

**SSC MTS 2020 Tier I : 8**

**Oct S3**

**Mock Test Questions & Solutions**

# Mock Test Solutions in English

## Questions



Our school has been issued instructions to restrict online classes to two hours towards the primary classes.



- 3. Select the most appropriate word to fill in the blank.**

The captain, with the members of the team, given a hearty welcome at the airport yesterday.



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

#### APPROACH

- A. reach
  - B. meet
  - C. near
  - D. avoid

- 5. Select the most appropriate meaning of the given idiom.**

## Change for the better

- A. Exchange an old product for new
  - B. Pretend to be someone else
  - C. To keep loose change
  - D. An improvement in the situation

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

VACANT

C. full

D. bare

7. Select the most appropriate one-word substitution for the given group of words.

To fall apart as a result of decay

A. Disintegrate

B. Dislocate

C. Discontinue

D. Dishevelled

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

APPEASE

A. irritate

B. excite

C. worsen

D. pacify

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

TARDY

A. late

B. slow

C. lazy

D. early

10. Select the most appropriate word to fill in the blank.

Everyone was amazed \_\_\_\_\_ the young child's courage.

A. on

B. at

C. in

D. of

11. Identify the segment in the sentence which contains a grammatical error.

India has always believe in the value of the family system.

A. always believe in

B. the value of

C. India has

D. the family system

12. 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'.

I am not use to eat spicy and oily food.

A. use to eating

B. No substitution required

C. used to eating

D. used to eat

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

Ritu goes to Singapore for her holidays last December.

- A. was going to Singapore
- B. went to Singapore
- C. has gone to Singapore
- D. had gone to Singapore

14. Select the most appropriate word to fill in the blank.

Mother tried to \_\_\_\_\_ the child when he was crying for a toy.

- A. disturb
- B. absorb
- C. attract
- D. distract

15. Select the most appropriate word to fill in the blank.

Pets are good \_\_\_\_\_ for lonely people.

- A. guides
- B. nurses
- C. substitutes
- D. companions

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

Loosen the purse strings

- A. To reduce the expenditure
- B. To increase the money available for expenditure
- C. To lose a purse
- D. To be miserly

17. Identify the segment in the sentence which contains a grammatical error.

I know she is much superior from me in intelligence.

- A. in intelligence
- B. she is much
- C. I know
- D. superior from me

18. Select the INCORRECTLY spelt word.

- A. Patient
- B. Already
- C. Intend
- D. Disrupt

19. Identify the segment in the sentence which contains a grammatical error.

A vacation is the time to relax and break up from the routine.

- A. A vacation is
- B. break up
- C. time to relax
- D. from the routine

20. Select the most appropriate one-word substitution for the given group of words.

A plan of what is to be done and when

- A. Meeting
- B. Schedule
- C. Scheme
- D. Occupation

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.

Every living species of our planet has changed or is changing. Some (1) \_\_\_\_, such as the pre-historic sabre-toothed tiger (2) \_\_\_\_ died out and some are (3) \_\_\_\_\_ dying out. Sometimes new species appear. The dog is (4) \_\_\_\_\_ species which man has caused to (5) \_\_\_\_\_ from the wolf.

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

- A. samples
- B. specimens
- C. strains
- D. species

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

- A. had
- B. has
- C. have
- D. having

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

- A. regularly
- B. gradually
- C. deliberately
- D. readily

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

- A. a
- B. the
- C. an
- D. only

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

- A. expand
- B. derive
- C. emerge
- D. evolve

26. **Which two signs should be interchanged to make the given equation correct?**

$$7 + 3 - 24 \div 6 \times 12 = 29$$

- A. + and ×
- B. – and ×

C. + and –

D. × and –

27. In a certain code language, 'WRITE' is written as 'RWIET', and 'MONTHLY' is written as 'NOMTYLH'. How will 'AMSTERDAM' be written in that language?
- A. TSMAEMADR      B. STNAEMAER  
C. STMAEAMER      D. TSNAEFADR
28. Select the option figure which is NOT embedded in the given figure as its part (rotation is NOT allowed).



29. 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:**

No onion is a lemon.

No lemon is a potato.

**Conclusions:**

I. No onion is a potato.

II. No potato is a lemon.

A. Neither conclusion I nor II follows

C. Only conclusion II follows

B. Both conclusions I and II follow

D. Only conclusion I follows

30. **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.**

MONKEY : STRDJP :: TORQUE : ?

A. WTYJZV

B. WSQJZV

C. WTYJMB

D. WTYLBV

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

5, 20, 65, 200, ?

A. 575

B. 605

C. 1005

D. 1055

32. In a certain code language, 'FREEDOM' is written as '618222241213'. How will "SUPINE" be written in that language?

A. 19062191322

B. 19211191422

C. 19616181422

D. 18617181422

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

15	12	90
16	13	104
12	18	?

A. 129

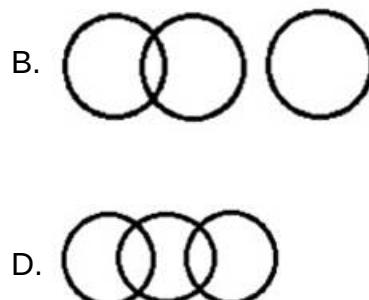
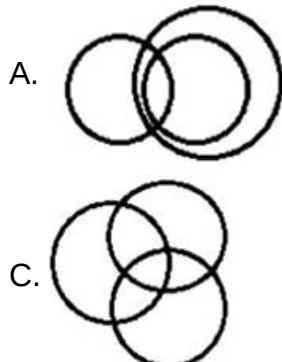
B. 119

C. 100

D. 108

34. **Select the Venn diagram that best illustrates the relationship among the following classes.**

Engineers, Indians, Ladies



35. 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:**

Some rings are calendars.

All rings are caps.

**Conclusions:**

I. All calendars are rings.

II. At least some calendars are caps.

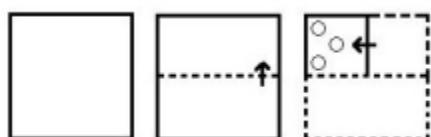
A. Both conclusions I and II follow

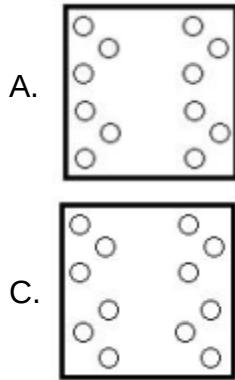
C. Only conclusion II follows

B. Only conclusion I follows

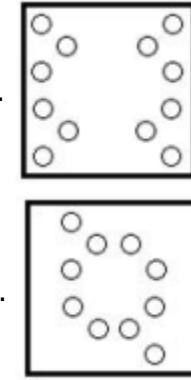
D. Neither conclusion I nor II follows

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



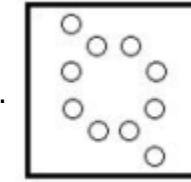


A.



B.

C.



D.

37. Five friends are sitting around a circular table facing the centre of the table. Abhishek is sitting to the immediate left of Sharad. Joseph is to the immediate right of Wasim. Vishal is third to the left of Wasim. Who is sitting between Joseph and Abhishek?
- A. Either Wasim or Vishal      B. Either Wasim or Sharad  
C. Vishal      D. Wasim
38. **Select the correct combination of mathematical signs to replace the \* signs and balance the given equation.**

$$25 * 5 * 6 * 15 * 3 * 50$$

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

39. Eight friends A, B, C, D, E, F, G and H are sitting clockwise around a circular table in the same sequence at equal distances facing the centre of the table. If C is sitting in the south direction, then who is sitting in the north-west direction?
- A. G      B. H  
C. F      D. E
40. **Select the option that is related to the third word in the same way as the second word is related to the first word.**

Bed : Sleep :: Chair : ?

- A. Jump      B. Wood  
C. Sit      D. Balance

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

40, 41, 50, 75, 124, ?



42. Select the figure that will replace the question mark (?) in the following figure series.



- A.  

B.  

C.  

D.  

43. In a certain code language, 'TURNIP' is written as '239597', and 'QUEEN' is written as "83555". How will 'LEMON' be written in that language?



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

NYD, MXC, LWB, KVA, ?



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

Amphibian : Frog :: Reptile : ?

- |             |              |
|-------------|--------------|
| A. Lizard   | B. Cockroach |
| C. Kangaroo | D. Mouse     |

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

2 : 54 :: 4 : ?



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



- The figure consists of four options labeled A, B, C, and D, each showing a 2x2 square divided into four quadrants. The shading is as follows:

  - A.** Top-left quadrant is black, bottom-right quadrant is white.
  - B.** Top-left quadrant is white, bottom-right quadrant is black.
  - C.** Top-left quadrant is black, bottom-right quadrant is black.
  - D.** Top-left quadrant is white, bottom-right quadrant is white.

48. If  $H > M = D > P$  and  $K = H > T > Z$ , then which of the following options is NOT correct?



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

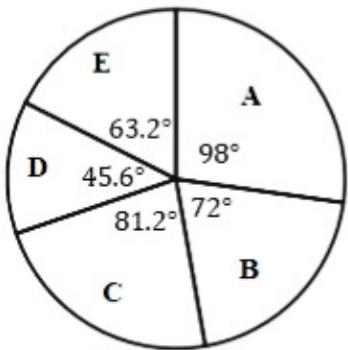
M  
RGB68P  
N

- A. RGB68P      B. RGB68P  
C. RGB68P      D. RGB68P

50. In a certain code language, 'FACTOR' is written as 'JEGXSV'. How will 'MARINA' be written in that language?

  - A. QEVMRE
  - B. PFVMRF
  - C. REUJOBE
  - D. QEHMSE

The pie chart shows the break-up of the total number of employees of a company in 2019, in five departments A, B, C, D and E



Total number of employees = 4500

If 30% of the employees in department B are transferred to department D, then the difference between the number of employees in department C and D is x, which lies between:



52. If the ratio of male employees to female employees in department A is 3:4, then the number of employees in department C is what percentage more than the number of female employees in department A (nearest to an integer)?



A. 6  
C. 7

B. 5  
D. 8

60. A sum was invested at simple interest at  $x\%$  p.a. for 2 years. Had it been invested at  $(x + 4)\%$ , for the same time, it would have fetched ₹1,800 more. What is the simple interest on the same sum for  $5\frac{2}{3}$  years at 8% p.a.?
- A. ₹10,200      B. ₹10,336  
C. ₹9,520      D. ₹10,064
61. A train of length 240 m crosses a pole in 16 seconds and crosses a platform in 42 seconds. What is the length (in m) of the platform?
- A. 400      B. 360  
C. 420      D. 390
62. Let  $x$  be the smallest 4-digit number such that when it is divided by 5, 6 and 7, it leaves the remainders 2, 3 and 4, respectively. The sum of the digits of  $x$  is:
- A. 9      B. 11  
C. 12      D. 14
63. Study the given data and answer the question that follows.

Marks	0-10	10-20	20-30	30-40	40-50
No. of students	3	18	5	7	16

If  $x$  is the lower limit of the median class and  $y$  is the upper limit of the modal class, then the value of  $(3x + 2y)$  is:

- A. 80      B. 90  
C. 70      D. 100

64. The radius of a metallic solid sphere is 21.6 cm. It is melted and drawn into a wire of uniform cross section. If the length of the wire is 259.2 m, then the radius of the wire is:
- A. 0.9 cm      B. 0.8 cm  
C. 0.54 cm      D. 0.72 cm
65. The marked price of an article is ₹4,450. A shopkeeper allows a discount of 10% on it and gets a profit of 20%. The cost price (in ₹) of the article is:
- A. 3,240.50      B. 3,180.00  
C. 3,337.50      D. 3,260.00



A.  $\frac{8}{195}$

B.  $\frac{7}{195}$

C.  $\frac{4}{195}$

D.  $\frac{2}{195}$

73. The value of  $\frac{5}{16} + \frac{3}{5} \times 1\frac{7}{8} \div \frac{2}{3} - 6\frac{1}{8} \div \left( 5\frac{1}{4} \div \frac{3}{7} \text{ of } \frac{1}{2} \right) \text{ of } \frac{6}{7}$  is:

A.  $\frac{31}{18}$

B.  $\frac{19}{6}$

C.  $\frac{41}{24}$

D.  $\frac{17}{12}$

74. The ratio of the number of boys and girls in a class is 5: 7. The average weight of boys is 56 kg and that of girls is 50 kg. What is the average weight (in kg) of all the boys and girls in the class?

A. 52.5

B. 51.8

C. 54.1

D. 53.2

75. The average of 12 numbers is 25.5. The average of the first six numbers is 22.4 and that of the last three numbers is 28.2. The 7th number is 5 less than the 8th number but 10 less than the 9th number. What is the average of the 8th and 9th numbers?

A. 32.6

B. 29.4

C. 29.8

D. 31.5

76. Which of the following instruments is normally played in a vertical position and with an arched bow?

A. Sitar

B. Sarangi

C. Shehnai

D. Veena

77. Rukmini Devi Arundale is associated with which of the following dance forms?

A. Kathakali

B. Bharatnatyam

C. Kathak

D. Kuchipudi

78. Who among the following was appointed as Finance Secretary in March 2020?

A. Satish Kumar Sharma

B. Bimal Julka

C. Amita Pandove

D. Ajay Bhushan Pandey

79. The 'Second Backward Classes Commission' in 1979 was headed by:

A. Jai Prakash Narayan

B. BP Mandal

C. VK Sahni

D. BR Ambedkar

80. Which of the following Indian table tennis player won the ITTF Challenger Plus Oman Open 2020?





A. Devvarman

C. Brihadratha

B. Satadhanvan

D. Samprati

99. In which state Naharkatiya oil field is located?

A. Assam

C. Maharashtra

B. West Bengal

D. Gujarat

100. What is the coloured ring of tissue behind the cornea called, that regulates the amount of light entering the eye, by adjusting the size of the pupil?

A. Fovea

C. Choroid

B. Retina

D. Iris

### Solutions

1. C

Sol.

**Option C has incorrectly spelt word.**

“Definition” is the correct spelling of the incorrect word “Definaton”. It means an explanation of the meaning of a word or phrase, especially in a dictionary.

The meaning of other words are :-

Stagnation: the fact of no longer developing or making progress

Recognition: the act of remembering who someone is when you see them, or of identifying what something is.

Ammunition: a supply of bullets, etc. to be fired from guns.

2. C

Sol.

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

\* Underlined part needs correction in preposition.

\* “Towards” as a preposition is used to show “in the direction of something/someone”

**For example:**

We were heading **towards** our home.

\* “For” as a preposition is used to show who is intended to have or use something.

**For example:**

It is a book **for** children.

- \* In the underlined sentence, we need to connect the “restrict online classes to two hours” with the intended entity i.e. “primary classes”. Thus, preposition “for” should be used in place of preposition “towards”.
- \* Hence, “**for**” is the correct substitution.

The correct sentence will be: **Our school has been issued instructions to restrict online classes to two hours for the primary classes.**

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

3. B

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

- \* Are = (helping verb) is a plural helping verb used in present tense.
- \* Was = (helping verb) is a singular helping verb used in past tense.
- \* Is = (helping verb) is a singular helping verb used in present tense.
- \* Were = (helping verb) is a plural helping verb used in past tense.

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

- \* “Are” is a helping verb of present tense but we need helping verb of past tense. Thus, option A is incorrect.
- \* “Is” is a helping verb of present tense but we need helping verb of past tense. Thus, option C is incorrect.
- \* “Were” is a plural helping verb used in past tense but we need singular helping verb. Thus, option D is incorrect.

\* "Was" is a singular helping verb used in past tense.

\* Here in the given sentence, it is used for the singular subject "the captain". Please note that when two nouns are connected with words like "with", then helping verb is used in accordance with the first noun.

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

The correct sentence will be: **The captain, with the members of the team, was given a hearty welcome at the airport yesterday.**

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

4. D

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

Approach = to come near to someone/something in distance or time.

E.g.: He was **approached** by a woman who asked for his help.

Reach = to arrive at the place that you have been travelling to.

Meet = to be in the same place as someone by chance and talk to them.

Near = a short distance away.

Avoid = to keep away from someone/something.

E.g.: We must leave early to **avoid** the rush hour.

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

5. D

Sol. The idiom "**change for the better**" means a person, thing, situation etc. that is better than the previous or present one.

Example: Voters see the new politician as a **change for the better**.

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

6. D

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

Vacant = empty or unoccupied.

E.g.: A seat became **vacant** and he sat down in it.

Used = familiar with something because you do it or experience it often.

Busy = having a lot to do; perhaps not free to do something else because you are working on something.

Full = containing or holding as much or as many as possible

Bare = not covered by any clothes.

E.g.: The winter sun filtered through the **bare** branches of the trees.

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

7. A

Sol.

Disintegrate: to break into small parts or pieces and be destroyed.

Dislocate: to put a bone out of its normal position in a joint

Discontinue: to stop doing something.

Dishevelled: very untidy.

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

8. D

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

Appease = to make someone calmer or less angry by giving them what they want.

E.g.: The move is widely seen as an attempt to **appease** critics of the regime.

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

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

Worsen = to become or make something worse than it was before.

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

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

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

9. D

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

Tardy = slow to act, move or happen

E.g.: The government's **tardy** response to the situation has worsen the matter.

Late = arriving or happening after the expected or usual time.

Slow = not moving, acting or done quickly.

Lazy = unwilling to work or be active.

Early = near the beginning of a period. OR arriving or done before the usual time.

E.g.: The bus is ten minutes **early**.

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

10. B

Sol.

Let us understand the meaning of the given words:-

- \* On = (preposition) is used to show in or into a position covering, touching or forming part of a surface.
- \* At = (preposition) is used to show where something/someone is or where something happens.
- \* In = (preposition) is used to show at a point within an area or a space
- \* Of = (preposition) is used for showing selection.

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

- \* "On" as a preposition is used to show in or into a position covering, touching or forming part of a surface. Thus, option A is incorrect.
- \* "In" as a preposition is used to for the purpose of "location within something". Thus, option C is incorrect.
- \* "Of" as a preposition is used for selection out of many thing. Thus, option D is incorrect.
- \* "At" as a preposition is used to show in the direction of or towards someone/something.
- \* Here in the given sentence, it is used to show the direction of "amazed" towards the "child's courage".

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

The correct sentence will be: **Everyone was amazed at the young child's courage.**

11. A

Sol.

The sentence is grammatically incorrect, and the error lies in **option A**. The error is related to **Tense**.

\* Present perfect tense has verb structure:

Has/Have + third form of verb

**For example:**

She **has** already **stated** her intention to run for the election.

\* In the given sentence, first form of verb “believe” is used after the helping verb “has”. This is wrong. Thus, third form of verb “believed” should be used in place of “believe”.

Note: “Always” is an adverb which is used for the verb.

\* Hence, “**always believed in**” is the correct substitution.

Thus, the correct sentence will be: **India has always believed in the value of the family system.**

12. C

Sol.

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

\* Underlined part needs correction in verb.

\* “Helping verb + used to + Gerund” structure is used when we want to convey the meaning of “be accustomed to”

**For example:**

Rakesh **is used to waking** up early.

\* In the underlined sentence, “am” is a helping verb. The sentence is conveying the sense of the subject “I” being “accustomed to eating spicy and oily food”. Thus, “eating” should be used

in place of “eat”.

\* Also, verb “use” is used in negative sentences as part of main verb with structure like: “did not + use to + first form of verb”.

\* But here the sentence is not negative, so usage of “use” should be avoided.

For example:

He **did not use to eat** pizza.

\* Hence, “**used to eating**” is the correct substitution.

Thus, the correct sentence will be: **I am not used to eating spicy and oily food.**

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

13. B

Sol.

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

\* Underlined part needs correction in Tense.

\* Time words like “yesterday”, “last + name of month/day” shows that the event happened in the past time. This necessitates the usage of simple past tense in the sentence.

For example:

We **had** a little adventure **yesterday**.

We **went** to Japan **last** March.

\* In the given sentence, time phrase “last December” necessitates the usage of simple past tense i.e. second form of verb.

\* But we have used the first form of verb “goes”. Thus, second form of verb “went” should be used in place of first form of verb “goes”.

\* Hence, “**went to Singapore**” is the correct substitution.

Thus, the correct sentence will be: **Ritu went to Singapore for her holidays last December.**

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

14. D

Sol.

Let us understand the meaning of the given words:-

- \* Disturb = to interrupt someone when they are trying to work, sleep etc.
- \* Absorb = to take liquid, gas or other substance from the surface or space around.
- \* Attract = to make someone/something take part in something.
- \* Distract = to take someone's attention away from what they are trying to do.

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

- \* “Disturb” is used in context of “interrupt someone”. Thus, option A is incorrect.
- \* “Absorb” is used in context of “taking liquid from the surface”. Thus, option B is incorrect.
- \* “Attract” is used in context of “make someone participate”. Thus, option C is incorrect.
- \* “Distract” is used in context of “take someone’s attention away”.
- \* Here in the given sentence, it is used to show that the mom tried to take the child’s attention away from the toy.

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

The correct sentence will be: **Mother tried to distract the child when he was crying for a toy.**

15. D

Sol.

Let us understand the meaning of the given words:-

- \* Guides = to show someone the way to a place, often by going with them.
- \* Nurses = a person whose job is to take care of sick or injured people
- \* Substitutes = a person or thing that you use or have instead of one you normally use or have
- \* Companions = a person or animal that travels with you or spends a lot of time with you

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

- \* "Guides" is used in context of "showing way to some place". Thus, option A is incorrect.
- \* "Nurses" is used in context of "care for sick people". Thus, option B is incorrect.
- \* "Substitutes" is used in context of "replacement". Thus, option C is incorrect.
- \* "Companions" is used in context of "someone with whom you spend a time".
- \* Here in the given sentence, it is used to show that for people who are lonely, pets can be used to spend some time by them.

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

The correct sentence will be: **Pets are good companions for lonely people.**

16. B

Sol.

The idiom "**loosen the purse strings**" means to increase the amount of money available to be spent.

Example: The recent changes in financial market will prompt the investors to **loose the purse strings**.

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

17. D

Sol.

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

\* "Superior" is a verb which takes fixed preposition "to" after it. It means better in quality than someone/something else.

