi \times h \times (R^2 - r^2)$$

$$\Rightarrow 1232 = \frac{22}{7} \times h \times (7^2 - 5^2)$$

$$\Rightarrow h = \frac{1232 \times 7}{22 \times 24} = 16.33 \text{ सेमी}$$

अतः, पाइप की लंबाई = 16.3 सेमी

70. C

Sol. ₹x के योग को A, B और C में इस प्रकार विभाजित किया जाता है कि A और B के शेयरों का अनुपात 7:12 है और B और C के शेयरों का अनुपात 8:5 है।

$$A : B = 7 : 12$$

$$\Rightarrow A : B = 14 : 24 \dots\dots\dots(1)$$

$$B : C = 8 : 5$$

$$\Rightarrow B : C = 24 : 15 \dots\dots\dots(2)$$

(1) और (2) का संयोजन

$$A : B : C = 14 : 24 : 15$$

A और C के शेयरों में अंतर 219 है

$$\Rightarrow (15-14) \text{ इकाई} = 219$$

$\Rightarrow 1 \text{ इकाई} = 219$

$$\Rightarrow (14 + 24 + 15) \text{ इकाई} = 53 \text{ इकाई} = 11607 \text{ रुपये}$$

अतः, $x = 11607$ रूप्ये

71. A

$$\text{Sol. } 0.42\bar{3} - 0.2 \text{ of } 52.5 \div 0.84 = x^2 - (0.02\bar{1} + 12.5)$$

$$\text{माना } 0.\overline{423} = x$$

$$0.\overline{423333} = x$$

$$423.33, \dots = 1000x \dots \dots \dots (2)$$

(1) से (2) को घटाने पर

$$\Rightarrow 381 = 900x$$

$$\Rightarrow x = \frac{381}{900}$$

$$\Rightarrow 0.\overline{423} = \frac{381}{900}$$

$$\text{माना } 0.\underline{021} = y$$

$$\Rightarrow 2.1111\dots = 100v$$

$$\Rightarrow 21.111\dots = 1000v$$

(1) से (2) को घटाने पर

$$\Rightarrow 19 = 900v$$

$$\Rightarrow y = \frac{19}{800}$$

$$\Rightarrow 0.02\bar{1} = \frac{19}{900}$$

$$\text{अब, } 0.42\bar{3} - 0.2 \text{ का } 52.5 \div 0.84 = x^2 - (0.02\bar{1} + 12.5)$$

$$\Rightarrow \frac{381}{900} - \frac{1}{5} \text{ का } 52.5 \div 0.84 = x^2 - \left(\frac{19}{900} + 12.5 \right)$$

$$\Rightarrow \frac{381}{900} - 10.5 \div 0.84 = x^2 - \left(\frac{19}{900} + \frac{125}{10} \right)$$

$$\Rightarrow \frac{381}{900} - 12.5 = x^2 - \left(\frac{19}{900} + 12.5 \right)$$

$$\Rightarrow \frac{381}{900} - 12.5 = x^2 - \frac{19}{900} - 12.5$$

$$\Rightarrow \frac{381}{900} = x^2 - \frac{19}{900}$$

$$\Rightarrow x^2 = \frac{381}{900} + \frac{19}{900} = \frac{400}{900}$$

$$\Rightarrow x = \frac{2}{3}$$

$$\text{अब, } 3x = 3 \times \frac{2}{3} = 2$$

72. D

Sol. कंपनियों B और E की मोटरसाइकिलों का कुल उत्पादन = 90 + 120 = 210

एक साथ सभी कंपनियों की मोटरसाइकिलों की मांग = 100 + 70 + 110 + 125 + 95 = 500

$$\text{अभीष्ट प्रतिशत} = \frac{210}{500} \times 100 = 42\%$$

73. A

Sol. ₹7,500 की राशि 2 वर्षों के बाद एक निश्चित दर प्रतिशत प्रतिवर्ष पर ₹8,748 हो जाती है।

