

Prepp

Your Personal Exams Guide



NDA



CDS



SSC CGL



CBSE UGC NET



IAS



SSC CHSL



CTET



MPSC



AFCAT



CSIR UDC NET



IBPS PO



UP POLICE



SSC MTS



SBI PO



BPS



UP TET



IBPS RRB



IBPS CLERK



IES



UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

SSC MTS Previous Year Paper (Held on: 8 Oct 2021 Shift 3)

Total Time: 1 Hour : 30 Minute

Total Marks: 100

Instructions

Sl No.	Section Name	No. of Question	Maximum Marks	Negative Marks	Positive Marks
1	General English	25	25	0.25	1
2	General Intelligence & Reasoning	25	25	0.25	1
3	Numerical Aptitude	25	25	0.25	1
4	General Awareness	25	25	0.25	1

- 1.) A total of 90 minutes is allotted for the examination.
- 2.) The server will set your clock for you. In the top right corner of your screen, a countdown timer will display the remaining time for you to complete the exam. Once the timer reaches zero, the examination will end automatically. The paper need not be submitted when your timer reaches zero.
- 3.) There will, however, be sectional timing for this exam. You will have to complete each section within the specified time limit. Before moving on to the next section, you must complete the current one within the time limits.

General English

1. Select the most appropriate synonym of the given word. (+1, -0.25)

APPEASE

- a. worsen
- b. excite
- c. irritate
- d. pacify

2. Select the most appropriate word to fill in the blank. (+1, -0.25)

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

- a. was
- b. are
- c. were
- d. is

3. Identify the segment in the sentence which contains a grammatical error. (+1, -0.25)

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

- a. India has
- b. always believe in
- c. the family system

d. the value of

4. Select the most appropriate one-word substitution for the given group of words. (+1, -0.25)

A plan of stating what is to be done and when

- a. Schedule
 - b. Occupation
 - c. Meeting
 - d. Scheme
-

5. Select the most appropriate one-word substitution for the given group of words. (+1, -0.25)

To fall apart as a result of decay

- a. Disintegrate
 - b. Dishevelled
 - c. Discontinue
 - d. Dislocate
-

6. Select the most appropriate meaning of the given idiom. (+1, -0.25)

Loosen the purse strings

- a. To increase the money available for expenditure
- b. To be miserly

- c. To reduce the expenditure
 - d. To lose a purse
-

7. Select the most appropriate word to fill in the blank. (+1, -0.25)

Everyone was amazed _____ the young child's courage.

- a. in
 - b. on
 - c. of
 - d. at
-

8. Select the most appropriate synonym of the given word. (+1, -0.25)

VACANT

- a. busy
 - b. used
 - c. full
 - d. bare
-

9. Select the most appropriate ANTONYM of the given word. (+1, -0.25)

APPROACH

- a. meet
- b. reach

- c. near
 - d. avoid
-

10. Select the most appropriate option to substitute the underlined segment in the given sentence. (+1, -0.25)

Ritu goes to Singapore for her holidays last December.

- a. had gone to Singapore
 - b. has gone to Singapore
 - c. was going to Singapore
 - d. went to Singapore
-

11. Identify the segment in the sentence which contains a grammatical error. (+1, -0.25)

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

- a. from the routine
 - b. break up
 - c. A vacation is
 - d. time to relax
-

12. Select the most appropriate word to fill in the blank. (+1, -0.25)

Pets are good _____ for lonely people.

- a. substitutes

- b. guides
 - c. nurses
 - d. companions
-

13. Select the most appropriate meaning of the given idiom. (+1, -0.25)

Change for the better

- a. An improvement in the situation
 - b. Pretend to be someone else
 - c. Exchange an old product for new
 - d. To keep loose change
-

14. Select the INCORRECTLY spelt word. (+1, -0.25)

- a. Patient
 - b. Intend
 - c. Allready
 - d. Disrupt
-

15. Select the most appropriate ANTONYM of the given word. (+1, -0.25)

TARDY

- a. late
- b. slow

- c. lazy
- d. early

16. Select the INCORRECTLY spelt word.

(+1, -0.25)

- a. Recognition
- b. Stagnation
- c. Defination
- d. Ammunition

17. 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'.