**For example:**

This robot is technically **superior to** its competitors.

\* In the given sentence, we have erroneously used preposition "from" after the verb "superior". Thus, fixed preposition "to" should be used in place of "from".

\* Hence, "**superior to me**" is the correct substitution.

Thus, the correct sentence will be:

**I know she is much superior to me in intelligence.**

18. B

Sol.

**Option B has incorrectly spelt word.**

“Already” is the correct spelling of the incorrect word “Allready”. It means before now or before a particular time in the past

The meaning of other words are:

Patient: a person who is receiving medical treatment especially in a hospital.

Intend: to have a plan, result or purpose in your mind when you do something.

Disrupt: to make it difficult for something to continue in the normal way.

19. B

Sol.

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

\* “Break off” is a phrasal verb. It means to stop doing something for a time.

**For example:**

Ukraine **broke off** diplomatic relations with Russia.

\* “Break up” is a phrasal verb. It means to come to an end.

**For example:**

The marriage has **broken up**.

\* The given sentence demands the sense of “stop doing work” when someone is on a vacation. Thus, preposition “off” should be used in place of “up”.

\* Hence, “**break off**” is the correct substitution.

The correct sentence will be: **A vacation is the time to relax and break off from the routine.**

20. B

Sol.

Meeting: an occasion when people come together to discuss or decide something.

Schedule: a plan that lists all the work that you have to do and when you must do each thing.

Scheme: a plan or system for doing or organising something.

Occupation: a job or profession.

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

21. A

Sol.

The given passage is about “**Changes in species over the time**”.

“Specimens” means a small amount of something that shows what the rest of it is like. Thus, option B is wrong.

“Strains” means pressure on a system or relationship because great demands are being placed on it. Thus, option C is wrong.

“Species” means a group into which animals, plants etc. that are able to have sex with each other and produce healthy young are divided, smaller than a genus and identified by a Latin name. Thus, option D is wrong.

“Samples” means a small amount of substance taken from a larger amount and tested in order to obtain information about the substance.

In the given sentence, it is used to mention about a small amount of substance connected with “pre-historic sabre-toothed tiger”.

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

22. C

Sol.

The given passage is about “**Changes in species over the time**”.

“Had” is a helping verb which is used in past tense. Thus, option B is wrong.

“Has” is a singular helping verb which is used in present tense. But we need plural helping verb. Thus, option C is wrong.

“Having” is the continuous form of verb “have”. But we need plural helping verb. Thus, option D is wrong.

“Have” is a plural helping verb which is used in present tense.

Here in the given sentence, it is used to show for noun “species” which is plural.

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

23. B

Sol.

The given passage is about “**Changes in species over the time**”.

“Regularly” means at regular intervals or times. Thus, option A is wrong.

“Deliberately” means done in a way that was planned, not by chance. Thus, option C is wrong.

“Readily” means quickly and without difficulty. Thus, option D is wrong.

“Gradually” means slowly, over a long period of time.

In the given sentence, it is used to mention that some of “pre-historic sabre-toothed tiger” are dying slowly over a long period of time.

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

24. A

Sol.

The given passage is about “**Changes in species over the time**”.

“The” is a definite article. It is used before the nouns that are specific. Thus, option B is wrong.

“An” as an indefinite article is used before the countable nouns (having vowel sounds) that have not been mentioned before. Thus, option C is wrong.

“Only” as an adjective is used to say that no other group exists or are there. Thus, option D is wrong.

“A” is an indefinite article. It is used to show that someone/something is a member of a group or profession.

Here in the given sentence, it is used to show that “dog” is member of “species” which evolved into wolf”.

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

25. D

Sol.

The given passage is about “**Changes in species over the time**”.

“Expand” means to become greater in size, number or importance. Thus, option A is wrong.

“Derive” means to come or develop from something. Thus, option B is wrong.

“Emerge” means to move out of or away from something and become possible to see. Thus, option C is wrong.

“Evolve” means to develop over time into forms that are better adapted to survive changes in their environment.

In the given sentence, it is used to mention that dog as a species have developed over the time into better adapted forms i.e. “wolf” to survive the changes happening in the environment.

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

26. A

Sol. **By checking option A:**

$$7 + 3 - 24 \div 6 \times 12 = 29$$

After interchanging:

$$7 \times 3 - 24 \div 6 + 12 = 29$$

$$\text{or, } 21 - 4 + 12 = 29$$

$$\text{or, } 29=29$$

so, its correct option.

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

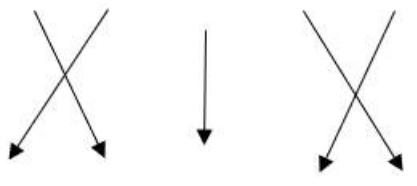
Hence, option A is the correct answer.

27. A

Sol.

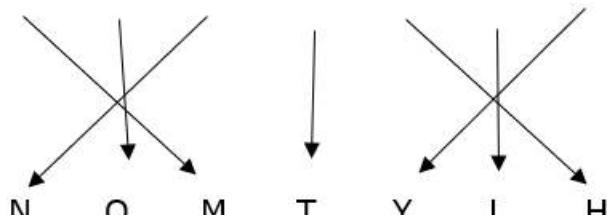
as,

W R I T E



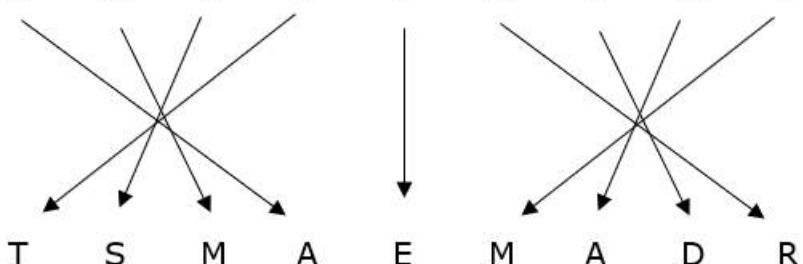
and

M O N T H L Y



similarly,

A M S T E R D A M



Hence, option A is the correct answer.

28. B

Sol. After carefully observing the figures given in the question and answers, it is very clear that the answer figure B is not embedded in the given question figure. It is shown as given below:

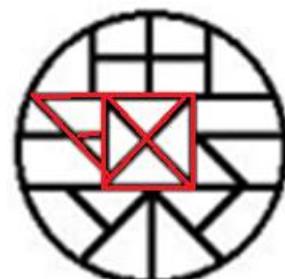
option A is embedded:



option C is embedded:



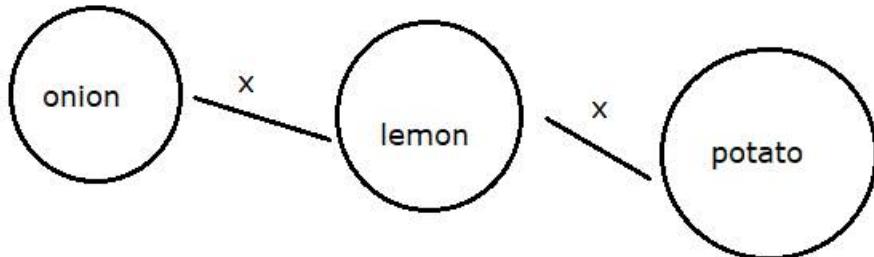
option D is embedded:



Hence, option B is the correct answer.

29. C

Sol. Minimum Possible diagram is-



Conclusions:

I. No onion is a potato. (It does not follow as it's just a possibility, not surety.)

II. No potato is a lemon. (it follows because No lemon is a potato.)

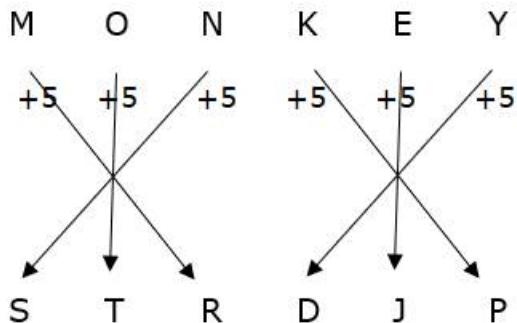
So, Only conclusions II follows.

Hence, option C is the correct answer.

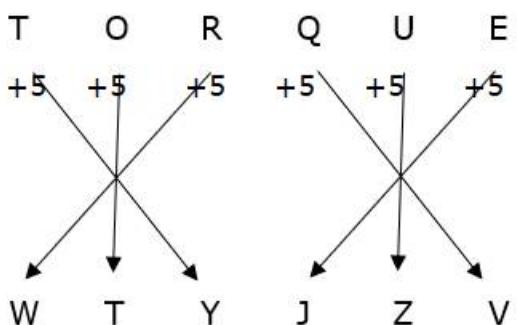
30. A

Sol.

as,



similarly,



Hence, option A is the correct answer.

31. B

Sol. pattern is:

$$5*3+5=20$$

$$20*3+5=65$$

$$65*3+5=200$$

$$200*3+5=605$$

Hence, option B is the correct answer.

32. C

Sol. Each vowel is coded by its reverse rank code and Each consonant is coded by its forward rank code.

as,

$$\begin{aligned}\text{FREEDOM} &= F(6)R(18)E(22)E(22)D(4)O(12)M(13) \\ &= 618222241213\end{aligned}$$

similarly,

$$\begin{aligned}\text{SUPINE} &= S(19)U(6)P(16)I(18)N(14)E(22) \\ &= 19616181422\end{aligned}$$

Hence, option C is the correct answer.

33. D

Sol. Row 1:

$$(15*12)/2=180/2=90$$

Row 2:

$$(16*13)/2=208/2=104$$

Row 3:

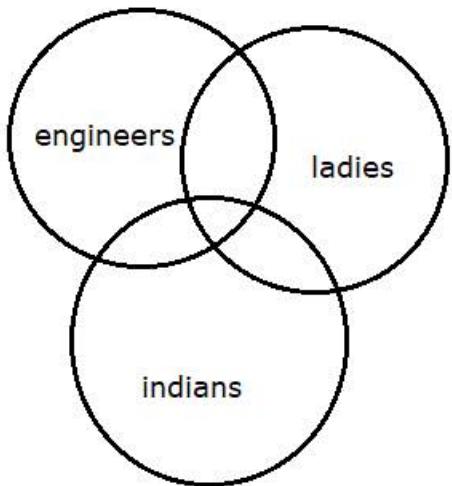
$$(12*18)/2=216/2=108$$

Hence, option D is the correct answer.

34. C

Sol. All the three elements (Engineers, Indians, Ladies) given are mutual to each other.

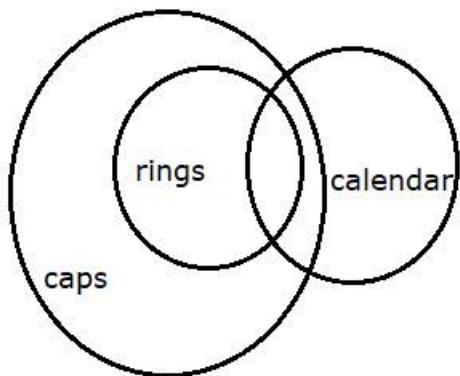
So, the best representation is:



Hence, option C is the correct answer.

35. C

Sol. Minimum Possible diagram is-



Conclusions:

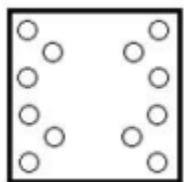
- I. All calendars are rings. (It does not follow as it's just a possibility, not surety.)
- II. At least some calendars are caps. (It follows because Some rings are calendars and All rings are caps.)

So, Only conclusions II follows.

Hence, option C is the correct answer.

36. B

Sol. As given in the figure, we need to fold it in the given(handkerchief folding) manner and Option B would appear when unfolded.



Hence, option B is the correct answer.

37. C

Sol. Abhishek is sitting to the immediate left of Sharad.

Abhishek Sharad

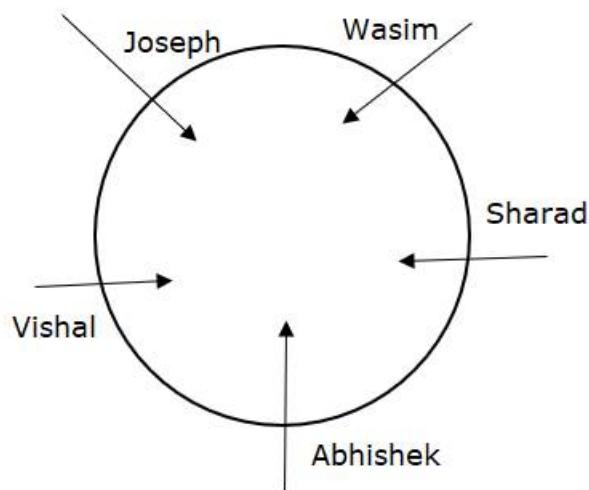
Joseph is to the immediate right of Wasim.

Wasim Joseph

Vishal is third to the left of Wasim.

Wasim Joseph Vishal

so, the final arrangement is:



Therefore, Vishal sitting between Joseph and Abhishek.

Hence, option C is the correct answer.

38. B

Sol. **By checking option A:**

$$25 * 5 * 6 * 15 * 3 * 50$$

After interchanging:

$$25 \div 5 \times 6 - 15 + 3 = 50$$

$$\text{or, } 5 \times 6 - 15 + 3 = 50$$

$$\text{or, } 30 - 15 + 3 = 50$$

$$\text{or, } 18=50$$

so, its not correct option.

**By checking option B:**

$$25 * 5 * 6 * 15 * 3 * 50$$

After interchanging:

$$25 + 5 \times 6 - 15 \div 3 = 50$$

$$\text{or, } 25 + 30 - 5= 50$$

$$\text{or, } 50=50$$

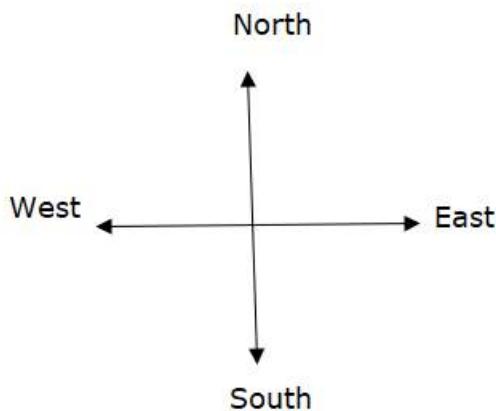
so, its correct option.

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

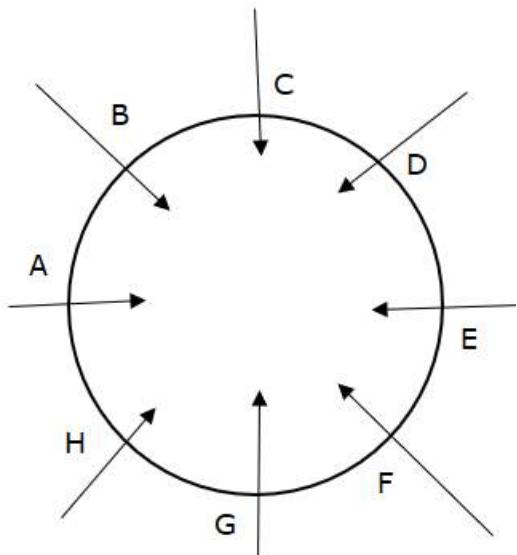
Hence, option B is the correct answer.

39. C

Sol.



C is sitting in the south direction. So, the final arrangement is:



Therefore, F is sitting in the north-west direction.

Hence, option C is the correct answer.

40. C

Sol. as,

Bed is used to Sleep.

similarly,

Chair is used to Sit.

Hence, option C is the correct answer.

41. A

Sol. pattern is:

$$40+1^2=41$$

$$41+3^2=50$$

$$50+5^2=75$$

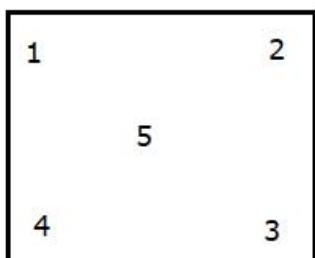
$$75+7^2=124$$

$$124+9^2=205$$

Hence, option A is the correct answer.

42. C

Sol.



Moving order of bubble with square is: 1 2 3 4

Bubble gets blackened and whitened alternately

Moving order of pointed arrow is: 3 4 1 2

Arrow takes 90 degree left in each step.

Moving order of half blacked triangle is: lies in the middle only(it gets blackened and whitened from top and bottom alternately.)

so, the next figure is-



Hence, Option C is the correct answer.

43. A

Sol. The sum of two-digit place values is taken and the single digit place values are considered as is.

As,

$$T (20 = 2 + 0 = 2)$$

$$U (21 = 2 + 1 = 3)$$

$$R (18 = 1 + 8 = 9)$$

$$N (14 = 1 + 4 = 5)$$

$$I (9)$$

$$P (16 = 1 + 6 = 7)$$

i.e. 239597

and

$$Q (17 = 1 + 7 = 8)$$

$$U (21 = 2 + 1 = 3)$$

$$E (5)$$

$$E (5)$$

$$N (14 = 1 + 4 = 5)$$

i.e. 83555

Similarly,

$$L (12 = 1 + 2 = 3)$$

$$E (5)$$

$$M (13 = 1 + 3 = 4)$$

$$O (15 = 1 + 5 = 6)$$

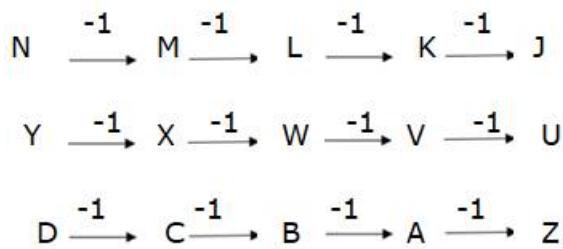
$$N (14 = 1 + 4 = 5)$$

i.e. 35465

Hence, option A is the correct answer.

44. A

Sol. pattern is:



Hence, option A is the correct answer.

45. A

Sol. as,

Frog is an amphibian(*Amphibia* refers to "double life", or life in water and on land.).

similarly,

Lizard is a reptile(Reptiles are egg-laying).

Hence, option A is the correct answer.

46. C

Sol. The logic followed here is  $a : 2(a + 1)^3$

As,

$$2 : 2(3)^3 = 2 \times 27 = 54$$

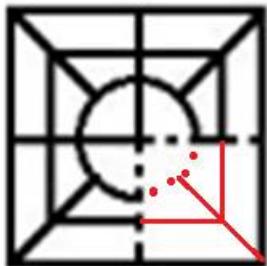
Similarly,

$$4 : 2(5)^3 = 2 \times 125 = 250$$

Hence, option C is the correct answer.

47. A

Sol. Complete figure is:



Hence, option A is the correct answer.

48. D

- Sol. A. H > D(true because H > M = D)  
B. Z < H (true because H > T > Z)  
C. P < M(true because M = D > P)  
D. Z > K(false because from K = H > T > Z, we get K>Z)

Hence, option D is the correct answer.

49. B

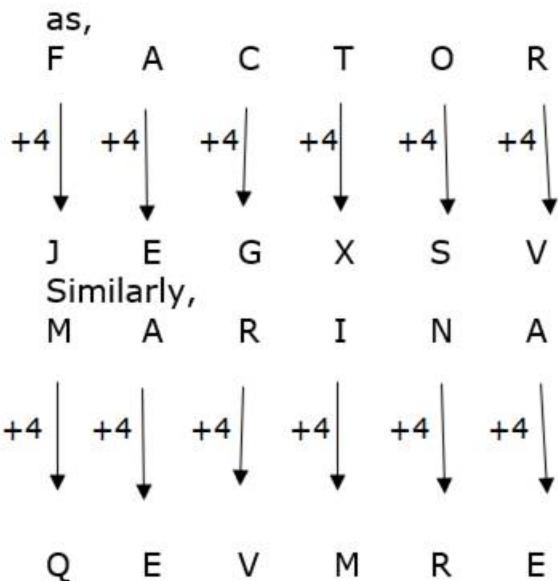
- Sol. In a plane mirror, a mirror image is a reflected duplication of an object that appears almost identical, but it is reversed in the direction perpendicular to the mirror surface. As an optical effect it results from reflection of substances such as a mirror or water.



Hence, option B is the correct answer.

50. A

Sol.



Hence, option A is the correct answer.

51. C

Sol.

$$\left( \frac{81.2^\circ}{360^\circ} \right) \times 4500 = 1015$$

Number of employees in department C =

$$\left( \frac{72^\circ}{360^\circ} \right) \times 4500 = 900$$

Number of employees in department B =

$$\left( \frac{45.6^\circ}{360^\circ} \right) \times 4500 = 570$$

Number of employees in department D =

30% of the employees in department B are transferred to department D.

$$\left( \frac{30}{100} \right) \times 900 = 270$$

30% of the employees in department B =

Hence, Resultant Number of employees in department D =  $570 + 270 = 840$

Difference between the number of employees in department C and D =  $1015 - 840 = 175$

Difference between the number of employees in department C and D is  $x$ .

$$\Rightarrow x = 175$$

Hence,  $x$  lies between 172 and 176.

52. A

Sol.

$$\left( \frac{98^\circ}{360^\circ} \right) \times 4500 = 1225$$

Number of employees in department A =

Ratio of male employees to female employees in department A is 3:4.