$$\text{राशि} = P \left(1 + \frac{R}{100} \right)^{\text{समय}}$$

$$\Rightarrow 8748 = 7500 \left(1 + \frac{R}{100} \right)^2$$

$$\Rightarrow \left(1 + \frac{R}{100} \right)^2 = \frac{8748}{7500} = \frac{2187}{1875} = \frac{729}{625}$$

$$\Rightarrow \left(1 + \frac{R}{100} \right)^2 = \left(\frac{27}{25} \right)^2$$

$$\Rightarrow \left(1 + \frac{R}{100}\right) = \left(\frac{27}{25}\right)$$

$$\Rightarrow \frac{R}{100} = \frac{2}{25}$$

$$\Rightarrow R = 8\%$$

अब, मूलधन = 7500 रुपये

समय = 3 वर्ष

$$\text{दर} = 2 \times 8\% = 16\%$$

$$\text{साधारण ब्याज} = \frac{\text{मूलधन} \times \text{दर} \times \text{समय}}{100}$$

$$\text{साधारण ब्याज} = \frac{7500 \times 16 \times 3}{100} = 3600 \text{ रुपये}$$

74. C

Sol. शांत जल में एक नाव की गति 30 किमी/घंटा है

धारा की गति = 6 किमी/घंटा

धारा के प्रतिकूल नाव की गति = 30 किमी/घंटा - 6 किमी/घंटा = 24 किमी/घंटा

धारा के प्रतिकूल 5 मिनट में तय की गई दूरी (किमी में) =

$$24 \times \frac{5}{60} = 2 \text{ किमी}$$

75. A

$$\text{Sol. } 1\frac{19}{21} - \left[1\frac{10}{21} + \frac{1}{2} \text{ of } \frac{1}{3} \div \frac{7}{12} - \left(\frac{2}{7} \text{ of } \frac{1}{5} \right) \right]$$

BODMAS लागू करने पर:

$$\Rightarrow \frac{40}{21} - \left[\frac{31}{21} + \frac{1}{6} \div \frac{7}{12} - \left(\frac{2}{35} \right) \right]$$

$$\Rightarrow \frac{40}{21} - \left[\frac{31}{21} + \frac{2}{7} - \left(\frac{2}{35} \right) \right]$$

$$\Rightarrow \frac{40}{21} - \left[\frac{31}{21} + \frac{6}{21} - \left(\frac{2}{35} \right) \right]$$

$$\Rightarrow \frac{40}{21} - \left[\frac{37}{21} - \left(\frac{2}{35} \right) \right]$$

$$\Rightarrow \frac{40}{21} - \frac{37}{21} + \left(\frac{2}{35} \right) = \frac{3}{21} + \frac{2}{35} = \frac{1}{7} + \frac{2}{35} = \frac{5}{35} + \frac{2}{35} = \frac{7}{35} = \frac{1}{5}$$

76. B

Sol. • एड्स (एकचायर्ड इम्यूनोडेफिसिएंशी सिंड्रोम) (**acquired immunodeficiency syndrome**) के लिए जिम्मेदार वायरस है।

• HIV या ह्यूमन इम्यूनोडेफिशिएंसी (Human Immunodeficiency) वायरस एक रेट्रोवायरस (retrovirus) है जो पहली बार 1983 में पाया गया था।

• HIV दो प्रकार के होते हैं; ये HIV -1 और HIV -2 हैं।

• विश्व एड्स दिवस 1988 से प्रत्येक वर्ष 1 दिसंबर को मनाया जाता है।

• यह जागरूकता बढ़ाने, शिक्षित करने और वैश्विक सार्वजनिक स्वास्थ्य समस्या के रूप में HIV की समझ में सुधार करने के लिए समर्पित है।

77. C

Sol. • संसदीय कार्य मंत्रालय केंद्र और राज्यों में अखिल भारतीय राजनीतिक दलों के सचेतकों के सम्मेलन का आयोजन करता है।