(+1, -0.25)

I am not use to eat spicy and oily food.

- a. used to eating
- b. No substitution required
- c. use to eating
- d. used to eat

18. 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.'

(+1, -0.25)

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

- a. into
 - b. for
 - c. No substitution required
 - d. from
-

19. Identify the segment in the sentence which contains a grammatical error. (+1, -0.25)

I know she is much superior from me in intelligence.

- a. superior from me
 - b. she is much
 - c. I know
 - d. in intelligence
-

20. Select the most appropriate word to fill in the blank. (+1, -0.25)

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

- a. attract
 - b. distract
 - c. disturb
 - d. absorb
-

21. In the following passage, some words have been deleted. Fill in the blanks (+1, -0.25) 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 tigers (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. species
- d. strains

22. In the following passage, some words have been deleted. Fill in the blanks (+1, -0.25) 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 tigers (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. 2.

- a. have
- b. having
- c. has
- d. had

23. In the following passage, some words have been deleted. Fill in the blanks (+1, -0.25) 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 tigers (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. 3.

- a. regularly
- b. readily
- c. deliberately
- d. gradually

24. In the following passage, some words have been deleted. Fill in the blanks (+1, -0.25) 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 tigers (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. 4.

- a. an
- b. only

c. a

d. the

25. In the following passage, some words have been deleted. Fill in the blanks (+1, -0.25) 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 tigers (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.

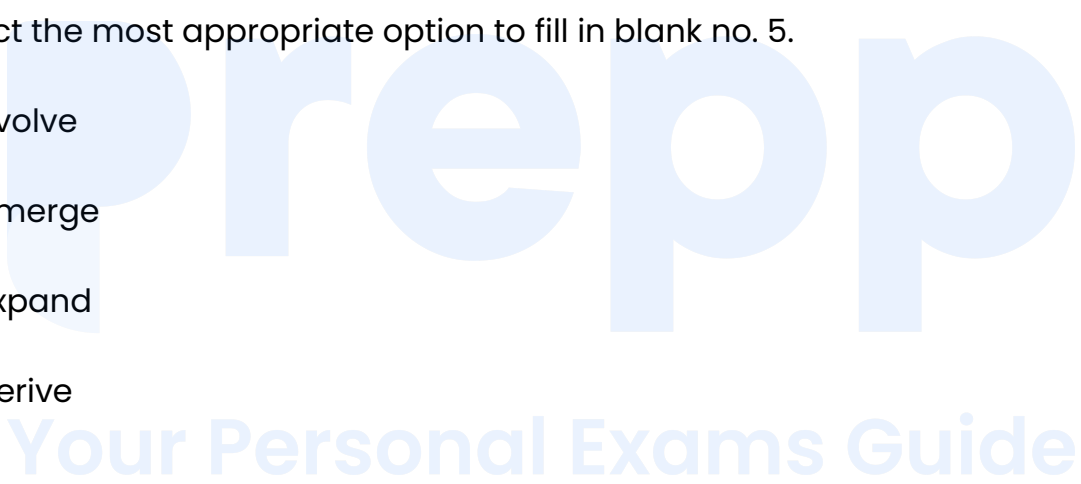
Select the most appropriate option to fill in blank no. 5.

a. evolve

b. emerge

c. expand

d. derive



General Intelligence & Reasoning

26. Which of the following letter-clusters will replace the question mark (?) in the given series? (+1, -0.25)

NYD, MXC, LWB, KVA, ?

- a. JUZ
- b. JUY
- c. JTZ
- d. LTZ

27. Select the option that is related to the third number in the same way as the second number is related to the first number. (+1, -0.25)

2 : 54 :: 4 : ?

- a. 250
- b. 270
- c. 201
- d. 225

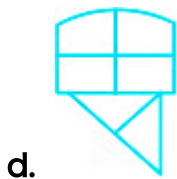
28. Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster. (+1, -0.25)

MONKEY : STRDJP :: TORQUE : ?