Let Number of male employees in department A =  $3x$

Number of female employees in department A =  $4x$

$$\Rightarrow 7x = 1225$$

$$\Rightarrow x = 175$$

$$\Rightarrow 4x = 700$$

Number of female employees in department A = 700

$$\left( \frac{81.2^\circ}{360^\circ} \right) \times 4500 = 1015$$

Number of employees in department C =

$$\text{Required percentage} = \frac{(1015 - 700)}{700} \times 100 = 45\%$$

53. D

Sol.

$$\left( \frac{45.6^\circ}{360^\circ} \right) \times 4500 = 570$$

Number of employees in department D =

$$\left( \frac{63.2^\circ}{360^\circ} \right) \times 4500 = 790$$

Number of employees in department E =

Average number of employees of the company in departments D and E =

$$\frac{570 + 790}{2} = 680$$

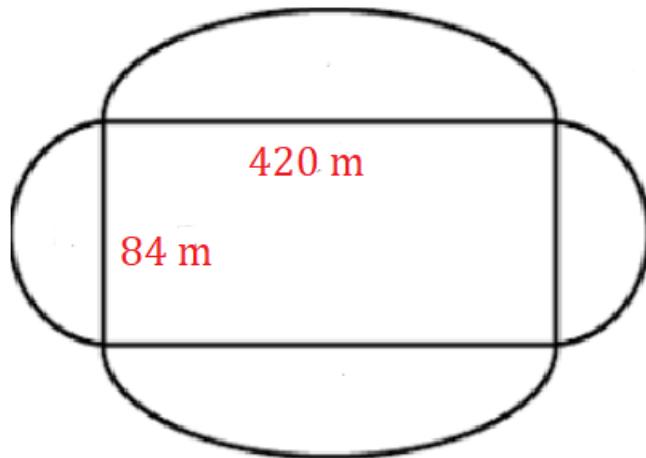
$$\left( \frac{98^\circ}{360^\circ} \right) \times 4500 = 1225$$

Number of employees in department A =

$$\text{Required percentage} = \frac{680}{1225} \times 100 = 55.5\%$$

54. C

Sol. A rectangular plot is 420 m long and 84 m wide. It is surrounded by semi-circular flower beds along all its sides.



Area of the entire plot =

$$420 \times 84 + \frac{22}{7} (210)^2 + \frac{22}{7} (42)^2 = 35280 + 138600 + 5544 = 179424 \text{ m}^2 = 17.9 \text{ hectares}$$

Hence,  $x = 17.9$

55. B

Sol.  $(a + b) : (b + c) : (c + a) = 7 : 4 : 5$

Let  $a+b=7k$

$$\Rightarrow b+c=4k$$

$$\Rightarrow c+a=5k$$

Now,  $2(a+b+c)=7k+4k+5k=16k$

$$\Rightarrow a+b+c=8k$$

But  $a + b + c = 16$

$$\Rightarrow 8k = 16$$

$$\Rightarrow k = 2$$

Hence,  $a + b = 14 \dots\dots\dots(1)$

$$\Rightarrow b + c = 8 \dots\dots\dots(2)$$

$$\Rightarrow c + a = 10 \dots\dots\dots(3)$$

$$a + b + c = 16 \dots\dots\dots(4)$$

subtract (1) from (4)

$$\Rightarrow c = 16 - 14 = 2$$

Put the value of  $c$  in (2)

$$\Rightarrow b = 8 - 2 = 6$$

Put the value of  $b$  in (1)

$$\Rightarrow a + 6 = 14$$

$$\Rightarrow a = 8$$

$$\text{Now, } \frac{a^2 + b^2 + c^2}{ab + bc + ca} = \frac{(8)^2 + (6)^2 + (2)^2}{(8)(6) + (6)(2) + (2)(8)} = \frac{64 + 36 + 4}{48 + 12 + 16} = \frac{104}{76} = \frac{26}{19}$$

56. B

Sol. A can do a piece of work in 8 days.

The efficiency of B is half the efficiency of A.

Efficiency of B : Efficiency of A = 1 : 2

If amount of work is same then  $\text{efficiency} \propto \frac{1}{\text{time taken}}$

Time taken by B : Time taken by A = 2 : 1

$\Rightarrow$  B can do a piece of work in 16 days.

Efficiency of C is 50% more than the efficiency of B.

Efficiency of C : Efficiency of B = 150 : 100 = 3 : 2

Time taken by C : Time taken by B = 2 : 3

Time taken by C to complete the work =  $\frac{2}{3} \times 16 = \frac{32}{3}$  days

Let total work = LCM (8, 16, 32) = 32 unit

Efficiency of A =  $\frac{32}{8} = 4$  unit/day

Efficiency of B =  $\frac{32}{16} = 2$  unit/day

$$\frac{32}{32} = 3 \text{ unit/day}$$

$$\text{Efficiency of C} = \frac{3}{3}$$

Work Finished by all three together in 2 days =  $(4+2+3) \times 2 = 18$  unit

$$\frac{18}{32} = \frac{9}{16}$$

Part of the work they finish in 2 days =  $\frac{9}{16}$

57. C

Sol. A and B can do a certain work in 25 days and 40 days, respectively.

Let total work = LCM (25,40) = 200 unit

$$\text{Efficiency of A} = \frac{200}{25} = 8 \text{ unit/day}$$

$$\text{Efficiency of B} = \frac{200}{40} = 5 \text{ unit/day}$$

They work together for 8 days.

Work finished by A and B in 8 days =  $(8+5) \times 8 = 104$  unit

Remaining work = 200 unit – 104 unit = 96 unit

C alone completes the remaining work in 24 days.

$$\text{Efficiency of C} = \frac{96}{24} = 4 \text{ unit/day}$$

Number of days taken by A and C together in completing 60% of the work =

$$\frac{\frac{60}{100} \times 200}{8+4} = \frac{120}{12} = 10 \text{ days}$$

58. B

Sol. A sum of ₹7,560 is divided between A, B, C and D such that the ratio of the shares of A and B is 4 : 5, that of B and C is 3 : 4 and that of C and D is 5 : 7.

$$A : B = 4 : 5$$

Multiply by 3

$$\Rightarrow A : B = 12 : 15 \dots\dots\dots(1)$$

$$B : C = 3 : 4$$

Multiply by 5

$$\Rightarrow B : C = 15 : 20 \dots\dots\dots(2)$$

$$C : D = 5 : 7$$

Multiply by 4

$$\Rightarrow C : D = 20 : 28 \dots\dots\dots(3)$$

Combining equation (1), (2) and (3)

$$\Rightarrow A : B : C : D = 12 : 15 : 20 : 28$$

According to question:

$$\Rightarrow (12+15+20+28) \text{ unit} = \text{Rs. } 7560$$

$$\Rightarrow 75 \text{ unit} = \text{Rs. } 7560$$

$$\Rightarrow 1 \text{ unit} = \text{Rs. } 100.8$$

$$\text{Difference (in ₹) between the shares of B and D} = 13 \times 100.8 = \text{Rs. } 1310.4$$

59. A

$$\text{Sol. } 145 - (125 - \{64 \div 8 \text{ of } 4 - (4 \times 8 \div 2)\})$$

Using BODMAS:

$$\Rightarrow 145 - (125 - \{64 \div 8 \text{ of } 4 - 16\})$$

$$\Rightarrow 145 - (125 - \{64 \div 32 - 16\})$$

$$\Rightarrow 145 - (125 - \{2 - 16\})$$

$$\Rightarrow 145 - (125 - \{-14\})$$

$$\Rightarrow 145 - (139)$$

$$\Rightarrow 6$$

60. A

Sol. A sum was invested at simple interest at  $x\%$  p.a. for 2 years. Had it been invested at  $(x + 4)\%$ , for the same time, it would have fetched ₹1,800 more.

Let sum = Rs. P

$$\Rightarrow \frac{P \times (x+4) \times 2}{100} - \frac{P \times (x) \times 2}{100} = 1800$$

$$\Rightarrow \frac{P \times (x)}{50} + \frac{4P}{50} - \frac{P \times (x)}{50} = 1800$$

$$\Rightarrow \frac{4P}{50} = 1800$$

$$\Rightarrow P = 1800 \times \frac{50}{4} = \text{Rs. } 22500$$

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

$$\text{Simple Interest} = \frac{22500 \times 8 \times \frac{17}{3}}{100} = \text{Rs. } 10200$$

61. D

Sol. A train of length 240 m crosses a pole in 16 seconds.

$$\text{Speed of train} = \frac{240}{16} = 15 \text{ m/sec}$$

Let length (in m) of the platform = L meter

Train crosses a platform in 42 seconds.

$$\Rightarrow \frac{L + 240}{42} = 15$$

$$\Rightarrow L = 630 - 240 = 390 \text{ meter}$$

Hence, length (in m) of the platform = 390 meter

62. C

Sol. Let  $x$  be the smallest 4-digit number such that when it is divided by 5, 6 and 7, it leaves the remainders 2, 3 and 4, respectively.

Clearly,  $(5 - 2) = (6 - 3) = (7 - 4) = 3$

So,  $x = \text{LCM} (5, 6, 7) k + 3 = 210k + 3$

Now, choose value of  $k$  such that  $(210k+3)$  can take minimum 4-digit value number.

By inspection, Put  $k = 5$

Hence,  $x = 210 \times 5 - 3 = 1047$

Sum of digits of 1047 =  $1 + 0 + 4 + 7 = 12$

63. D

Sol.

Marks	Number of students (frequency)	Cumulative frequency
0-10	3	3
10-20	18	21
20-30	5	26
30-40	7	33
40-50	16	49

Model class is a class having the highest frequency.

As class 10-20 has highest frequency i.e. 18.

Hence, Modal class = 10 – 20

upper limit of the modal class = 20

$$\Rightarrow y = 20$$

Now, we will find the median class.

first add the total numbers of frequency.

$$\sum f_i = 3 + 18 + 5 + 7 + 16 = 49$$

$$\Rightarrow \frac{\sum f_i}{2} = \frac{49}{2} = 24.5$$

Value 24.5 lies in the class interval 20- 30.

Hence, median class = 20 – 30

Lower limit of the median class = 20

$$\Rightarrow x = 20$$

$$\text{Now, } 3x + 2y = 3(20) + 2(20) = 60 + 40 = 100$$

64. D

Sol. The radius of a metallic solid sphere is 21.6 cm.

It is melted and drawn into a wire of uniform cross section.

Length of the wire = 259.2 m = 25920 cm

Wire will be in the form of cylinder.

Now, volume of metallic solid sphere = volume of wire

$$\begin{aligned} & \Rightarrow \frac{4}{3}\pi(21.6)^3 = \pi(r)^2(25920) \\ & \Rightarrow \frac{4}{3}(21.6)^3 = (r)^2(25920) \\ & \Rightarrow r^2 = \frac{4}{3} \times (21.6)^3 \times \frac{1}{25920} = 0.51840 \\ & \Rightarrow r = \sqrt{0.51840} = 0.72 \text{ cm} \end{aligned}$$

Radius of the wire = 0.72 cm

65. C

Sol. Marked price of an article is ₹4,450.

Discount = 10%

$$\text{Selling price of article} = 4450 \times \frac{90}{100} = \text{Rs.}4005$$

Profit = 20%

$$\text{Cost price of article} = 4005 \times \frac{100}{120} = \text{Rs.} 3337.5$$

66. C

Sol. A sum of ₹3,364 is divided in two parts such that the amounts received on them after 3 years and 5 years, respectively, is the same when the rate of interest is 5% p.a., compounded yearly.

Let first part of sum = Rs. x

Second part of sum = Rs.  $(3364 - x)$

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

According to question:

$$\Rightarrow x \left(1 + \frac{5}{100}\right)^3 = (3364 - x) \left(1 + \frac{5}{100}\right)^5$$

$$\Rightarrow x = (3364 - x) \left(\frac{105}{100}\right)^2$$

$$\Rightarrow x = (3364 - x) \left(\frac{21}{20}\right)^2$$

$$\Rightarrow x = \left(3364 \times \frac{441}{400} - \frac{441}{400}x\right)$$

$$\Rightarrow \frac{841}{400}x = 3364 \times \frac{441}{400}$$

$$\Rightarrow x = 1764$$

first part of sum = Rs. 1764

Second part of sum = Rs.  $(3364 - 1764) = 1600$

Difference between the two parts = Rs.  $1764 - 1600 = \text{Rs. } 164$

67. C

Sol. Selling price of article = Rs. 1188

Profit =  $x\%$

$$\text{Cost price of article} = \frac{1188 \times 100}{(100+x)}$$

Selling price of article = Rs. 1435.50

Profit =  $(x+25)\%$

$$\text{Cost price of article} = \frac{1435.50 \times 100}{(125+x)}$$

According to question:

$$\begin{aligned}\Rightarrow 1188 \times \frac{100}{(100+x)} &= 1435.50 \times \frac{100}{(125+x)} \\ \Rightarrow 1188 \times (125+x) &= 1435.50 \times (100+x) \\ \Rightarrow 148500 + 1188x &= 143550 + 1435.50x \\ \Rightarrow 247.5x &= 4950\end{aligned}$$

$$\Rightarrow x = \frac{4950}{247.5} = 20$$

68. C

Sol. The ratio of two numbers A and B is 5 : 6.

Let first number = 5x

Second number = 6x

If 8 is subtracted from each of them, then the ratio becomes 4 : 5.

$$\begin{aligned}\Rightarrow \frac{5x-8}{6x-8} &= \frac{4}{5} \\ \Rightarrow 25x - 40 &= 24x - 32 \\ \Rightarrow x &= 8\end{aligned}$$

Sum of A and B =  $5x + 6x = 11x = 88$

69. C

Sol. Kapil rows  $2\frac{1}{2}$  km against the current in 15 minutes and the same distance along the current in 8 minutes.

Speed of the rowing in still water = x km/hr

Speed of the current = y km/hr

$$\frac{5}{2 \times \frac{15}{60}} = 10 \text{ km/hr}$$

Speed of the rowing during upstream =  $x - y =$  .....(1)

$$\frac{5}{2 \times \frac{8}{60}} = 18.75 \text{ km/hr}$$

Speed of the rowing during downstream =  $x + y =$  .....(2)

Subtract (1) from (2)

$$\Rightarrow 2y = 8.75$$

$$\Rightarrow y = 4.375 = \frac{4375}{1000} = \frac{875}{200} = \frac{175}{40} = \frac{35}{8}$$

$$\text{Speed of the current} = \frac{35}{8} \text{ km/hr}$$

70. A

Sol. Selling price of article = ₹882

Loss = 10%

$$\text{Cost price of article} = 882 \times \frac{100}{90} = \text{Rs. } 980$$

If he sells it for ₹991.76 then

$$\text{Profit \%} = \frac{991.76 - 980}{980} \times 100 = \frac{1176}{980} = 1.2\%$$

71. D

Sol. Let total income of Surekha = 100 unit

Surekha Spend 24% of her income on grocery items and 16% of her income on rent.

$$\text{Expenditure on grocery items and rent} = \frac{24}{100} \times 100 + \frac{16}{100} \times 100 = 40 \text{ unit}$$

$$\text{Remaining income} = 100 \text{ unit} - 40 \text{ unit} = 60 \text{ unit}$$

She spends 55% of remaining income on child education and other expenses.

$$\text{Expenditure on child education and other expenses} = \frac{55}{100} \times 60 = 33 \text{ unit}$$

$$\text{Total expenditure} = 40 + 33 = 73 \text{ unit}$$

$$\text{Saving of Surekha} = 100 \text{ unit} - 73 \text{ unit} = 27 \text{ unit}$$

According to question:

$$\Rightarrow 27 \text{ unit} = \text{Rs. } 5940$$

$$\Rightarrow 1 \text{ unit} = 220$$

$$\Rightarrow 16 \text{ unit} = \text{Rs. } 3520$$

Hence, Expenditure on rent = Rs. 3520

72. C

Sol.

$$\frac{\frac{1}{4} \div \frac{3}{4} \left( \frac{2}{5} - \frac{1}{3} \right)}{1 \frac{2}{3} \text{ of } \frac{3}{4} - \frac{1}{4} \text{ of } \frac{2}{3}}$$

Using BODMAS :

$$\Rightarrow \frac{\frac{1}{4} \div \frac{3}{4} \left( \frac{1}{15} \right)}{\frac{5}{3} \text{ of } \frac{3}{4} - \frac{1}{6}} = \frac{\frac{1}{3} \times \frac{1}{15}}{\frac{5}{4} - \frac{1}{6}} = \frac{\frac{1}{45}}{\frac{26}{24}} = \frac{24}{45 \times 26} = \frac{4}{195}$$

73. C

Sol.  $\frac{5}{16} + \frac{3}{5} \times 1 \frac{7}{8} \div \frac{2}{3} - 6 \frac{1}{8} \div \left( 5 \frac{1}{4} \div \frac{3}{7} \text{ of } \frac{1}{2} \right) \text{ of } \frac{6}{7}$

Using BODMAS :

$$\Rightarrow \frac{5}{16} + \frac{3}{5} \times \frac{15}{8} \div \frac{2}{3} - \frac{49}{8} \div \left( \frac{21}{4} \div \frac{3}{14} \right) \text{ of } \frac{6}{7}$$

$$\Rightarrow \frac{5}{16} + \frac{3}{5} \times \frac{15}{8} \div \frac{2}{3} - \frac{49}{8} \div \left( \frac{49}{2} \right) \text{ of } \frac{6}{7}$$

$$\Rightarrow \frac{5}{16} + \frac{3}{5} \times \frac{15}{8} \div \frac{2}{3} - \frac{49}{8} \div 21$$

$$\Rightarrow \frac{5}{16} + \frac{3}{5} \times \frac{45}{16} - \frac{7}{24}$$

$$\Rightarrow \frac{5}{16} + \frac{27}{16} - \frac{7}{24} = \frac{32}{16} - \frac{7}{24} = 2 - \frac{7}{24} = \frac{41}{24}$$

74. A

Sol. The ratio of the number of boys and girls in a class is 5: 7.

Let number of boys =  $5x$

Number of girls =  $7x$

Average weight of boys is 56 kg.

Sum of weight of boys =  $56 \times 5x = 280x$  kg

Average weight of girls is 50 kg.

Sum of weight of girls =  $50 \times 7x = 350x$  kg

Average weight (in kg) of all the boys and girls in the class =

$$\frac{280x + 350x}{12x} = \frac{630x}{12x} = 52.5$$

75. D

Sol. The average of 12 numbers is 25.5.

Sum of 12 numbers =  $12 \times 25.5 = 306$

The average of the first six numbers is 22.4 and that of the last three numbers is 28.2.

sum of first 6 numbers =  $6 \times 22.4 = 134.4$

sum of last 3 numbers =  $3 \times 28.2 = 84.6$

Sum of first six and last three numbers =  $134.4 + 84.6 = 219$

Now, sum of 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> number =  $306 - 219 = 87$

The 7th number is 5 less than the 8th number but 10 less than the 9th number.

Let 7<sup>th</sup> number = x

8<sup>th</sup> number = x + 5

9<sup>th</sup> number = x + 10

$$\Rightarrow x + x + 5 + x + 10 = 87$$

$$\Rightarrow 3x + 15 = 87$$

$$\Rightarrow x = 24$$

$$\frac{x+5+x+10}{2} = \frac{63}{2} = 31.5$$

Now, Average of the 8th and 9th numbers =

76. B

- Sol. • Sarangi is normally played in a vertical position and with an arched bow.  
• It is said to most resemble the sound of the human voice through its ability to imitate vocal ornaments.  
• Sitar is a plucked stringed instrument and it originated from the Indian subcontinent.  
• It was invented in medieval India and flourished in the 16th and 17th centuries.  
• Shehnai is made of wood, with a double reed at one end and a metal or wooden flared bell at the other end.  
• Veena is an important and popular string instrument in classical Carnatic music.

77. B

- Sol. • Rukmini Devi Arundale is associated with Bharatnatyam.

- She was the first woman in Indian history to be nominated as a member of the Rajya Sabha.
- Bharatanatyam is a popular classical dance form in South India.
- Kathakali is the most well-known dance drama from the south Indian state of Kerala.
- It is known for its large, elaborate makeup and costumes.
- Kuchipudi is a dance-drama performance with its roots in the ancient Hindu Sanskrit text of Natya Shastra.

78. D

- Sol.
- Ajay Bhushan Pandey was appointed as Finance Secretary in March 2020.
  - He is also the former chief executive officer of the Unique Identification Authority of India.
  - The Finance Secretary is the administrative head of the Ministry of Finance.
  - He is the principal adviser to the Finance Minister on all matters of policy and administration within the Finance Ministry.
  - This post is held by a senior IAS officer of the rank of Secretary to the Government of India.

79. B

- Sol.
- The 'Second Backward Classes Commission' in 1979 was headed by BP Mandal.
  - It was established in India by the Janata Party government under Prime Minister Morarji Desai.
  - It was to consider the question of reservations for people to redress caste discrimination.
  - It was with a mandate to identify the socially or educationally backward classes of India.
  - BR Ambedkar was the 1st Minister of Law and Justice.
  - He was famous for drafting the constitution of India and his work for the Backward classes.

80. C

- Sol. • Sharath Kamal won the ITTF Challenger Plus Oman Open 2020.  
• He is the first Indian table tennis player ever to become nine times Senior National Champion.  
• He was awarded the Padma Shri, India's fourth-highest civilian award in 2019.  
• The full form of ITTF is International Table Tennis Federation and It was founded in 1926 by William Henry Lawes.  
• It is the governing body for all national table tennis associations.  
• It is responsible for the organisation of numerous international competitions.

81. A

- Sol. • Malleability is the property of iron, due to which a piece of hot iron can be beaten into a knife.  
• It is a physical property of metals that defines their ability to be hammered, pressed or rolled into thin sheets without breaking.  
• Ductility is the quality of being pliable and flexible, like a piece of metal that can be bent into a thin wire.  
• Sonority is a nonbinary phonological feature categorizing sounds into a relative scale.  
• Iron is the most common element on Earth by mass and It is a metal that belongs to the first transition series.  
• It is the fourth most common element in the Earth's crust.

82. B

- Sol. • Uddham Singh killed Michael O'Dwyer, the British officer responsible for the Jallianwala Bagh massacre.  
• He is a well-known figure of the Indian independence movement.  
• The Jallianwala Bagh massacre is also known as the Amritsar massacre and It took place on 13 April 1919.

- **Ram Prasad Bismil** was a freedom fighter who played an active role in India's freedom struggle.
- **Bhagat Singh** is considered a **national hero of India's freedom struggle against colonial rule**.
- **Chandra Shekhar Azad** was **one of the most prominent freedom fighters in the history of the Indian Independence Movement**.

83. C

Sol. • A concave mirror is used in vehicles as a headlight.

- It is a type of mirror that is bent towards the inwards side in the middle.
- It is an object that reflects the light at the same angle as it receives from the object.
- Convex Mirror is a curved mirror where the reflective surface bulges out towards the light source.
- They are also popularly known as the fish eye mirror or diverging mirror.
- Plane mirror is a mirror with a flat reflective surface and its optical power is zero.