• जनवरी 2018 में राजस्थान के उदयपुर में 18वें अखिल भारतीय सचेतक सम्मेलन, 2018 का आयोजन किया गया।

• संसदीय कार्य मंत्रालय भारत की संसद से संबंधित मामलों को देखता है।

• यह दो सदनों, लोकसभा और राज्यसभा के बीच एक कड़ी के रूप में काम करता है।

• यह 1949 में विभाग के रूप में बनाया गया था लेकिन बाद में एक पूर्ण मंत्रालय बन गया।

• प्रल्हाद वेंकटेश जोशी (Pralhad Venkatesh Joshi) वर्तमान केंद्रीय संसदीय कार्यमंत्री हैं।

78. B

Sol. • मेलामाइन एक थर्मोसेटिंग प्लास्टिक है।

• आग की लपटों से बचाने के लिए इसे फायरमैन की वर्दी पर लेप किया जाता है।

• इसका उपयोग फर्श की टाइलें, सभी प्रकार के आग प्रतिरोधी कपड़े और बरतन बनाने के लिए भी किया जाता है।

- मेलामाइन एक कार्बनिक यौगिक है जिसका सूत्र $C_3H_6N_6$ है।

79. D

Sol. • द टेस्टामेंट्स (The Testaments), मार्गरेट एटवुड (Margaret Atwood) का 2019 का उपन्यास है।

- बर्नार्डिन एवरिस्टो (Bernardine Evaristo) के उपन्यास गर्ल, वुमन, अदर (Girl, Woman, Other) के साथ द टेस्टामेंट्स (The Testaments) 2019 बुकर पुरस्कार की संयुक्त विजेता थी।
- मार्गरेट एटवुड (Margaret Atwood) एक कनाडाई कवि, उपन्यासकार और एक पर्यावरण कार्यकर्ता हैं।
- 1961 से, उन्होंने कविता की 18 पुस्तकें, 18 उपन्यास और गैर-कथा की 11 पुस्तकें प्रकाशित की।

80. B

Sol. • 2023 फीफा महिला विश्व कप (FIFA Women's World Cup) की मेजबानी ऑस्ट्रेलिया और न्यूजीलैंड संयुक्त रूप से करेंगे।

- यह 20 जुलाई से 20 अगस्त 2023 तक होने वाला है।
- यह फीफा महिला विश्व कप (FIFA Women's World Cup) का 9वां संस्करण होगा।
- संयुक्त राज्य अमेरिका डिफेंडिंग चैंपियन है, जिसने 2015 और 2019 में पिछले दो टूर्नामेंट जीते।
- प्रतियोगिता प्रत्येक चार वर्ष में आयोजित की जाती है।
- पहला फीफा महिला विश्व कप (FIFA Women's World Cup) 1991 में चीन में आयोजित किया गया था।

81. D

Sol. • राइबोसोम RNA और प्रोटीन से बना कोशिकीय कण है।

- यह प्रोटीन संश्लेषण के लिए उत्तरदायी है।
- राइबोसोम में दो मुख्य घटक होते हैं जिन्हें बड़ा सबयूनिट (large subunit) और छोटा सबयूनिट (small subunit) कहा जाता है।
- राइबोसोम का मुख्य कार्य कोशिका के लिए प्रोटीन बनाना है।
- राइबोसोम की खोज सबसे पहले 1955 में रोमानियाई-अमेरिकी कोशिका जीवविज्ञानी जॉर्ज एमिल पलाडे (George Emil Palade) ने की थी।

82. A

Sol. • सुभाष चंद्र बोस 1938 और 1939 में कांग्रेस पार्टी के अध्यक्ष बने।

- 1939 में राजेंद्र प्रसाद ने भारतीय राष्ट्रीय कांग्रेस के अध्यक्ष के रूप में उनका स्थान लिया।

- भारतीय राष्ट्रीय कांग्रेस की स्थापना 1885 में एलन ऑक्टेवियन ह्यूम (Allan Octavian Hume) ने की थी।