- a. WSQJZV

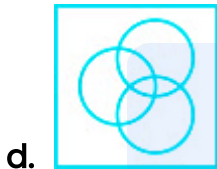
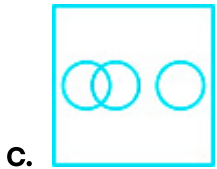
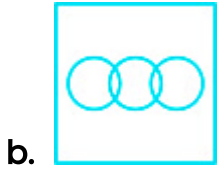
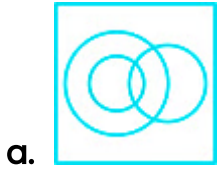
- b. WTYLBV
- c. WTYJMB
- d. WTYJZV

29. Select the option figure which is NOT embedded in the given figure as its part (rotation is NOT allowed). (+1, -0.25)



30. Select the Venn diagram that best illustrates the relationship among the following classes (+1, -0.25)

Engineers, Indians, Ladies



31. In a certain code language, 'TURNIP' is written as '239597', and 'QUEEN' is written as '83555'. How will 'LEMON' be written in that language? (+1, -0.25)

- a. 35465
- b. 20584
- c. 45658
- d. 45587

32. Select the correct mirror image of the given combination when the mirror is placed at MN as shown below. (+1, -0.25)

R G B 6 8 P
 M
 N

- a. R G B 6 8 P
- b. R G B 6 8 P
- c. R G B 6 8 P
- d. R G B 6 8 P

33. Two statements are given followed by two conclusions numbered I and II. (+1, -0.25)
 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. Only conclusion I follows
- b. Only conclusion II follows
- c. Neither conclusion I nor II follow

d. Both conclusions I and II follow

34. 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? (+1, -0.25)

a. G

b. E

c. F

d. H

35. Select the option that is related to the third word in the same way as the second word is related to the first word. (+1, -0.25)

Amphibian : Frog :: Reptile : ?

a. Lizard

b. Cockroach

c. Kangaroo

d. Mouse

36. Select the correct combination of mathematical signs to replace the * signs and balance the given equation. (+1, -0.25)

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

a. $\times, \div, +, -, =$

b. +, ×, −, ÷, =

c. ×, +, ÷, −, =

d. ÷, ×, −, +, =

37. In a certain code language, 'FACTOR' is written as 'JEGXSV'. How will 'MARINA' be written in that language? (+1, -0.25)

a. QEVMRE

b. QEHMSE

c. REUORE

d. PFVMRF

38. In a certain code language, 'FREEDOM' is written as '618222241213'. How will 'SUPINE' be written in that language? (+1, -0.25)

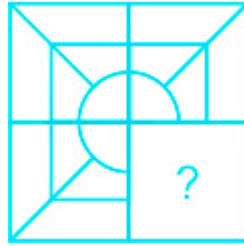
a. 19062191322

b. 19616181422

c. 19211191422

d. 18617181422

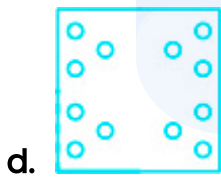
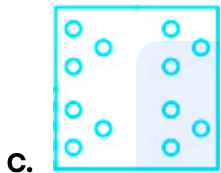
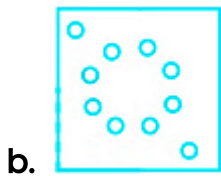
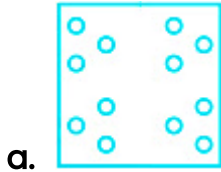
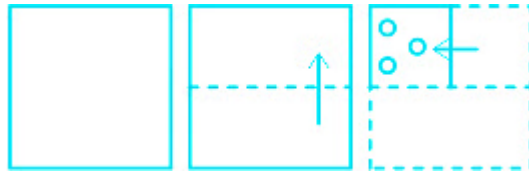
39. Select the option figure that will replace the question mark (?) in the figure given below to complete the pattern. (+1, -0.25)