84. B

Sol. • Kanchenjunga Biosphere Reserve is located in Sikkim.

- It was inscribed to the UNESCO World Heritage Sites list in July 2016 and it became the first "Mixed Heritage" site of India.
- It was included in the UNESCO Man and the Biosphere Programme.
- It is the highest biosphere reserve in the country.
- Sikkim is the least populous and second smallest among the Indian states.
- It accounts for the largest share of cardamom production in India and it is the world's second-largest producer of spice.

85. D

Sol. • Viktor Axelsen won the All England Open Badminton Championship Men's Singles 2020 title.

- He is the **2017 World champion** and the **2020 Olympic champion**.
- **Chou Tien-Chen** became the **first local shuttler in 17 years** to win the men's singles title of the **Chinese Taipei Open**.
- **Lee Chong Wei** is the **only Malaysian shuttler** who has held the number one ranking for more than a year.
- **Lin Dan** is widely regarded as the greatest badminton player of all time.
- **2020 All England Open** was a **badminton tournament** that took place at **Arena Birmingham** in England from **11 to 15 March 2020**.

86. C

Sol. • **Revenue Administration was the meaning of Diwani in the Mughal provincial administration.**

- **Diwani** was the **power to collect revenue** and **administer Civil cases in Bengal**.
- It was granted to the East India Company in 1765 by Shah Alam II.
- The **Mughal Empire** was divided into **fifteen provinces or subas**.
- The important officers of the province were:
  - a) **Subedar**
  - b) **Diwan**
  - c) **Bakshi**
  - d) **Waqa-i-Newis**
  - e) **Qazi**
  - f) **Kotwal**

87. B

Sol. • **The Speaker of Lok Sabha presides over the joint sitting of both the Houses of Parliament.**

- He is the **presiding officer** and the **highest authority of the Lok Sabha**.
- He is **elected generally in the first meeting of the Lok Sabha following general elections**.

- He can be removed by the Lok Sabha by a resolution passed by an effective majority of the house as per the Constitution of India.
- The Vice President of India is the ex-officio Chairman of the Rajya Sabha.
- The Parliament of India is the supreme legislative body of the Republic of India.

88. D

- Sol.
- India's global rank is third in the category of 'New Firms Created' as per a survey conducted in 2019-2020 by the World Bank.
  - This survey also said there has been a spur of new Service sector firms as opposed to Manufacturing, Agriculture, or Infrastructure.
  - It observed that the birth of new firms is very heterogeneous across Indian districts and sectors.
  - It also points out that the level of local education and quality of physical infrastructure in the district influence new firm creation significantly.
  - World Bank is an international organisation that provides financing, advice and research to developing nations to help advance their economies.

89. B

- Sol.
- 2 per cent of the total geographical area of the world does India account for (rounded off to nearest whole number).
  - India is the seventh-largest country with a total area of 3,287,263 square kilometres.
  - It is the second-most populous country in the world.
  - It is one of the most ethnically diverse countries in the world and the most populous democracy in the world.
  - It is situated north of the equator between 8°4' north to 37°6' north latitude and 68°7' east to 97°25' east longitude.
  - It can be divided into six physiographic regions:
    - a) Northern Mountains
    - b) Peninsular Plateau

c) Indo-Gangetic Plain

d) Thar Desert

e) Coastal Plains

f) Islands

90. B

Sol. • The fluid present between joints, that makes the movement of joints easy, is called **Synovial**.

• Synovial fluid is a thick liquid located between your joints and it cushions the ends of bones and reduces friction.

• Bursae is an important lubricated fluid-filled thin sac located between bone and surrounding soft tissue, bones & tendons, and muscles.

• Cartilage is a non-vascular type of supporting connective tissue that is found throughout the body.

• It is not as rigid as bone but is stiffer and less flexible than muscle tissue.

• Tendon is a cord of strong, flexible tissue, similar to a rope and it connects your muscles to your bones.

91. A

Sol. • The Government of India introduced value-added tax (VAT) as an indirect tax in the Indian taxation system to replace the existing general sales tax in 2005.

• Value Added Tax is a type of tax that is assessed incrementally and it is an indirect tax.

• It is commonly expressed as a percentage of the total cost.

• It is levied on the price of a product or service at each stage of production, distribution, or sale to the end consumer.

• Germany and France were the first countries to implement Value Added Tax.

• It is designed to tax only the value added by a business on top of the services and goods it can purchase from the market.

92. D

- Sol.
- **Paryushan Parva** is a Jain festival celebrated by the Shwetambar community for eight days and celebrated for ten days by the Digambar community as Dasalakshan Parv.
  - It is the most important annual holy event for Jains and is usually celebrated in August or September in the Hindu calendar.
  - **Navapda Oli** is a nine-day fasting festival observed by the Jain community and occurs twice a year.
  - **Kartik Purnima** is celebrated as **Gurupurab** or **Prakash Parva** of Sri Guru Nanak Dev Ji.
  - **Gyan Panchami** is celebrated on the 5th day of the month of Kartik and it is also known as **Saubhagya Panchami** or **Labha Panchami**.
  - It is celebrated by Jains to recognize the importance of their scriptures.

93. C

- Sol.
- **Sarita Joshi**, one of the recipients of Padma Shri 2020, has received an award in the domain of Art.
  - She is a **veteran actress** of Gujarati theatre and Marathi theatre & Marathi cinema.
  - **Padma Shri** is the fourth-highest civilian award of the Republic of India.
  - It is awarded by the Government of India every year on India's Republic Day.
  - It was instituted in 1954 and it was awarded for the first time in 1954 to 17 recipients.
  - This award seeks to recognize works of distinction and is given for distinguished & exceptional achievements in all fields of disciplines.

94. A

- Sol.
- **Rs 2,00,000** is the minimum amount that can be remitted through Real Time Gross Settlement.
  - **RTGS** is an electronic form of fund transfer and it was introduced in year 2004.
  - It is a fund transfer method via which money is sent immediately without any delays.
  - It facilitates the predictability of cash flows as customers know when their accounts will be debited or credited.

- It eliminates systematic settlement risk that can arise for end-of-day net settlement of large value transactions.
- Its transactions can be completed on a 24/7 basis, except between 11:30 p.m. and 00:30 a.m. due to cut-off.

95. B

- Sol. • The total number of members of the Rajya Sabha cannot be more than 250 as per Article 80 of the Constitution of India.
- Rajya Sabha is the upper house of the bicameral Parliament of India.
  - Its first sitting was held on 13 May 1952 and It is a permanent body & is not subject to dissolution.
  - It has facilities for simultaneous interpretation in all the 22 scheduled languages of India.
  - The present Rajya Sabha has 245 members out of which 233 are elected by the legislatures of the states and 12 are nominated by the President.
  - The Vice President of India is the ex-officio Chairman of the Rajya Sabha.

96. A

- Sol. • Mustafa Al-Kadhimi has assumed office as the new Prime Minister of Iraq in May 2020.
- Adel Abdul Mahdi served as Prime Minister of Iraq from October 2018 until May 2020.
  - Iraq is a country in Western Asia and It is a federal parliamentary republic.
  - It is one of the easternmost countries of the Arab world and It has a total population of about 30.4 million.
  - It is considered an emerging middle power with a strategic location.
  - It has one of the world's oldest cultural histories and boasts a rich heritage.

97. A

- Sol. • The liver converts glucose into glycogen (a complex carbohydrate used for storage)

and amino acids into proteins.

- It is a large, meaty organ that sits on the right side of the belly and it is reddish-brown in colour & feels rubbery to the touch.
- It is the largest organ inside your body and helps the body to digest food, store energy and remove poisons.
- Lungs are a pair of spongy, air-filled organs located on either side of the chest.
- The small intestine is an organ in the gastrointestinal tract where most of the absorption of nutrients from food takes place.
- The large intestine is the portion of the digestive system most responsible for the absorption of water from the indigestible residue of food.

98. C

- Sol. • **Brihadratha was the last king of the Mauryan dynasty.**
- He ruled from 187 to 184 BCE and he was killed by his general Pushyamitra Shunga.
  - The Mauryan Empire was formed around 321 B.C.E. and ended in 185 B.C.E.
  - It was the first pan-Indian empire, an empire that covered most of the Indian region.
  - Samprati was the only great Mauryan emperor after Ashoka and was a great patron of Jainism.
  - **Chandragupta Maurya** was the founder of the Mauryan Empire in ancient India.

99. A

- Sol. • **Naharkatiya oil field is located in Assam.**
- It is located at the bank of Burhi Dihing River.
  - The discovery of oil took place in 1953 and production started in 1954.
  - An oilfield is an area of land from where crude oil and natural gas are produced.
  - **Assam** is the oldest oil-producing state in the country and the first site for oil drilling in Asia.
  - It is always known for attracting a large number of tourists every year.

100. D

- Sol.
- Iris is the coloured ring of tissue behind the cornea called, that regulates the amount of light entering the eye, by adjusting the size of the pupil.
  - It is located in front of the lens and ciliary body and behind the cornea.
  - The fovea is a tiny part of the eye's anatomy that makes a huge difference in our eyesight.
  - The retina is a layer of tissue in the back of your eye that senses light and sends images to your brain.
  - It provides the sharp, central vision needed for reading, driving and seeing fine detail.
  - The choroid is a vascular and connective tissue layer of the eye found between the sclera and the retina.

# Mock Test Solutions in Hindi

## Questions



Our school has been issued instructions to restrict online classes to two hours towards the primary classes.



- 3. Select the most appropriate word to fill in the blank.**

The captain, with the members of the team, \_\_\_\_\_ given a hearty welcome at the airport yesterday.



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

#### APPROACH

- A. reach
  - B. meet
  - C. near
  - D. avoid

- 5. Select the most appropriate meaning of the given idiom.**

## Change for the better

- A. Exchange an old product for new
  - B. Pretend to be someone else
  - C. To keep loose change
  - D. An improvement in the situation

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

**VACANT**

C. full

D. bare

7. Select the most appropriate one-word substitution for the given group of words.

To fall apart as a result of decay

A. Disintegrate

B. Dislocate

C. Discontinue

D. Dishevelled

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

APPEASE

A. irritate

B. excite

C. worsen

D. pacify

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

TARDY

A. late

B. slow

C. lazy

D. early

10. Select the most appropriate word to fill in the blank.

Everyone was amazed \_\_\_\_\_ the young child's courage.

A. on

B. at

C. in

D. of

11. Identify the segment in the sentence which contains a grammatical error.

India has always believe in the value of the family system.

A. always believe in

B. the value of

C. India has

D. the family system

12. 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'.

I am not use to eat spicy and oily food.

A. use to eating

B. No substitution required

C. used to eating

D. used to eat

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

Ritu goes to Singapore for her holidays last December.

- A. was going to Singapore
- B. went to Singapore
- C. has gone to Singapore
- D. had gone to Singapore

14. Select the most appropriate word to fill in the blank.

Mother tried to \_\_\_\_\_ the child when he was crying for a toy.

- A. disturb
- B. absorb
- C. attract
- D. distract

15. Select the most appropriate word to fill in the blank.

Pets are good \_\_\_\_\_ for lonely people.

- A. guides
- B. nurses
- C. substitutes
- D. companions

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

Loosen the purse strings

- A. To reduce the expenditure
- B. To increase the money available for expenditure
- C. To lose a purse
- D. To be miserly

17. Identify the segment in the sentence which contains a grammatical error.

I know she is much superior from me in intelligence.

- A. in intelligence
- B. she is much
- C. I know
- D. superior from me

18. Select the INCORRECTLY spelt word.

- A. Patient
- B. Already
- C. Intend
- D. Disrupt

19. Identify the segment in the sentence which contains a grammatical error.

A vacation is the time to relax and break up from the routine.

- A. A vacation is
- B. break up
- C. time to relax
- D. from the routine

20. Select the most appropriate one-word substitution for the given group of words.

A plan of what is to be done and when

- A. Meeting
- B. Schedule
- C. Scheme
- D. Occupation

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.

Every living species of our planet has changed or is changing. Some (1) \_\_\_\_, such as the pre-historic sabre-toothed tiger (2) \_\_\_\_ died out and some are (3) \_\_\_\_\_ dying out. Sometimes new species appear. The dog is (4) \_\_\_\_\_ species which man has caused to (5) \_\_\_\_\_ from the wolf.

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

- A. samples
- B. specimens
- C. strains
- D. species

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

- A. had
- B. has
- C. have
- D. having

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

- A. regularly
- B. gradually
- C. deliberately
- D. readily

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

- A. a
- B. the
- C. an
- D. only

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

- A. expand
- B. derive
- C. emerge
- D. evolve

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

$$7 + 3 - 24 \div 6 \times 12 = 29$$

- A. + और ×
- B. – और ×

- C. + और -

- D. × और –



- A.

- B.

- C.

- D.

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

कथनः

कोई प्याज, नींबू नहीं है ।

कोई नींबू आल नहीं है।

ନିଷ୍ଠାର୍ଥ-

I. कोई प्याज, आलू नहीं है।

II. कोई आलू, नींबू नहीं है।

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

30. 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।

MONKEY : STRDJP :: TORQUE : ?

A. WTYJZV

B. WSQJZV

C. WTYJMB

D. WTYLBV

31. निम्नलिखित में से कौन सी संख्या दी गई श्रूतें खला में प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगी?

5, 20, 65, 200, ?

A. 575

B. 605

C. 1005

D. 1055

32. एक निश्चित कूट भाषा में, 'FREEDOM' को '618222241213' के रूप में लिखा जाता है। तो उसी भाषा में "SUPINE" को किस प्रकार लिखा जाएगा?

A. 19062191322

B. 19211191422

C. 19616181422

D. 18617181422

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

15	12	90
16	13	104
12	18	?

A. 129

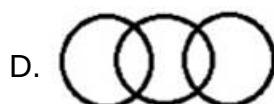
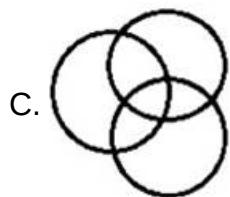
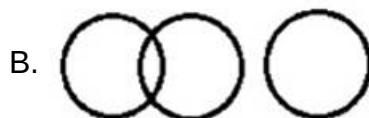
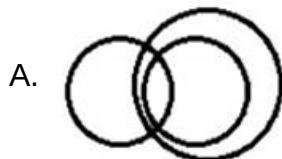
B. 119

C. 100

D. 108

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

इंजीनियर्स, भारतीय, महिलाएं



35. दो कथन दिए गए हैं, जिसके बाद दो निष्कर्ष संख्या 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:**

कुछ रिंग, कैलेंडर हैं।

सभी रिंग, कैप हैं।

**निष्कर्ष:**

I. सभी कैलेंडर, रिंग हैं।

II. कम से कम कुछ कैलेंडर, कैप हैं।

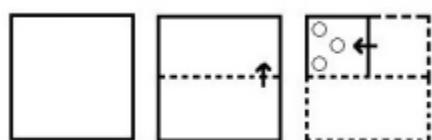
A. दोनों निष्कर्ष I और II अनुसरण करते हैं।

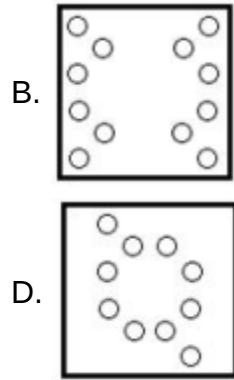
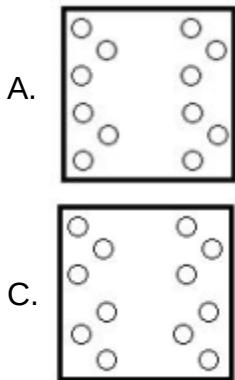
C. केवल निष्कर्ष II अनुसरण करता है।

B. केवल निष्कर्ष I अनुसरण करता है।

D. न तो निष्कर्ष I न ही II अनुसरण करता है।

36. एक कागज को नीचे दी गई आकृतियों के अनुसार मोड़ा और काटा जाता है। कागज खोले जाने पर कैसा दिखाई देगा?





37. पांच मित्र एक वृत्ताकार मेज की चारों ओर मेज के केंद्र की ओर मुख करके बैठे हैं। अभिषेक, शरद की ठीक बाईं ओर बैठा है। जोसेफ, वसीम की ठीक दाईं ओर बैठा है। विशाल, वसीम की बाईं ओर से तीसरे स्थान पर है। जोसेफ और अभिषेक के मध्य कौन बैठा है?
- A. या तो वसीम या विशाल      B. या तो वसीम या शरद  
 C. विशाल      D. वसीम
38. \* प्रतीकों को बदलने और दिए गए समीकरण को संतुलित करने के लिए गणितीय प्रतीकों के सही संयोजन का चयन करें।

$$25 * 5 * 6 * 15 * 3 * 50$$

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

39. आठ मित्र अर्थात् A, B, C, D, E, F, G और H एक वृत्ताकार मेज की चारों ओर समान दूरी पर समान क्रम में केंद्र की ओर मुख करके दक्षिणावर्त दिशा में बैठे हैं। यदि C दक्षिण दिशा में बैठा है, तो उत्तर-पश्चिम दिशा में कौन बैठा है?
- A. G      B. H  
 C. F      D. E
40. उस विकल्प का चयन करें जो तीसरे शब्द से उसी प्रकार संबंधित है जिस प्रकार दूसरा शब्द पहले शब्द से संबंधित है।

बेड : नींद :: कुर्सी : ?

- A. कूदना      B. लकड़ी  
 C. बैठना      D. संतुलन
41. निम्न में से कौन सी संख्या दी गई श्रृंखला में प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगी?

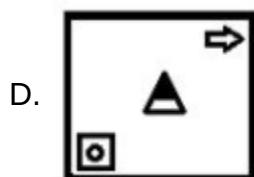
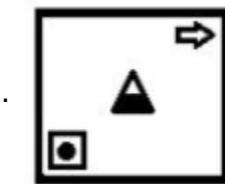
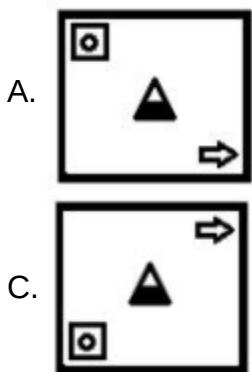
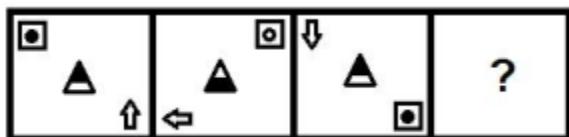
40, 41, 50, 75, 124, ?

- A. 205      B. 257

C. 232

D. 264

42. उस आकृति का चयन करें जो निम्नलिखित आकृति श्रृंखला में प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगी ।



43. एक निश्चित कूट भाषा में, 'TURNIP' को '239597' के रूप में लिखा जात है, तथा 'QUEEN' को "83555" के रूप में लिखा जाता है । तो उसी भाषा में 'LEMON' को किस प्रकार लिखा जाएगा?

A. 35465

B. 45587

C. 45658

D. 20584

44. निम्नलिखित में से कौन सा अक्षर-समूह दी गई श्रृंखला में प्रश्नवाचक चिन्ह (?) को प्रतिस्थापित करेगा?

NYD, MXC, LWB, KVA, ?

A. JUZ

B. JUY

C. JTZ

D. LTZ

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

उभयचर : मेंढक :: सरीसृप : ?

A. छिपकली

B. तिलचटा

C. कंगारू

D. चूहा

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

2 : 54 :: 4 : ?



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



- The figure consists of four separate 2x2 square grids labeled A, B, C, and D. Grid A has shaded top-left and bottom-right squares. Grid B has shaded top-right and bottom-left squares. Grid C has shaded top-left and top-right squares. Grid D has shaded bottom-left and bottom-right squares.

48. यदि  $H > M = D > P$  और  $K = H > T > Z$  हैं, तो निम्न में से कौन सा विकल्प सही नहीं है?



49. दिए गए संयोजन की सही दर्पण छवि का चयन करें जब दर्पण को रेखा MN पर स्थापित किया जाता है जैसा कि नीचे दिखाया गया है।

M  
RGB68P  
N

- A. RGB68P      B. RGB68P  
C. P868RGB      D. RGB68P

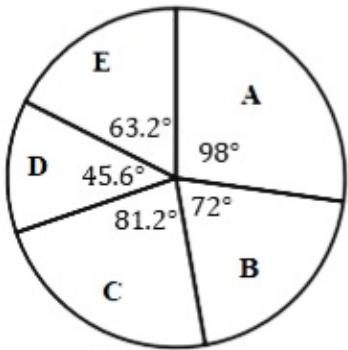
50. एक निश्चित कूट भाषा में, 'FACTOR' को 'JEGXSV' के रूप में लिखा जाता है। तो उसी भाषा में 'MARINA' को किस प्रकार लिखा जाएगा?

C. REUORE

D. QEHMSE

51. **निर्देश:** दिए गए पाई चार्ट का अध्ययन करें और नीचे दिए गए प्रश्न का उत्तर दें:

पाई चार्ट 2019 में पांच विभागों A, B, C, D और E में एक कंपनी के कर्मचारियों की कुल संख्या का ब्रेकअप दिखाता है।



$$\text{कर्मचारियों की कुल संख्या} = 4500$$

यदि विभाग B के 30% कर्मचारियों को विभाग D में स्थानांतरित कर दिया जाता है, तो विभाग C और D में कर्मचारियों की संख्या के बीच का अंतर x है, जो \_\_\_\_\_ के बीच है।

A. 176 और 180

B. 168 और 172

C. 172 और 176

D. 164 और 168

52. यदि विभाग A में पुरुष कर्मचारियों का महिला कर्मचारियों से अनुपात 3:4 है, तो विभाग C में कर्मचारियों की संख्या विभाग A में महिला कर्मचारियों की संख्या (एक पूर्णांक के निकटतम) से कितने प्रतिशत अधिक है?

A. 45

B. 42

C. 40

D. 31

53. विभाग D और E में कंपनी के कर्मचारियों की औसत संख्या विभाग A में कर्मचारियों की संख्या का कितना प्रतिशत है (एक दशमलव स्थान तक सही)?