- कांग्रेस की पहली बैठक 28 दिसंबर, 1885 को बॉम्बे में एओ ह्यूम (AO Hume) द्वारा आयोजित की गई थी।

83. A

Sol. • पेलाग्रा विटामिन B-3 के कारण होने वाला रोग है।

- विटामिन B-3 को नियासिन (niacin) के नाम से भी जाना जाता है।

- पेलाग्रा (Pellagra) को प्रणालीगत बीमारी द्वारा परिभाषित किया गया है। मनोभ्रंश (डिमेंशिया), दस्त (डायरिया) और त्वचाशोथ (डर्मेटाइटिस) इसकी विशेषता है।

- शरीर में वसा और शर्करा के उचित कार्य और स्वस्थ कोशिकाओं को बनाए रखने के लिए नियासिन (Niacin) (विटामिन B -3) की आवश्यकता होती है।

84. D

Sol. • भारत का सांख्यिकी दिवस प्रत्येक वर्ष 29 जून को प्रशांत चंद्र महालनोबिस (Prasanta Chandra Mahalanobis) की जयंती के रूप में मनाया जाता है।

- प्रशांत चंद्र महालनोबिस (Prasanta Chandra Mahalanobis) को 'भारतीय सांख्यिकी के जनक' के रूप में भी जाना जाता है।

- उनका जन्म 29 जून, 1893 को कलकत्ता, पश्चिम बंगाल में हुआ था।

- उन्होंने 1932 में भारतीय सांख्यिकी संस्थान (ISI) की स्थापना की।

- वह 1955 में योजना आयोग के सदस्य भी रहे और 1967 तक बने रहे।

- सांख्यिकी दिवस, 2021 का आयोजन नीति आयोग द्वारा किया गया था।

85. C

Sol. • मानव विकास रिपोर्ट (HDR) एक वार्षिक मानव विकास सूचकांक रिपोर्ट है।

- यह संयुक्त राष्ट्र विकास कार्यक्रम (UNDP) के मानव विकास रिपोर्ट कार्यालय द्वारा प्रकाशित किया जाता है।

- पहला HDR 1990 में पाकिस्तानी अर्थशास्त्री महबूब उल हक (Mahbub ul Haq) और भारतीय नोबेल पुरस्कार विजेता अमर्त्य सेन (Amartya Sen) द्वारा लॉन्च किया गया था।

- संयुक्त राष्ट्र विकास कार्यक्रम (UNDP) 22 नवंबर, 1965 को स्थापित किया गया था।

- इसका मुख्यालय न्यूयॉर्क, यूएसए में है।

86. A

Sol. • "गरीब कल्याण रोजगार अभियान" एक ग्रामीण लोक निर्माण योजना है।

- इसे 20 जून 2020 को 50,000 करोड़ रुपये की शुरुआती फंडिंग के साथ लॉन्च किया गया था।
- ग्रामीण विकास मंत्रालय 'गरीब कल्याण रोजगार अभियान' के लिए नोडल मंत्रालय है।
- गिरिराज सिंह (Giriraj Singh) वर्तमान ग्रामीण विकास मंत्री हैं।

87. D

Sol. • वेस्टइंडीज ने 1975 में पहला क्रिकेट विश्व कप जीता था।

- फाइनल मैच में वेस्टइंडीज ने ऑस्ट्रेलिया को 17 रन से हराकर खिताब अपने नाम किया।
- 1975 क्रिकेट विश्व कप (प्रूडेंशियल कप) '75) पुरुषों के क्रिकेट विश्व कप का उद्घाटन था।
- यह एक दिवसीय अंतर्राष्ट्रीय (ODI) क्रिकेट के इतिहास में पहला बड़ा टूर्नामेंट था।
- यह 7 जून और 21 जून 1975 के बीच इंग्लैंड में अंतर्राष्ट्रीय क्रिकेट परिषद (ICC) द्वारा आयोजित किया गया था।