40. In a certain code language, 'WRITE' is written as 'RWIET', and 'MONTHLY' is written as 'NOMTYLH'. How will 'AMSTERDAM' be written in that language? (+1, -0.25)

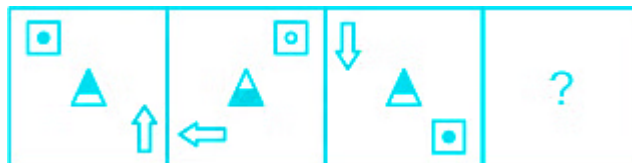
- a. TSMAEMADR
- b. STNAEMAER
- c. TSNAEFADR
- d. STMAEAMER

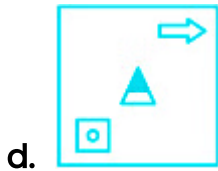
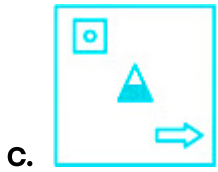
41. A paper is folded and cut as shown in the given figures. How will it appear when unfolded? (+1, -0.25)



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42. Select the figure that will replace the question mark(?) in the following figures series. (+1, -0.25)





43. If $H > M = D > P$ and $K = H > T > Z$, then which of the following options is NOT correct? (+1, -0.25)

- a. $P < M$
- b. $H > D$
- c. $Z < H$
- d. $Z > K$

44. 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. (+1, -0.25)

Statements:

Some rings are calendars.

All rings are caps.

Conclusions:

- I. All calendars are rings.
 - II. At least some calendars are caps.
- a. Only conclusion II follows
 - b. Both conclusions I and II follow
 - c. Neither conclusion I nor II follows
 - d. Only conclusion I follows

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. (+1, -0.25)

Bed : Sleep :: Chair : ?

- a. Jump
- b. Balance
- c. Wood
- d. Sit

46. Study the given pattern carefully and select the number that can replace the question mark (?) in it. (+1, -0.25)

15	12	90
16	13	104
12	18	?

- a. 119
 - b. 108
 - c. 100
 - d. 129
-

47. Which of the following numbers will replace the question mark (?) in the given series? (+1, -0.25)

40, 41, 50, 75, 124, ?

- a. 205
 - b. 257
 - c. 232
 - d. 264
-

48. Five friends are sitting around a circular table facing the center 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? (+1, -0.25)

- a. Vishal
 - b. Either Wasim or Vishal
 - c. Either Wasim or Sharad
 - d. Wasim
-

49. Which of the following numbers will replace the question mark (?) in the given series? (+1, -0.25)

5, 20, 65, 200, ?

- a. 605
- b. 1055
- c. 575
- d. 1005

50. Which two signs should be interchanged to make the given equation correct? (+1, -0.25)

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

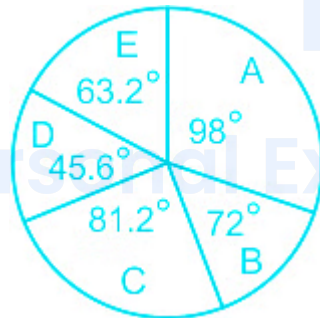
- a. + and ×
- b. ÷ and ×
- c. + and -
- d. × and -

Numerical Aptitude

51. 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: (+1, -0.25)
- a. 14
 - b. 12
 - c. 11
 - d. 9

52. Study the given pie chart and answer the question that follows: (+1, -0.25)

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

The average number of employees of the company in departments D and E is what percentage of the number of employees in department A (correct to one decimal place)?