A. 56.2%

B. 54.4%

C. 55.8%

D. 55.5%

54. एक आयताकार भूखंड 420 मीटर लंबा और 84 मीटर चौड़ा है। यह चारों ओर से अर्ध-गोलाकार फूलों की क्यारियों से घिरा हुआ है। पूरे भूखंड का क्षेत्रफल (हेक्टेयर में) x है। x का मान (एक दशमलव स्थान तक सही) क्या होगा ( $\pi = \frac{22}{7}$  लें)?

A. 19.1

B. 18.7

C. 17.9

D. 19.4

55. यदि  $(a + b) : (b + c) : (c + a) = 7 : 4 : 5$ , और  $a + b + c = 16$ , तो  $(a^2 + b^2 + c^2) : (ab + bc + ca)$  किसके बराबर है?

A. 24 : 17

B. 26 : 19

C. 27 : 20

D. 23 : 15

56. A एक कार्य को 8 दिनों में कर सकता है। B की क्षमता A की क्षमता की आधी है और C की क्षमता B की क्षमता से 50% अधिक है। यदि तीनों एक साथ कार्य करते हैं, तो वे 2 दिनों में कार्य का कितना भाग पूरा करेंगे?

A.  $\frac{3}{4}$   
C.  $\frac{3}{8}$ B.  $\frac{9}{16}$   
D.  $\frac{9}{32}$ 

57. A और B एक निश्चित कार्य को क्रमशः 25 दिनों और 40 दिनों में कर सकते हैं। वे 8 दिनों तक एक साथ कार्य करते हैं। C अकेला शेष कार्य को 24 दिनों में पूरा करता है। A और C मिलकर समान कार्य का 60% कितने समय में पूरा करेंगे?

A. 8 दिन  
C. 10 दिनB. 9 दिन  
D. 12 दिन

58. 7,560 रुपये की राशि को A, B, C और D के बीच इस प्रकार विभाजित किया जाता है कि A व B के शेयरों का अनुपात 4 : 5 है और B व C का अनुपात 3 : 4 है और C व D का अनुपात 5 : 7 है। B और D के शेयरों में कितना अंतर (रुपये में) है?

A. 1,612.80  
C. 806.40B. 1,310.40  
D. 1,209.60

59.  $145 - (125 - \{64 \div 8 \text{ का } 4 - (4 \times 8 \div 2)\})$  का मान \_\_\_\_\_ है।

A. 6  
C. 7B. 5  
D. 8

60. एक राशि को साधारण ब्याज पर  $x\%$  प्रति वर्ष की दर से 2 वर्षों के लिए निवेश किया गया था। यदि इसे उसी समय  $(x + 4)\%$  पर निवेश किया गया होता, तो इससे 1,800 रुपये अधिक मिलते। उसी राशि पर  $5\frac{2}{3}\%$  के लिए 8% प्रतिवर्ष की दर से साधारण ब्याज कितना है?

A. 10,200 रुपये  
C. 9,520 रुपयेB. 10,336 रुपये  
D. 10,064 रुपये

61. 240 मीटर लंबी एक ट्रेन 16 सेकंड में एक पोल को पार करती है और 42 सेकंड में एक प्लेटफॉर्म को पार करती है। प्लेटफॉर्म की लंबाई (मीटर में) क्या है?

A. 400  
C. 420B. 360  
D. 390

62. मान लीजिए कि  $x$ , 4 अंकों की सबसे छोटी संख्या है, जिसे 5, 6 और 7 से विभाजित करने पर क्रमशः 2, 3 और 4 शेष बचता है।  $x$  के अंकों का योग क्या है?

A. 9  
C. 12B. 11  
D. 14

63. दिए गए डेटा का अध्ययन करें और नीचे दिए गए प्रश्न का उत्तर दें।

अंक	0-10	10-20	20-30	30-40	40-50
छात्रों की संख्या	3	18	5	7	16

लाभ क्या होगा?

- A. लाभ, 1.2%  
B. हानि, 5%  
C. लाभ, 12%  
D. हानि, 1.5%

71. सुरेखा, अपनी मासिक आय का 24% किराने के सामान पर, 16% किराए पर और शेष आय का 55% बच्चों की शिक्षा और अन्य पर खर्च करती है। यदि वह महीने में 5,940 रुपये बचाती है, तो वह किराए पर कितना (रुपये में) खर्च करती है?

- A. 3,960  
B. 3,740  
C. 3,300  
D. 3,520

72.  $\frac{\frac{1}{4} \div \frac{3}{4} \left( \frac{2}{3} - \frac{1}{3} \right)}{\frac{1}{3} \text{ of } \frac{3}{4} - \frac{1}{4} \text{ of } \frac{2}{3}}$  का मान क्या है?

- A.  $\frac{8}{195}$   
B.  $\frac{7}{195}$   
C.  $\frac{4}{195}$   
D.  $\frac{2}{195}$

73.  $\frac{5}{16} + \frac{3}{5} \times 1\frac{7}{8} \div \frac{2}{3} - 6\frac{1}{8} \div \left( 5\frac{1}{4} \div \frac{3}{7} \text{ of } \frac{1}{2} \right)$  का मान क्या है?

- A.  $\frac{31}{18}$   
B.  $\frac{19}{6}$   
C.  $\frac{41}{24}$   
D.  $\frac{17}{12}$

74. एक कक्षा में लड़के और लड़कियों की संख्या का अनुपात 5:7 है। लड़कों का औसत वजन 56 किलो और लड़कियों का 50 किलो होता है। कक्षा में सभी लड़के और लड़कियों का औसत वजन (किलो में) कितना है?

- A. 52.5  
B. 51.8  
C. 54.1  
D. 53.2

75. 12 संख्याओं का औसत 25.5 है। पहली छह संख्याओं का औसत 22.4 है और अंतिम तीन संख्याओं का औसत 28.2 है। 7वीं संख्या, 8वीं संख्या से 5 कम है लेकिन 9वीं संख्या से 10 कम है। 8वीं और 9वीं संख्याओं का औसत क्या है?

- A. 32.6  
B. 29.4  
C. 29.8  
D. 31.5

76. निम्नलिखित में से कौन सा वाद्य यंत्र आमतौर पर ऊर्ध्वाधर स्थिति में और धनुषाकार धनुष (झुका हुआ तार) के साथ बजाया जाता है?

- A. सितार  
B. सारंगी  
C. शहनाई  
D. वीना

77. रुकिमणी देवी अरुंडेल निम्नलिखित में से किस नृत्य शैली से संबंधित हैं?

- A. कथकली  
B. भरतनाट्यम  
C. कथक  
D. कुचिपुड़ी

78. निम्नलिखित में से किसे मार्च 2020 में वित्त सचिव के रूप में नियुक्त किया गया?

- A. सतीश कुमार शर्मा  
B. बिमल जुल्फा  
C. अमिता पांडेव  
D. अजय भूषण पांडे

79. 1979 में 'द्वितीय पिछड़ा वर्ग आयोग' की अध्यक्षता \_\_\_\_\_ ने की थी।  
A. जय प्रकाश नारायण B. बीपी मंडल  
C. वीके साहनी D. बीआर अम्बेडकर

80. निम्नलिखित में से किस भारतीय टेबल टेनिस खिलाड़ी ने ITTF चैलेंजर प्लस ओपन 2020 जीता?  
A. एंथोनी अमलराज B. शुभजीत साहा  
C. शरथ कमल D. सनिल शेटटी

81. लोहे का वह कौन सा गुण है जिसके कारण गर्म लोहे के टुकड़े को पीटकर चाकू बनाया जा सकता है?  
A. आघातवर्धनीयता B. चमक  
C. लचीलापन D. धन्यात्मकता

82. जलियांवाला बाग हत्याकांड के लिए जिम्मेदार ब्रिटिश अधिकारी माइकल ओ' डायर की हत्या निम्नलिखित में से किसने की थी?  
A. राम प्रसाद बिस्मिल B. उधम सिंह  
C. चंद्रशेखर आजाद D. भगत सिंह

83. निम्नलिखित में से कौन सा दर्पण वाहनों में हेडलाइट के रूप में प्रयोग किया जाता है?  
A. दोहरा उत्तल दर्पण B. समतल दर्पण  
C. अवतल दर्पण D. उत्तल दर्पण

84. कंचनजंगा बायोस्फीयर रिजर्व निम्नलिखित में से किस राज्य में स्थित है?  
A. झारखण्ड B. सिक्किम  
C. हिमाचल प्रदेश D. केरल

85. निम्नलिखित में से किसने ऑल इंग्लैंड ओपन बैडमिंटन चैम्पियनशिप पुरुष एकल 2020 का खिताब जीता?  
A. चाउ टीएन-चेन B. ली चौंग वेर्झ  
C. लिन डान D. विक्टर ऐक्सल्सन

86. मुगल प्रांतीय प्रशासन में सामान्यतः दीवानी का क्या अर्थ था?  
A. कानून और व्यवस्था और आपराधिक न्याय का प्रशासन B. आपराधिक न्यायशास्त्र और कारागार प्रशासन  
C. राजस्व प्रशासन D. अपराधिक न्याय प्रणाली

87. निम्नलिखित में से कौन संसद के दोनों सदनों की संयुक्त बैठक की अध्यक्षता करता है?  
A. केंद्रीय संसदीय कार्य मंत्री B. लोकसभा अध्यक्ष  
C. राज्यसभा के उपसभापति D. राज्यसभा के सभापति

88. विश्व बैंक द्वारा 2019-2020 में किए गए एक सर्वेक्षण के अनुसार 'नई फर्मों का निर्माण' की श्रेणी में भारत की वैशिक रैंक क्या है?  
A. दूसरी B. पहली  
C. छठवीं D. तीसरी

89. विश्व के कुल भौगोलिक क्षेत्र का कितना प्रतिशत भारत के पास है (निकटतम पूर्ण संख्या में पूर्णांकित)?



C. बृहदरथ

D. सम्प्रति

99. नहरकटिया तेल क्षेत्र किस राज्य में स्थित है?

A. असम

B. पश्चिम बंगाल

C. महाराष्ट्र

D. गुजरात

100. कॉर्निया के पीछे ऊतक के रंगीन वलय को क्या कहते हैं, जो पुतली के आकार को समायोजित करके आंख में प्रवेश करने वाले प्रकाश की मात्रा को नियंत्रित करता है?

A. फोविया

B. रेटिना

C. कोरॉयड

D. आईरिस

### Solutions

1. C

Sol.

**Option C has incorrectly spelt word.**

“Definition” is the correct spelling of the incorrect word “Definaton”. It means an explanation of the meaning of a word or phrase, especially in a dictionary.

The meaning of other words are :-

Stagnation: the fact of no longer developing or making progress

Recognition: the act of remembering who someone is when you see them, or of identifying what something is.

Ammunition: a supply of bullets, etc. to be fired from guns.

2. C

Sol.

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

\* Underlined part needs correction in preposition.

\* “Towards” as a preposition is used to show “in the direction of something/someone”

**For example:**

We were heading **towards** our home.

\* “For” as a preposition is used to show who is intended to have or use something.

**For example:**

It is a book **for** children.

- \* In the underlined sentence, we need to connect the “restrict online classes to two hours” with the intended entity i.e. “primary classes”. Thus, preposition “for” should be used in place of preposition “towards”.
- \* Hence, “**for**” is the correct substitution.

The correct sentence will be: **Our school has been issued instructions to restrict online classes to two hours for the primary classes.**

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

3. B

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

- \* Are = (helping verb) is a plural helping verb used in present tense.
- \* Was = (helping verb) is a singular helping verb used in past tense.
- \* Is = (helping verb) is a singular helping verb used in present tense.
- \* Were = (helping verb) is a plural helping verb used in past tense.

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

- \* “Are” is a helping verb of present tense but we need helping verb of past tense. Thus, option A is incorrect.
- \* “Is” is a helping verb of present tense but we need helping verb of past tense. Thus, option C is incorrect.
- \* “Were” is a plural helping verb used in past tense but we need singular helping verb. Thus, option D is incorrect.

\* "Was" is a singular helping verb used in past tense.

\* Here in the given sentence, it is used for the singular subject "the captain". Please note that when two nouns are connected with words like "with", then helping verb is used in accordance with the first noun.

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

The correct sentence will be: **The captain, with the members of the team, was given a hearty welcome at the airport yesterday.**

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

4. D

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

Approach = to come near to someone/something in distance or time.

E.g.: He was **approached** by a woman who asked for his help.

Reach = to arrive at the place that you have been travelling to.

Meet = to be in the same place as someone by chance and talk to them.

Near = a short distance away.

Avoid = to keep away from someone/something.

E.g.: We must leave early to **avoid** the rush hour.

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

5. D

Sol. The idiom "**change for the better**" means a person, thing, situation etc. that is better than the previous or present one.

Example: Voters see the new politician as a **change for the better**.

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

6. D

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

Vacant = empty or unoccupied.

E.g.: A seat became **vacant** and he sat down in it.

Used = familiar with something because you do it or experience it often.

Busy = having a lot to do; perhaps not free to do something else because you are working on something.

Full = containing or holding as much or as many as possible

Bare = not covered by any clothes.

E.g.: The winter sun filtered through the **bare** branches of the trees.

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

7. A

Sol.

Disintegrate: to break into small parts or pieces and be destroyed.

Dislocate: to put a bone out of its normal position in a joint

Discontinue: to stop doing something.

Dishevelled: very untidy.

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

8. D

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

Appease = to make someone calmer or less angry by giving them what they want.

E.g.: The move is widely seen as an attempt to **appease** critics of the regime.

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

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

Worsen = to become or make something worse than it was before.

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

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

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

9. D

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

Tardy = slow to act, move or happen

E.g.: The government's **tardy** response to the situation has worsen the matter.

Late = arriving or happening after the expected or usual time.

Slow = not moving, acting or done quickly.

Lazy = unwilling to work or be active.

Early = near the beginning of a period. OR arriving or done before the usual time.

E.g.: The bus is ten minutes **early**.

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

10. B

Sol.

Let us understand the meaning of the given words:-

- \* On = (preposition) is used to show in or into a position covering, touching or forming part of a surface.
- \* At = (preposition) is used to show where something/someone is or where something happens.
- \* In = (preposition) is used to show at a point within an area or a space
- \* Of = (preposition) is used for showing selection.

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

- \* "On" as a preposition is used to show in or into a position covering, touching or forming part of a surface. Thus, option A is incorrect.
- \* "In" as a preposition is used to for the purpose of "location within something". Thus, option C is incorrect.
- \* "Of" as a preposition is used for selection out of many thing. Thus, option D is incorrect.
- \* "At" as a preposition is used to show in the direction of or towards someone/something.
- \* Here in the given sentence, it is used to show the direction of "amazed" towards the "child's courage".

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

The correct sentence will be: **Everyone was amazed at the young child's courage.**

11. A

Sol.

The sentence is grammatically incorrect, and the error lies in **option A**. The error is related to **Tense**.

\* Present perfect tense has verb structure:

Has/Have + third form of verb

**For example:**

She **has** already **stated** her intention to run for the election.

\* In the given sentence, first form of verb “believe” is used after the helping verb “has”. This is wrong. Thus, third form of verb “believed” should be used in place of “believe”.

Note: “Always” is an adverb which is used for the verb.

\* Hence, “**always believed in**” is the correct substitution.

Thus, the correct sentence will be: **India has always believed in the value of the family system.**

12. C

Sol.

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

\* Underlined part needs correction in verb.

\* “Helping verb + used to + Gerund” structure is used when we want to convey the meaning of “be accustomed to”

**For example:**

Rakesh **is used to waking** up early.

\* In the underlined sentence, “am” is a helping verb. The sentence is conveying the sense of the subject “I” being “accustomed to eating spicy and oily food”. Thus, “eating” should be used

in place of “eat”.

\* Also, verb “use” is used in negative sentences as part of main verb with structure like: “did not + use to + first form of verb”.

\* But here the sentence is not negative, so usage of “use” should be avoided.

For example:

He **did not use to eat** pizza.

\* Hence, “**used to eating**” is the correct substitution.

Thus, the correct sentence will be: **I am not used to eating spicy and oily food.**

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

13. B

Sol.

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

\* Underlined part needs correction in Tense.

\* Time words like “yesterday”, “last + name of month/day” shows that the event happened in the past time. This necessitates the usage of simple past tense in the sentence.

For example:

We **had** a little adventure **yesterday**.

We **went** to Japan **last** March.

\* In the given sentence, time phrase “last December” necessitates the usage of simple past tense i.e. second form of verb.

\* But we have used the first form of verb “goes”. Thus, second form of verb “went” should be used in place of first form of verb “goes”.

\* Hence, “**went to Singapore**” is the correct substitution.

Thus, the correct sentence will be: **Ritu went to Singapore for her holidays last December.**

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

14. D

Sol.

Let us understand the meaning of the given words:-

- \* Disturb = to interrupt someone when they are trying to work, sleep etc.
- \* Absorb = to take liquid, gas or other substance from the surface or space around.
- \* Attract = to make someone/something take part in something.
- \* Distract = to take someone's attention away from what they are trying to do.

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

- \* “Disturb” is used in context of “interrupt someone”. Thus, option A is incorrect.
- \* “Absorb” is used in context of “taking liquid from the surface”. Thus, option B is incorrect.
- \* “Attract” is used in context of “make someone participate”. Thus, option C is incorrect.
- \* “Distract” is used in context of “take someone’s attention away”.
- \* Here in the given sentence, it is used to show that the mom tried to take the child’s attention away from the toy.

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

The correct sentence will be: **Mother tried to distract the child when he was crying for a toy.**

15. D

Sol.

Let us understand the meaning of the given words:-

- \* Guides = to show someone the way to a place, often by going with them.
- \* Nurses = a person whose job is to take care of sick or injured people
- \* Substitutes = a person or thing that you use or have instead of one you normally use or have
- \* Companions = a person or animal that travels with you or spends a lot of time with you

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

- \* "Guides" is used in context of "showing way to some place". Thus, option A is incorrect.
- \* "Nurses" is used in context of "care for sick people". Thus, option B is incorrect.
- \* "Substitutes" is used in context of "replacement". Thus, option C is incorrect.
- \* "Companions" is used in context of "someone with whom you spend a time".
- \* Here in the given sentence, it is used to show that for people who are lonely, pets can be used to spend some time by them.

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

The correct sentence will be: **Pets are good companions for lonely people.**

16. B

Sol.

The idiom "**loosen the purse strings**" means to increase the amount of money available to be spent.

Example: The recent changes in financial market will prompt the investors to **loose the purse strings**.

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

17. D

Sol.

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

\* "Superior" is a verb which takes fixed preposition "to" after it. It means better in quality than someone/something else.

**For example:**

This robot is technically **superior to** its competitors.

\* In the given sentence, we have erroneously used preposition "from" after the verb "superior". Thus, fixed preposition "to" should be used in place of "from".

\* Hence, "**superior to me**" is the correct substitution.

Thus, the correct sentence will be:

**I know she is much superior to me in intelligence.**

18. B

Sol.

**Option B has incorrectly spelt word.**

“Already” is the correct spelling of the incorrect word “Allready”. It means before now or before a particular time in the past

The meaning of other words are:

Patient: a person who is receiving medical treatment especially in a hospital.

Intend: to have a plan, result or purpose in your mind when you do something.

Disrupt: to make it difficult for something to continue in the normal way.

19. B

Sol.

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

\* “Break off” is a phrasal verb. It means to stop doing something for a time.

**For example:**

Ukraine **broke off** diplomatic relations with Russia.

\* “Break up” is a phrasal verb. It means to come to an end.

**For example:**

The marriage has **broken up**.

\* The given sentence demands the sense of “stop doing work” when someone is on a vacation. Thus, preposition “off” should be used in place of “up”.

\* Hence, “**break off**” is the correct substitution.

The correct sentence will be: **A vacation is the time to relax and break off from the routine.**

20. B

Sol.

Meeting: an occasion when people come together to discuss or decide something.

Schedule: a plan that lists all the work that you have to do and when you must do each thing.

Scheme: a plan or system for doing or organising something.

Occupation: a job or profession.

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

21. A

Sol.

The given passage is about “**Changes in species over the time**”.

“Specimens” means a small amount of something that shows what the rest of it is like. Thus, option B is wrong.

“Strains” means pressure on a system or relationship because great demands are being placed on it. Thus, option C is wrong.

“Species” means a group into which animals, plants etc. that are able to have sex with each other and produce healthy young are divided, smaller than a genus and identified by a Latin name. Thus, option D is wrong.

“Samples” means a small amount of substance taken from a larger amount and tested in order to obtain information about the substance.

In the given sentence, it is used to mention about a small amount of substance connected with “pre-historic sabre-toothed tiger”.

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

22. C

Sol.

The given passage is about “**Changes in species over the time**”.

“Had” is a helping verb which is used in past tense. Thus, option B is wrong.

“Has” is a singular helping verb which is used in present tense. But we need plural helping verb. Thus, option C is wrong.

“Having” is the continuous form of verb “have”. But we need plural helping verb. Thus, option D is wrong.

“Have” is a plural helping verb which is used in present tense.

Here in the given sentence, it is used to show for noun “species” which is plural.

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

23. B

Sol.

The given passage is about “**Changes in species over the time**”.

“Regularly” means at regular intervals or times. Thus, option A is wrong.

“Deliberately” means done in a way that was planned, not by chance. Thus, option C is wrong.

“Readily” means quickly and without difficulty. Thus, option D is wrong.

“Gradually” means slowly, over a long period of time.

In the given sentence, it is used to mention that some of “pre-historic sabre-toothed tiger” are dying slowly over a long period of time.

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

24. A

Sol.

The given passage is about “**Changes in species over the time**”.

“The” is a definite article. It is used before the nouns that are specific. Thus, option B is wrong.

“An” as an indefinite article is used before the countable nouns (having vowel sounds) that have not been mentioned before. Thus, option C is wrong.

“Only” as an adjective is used to say that no other group exists or are there. Thus, option D is wrong.

“A” is an indefinite article. It is used to show that someone/something is a member of a group or profession.

Here in the given sentence, it is used to show that “dog” is member of “species” which evolved into wolf”.

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

25. D

Sol.

The given passage is about “**Changes in species over the time**”.

“Expand” means to become greater in size, number or importance. Thus, option A is wrong.