88. A

Sol. • सही उत्तर "कोई सीमा नहीं है"।

- भारतीय संविधान के अनुच्छेद 154 के अनुसार एक व्यक्ति को एक से अधिक राज्यों का राज्यपाल नियुक्त किया जा सकता है।
- अनुच्छेद 153 के अनुसार राज्यपाल, राज्य का संवैधानिक प्रमुख होता है।

89. B

Sol. • ब्राह्मी लिपि सिंधु लिपि के बाद भारत में विकसित सबसे प्राचीन लेखन प्रणाली है।

- यह देवनागरी, बंगाली, तमिल और मलयालम आदि सहित अधिकांश वर्तमान भारतीय लिपियों की मातृ लिपि है।
- दक्षिण पूर्व और पूर्वी एशिया में पाई जाने वाली सभी आधुनिक भारतीय लिपियाँ और कई सौ लिपियाँ ब्राह्मी लिपि से ली गई हैं।

90. B

Sol. • शुक्र का कोई चन्द्रमा नहीं है।

- यह सूर्य से दूसरा ग्रह है।
- इसका नाम प्रेम और सुंदरता की रोमन देवी के नाम पर रखा गया है।

- शनि, अरुण और बृहस्पति के क्रमशः 82, 27 और 79 चंद्रमा हैं।

91. C

Sol. • बिष्णुपुर (Bishnupur) पश्चिम बंगाल राज्य में बांकुरा जिले का शहर और नगर पालिका है।

- यह मल्ल शासकों (Malla ruler) द्वारा निर्मित टेराकोटा मंदिरों, 1600-1800ई. के दौरान निर्मित ऐतिहासिक राधा कृष्ण मंदिरों और बलूचरी साड़ियों (Baluchari sarees) के लिए प्रसिद्ध है।
- मल्ल शासक (Malla ruler) वैष्णव थे और उन्होंने इस स्थान पर 17 वीं और 18 वीं शताब्दी के दौरान प्रसिद्ध टेराकोटा मंदिरों का निर्माण किया था।
- बिष्णुपुर (Bishnupur) पर गुप्त काल में स्थानीय हिंदू राजाओं का शासन था।

92. D

Sol. • सुंदरवन आरक्षित वन (SRF) विश्व का सबसे बड़ा सन्निहित मैंग्रोव वन है।

- यह बांग्लादेश के दक्षिण-पश्चिम में पूर्व में बालेश्वर नदी (Baleswar river) और पश्चिम में हरिनबंगा (Harinbangla) के बीच स्थित है।
- चिदंबरम (Chidambaram) के पास पिछावरम मैंग्रोव वन (Pichavaram Mangrove Forest) विश्व का दूसरा सबसे बड़ा मैंग्रोव वन है।

93. D

Sol. • अखिल भारतीय मुस्लिम लीग की स्थापना 1906 में ढाका (बांग्लादेश) में हुई थी।

- यह आगा खान (Aga Khan), ढाका के नवाब सलीमुल्लाह (Salimullah) और नवाब मोहसिन-उल-मुल्क (Mohsin- ul- Mulk) के नेतृत्व में स्थापित किया गया था।
- आगा खान (Aga Khan) मुस्लिम लीग के पहले अध्यक्ष थे।

94. D

Sol. • सेरिंग लैंडोल (Tsering Landol) एक भारतीय स्त्री रोग विशेषज्ञ (gynecologist) हैं और महिलाओं के स्वास्थ्य के अग्रदूतों में से एक हैं।

- वह लद्दाख की रहने वाली हैं।

- भारतीय चिकित्सा में उनके योगदान के लिए उन्हें 2006 में पद्म शशी और 2020 में पद्म भूषण से सम्मानित किया गया था।

95. B

Sol. • महानदी छत्तीसगढ़ और ओडिशा राज्यों से होकर बहती है और अंत में बंगाल की खाड़ी में मिल जाती है।

- इसकी कुल लंबाई 900 किलोमीटर है।

- हीराकुड बांध (Hirakud Dam), महानदी नदी पर बना है।

- यह विश्व का सबसे लंबा मिटटी का बांध है।

96. C

Sol. • भारत के संविधान के अनुच्छेद 343(3) ने संसद को 25 जनवरी 1965 के बाद भी आधिकारिक उद्देश्यों के लिए अंग्रेजी के निरंतर उपयोग के लिए कानून द्वारा प्रदान करने का अधिकार दिया।

- अनुच्छेद 343(1) के अनुसार संघ की राजभाषा देवनागरी लिपि में हिन्दी होगी।

- संविधान का भाग XVII अनुच्छेद 343 से अनुच्छेद 351 में राजभाषा से संबंधित है।

97. C

Sol. • जनसंख्या भूगोल मानव भूगोल की एक शाखा है।

- यह लोगों के वैज्ञानिक अध्ययन, उनके स्थानिक वितरण और घनत्व पर केंद्रित है।

- भूगोल को दो मुख्य शाखाओं: मानव भूगोल और भौतिक भूगोल, में बांटा गया है।

• मानव भूगोल लोगों और उनके समुदायों, संस्कृतियों, अर्थव्यवस्थाओं और पर्यावरण के साथ अंतःक्रियाओं के अध्ययन से संबंधित है और यह अंतरिक्ष व स्थान के साथ उनके संबंधों का अध्ययन करता है।

- भौतिक भूगोल वातावरण, जलमंडल, जीवमंडल और भूमंडल जैसे प्राकृतिक वातावरण में प्रक्रियाओं और पैटर्न के अध्ययन से संबंधित है।

98. B

Sol. • राजतरंगिणी (**Rajatarangini**) कश्मीर के इतिहास का सबसे पुराना और पूरा रिकॉर्ड है।

- यह कश्मीर पर सबसे प्रारंभिक स्रोत प्रदान करता है।

- इस कृति में 7826 छंद शामिल हैं, जिन्हें तरंग ("लहर") नामक आठ पुस्तकों में विभाजित किया गया है।

- यह संस्कृत में कश्मीरी इतिहासकार कल्हण (Kalhana) द्वारा 12वीं शताब्दी ई. में लिखा गया था।

99. A

Sol. • गानसरस्वती किशोरी अमोनकर (Kishori Amonkar) एक प्रमुख भारतीय शास्त्रीय गायिका थीं।

- वह जयपुर घराने से ताल्लुक रखती थीं।

- वह शास्त्रीय शैली 'ख्याल' ('khyal') और हल्की शास्त्रीय शैलियों 'तुमरी' ('thumri') और 'भजन' ('bhajan') की कलाकार थीं।

- उन्हें 1987 में पद्म भूषण और 2002 में पद्म विभूषण से सम्मानित किया गया था।
- उन्हें 1985 में संगीत नाटक अकादमी पुरस्कार (Sangeet Natak Akademi Award) और 2009 में संगीत नाटक अकादमी फैलोशिप (Sangeet Natak Akademi Fellowship) से सम्मानित किया गया था।

100. C

Sol. • व्यापार और विकास पर संयुक्त राष्ट्र सम्मेलन (UNCTAD) के अनुसार, भारत वर्ष 2019 में प्रत्यक्ष विदेशी निवेश (FDI) का 9वां सबसे बड़ा प्राप्तकर्ता था।

- इस रिपोर्ट के अनुसार "विकास एशिया" क्षेत्र में, भारत एफडीआई के लिए शीर्ष 5 मेजबान अर्थव्यवस्थाओं में से एक था।
- व्यापार और विकास पर संयुक्त राष्ट्र सम्मेलन (UNCTAD) 1964 में स्थापित किया गया था।
- इसका मुख्यालय जिनेवा, स्विटजरलैंड में है।
- रेबेका ग्रिन्स्पैन (Rebeca Grynspan) 13 सितंबर 2021 से संयुक्त राष्ट्र व्यापार और विकास सम्मेलन (UNCTAD) के महासचिव के रूप में कार्यरत हैं।