“Derive” means to come or develop from something. Thus, option B is wrong.

“Emerge” means to move out of or away from something and become possible to see. Thus, option C is wrong.

“Evolve” means to develop over time into forms that are better adapted to survive changes in their environment.

In the given sentence, it is used to mention that dog as a species have developed over the time into better adapted forms i.e. “wolf” to survive the changes happening in the environment.

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

26. A

Sol. विकल्प A की जांच करने पर:

$$7 + 3 - 24 \div 6 \times 12 = 29$$

परस्पर बदलाव के बाद:

$$7 \times 3 - 24 \div 6 + 12 = 29$$

$$\text{या, } 21 - 4 + 12 = 29$$

$$\text{या, } 29=29$$

तो, यह सही विकल्प है।

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

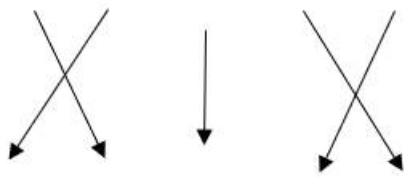
इसलिए, विकल्प A सही उत्तर है।

27. A

Sol.

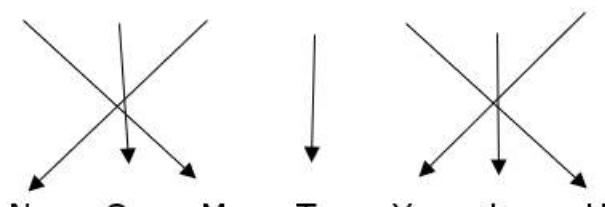
as,

W R I T E



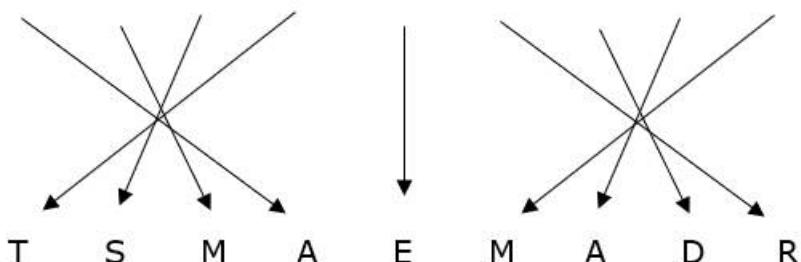
and

M O N T H L Y



similarly,

A M S T E R D A M



इसलिए, विकल्प A सही उत्तर है।

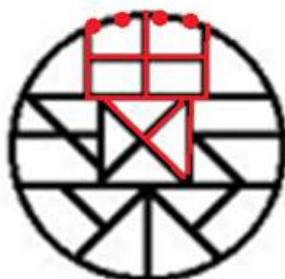
28. B

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

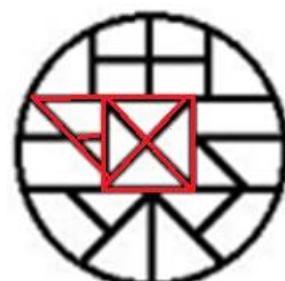
विकल्प A अंतर्निहित है:



विकल्प C अंतर्निहित है:



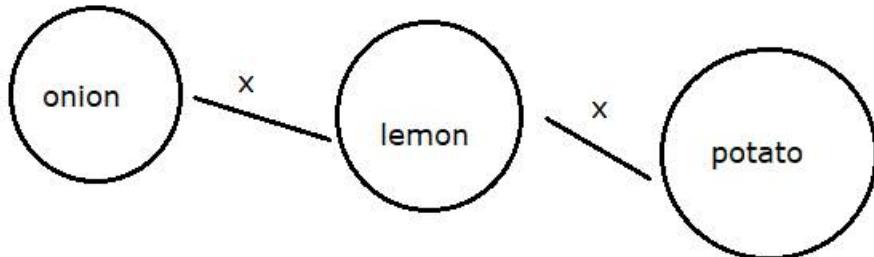
विकल्प D अंतर्निहित है:



इसलिए, विकल्प B सही उत्तर है।

29. C

Sol. न्यूनतम संभावित आरेख है -



निष्कर्षः

I. कोई प्याज, आलू नहीं है। (यह अनुसरण नहीं करता है क्योंकि यह केवल संभावना है, सुनिश्चितता नहीं है।)

II. कोई आलू, नींबू नहीं है। (यह अनुसरण करता है क्योंकि कोई नींबू, आलू नहीं है।)

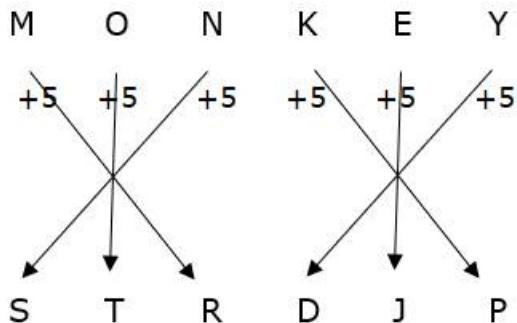
तो, केवल निष्कर्ष II अनुसरण करता है।

इसलिए, विकल्प C सही उत्तर है।

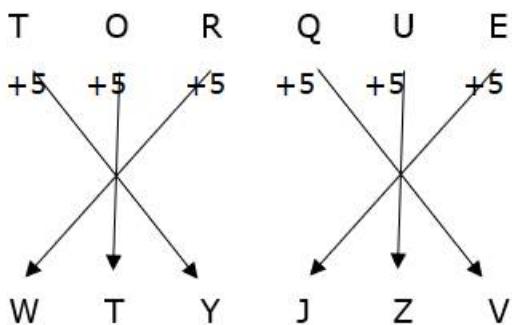
30. A

Sol.

as,



similarly,



इसलिए, विकल्प A सही उत्तर है।

31. B

Sol. पैटर्न इस प्रकार है:

$$5*3+5=20$$

$$20*3+5=65$$

$$65*3+5=200$$

$$200*3+5=605$$

इसलिए, विकल्प B सही उत्तर है।

32. C

Sol. प्रत्येक स्वर को उसके रिवर्स रैंक कूट द्वारा कूटबद्ध किया जाता है और प्रत्येक व्यंजन को उसके फॉरवर्ड रैंक कूट द्वारा कूटबद्ध किया जाता है।

चूंकि,

$$\text{FREEDOM} = F(6)R(18)E(22)E(22)D(4)O(12)M(13)$$

$$= 618222241213$$

इसी तरह,

$$\text{SUPINE} = S(19)U(6)P(16)I(18)N(14)E(22)$$

$$= 19616181422$$

इसलिए, विकल्प C सही उत्तर है।

33. D

Sol. पंक्ति 1:

$$(15*12)/2 = 180/2 = 90$$

पंक्ति 2:

$$(16*13)/2 = 208/2 = 104$$

पंक्ति 3:

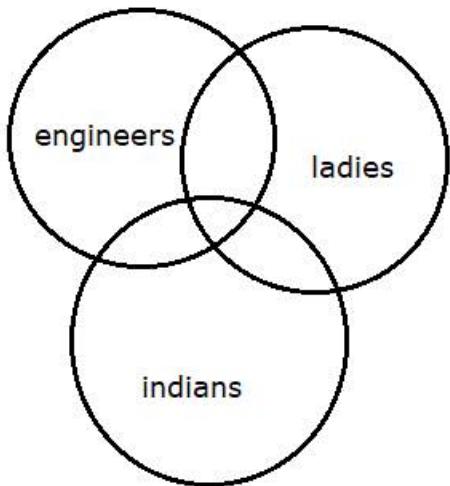
$$(12*18)/2 = 216/2 = 108$$

इसलिए, विकल्प D सही उत्तर है।

34. C

Sol. दिए गए तीनों तत्व (इंजीनियर, भारतीय, महिलाएं) एक दूसरे से परस्पर संबंधित हैं।

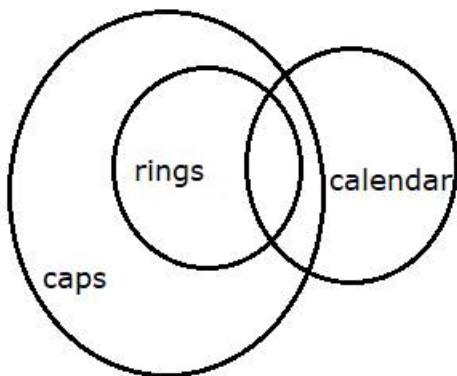
तो, सबसे अच्छा प्रतिनिधित्व है:



इसलिए, विकल्प C सही उत्तर है।

35. C

Sol. न्यूनतम संभावित आरेख है -



निष्कर्षः

I. सभी कैलेंडर, रिंग हैं। (यह अनुसरण नहीं करता है चूंकि यह केवल एक संभावना है, सुनिश्चितता नहीं है।)

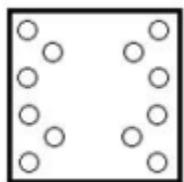
II. कम से कम कुछ कैलेंडर, कैप हैं। (यह अनुसरण करता है क्योंकि कुछ रिंग, कैलेंडर हैं तथा सभी रिंग, कैप हैं।)

तो, केवल निष्कर्ष II अनुसरण करता है।

इसलिए, विकल्प C सही उत्तर है।

36. B

Sol. जैसा कि आकृति में दिया गया है, हमें इसे दिए गए (रुमाल मोड़ने के अनुसार) तरीके से मोड़ने की जरूरत है और इसे खोले जाने पर विकल्प B दिखाई देगा।



इसलिए, विकल्प B सही उत्तर है।

37. C

Sol. अभिषेक, शरद की ठीक बाईं ओर बैठा है।

अभिषेद, शरद

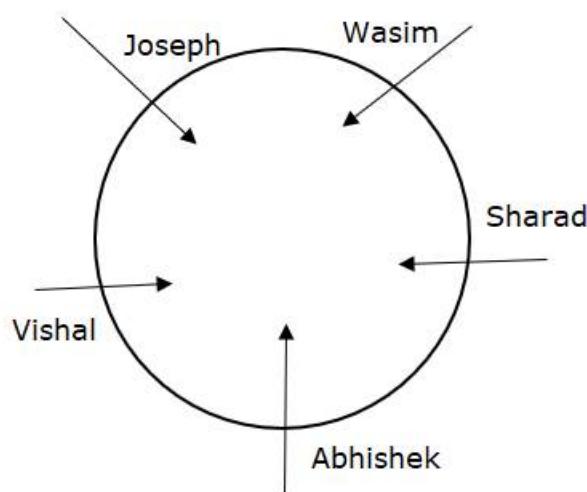
जोसेफ, वसीम की ठीक दाईं ओर बैठा है।

वसीम, जोसेफ

विशाल, वसीम की बाईं ओर से तीसरे स्थान पर है।

वसीम, जोसेफ, विशाल

तो, अंतिम व्यवस्था है:



इसलिए, विशाल, जोसफ और अभिषेक के मध्य में बैठा है।

इसलिए, विकल्प C सही उत्तर है।

38. B

Sol. विकल्प A की जांच करने पर:

$$25 * 5 * 6 * 15 * 3 * 50$$

परस्पर बदलाव के बाद:

$$25 \div 5 \times 6 - 15 + 3 = 50$$

$$\text{या, } 5 \times 6 - 15 + 3 = 50$$

$$\text{या, } 30 - 15 + 3 = 50$$

$$\text{या, } 18=50$$

तो, यह सही विकल्प नहीं है।

विकल्प B की जांच करने पर:

$$25 * 5 * 6 * 15 * 3 * 50$$

परस्पर बदलाव के बाद:

$$25 + 5 \times 6 - 15 \div 3 = 50$$

$$\text{या, } 25 + 30 - 5= 50$$

$$\text{या, } 50=50$$

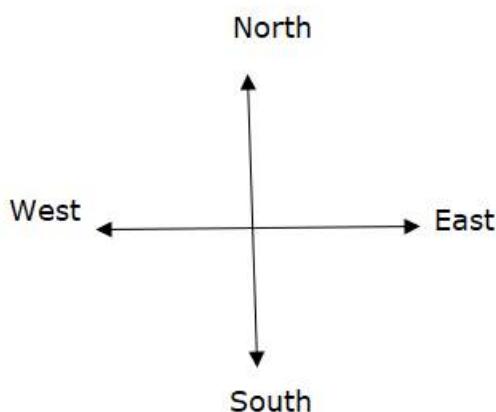
तो, यह सही विकल्प है।

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

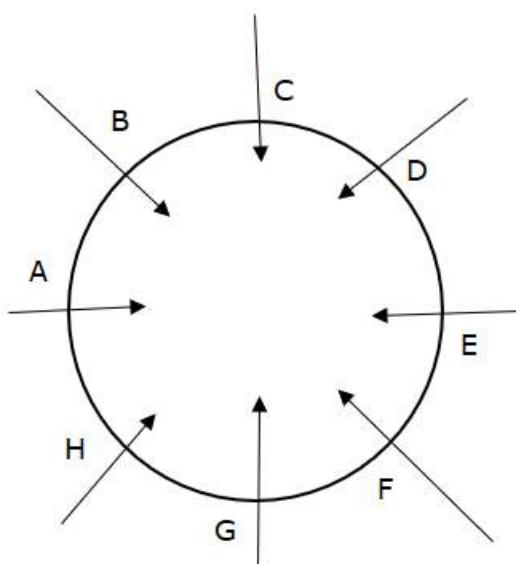
इसलिए, विकल्प B सही उत्तर है।

39. C

Sol.



C दक्षिण दिशा में बैठा है। तो, अंतिम व्यवस्था है:



इसलिए, F उत्तर-पश्चिम दिशा में बैठा है।

इसलिए, विकल्प C सही उत्तर है।

40. C

Sol. जैसाकि,

बेड का इस्तेमाल सोने के लिए किया जाता है।

इसी तरह,

कुर्सी का उपयोग बैठने के लिए किया जाता है।

इसलिए, विकल्प C सही उत्तर है।

41. A

Sol. पैटर्न इस प्रकार है:

$$40+1^2=41$$

$$41+3^2=50$$

$$50+5^2=75$$

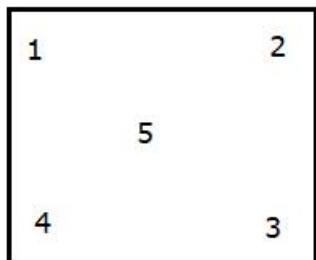
$$75+7^2=124$$

$$124+9^2=205$$

इसलिए, विकल्प A सही उत्तर है।

42. C

Sol.



वर्ग के साथ बबल का गतिमान क्रम है: 1 2 3 4

बबल वैकल्पिक रूप से काला और सफेद हो जाता है

तीर का गतिमान क्रम है: 3 4 1 2

तीर प्रत्येक चरण में 90 डिग्री बाएं मुड़ता है।

आधे काले त्रिभुज का गतिमान क्रम है: केवल मध्य में स्थित है (यह काला हो जाता है तथा ऊपर और नीचे से वैकल्पिक रूप से सफेद हो जाता है।)

तो, अगली आकृति है -



इसलिए, विकल्प C सही उत्तर है।

43. A

Sol. दो अंकों के स्थानीय मानों का योग लिया जाता है और एक अंक के स्थानीय मानों को इस प्रकार माना जाता है।

जैसाकि,

T ( $20 = 2 + 0 = 2$ )

U ( $21 = 2 + 1 = 3$ )

R ( $18 = 1 + 8 = 9$ )

N ( $14 = 1 + 4 = 5$ )

I (9)

P ( $16 = 1 + 6 = 7$ )

अर्थात् 239597

और

Q ( $17 = 1 + 7 = 8$ )

U ( $21 = 2 + 1 = 3$ )

E (5)

E (5)

N ( $14 = 1 + 4 = 5$ )

अर्थात् 83555

इसी तरह,

L ( $12 = 1 + 2 = 3$ )

E (5)

M ( $13 = 1 + 3 = 4$ )

O ( $15 = 1 + 5 = 6$ )

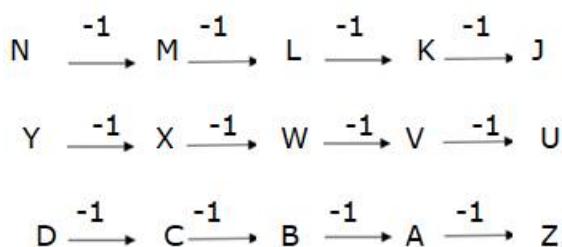
N ( $14 = 1 + 4 = 5$ )

अर्थात् 35465

इसलिए, विकल्प A सही उत्तर है।

44. A

Sol. पैटर्न इस प्रकार है:



इसलिए, विकल्प A सही उत्तर है।

45. A

Sol. जैसाकि,

मेंढक एक उभयचर है (उभयचर "दोहरे जीवन", या पानी में और जमीन पर जीवन को संदर्भित करता है।)

इसी तरह,

छिपकली एक सरीसृप है (सरीसृप अंडे देने वाले होते हैं)।

इसलिए, विकल्प A सही उत्तर है।

46. C

Sol. अनुसरण किया गया तर्क है  $a : 2(a + 1)^3$ 

चूंकि,

$$2 : 2(3)^3 = 2 \times 27 = 54$$

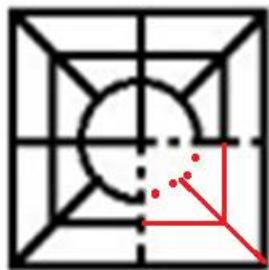
इसी प्रकार,

$$4 : 2(5)^3 = 2 \times 125 = 250$$

इसलिए, विकल्प C सही उत्तर है।

47. A

Sol. पूर्ण आकृति है:



इसलिए, विकल्प A सही उत्तर है।

48. D

Sol. A. H &gt; D (सही है क्योंकि H &gt; M = D)

B. Z &lt; H (सही है क्योंकि H &gt; T &gt; Z)

C. P &lt; M (सही है क्योंकि M = D &gt; P)

D. Z &gt; K (गलत है क्योंकि K = H &gt; T &gt; Z से, हमें प्राप्त होता है K &gt; Z)

इसलिए, विकल्प D सही उत्तर है।

49. B

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

होती है।

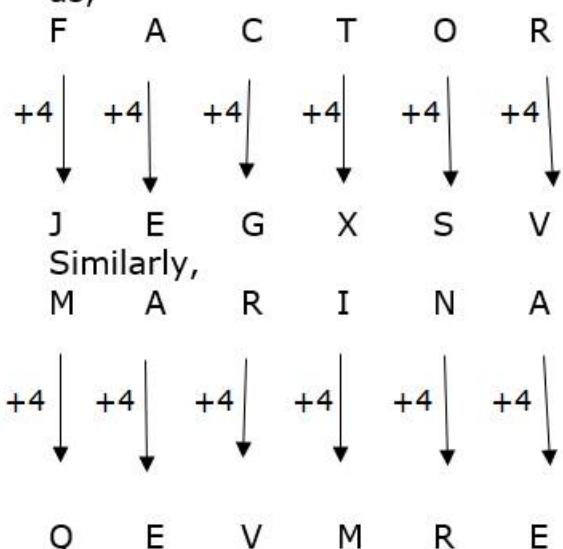


इसलिए, विकल्प B सही उत्तर है।

50. A

Sol.

as,



इसलिए, विकल्प A सही उत्तर है।

51. C

Sol. विभाग C में कर्मचारियों की संख्या =  $\left(\frac{81.2}{360}\right) \times 4500 = 1015$

विभाग B में कर्मचारियों की संख्या =  $\left(\frac{72}{360}\right) \times 4500 = 900$

विभाग D में कर्मचारियों की संख्या =  $\left(\frac{45.6}{360}\right) \times 4500 = 570$

विभाग B के 30% कर्मचारियों को विभाग D में स्थानांतरित किया जाता है।

विभाग B में 30% कर्मचारी =  $\left(\frac{30}{100}\right) \times 900 = 270$

अतः विभाग D में कर्मचारियों की परिणामी संख्या =  $570 + 270 = 840$

विभाग C और D में कर्मचारियों की संख्या के बीच अंतर =  $1015 - 840 = 175$

विभाग C और D में कर्मचारियों की संख्या के बीच का अंतर  $x$  है।

$$\Rightarrow x = 175$$

अतः,  $x$  172 और 176 के बीच स्थित है।

52. A

Sol. विभाग A में कर्मचारियों की संख्या =  $\left(\frac{98}{360}\right) \times 4500 = 1225$

विभाग A में पुरुष कर्मचारियों का महिला कर्मचारियों से अनुपात 3:4 है।

माना विभाग A में पुरुष कर्मचारियों की संख्या =  $3x$

विभाग A में महिला कर्मचारियों की संख्या =  $4x$

$$\Rightarrow 7x = 1225$$

$$\Rightarrow x = 175$$

$$\Rightarrow 4x = 700$$

विभाग A में महिला कर्मचारियों की संख्या = 700

विभाग C में कर्मचारियों की संख्या =  $\left(\frac{81.2}{360}\right) \times 4500 = 1015$

अपेक्षित प्रतिशत =  $\frac{(1015-700)}{700} \times 100 = 45\%$

53. D

Sol. विभाग D में कर्मचारियों की संख्या =  $\left(\frac{45.6}{360}\right) \times 4500 = 570$

विभाग E में कर्मचारियों की संख्या =  $\left(\frac{63.2}{360}\right) \times 4500 = 790$

विभाग D और E में कंपनी के कर्मचारियों की औसत संख्या =

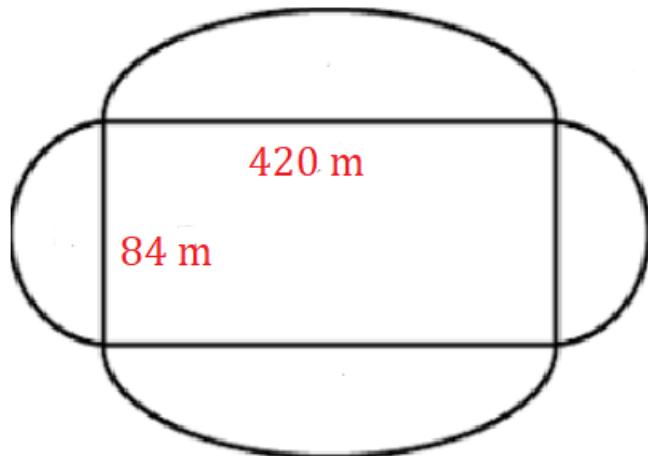
$$\frac{570+790}{2} = 680$$

विभाग A में कर्मचारियों की संख्या =  $\left(\frac{98}{360}\right) \times 4500 = 1225$

$$\text{अपेक्षित प्रतिशत} = \frac{680}{1225} \times 100 = 55.5\%$$

54. C

Sol. एक आयताकार भूखंड 420 मीटर लंबा और 84 मीटर चौड़ा है। यह चारों ओर से अर्ध-गोलाकार फूलों की क्यारियों से घिरा हुआ है।



पूरे भूखंड का क्षेत्रफल =

$$420 \times 84 + \frac{22}{7}(210)^2 + \frac{22}{7}(42)^2 = 35280 + 138600 + 5544 = 179424 \text{ m}^2 = 17.9 \text{ हेक्टेयर}$$

अतः,  $x = 17.9$

55. B

Sol.  $(a + b) : (b + c) : (c + a) = 7 : 4 : 5$

$$\text{माना } a + b = 7k$$

$$\Rightarrow b + c = 4k$$

$$\Rightarrow c + a = 5k$$

$$\text{अब, } 2(a + b + c) = 7k + 4k + 5k = 16k$$

$$\Rightarrow a + b + c = 8k$$

$$\text{लेकिन } a + b + c = 16$$

$$\Rightarrow 8k = 16$$

$$\Rightarrow k = 2$$

$$\text{अतः, } a + b = 14 \dots\dots\dots(1)$$

$$\Rightarrow b + c = 8 \dots\dots\dots(2)$$

$$\Rightarrow c + a = 10 \dots\dots\dots(3)$$

$$a + b + c = 16 \dots\dots\dots(4)$$

(1) से (4) घटाने पर

$$\Rightarrow c = 16 - 14 = 2$$

C का मान (2) में रखने पर

$$\Rightarrow b = 8 - 2 = 6$$

b का मान (1) में रखने पर,

$$\Rightarrow a + 6 = 14$$

$$\Rightarrow a = 8$$

$$\text{अब, } \frac{a^2 + b^2 + c^2}{ab + bc + ca} = \frac{(8)^2 + (6)^2 + (2)^2}{(8)(6) + (6)(2) + (2)(8)} = \frac{64 + 36 + 4}{48 + 12 + 16} = \frac{104}{76} = \frac{26}{19}$$

56. B

Sol. A एक काम को 8 दिनों में कर सकता है।

B की क्षमता, A की क्षमता की आधी है।

B की क्षमता : A की क्षमता  $\equiv 1 : 2$

यदि कार्य की मात्रा समान है तो  $efficiency \propto \frac{1}{time\ taken}$

B द्वारा लिया गया समय: A द्वारा लिया गया समय

C की क्षमता B की क्षमता से 50% अधिक है।

C की क्षमता : B की क्षमता = 150 : 100 = 3 : 2

C द्वारा लिया गया समय: B द्वारा लिया गया समय = 2 : 3

C द्वारा कार्य पूरा करने में लिया गया समय =  $\frac{2}{3} \times 16 = \frac{32}{3}$  दिन

माना कुल कार्य = LCM (8, 16, 32) = 32 इकाई

A की क्षमता =  $\frac{32}{8} = 4$  unit/day

B की क्षमता =  $\frac{32}{16} = 2$  unit/day

C की क्षमता =  $\frac{32}{\frac{32}{3}} = 3$  unit/day

तीनों द्वारा एक साथ 2 दिनों में समाप्त किया गया कार्य =  $(4 + 2 + 3) \times 2 = 18$  unit

2 दिनों में समाप्त किए गए कार्य का भाग =  $\frac{18}{32} = \frac{9}{16}$

57. C

Sol. A और B एक निश्चित कार्य को क्रमशः 25 दिनों और 40 दिनों में कर सकते हैं।

माना कुल कार्य = LCM (25, 40) = 200 इकाई

A की क्षमता =  $\frac{200}{25} = 8$  unit/day

B की क्षमता =  $\frac{200}{40} = 5$  unit/day

वे 8 दिनों तक एक साथ कार्य करते हैं।

A और B द्वारा 8 दिनों में समाप्त किया गया कार्य =  $(8 + 5) \times 8 = 104$  unit

शेष कार्य = 200 इकाई - 104 इकाई = 96 इकाई

C अकेला शेष कार्य को 24 दिनों में पूरा करता है।

C की क्षमता =  $\frac{96}{24} = 4$  unit/day

A और C द्वारा मिलकर कार्य का 60% पूरा करने में लिए गए दिनों की संख्या  $= \frac{\frac{60}{100} \times 200}{8+4} = \frac{120}{12} = 10 \text{ days}$

58. B

Sol. 7,560 रुपये की राशि को A, B, C और D के बीच इस प्रकार विभाजित किया जाता है कि A और B के शेयरों का अनुपात 4 : 5 है और B और C का अनुपात 3 : 4 है और C और D का अनुपात 5 : 7 है।

$$A : B = 4 : 5$$

3 से गुणा करने पर

$$\Rightarrow A : B = 12 : 15 \dots\dots\dots\dots(1)$$

$$B : C = 3 : 4$$

5 से गुणा करने पर

$$\Rightarrow B : C = 15 : 20 \dots\dots\dots\dots(2)$$

$$C : D = 5 : 7$$

4 से गुणा करने पर

$$\Rightarrow C : D = 20 : 28 \dots\dots\dots\dots(3)$$

समीकरण (1), (2) और (3) को मिलाकर

$$\Rightarrow A : B : C : D = 12 : 15 : 20 : 28$$

प्रश्न के अनुसार:

$$\Rightarrow (12+15+20+28) \text{ इकाई} = 7560 \text{ रुपये}$$

$$\Rightarrow 75 \text{ इकाई} = \text{Rs } 7560 \text{ रुपये}$$

$$\Rightarrow 1 \text{ इकाई} = \text{Rs } 100.8 \text{ रुपये}$$

$$B \text{ और } D \text{ के शेयरों के बीच अंतर (रुपये में) = } 13 \times 100.8 = \text{Rs. } 1310.4$$

59. A

Sol.  $145 - (125 - \{64 \div 8 \text{ का } 4 - (4 \times 8 \div 2)\})$

बोडमास का उपयोग करके:

$$\Rightarrow 145 - (125 - \{64 \div 8 \text{ of } 4 - 16\})$$

$$\Rightarrow 145 - (125 - \{64 \div 32 - 16\})$$

$$\Rightarrow 145 - (125 - \{2 - 16\})$$

$$\Rightarrow 145 - (125 - \{-14\})$$

$$\Rightarrow 145 - (139)$$

$$\Rightarrow 6$$

60. A

Sol. एक राशि को साधारण ब्याज पर  $x\%$  प्रतिवर्ष की दर से 2 वर्षों के लिए निवेश किया गया था। यदि इसे उसी समय  $(x + 4)\%$  पर निवेश किया गया होता, तो इससे 1,800 रुपये अधिक मिलते।

मान लीजिए योग = P रुपये

$$\Rightarrow \frac{P \times (x+4) \times 2}{100} - \frac{P \times (x) \times 2}{100} = 1800$$

$$\Rightarrow \frac{P \times (x)}{50} + \frac{4P}{50} - \frac{P \times (x)}{50} = 1800$$

$$\Rightarrow \frac{4P}{50} = 1800$$

$$\Rightarrow P = 1800 \times \frac{50}{4} = Rs. 22500$$

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

$$\text{साधारण ब्याज} = \frac{22500 \times 8 \times \frac{17}{3}}{100} = 10200 \text{ ₹}$$

61. D

Sol. 240 मीटर लंबी एक ट्रेन 16 सेकंड में एक पोल को पार करती है।

$$\text{ट्रेन की गति} = \frac{240}{16} = 15 \text{ m/sec}$$

माना प्लेटफॉर्म की लंबाई (मीटर में) = L मीटर

दरेन 42 सेकंड में प्लेटफॉर्म को पार करती है।

$$\Rightarrow \frac{L+240}{42} = 15$$

$$\Rightarrow L = 630 - 240 = 390 \text{ मीटर}$$

अतः प्लेटफॉर्म की लंबाई (मीटर में) = 390 मीटर

62. C

Sol. मान लीजिए कि  $x$ , 4 अंकों की सबसे छोटी संख्या है जिसे 5, 6 और 7 से विभाजित करने पर क्रमशः 2, 3 और 4 शेष बचता है।

$$\text{स्पष्ट रूप से, } (5 - 2) = (6 - 3) = (7 - 4) = 3$$

$$\text{तो, } x = \text{LCM}(5, 6, 7)k + 3 = 210k - 3$$

अब,  $k$  का मान इस प्रकार चुनें कि  $(210k+3)$  न्यूनतम 4-अंकीय मान संख्या ले सके।

निरीक्षण द्वारा  $k = 5$  रखें,

$$\text{अतः, } x = 210 \times 5 - 3 = 1047$$

$$1047 \text{ के अंकों का योग} = 1 + 0 + 4 + 7 = 12$$

63. D

Sol.

अंक	छात्रों की संख्या (आवृत्ति)	संचयी आवृत्ति
0-10	3	3
10-20	18	21
20-30	5	26
30-40	7	33
40-50	16	49

मॉडल वर्ग सबसे अधिक बारंबारता वाला वर्ग है।

कक्षा 10-20 की बारंबारता उच्चतम अर्थात् 18 है।

$$\text{अतः, बहुलक वर्ग} = 10 - 20$$

$$\text{बहुलक वर्ग की ऊपरी सीमा} = 20$$

$$\Rightarrow y = 20$$

अब, हम माध्यिका वर्ग ज्ञात करेंगे।

पहले आवृत्ति की कुल संख्या जोड़ें।

$$\sum f_i = 3 + 18 + 5 + 7 + 16 = 49$$

$$\Rightarrow \frac{\sum f_i}{2} = \frac{49}{2} = 24.5$$

मान 24.5 वर्ग अंतराल 20-30 में है।

अतः माध्यिका वर्ग = 20 - 30

माध्यिका वर्ग की निचली सीमा = 20

$$\Rightarrow x = 20$$

$$\text{अब, } 3x + 2y = 3(20) + 2(20) = 60 + 40 = 100$$

64. D

Sol. एक धात्तिक ठोस गोले की तिरज्या 21.6 सेमी है।

इसे पिघलाया जाता है और एक समान अनुप्रस्थ काट के तार में परिवर्तित कर दिया जाता है।

तार की लंबाई = 259.2 मीटर = 25920 सेमी

तार बेलन के रूप में होंगे।

अब, धात्तिक ठोस गोले का आयतन = तार का आयतन

$$\Rightarrow \frac{4}{3}\pi(21.6)^3 = \pi(r)^2(25920)$$

$$\Rightarrow \frac{4}{3}(21.6)^3 = (r)^2(25920)$$

$$\Rightarrow r^2 = \frac{4}{3} \times (21.6)^3 \times \frac{1}{25920} = 0.51840$$

$$\Rightarrow r = \sqrt{0.51840} = 0.72 \text{ cm}$$

तार की तिरज्या = 0.72 सेमी

65. C

Sol. एक वस्तु का अंकित मूल्य 4,450 रुपये है।

$$\text{छूट} = 10\%$$

$$\text{वस्तु का विक्रय मूल्य} = 4450 \times \frac{90}{100} = \text{Rs.} 4005$$

$$\text{लाभ} = 20\%$$

$$\text{वस्तु का क्रय मूल्य} = 4005 \times \frac{100}{120} = \text{Rs.} 3337.5$$

66. C

Sol. 3,364 रुपये की राशि को दो भागों में इस प्रकार विभाजित किया जाता है कि क्रमशः 3 वर्ष और 5 वर्षों के बाद उन पर प्राप्त राशि समान होती है, जब ब्याज की दर 5% प्रतिवर्ष होती है, जो वार्षिक रूप से संयोजित होती है।

$$\text{माना योग का पहला भाग} = x \text{ रुपये}$$

$$\text{योग का दूसरा भाग} = (3364 - x) \text{ रुपये}$$

$$\text{प्रयुक्त सूत्र: राशि} = P \left(1 + \frac{\text{Rate}}{100}\right)^{\text{time}}$$

प्रश्न के अनुसार:

$$\Rightarrow x \left(1 + \frac{5}{100}\right)^3 = (3364 - x) \left(1 + \frac{5}{100}\right)^5$$

$$\Rightarrow x = (3364 - x) \left(\frac{105}{100}\right)^2$$

$$\Rightarrow x = (3364 - x) \left(\frac{21}{20}\right)^2$$

$$\Rightarrow x = \left(3364 \times \frac{441}{400} - \frac{441}{400}x\right)$$

$$\Rightarrow \frac{841}{400}x = 3364 \times \frac{441}{400}$$

$$\Rightarrow x = 1764$$

$$\text{योग का पहला भाग} = 1764 \text{ रुपये}$$

$$\text{योग का दूसरा भाग} = (3364 - 1764) = 1600 \text{ रुपये}$$

दोनों भागों में अंतर = 1764 रुपये – 1600 रुपये = 164 रुपये

67. C

Sol. वस्तु का विक्रय मूल्य = 1188 रुपये

लाभ =  $x\%$

$$\text{वस्तु का क्रय मूल्य} = 1188 \times \frac{100}{(100+x)}$$

वस्तु का विक्रय मूल्य = 1435.50 रुपये

लाभ =  $(x+25)\%$

$$\text{वस्तु का क्रय मूल्य} = 1435.50 \times \frac{100}{(125+x)}$$

प्रश्न के अनुसार:

$$\Rightarrow 1188 \times \frac{100}{(100+x)} = 1435.50 \times \frac{100}{(125+x)}$$

$$\Rightarrow 1188 \times (125 + x) = 1435.50 \times (100 + x)$$

$$\Rightarrow 148500 + 1188x = 143550 + 1435.50x$$

$$\Rightarrow 247.5x = 4950$$

$$\Rightarrow x = \frac{4950}{247.5} = 20$$

68. C

Sol. दो संख्याओं A और B का अनुपात 5:6 है।

माना पहली संख्या =  $5x$

दूसरी संख्या =  $6x$

यदि उनमें से प्रत्येक में से 8 घटा दिया जाए तो अनुपात 4:5 हो जाता है।

$$\Rightarrow \frac{5x-8}{6x-8} = \frac{4}{5}$$

$$\Rightarrow 25x - 40 = 24x - 32$$

$$\Rightarrow x = 8$$

$$A \text{ और } B \text{ का योग} = 5x + 6x = 11x = 88$$

69. C

Sol. कपिल धारा के विपरीत  $\frac{1}{2}$  किमी की दूरी 15 मिनट में और उत्तरी ही दूरी धारा के अनुदिश 8 मिनट में तय (नौकायन) करता है।

शांत जल में नौका चलाने की गति =  $x$  किमी/घंटा

धारा की गति =  $y$  किमी/घंटा

$$\text{उर्ध्वप्रवाह के दौरान नौका की गति} = x - y = \frac{5}{\frac{2 \times 15}{60}} = 10 \text{ km/hr} \quad \dots\dots(1)$$

$$\text{अनुप्रवाह के दौरान नौका की गति} = x + y = \frac{5}{\frac{2 \times 8}{60}} = 18.75 \text{ km/hr} \quad \dots\dots(2)$$

(1) को (2) से घटाने पर,

$$\Rightarrow 2y = 8.75$$

$$\Rightarrow y = 4.375 = \frac{4375}{1000} = \frac{875}{200} = \frac{175}{40} = \frac{35}{8}$$

धारा की गति =  $\frac{35}{8}$  किमी/घंटा

70. A

Sol. वस्तु का विक्रय मूल्य = 882 रुपये

हानि = 10%

$$\text{वस्तु का क्रय मूल्य} = 882 \times \frac{100}{90} = \text{Rs. } 980$$

यदि वह इसे 991.76 रुपये में बेचता है तो,

$$\text{लाभ \%} = \frac{991.76 - 980}{980} \times 100 = \frac{1176}{980} = 1.2\%$$

71. D

Sol. माना सुरेखा की कुल आय = 100 इकाई

सुरेखा अपनी आय का 24% किराने की वस्तुओं पर और अपनी आय का 16% किराए पर खर्च करती है।

$$\text{किराना सामान और किराए पर खर्च} = \frac{24}{100} \times 100 + \frac{16}{100} \times 100 = 40 \text{ unit}$$

$$\text{शेष आय} = 100 \text{ इकाई} - 40 \text{ इकाई} = 60 \text{ इकाई}$$

वह बची हुई आय का 55% बाल शिक्षा और अन्य खर्चों पर खर्च करती है।

$$\text{बाल शिक्षा और अन्य खर्च पर खर्च} = \frac{55}{100} \times 60 = 33 \text{ unit}$$

$$\text{कुल खर्च} = 40 + 33 = 73 \text{ इकाई}$$

$$\text{सुरेखा की बचत} = 100 \text{ इकाई} - 73 \text{ इकाई} = 27 \text{ इकाई}$$

प्रश्न के अनुसार:

$$\Rightarrow 27 \text{ इकाई} = 5940 \text{ रुपये}$$

$$\Rightarrow 1 \text{ इकाई} = 220$$

$$\Rightarrow 16 \text{ इकाई} = 3520 \text{ रुपये}$$

$$\text{अतः किराए पर व्यय} = 3520 \text{ रुपये}$$

72. C

$$\text{Sol. } \frac{\frac{1}{4} + \frac{3}{4} \left( \frac{2}{5} - \frac{1}{3} \right)}{\frac{2}{3} of \frac{3}{4} - \frac{1}{4} of \frac{2}{3}}$$

बोडमास का उपयोग करने पर:

$$\Rightarrow \frac{\frac{1}{4} + \frac{3}{4} \left( \frac{1}{15} \right)}{\frac{5}{3} of \frac{3}{4} - \frac{1}{6}} = \frac{\frac{1}{4} \times \frac{1}{15}}{\frac{5}{4} - \frac{1}{6}} = \frac{\frac{1}{45}}{\frac{24}{20}} = \frac{24}{45 \times 24} = \frac{4}{195}$$

73. C

$$\text{Sol. } \frac{5}{16} + \frac{3}{5} \times 1\frac{7}{8} \div \frac{2}{3} - 6\frac{1}{8} \div \left( 5\frac{1}{4} \div \frac{3}{7} of \frac{1}{2} \right) of \frac{6}{7}$$

बोडमास का उपयोग करने पर:

$$\Rightarrow \frac{5}{16} + \frac{3}{5} \times \frac{15}{8} \div \frac{2}{3} - \frac{49}{8} \div \left( \frac{21}{4} \div \frac{3}{14} \right) of \frac{6}{7}$$

$$\Rightarrow \frac{5}{16} + \frac{3}{5} \times \frac{15}{8} \div \frac{2}{3} - \frac{49}{8} \div \left( \frac{49}{2} \right) of \frac{6}{7}$$

$$\Rightarrow \frac{5}{16} + \frac{3}{5} \times \frac{15}{8} \div \frac{2}{3} - \frac{49}{8} \div 21$$

$$\Rightarrow \frac{5}{16} + \frac{3}{5} \times \frac{45}{16} - \frac{7}{24}$$

$$\Rightarrow \frac{5}{16} + \frac{27}{16} - \frac{7}{24} = \frac{32}{16} - \frac{7}{24} = 2 - \frac{7}{24} = \frac{41}{24}$$

74. A

Sol. एक कक्षा में लड़के और लड़कियों की संख्या का अनुपात 5:7 है।

माना लड़कों की संख्या =  $5x$ लड़कियों की संख्या =  $7x$ 

लड़कों का औसत वजन 56 किलो है।

लड़कों के वजन का योग =  $56 \times 5x = 280x$  किग्रा

लड़कियों का औसत वजन 50 किलो होता है।

लड़कियों के वजन का योग =  $50 \times 7x = 350x$  किग्रा

कक्षा में सभी लड़कों और लड़कियों का औसत वजन (किलो में) =

$$\frac{280x + 350x}{12x} = \frac{630x}{12x} = 52.5$$

75. D

Sol. 12 संख्याओं का औसत 25.5 है।

12 संख्याओं का योग =  $12 \times 25.5 = 306$ 

पहली छह संख्याओं का औसत 22.4 है और अंतिम तीन संख्याओं का औसत 28.2 है।

पहली 6 संख्याओं का योग =  $6 \times 22.4 = 134.4$ अंतिम 3 संख्याओं का योग =  $3 \times 28.2 = 84.6$ पहली छह और अंतिम तीन संख्याओं का योग =  $134.4 + 84.6 = 219$ अब, 7वीं, 8वीं और 9वीं संख्या का योग =  $306 - 219 = 87$

7वीं संख्या 8वीं संख्या से 5 कम है लेकिन 9वीं संख्या से 10 कम है।

माना 7वीं संख्या =  $x$

8वीं संख्या =  $x + 5$

9वीं संख्या =  $x + 10$

$$\Rightarrow x + x + 5 + x + 10 = 87$$

$$\Rightarrow 3x + 15 = 87$$

$$\Rightarrow x = 24$$

अब, 8वीं और 9वीं संख्याओं का औसत =  $\frac{x+5+x+10}{2} = \frac{63}{2} = 31.5$

76. B

Sol. • सारंगी आमतौर पर ऊर्ध्वाधर स्थिति में और धनुषाकार धनुष (झुका हुआ तार) के साथ बजाया जाता है।

- ऐसा कहा जाता है कि यह वाचिक अलंकरण का अनुकरण करने की कुशलता के माध्यम से मानव स्वर की ध्वनि से मिलता जुलता है।
- सितार एक तार वाला वाद्य यंत्र है और इसकी उत्पत्ति भारतीय उपमहाद्वीप से हुई है।
- इसका आविष्कार मध्यकालीन भारत में हुआ था और यह 16वीं व 17वीं शताब्दी में फला-फूला।
- शहनाई लकड़ी से बनी होती है जिसके एक सिरे पर डबल बेंत और दूसरे सिरे पर धातु या लकड़ी की फ्लेयर बेल होती है।
- वीणा शास्त्रीय कर्नाटक संगीत में एक महत्वपूर्ण और लोकप्रिय वाद्य यंत्र है।

77. B

Sol. • रुक्मिणी देवी अरुणेल भरतनाट्यम से संबंधित हैं।

- वह भारतीय इतिहास की पहली महिला थीं जिन्हें राज्यसभा के सदस्य के रूप में नामित किया गया था।
- भरतनाट्यम दक्षिण भारत का एक लोकप्रिय शास्त्रीय नृत्य है।
- कथकली दक्षिण भारतीय राज्य केरल का सबसे प्रसिद्ध नृत्य नाटक है।
- यह अपने बड़े, विस्तृत शरूंगार और वेशभूषा के लिए जाना जाता है।

- कुचिपुड़ी एक नृत्य-नाटक प्रदर्शन है जिसकी जड़ें नाट्य शास्त्र के प्राचीन हिंदू संस्कृत ग्रंथ में हैं।

78. D

Sol. • अजय भूषण पांडे को मार्च 2020 में वित्त सचिव के रूप में नियुक्त किया गया।

- वह भारतीय विशिष्ट पहचान प्राधिकरण के पूर्व मुख्य कार्यकारी अधिकारी भी हैं।
- वित्त सचिव वित्त मंत्रालय का प्रशासनिक प्रमुख होता है।
- वह वित्त मंत्रालय के अंतर्गत नीति और प्रशासन के सभी मामलों पर वित्तमंत्री के प्रमुख सलाहकार हैं।
- यह पद भारत सरकार के सचिव स्तर के एक वरिष्ठ आईएएस अधिकारी के पास होता है।

79. B

Sol. • 1979 में 'द्वितीय पिछड़ा वर्ग आयोग' की अध्यक्षता बीपी मंडल ने की।

- यह भारत में प्रधानमंत्री मोरारजी देसाई के तहत जनता पार्टी सरकार द्वारा स्थापित किया गया था।
- इसका उद्देश्य जातिगत भेदभाव के निवारण हेतु लोगों के लिए आरक्षण के प्रश्न पर विचार करना था।
- यह भारत के सामाजिक या शैक्षिक रूप से पिछड़े वर्गों की पहचान करने के लिए एक जनादेश के साथ था।
- बीआर अम्बेडकर पहले कानून और न्यायमंत्री थे।
- वह भारत के संविधान का मसौदा तैयार करने और पिछड़े वर्गों हेतु अपने कार्य के लिए प्रसिद्ध थे।

80. C

Sol. • शरथ कमल ने ITTF चैलेंजर प्लस ओमान ओपन 2020 जीता।

- वह नौ बार सीनियर नेशनल चैंपियन बनने वाले पहले भारतीय टेबल टेनिस खिलाड़ी हैं।
- उन्हें 2019 में भारत के चौथे सबसे बड़े नागरिक पुरस्कार पद्म श्री से सम्मानित किया गया था।
- ITTF का पूर्णरूप इंटरनेशनल टेबल टेनिस फेडरेशन है और इसकी स्थापना 1926 में विलियम हेनरी लॉज ने की थी।
- यह सभी राष्ट्रीय टेबल टेनिस संघों के लिए शासी निकाय है।
- यह कई अंतर्राष्ट्रीय प्रतियोगिताओं के आयोजन के लिए जिम्मेदार है।

81. A

Sol. • आघातवर्धनीयता लोहे का वह गुण है जिसके कारण गर्म लोहे के टुकड़े को पीटा जा सकता है।

- यह धातुओं का एक भौतिक गुण है जो बिना तोड़े पतली चादरों में हथौड़े से मारने, दबाने या लुढ़कने की उनकी क्षमता को परिभाषित करता है।
- लचीलापन धातु के एक टुकड़े की तरह कोमल और नम्ब्य होने का गुण है जिसे पतले तार में घुमाया जा सकता है।
- धन्यात्मकता एक गैर-द्विआधारी स्वरविज्ञान संबंधी विशेषता है जो धनियों को एक सापेक्ष पैमाने में वर्गीकृत करती है।
- लोहा पृथ्वी पर द्रव्यमान के हिसाब से सबसे आम तत्व है और यह एक धातु है जो पहली संक्रमण शूरूखला से संबंधित है।
- यह पृथ्वी की पपड़ी में चौथा सबसे आम तत्व है।

82. B

Sol. • उधम सिंह ने जलियांवाला बाग हत्याकांड के लिए जिम्मेदार ब्रिटिश अधिकारी माझकल और डायर की हत्या की थी।

- वह भारतीय स्वतंत्रता आंदोलन के एक प्रसिद्ध व्यक्ति हैं।
- जलियांवाला बाग हत्याकांड को अमृतसर नरसंहार के रूप में भी जाना जाता है और यह 13 अप्रैल 1919 को हुआ था।
- राम प्रसाद बिस्मिल एक स्वतंत्रता सेनानी थे जिन्होंने भारत के स्वतंत्रता संग्राम में सक्रिय भूमिका निभाई।
- भगत सिंह को औपनिवेशिक शासन के खिलाफ भारत के स्वतंत्रता संग्राम का राष्ट्रीय नायक माना जाता है।
- चंद्रशेखर आजाद भारतीय स्वतंत्रता आंदोलन के इतिहास में सबसे प्रमुख स्वतंत्रता सेनानियों में से एक थे।

83. C

Sol. • अवतल दर्पण का उपयोग वाहनों में हेडलाइट के रूप में किया जाता है।

- यह एक प्रकार का दर्पण होता है जो बीच में अंदर की ओर मुड़ा होता है।
- यह एक ऐसी वस्तु है जो प्रकाश को उसी कोण पर परावर्तित करती है जिस कोण से वह वस्तु से प्राप्त करती है।
- उत्तल दर्पण एक घुमावदार दर्पण है जहां परावर्तक सतह प्रकाश स्रोत की ओर उभरी होती है।
- इन्हें लोकप्रिय रूप से फिश आई मिरर या डाइवर्जिंग मिरर के रूप में भी जाना जाता है।
- समतल दर्पण एक समतल परावर्तक सतह वाला दर्पण होता है और इसकी प्रकाशिक शक्ति शून्य होती है।

84. B

Sol. • कंचनजंगा बायोस्फीयर रिजर्व सिक्किम में स्थित है।

- इसे जुलाई 2016 में यूनेस्को की विश्व धरोहर स्थलों की सूची में अंकित किया गया था और यह भारत का पहला "मिश्रत विरासत" स्थल बन गया ।
- इसे यूनेस्को मैन एंड बायोस्फीयर प्रोग्राम में शामिल किया गया था ।
- यह देश का सबसे ऊंचा बायोस्फीयर रिजर्व है ।
- सिक्किम सबसे कम आबादी वाला और भारतीय राज्यों में दूसरा सबसे छोटा है ।
- यह भारत में इलायची उत्पादन का सबसे बड़ा हिस्सा है और यह विश्व का दूसरा सबसे बड़ा मसाला उत्पादक है ।

85. D

Sol. ● विक्टर ऐक्सल्सन ने ऑल इंग्लैंड ओपन बैडमिंटन चैंपियनशिप पुरुष एकल 2020 का खिताब जीता ।

- वह 2017 विश्व चैंपियन और 2020 ओलंपिक चैंपियन हैं ।
- चाउ टिएन-चेन 17 वर्षों में चीनी ताइपे ओपन का पुरुष एकल खिताब जीतने वाले पहले स्थानीय शटलर बने ।
- ली चोंग वेर्ड एकमात्र मलेशियाई शटलर हैं जिन्होंने एक वर्ष से अधिक समय तक नंबर एक रैंकिंग पर कब्जा किया है ।
- लिन डैन को व्यापक रूप से सर्वकालिक महान बैडमिंटन खिलाड़ी माना जाता है ।
- 2020 ऑल इंग्लैंड ओपन एक बैडमिंटन टूर्नामेंट था जो 11 से 15 मार्च 2020 तक इंग्लैंड के एरिना बर्मिंघम में हुआ था ।

86. C

Sol. ● मुगल प्रान्तीय प्रशासन में दीवानी का अर्थ राजस्व प्रशासन था ।

- दीवानी बंगाल में राजस्व एकत्र करने और दीवानी मामलों को प्रशासित करने की शक्ति थी ।
- यह ईस्ट इंडिया कंपनी को 1765 में शाह आलम II द्वारा प्रदान किया गया था ।
- मुगल साम्राज्य पंद्रह प्रांतों या सूबों में विभाजित था ।
- प्रांत के महत्वपूर्ण अधिकारी निम्न थे:

- a) सूबेदार
- b) दीवान
- c) बख्शी

d) वका-ए-नवीस

e) काजी

f) कोतवाल

87. B

Sol. • लोकसभा के अध्यक्ष संसद के दोनों सदनों की संयुक्त बैठक की अध्यक्षता करते हैं।

• वह लोकसभा का पीठासीन अधिकारी और सर्वोच्च प्राधिकारी होता है।

• वह आमतौर पर आम चुनावों के बाद लोकसभा की पहली बैठक में चुने जाते हैं।

• उन्हें भारत के संविधान के अनुसार सदन के प्रभावी बहुमत से पारित प्रस्ताव के जरिए लोकसभा द्वारा हटाया जा सकता है।

• भारत का उपराष्ट्रपति राज्यसभा का पदेन सभापति होता है।

• भारत की संसद भारत गणराज्य का सर्वोच्च विधायी निकाय है।

88. D

Sol. • विश्व बैंक द्वारा 2019-2020 में किए गए सर्वेक्षण के अनुसार 'नई फर्मों के निर्माण' की श्रेणी में भारत की वैश्विक रैंक तीसरे स्थान पर है।

• इस सर्वेक्षण में यह भी कहा गया है कि विनिर्माण, कृषि या बुनियादी ढांचे के विपरीत सेवा क्षेत्र की नई फर्मों का उदय हुआ है।

• यह देखा गया कि भारतीय जिलों और क्षेत्रों में नई फर्मों की उत्पत्ति बहुत ही विषम है।

• यह भी झंगित करता है कि जिले में स्थानीय शिक्षा का स्तर और भौतिक बुनियादी ढांचे की गुणवत्ता नई फर्म निर्माण को महत्वपूर्ण रूप से प्रभावित करती है।

• विश्व बैंक एक अंतर्राष्ट्रीय संगठन है जो विकासशील देशों को उनकी अर्थव्यवस्थाओं को आगे बढ़ाने में मदद करने के लिए वित्तपोषण, सलाह और अनुसंधान प्रदान करता है।

89. B

Sol. • विश्व के कुल भौगोलिक क्षेत्र का 2 प्रतिशत भारत के पास है (निकटतम पूर्ण संख्या में पूर्णांकित)।

• भारत सातवां सबसे बड़ा देश है जिसका कुल क्षेत्रफल 3,287,263 वर्ग किलोमीटर है।

• यह विश्व का दूसरा सबसे अधिक आबादी वाला देश है।

- यह विश्व में सबसे अधिक जातीय रूप से विविध देशों में से एक है और विश्व में सबसे अधिक आबादी वाला लोकतंत्र है।
- यह भूमध्य रेखा के उत्तर में  $8^{\circ}4'$  उत्तर से  $37^{\circ}6'$  उत्तरी अक्षांश और  $68^{\circ}7'$  पूर्व से  $97^{\circ}25'$  पूर्वी देशांतर के बीच स्थित है।
- इसे छह भौगोलिक क्षेत्रों में विभाजित किया जा सकता है:
  - a) उत्तरी पर्वत
  - b) प्रायद्वीपीय पठार
  - c) भारत-गंगा का मैदान
  - d) थार रेगिस्तान
  - e) तटवर्ती मैदान
  - f) द्वीप

90. B

Sol. ● जोड़ों के बीच मौजूद द्रव जो जोड़ों की गति को आसान बनाता है, वह श्लेष कहलाता है।

- श्लेष, द्रव आपके जोड़ों के बीच स्थित एक गाढ़ा तरल होता है और यह हड्डियों के सिरों को कुशन (गद्दी लगाता) करता है और घर्षण को कम करता है।
- बर्से हड्डी और आसपास के कोमल ऊतकों, हड्डियों और कण्डरा और मांसपेशियों के बीच स्थित एक महत्वपूर्ण चिकनाई युक्त द्रव से भरी पतली थैली है।
- उपास्थि एक गैर-संवहनी प्रकार का सहायक संयोजी ऊतक है जो पूरे शरीर में पाया जाता है।
- यह हड्डी की तरह कठोर नहीं है, लेकिन मांसपेशियों के ऊतकों की तुलना में सख्त और कम लचीला है।
- कण्डरा एक रस्सी के समान मजबूत, लचीले ऊतक का एक रज्जु है और यह आपकी मांसपेशियों को आपकी हड्डियों से जोड़ता है।

91. A

Sol. ● भारत सरकार ने 2005 में मौजूदा सामान्य बिक्री कर को बदलने के लिए भारतीय कराधान प्रणाली में एक अप्रत्यक्ष कर के रूप में मूल्य वर्धित कर (वैट) की शुरुआत की।

- मूल्य वर्धित कर एक प्रकार का कर है जिसका मूल्यांकन वृद्धिशील रूप से किया जाता है और यह एक अप्रत्यक्ष कर है।
- इसे सामान्यतः कुल लागत के प्रतिशत के रूप में व्यक्त किया जाता है।

- यह अंतिम उपभोक्ता को उत्पादन, वितरण या बिक्री के प्रत्येक चरण में किसी उत्पाद या सेवा की कीमत पर लगाया जाता है।
- जर्मनी और फ्रांस मूल्य वर्धित कर लागू करने वाले पहले देश थे।
- यह केवल उन सेवाओं और सामानों के शीर्ष पर एक व्यवसाय द्वारा जोड़े गए मूल्य पर कर लगाने के लिए डिज़ाइन किया गया है जिसे वह बाजार से खरीद सकता है।

92. D

Sol. • पर्यूषण पर्व श्वेतांबर समुदाय द्वारा आठ दिनों तक मनाया जाने वाला एक जैन त्योहार है और दिगंबर समुदाय द्वारा दस दिनों तक दसलक्षण पर्व के रूप में मनाया जाता है।

- यह जैनियों के लिए सबसे महत्वपूर्ण वार्षिक पवित्र आयोजन है और आमतौर पर हिंदू कैलेंडर में अगस्त या सितंबर में मनाया जाता है।
- नवपद ओली जैन समुदाय द्वारा मनाया जाने वाला नौ दिनों का उपवास उत्सव है और यह वर्ष में दो बार होता है।
- कार्तिक पूर्णिमा को श्री गुरु नानक देव जी के गुरुपूरब या प्रकाश पर्व के रूप में मनाया जाता है।
- ज्ञान पंचमी कार्तिक मास की 5वीं तिथि को मनाई जाती है और इसे सौभाग्य पंचमी या लाभ पंचमी के नाम से भी जाना जाता है।
- यह जैनियों द्वारा अपने शास्त्रों के महत्व को पहचानने के लिए मनाया जाता है।

93. C

Sol. • पद्म श्री 2020 प्राप्तकर्ताओं में से एक सरिता जोशी को कला के क्षेत्र में एक पुरस्कार मिला।

- वह गुजराती थिएटर और मराठी थिएटर व मराठी सिनेमा की एक अनुभवी अभिनेत्री हैं।
- पद्म श्री भारत गणराज्य का चौथा सर्वोच्च नागरिक पुरस्कार है।
- यह भारत के गणतंत्र दिवस पर प्रत्येक वर्ष भारत सरकार द्वारा प्रदान किया जाता है।
- इसे 1954 में स्थापित किया गया था और यह पुरस्कार पहली बार 1954 में 17 प्राप्तकर्ताओं को प्रदान किया गया था।
- यह पुरस्कार विशिष्ट कार्यों को मान्यता देने का प्रयास करता है और सभी क्षेत्रों में विशिष्ट और असाधारण उपलब्धियों के लिए दिया जाता है।

94. A

Sol. • 2,00,000 रुपये वह न्यूनतम राशि है, जिसे रीयल टाइम ग्रॉस सेटलमेंट के माध्यम से प्रेषित किया जा सकता है।

- RTGS फंड ट्रांसफर का एक इलेक्ट्रॉनिक रूप है और इसे वर्ष 2004 में पेश किया गया था।

- यह एक फंड ट्रांसफर विधि है जिसके माध्यम से बिना किसी देरी के तुरंत पैसा भेजा जाता है।
- यह नकदी प्रवाह की पूर्वानुमेयता की सुविधा देता है क्योंकि ग्राहकों को पता होता है कि उनके खाते कब डेबिट या क्रेडिट किए जाएंगे।
- यह व्यवस्थित निपटान जोखिम को समाप्त करता है जो बड़े मूल्य के लेनदेन हेतु दिन के अंत में शुद्ध निपटान के लिए उत्पन्न हो सकता है।
- कट-ऑफ के कारण रात 11:30 बजे से 00:30 बजे के बीच को छोड़कर इसका लेनदेन 24/7 के आधार पर पूरा किया जा सकता है।

95. B

Sol. ● भारत के संविधान के अनुच्छेद 80 के अनुसार राज्यसभा के सदस्यों की कुल संख्या 250 से अधिक नहीं हो सकती है।

- राज्यसभा भारत की द्विसदनीय संसद का ऊपरी सदन है।
- इसकी पहली बैठक 13 मई 1952 को हुई थी और यह एक स्थायी निकाय है विघटन के अधीन नहीं है।
- इसमें भारत की सभी 22 अनुसूचित भाषाओं में एक साथ व्याख्या की सुविधा है।
- वर्तमान राज्यसभा में 245 सदस्य हैं, जिनमें से 233 राज्यों के विधानमंडलों द्वारा चुने जाते हैं और 12 राष्ट्रपति द्वारा मनोनीत होते हैं।
- भारत का उपराष्ट्रपति राज्यसभा का पदेन सभापति होता है।

96. A

Sol. ● मुस्तफा अल-कादिमी ने मई 2020 में इराक के नए प्रधानमंत्री के रूप में पदभार ग्रहण किया।

- आदिल अब्दुल महदी ने अक्टूबर 2018 से मई 2020 तक इराक के प्रधानमंत्री के रूप में कार्य किया।
- इराक पश्चिमी एशिया का एक देश है और यह एक संघीय संसदीय गणतंत्र है।
- यह अरब विश्व के सबसे पूर्वी देशों में से एक है और इसकी कुल आबादी लगभग 30.4 मिलियन है।
- इसे एक रणनीतिक स्थान के साथ एक उभरती हुई मध्य शक्ति माना जाता है।
- यह विश्व के सबसे पुराने सांस्कृतिक इतिहास में से एक है और एक समृद्ध विरासत समेटे हुए है।

97. A

Sol. ● यकृत ग्लूकोज को ग्लाइकोजन (भंडारण के लिए प्रयुक्त एक जटिल कार्बोहाइड्रेट) और अमीनो एसिड को प्रोटीन में परिवर्तित करता है।

- यह एक बड़ा, मांसल अंग है जो पेट के दाहिनी ओर बैठता है और यह लाल-भूरे रंग का होता है और स्पर्श करने पर रबड़ जैसा लगता है।

- यह आपके शरीर के अंदर सबसे बड़ा अंग है और शरीर को भोजन पचाने, ऊर्जा जमा करने व विषाक्त निकालने में मदद करता है।
- फेफड़े स्पंजी, हवा से भरे अंगों की एक युग्म है जो छाती के दोनों ओर स्थित होते हैं।
- छोटी आंत जठरांतर संबंधी मार्ग का अंग है जहां भोजन से पोषक तत्वों का अधिकांश अवशोषण होता है।
- बड़ी आंत भोजन के अपचनीय अवशोषों से जल के अवशोषण के लिए सबसे अधिक जिम्मेदार पाचन तंत्र का हिस्सा है।

98. C

Sol. • मौर्य वंश का अंतिम राजा बृहदरथ था।

- उसने 187 से 184 ईसा पूर्व तक शासन किया और उसके सेनापति पुष्यमित्र शुंग ने उसकी हत्या कर दी।
- मौर्य साम्राज्य का गठन 321 ईसा पूर्व के आसपास हुआ और 185 ईसा पूर्व में समाप्त हुआ।
- यह पहला अखिल भारतीय साम्राज्य था जिसने अधिकांश भारतीय क्षेत्र को कवर किया।
- अशोक के बाद संप्रति एकमात्र महान मौर्य सम्राट थे और जैन धर्म के महान संरक्षक थे।
- चंद्रगुप्त मौर्य प्राचीन भारत में मौर्य साम्राज्य के संस्थापक थे।

99. A

Sol. • नहरकटिया तेल क्षेत्र असम में स्थित है।

- यह बूरही दिहिंग नदी (Burhi Dihing River) के तट पर स्थित है।
- तेल की खोज 1953 में हुई और उत्पादन 1954 में शुरू हुआ।
- तेल क्षेत्र भूमि का एक क्षेत्र है जहां से कच्चे तेल और प्राकृतिक गैस का उत्पादन होता है।
- असम देश का सबसे पुराना तेल उत्पादक राज्य है और एशिया में तेल डिरलिंग का पहला स्थल है।
- यह हमेशा प्रत्येक वर्ष बड़ी संख्या में पर्यटकों को आकर्षित करने के लिए जाना जाता है।

100. D

Sol. • आईरिस, कॉर्निया के पीछे ऊतक का रंगीन वलय है, जो पुतली के आकार को समायोजित करके आंख में प्रवेश करने वाले प्रकाश की मात्रा को नियंत्रित करता है।

- यह लैंस और सिलिअरी बॉडी के सामने और कॉर्निया के पीछे स्थित होता है।
- फोविया आंख की शारीरिक रचना का एक छोटा सा भाग है जो हमारी दृष्टि में बहुत बड़ा अंतर डालता है।

- रेटिना आपकी आंख के पिछले हिस्से में ऊतक की एक परत होती है जो प्रकाश को महसूस करती है और आपके मस्तिष्क को छवियां भेजती है।
- यह पढ़ने, ड्राइविंग और बारीक विवरण देखने के लिए आवश्यक तेज केंद्रीय दृष्टि प्रदान करता है।
- कोरॉइड आंख की एक संवहनी और संयोजी ऊतक परत है जो श्वेतपटल और रेटिना के बीच पाई जाती है।