- a. 54.4%
- b. 56.2%

- c. 55.8%
- d. 55.5%

53. 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? (+1, -0.25)

- a. 32.6
- b. 29.4
- c. 29.8
- d. 31.5

54. 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. The difference between the two parts is: (+1, -0.25)

- a. ₹164
- b. ₹180
- c. ₹160
- d. ₹166

55. 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. What the difference (in ₹) between the shares of B and D? (+1, -0.25)

- a. 1,209.60
- b. 1,310.40
- c. 806.40
- d. 1,612.80

56. Kapil rows $2\frac{1}{2}$ km against the current in 15 minutes and the same distance along the current in 8 minutes. What is the speed (in km/h) of the current? (+1, -0.25)

- a. 4
- b. $\frac{35}{8}$
- c. 5
- d. $\frac{9}{2}$

57. 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.? (+1, -0.25)

- a. ₹10,200
- b. ₹10,064
- c. ₹10,336
- d. ₹9,520

58. 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: (+1, -0.25)

- a. 0.9 cm
- b. 0.8 cm
- c. 0.72 cm
- d. 0.54 cm

59. Surekha spends 24% of her monthly income on groceries. 16% of it on rent and 55% of the remaining on children's education and others. If she saves ₹5,940 in a month, then how much (in ₹) does she spend on rent? (+1, -0.25)

- a. 3,960
- b. 3,520
- c. 3,740
- d. 3,300

60. 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? (+1, -0.25)

- a. 360
- b. 420
- c. 390
- d. 400

61. 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? (+1, -0.25)

- a. 54.1
- b. 53.2
- c. 52.5
- d. 51.8

62. A can do a piece of work in 8 days. The efficiency of B is half the efficiency of A, and the efficiency of C is 50% more than the efficiency of B. If all the three work together, what part of the work will they finish in 2 days? (+1, -0.25)

- a. $\frac{3}{8}$
- b. $\frac{3}{4}$
- c. $\frac{9}{32}$
- d. $\frac{9}{16}$

63. The value of $\frac{5}{16} + \frac{3}{5} \times 1\frac{7}{8} \div \frac{2}{3} - 6\frac{1}{8} \div (5\frac{1}{4} \div \frac{3}{7} \text{ of } \frac{1}{2}) \text{ of } \frac{6}{7}$ is: (+1, -0.25)

- a. $\frac{19}{6}$
- b. $\frac{17}{12}$
- c. $\frac{41}{24}$
- d. $\frac{31}{18}$

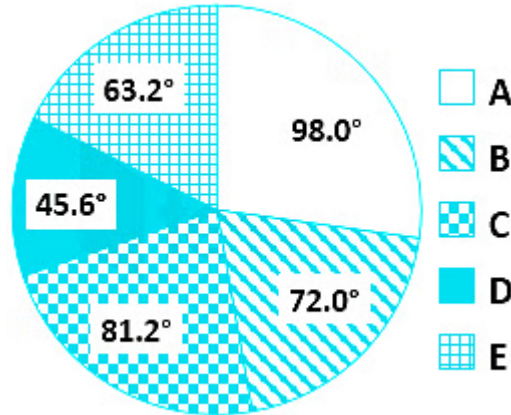
64. A rectangular plot is 420 m long and 84 m wide. It is surrounded by semi-circular flower beds along all its sides. The area of the entire plot (in hectares) is x . The value of x (correct to one decimal place) is (take $= \frac{22}{7}$): (+1, -0.25)
- a. 17.9
 - b. 18.7
 - c. 19.1
 - d. 19.4

65. The value of $145 - [125 - \{64 \div 8 \text{ of } 4 - (4 \times 8 \div 2)\}]$ is: (+1, -0.25)
- a. 6
 - b. 5
 - c. 8
 - d. 7

66. When an article is sold for ₹1,188, the percentage profit earned is $x\%$. (+1, -0.25)
When it is sold for ₹1,435.50, then the percentage profit is $(x + 25)\%$ What is the value of x ?
- a. 15
 - b. 10
 - c. 20
 - d. 18

67. Study the given pie chart and answer the question that follows: (+1, -0.25)

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 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. 40
- b. 42
- c. 31
- d. 45

68. The ratio of two numbers A and B is 5 : 6. If 8 is subtracted from each of them, then the ratio becomes 4 : 5. What is the sum of A and B? (+1, -0.25)

- a. 88
- b. 110

c. 121

d. 99

69. The value of $\frac{\frac{1}{4} \div \frac{3}{4} (\frac{2}{5} - \frac{1}{3})}{1\frac{2}{3} \text{ of } \frac{3}{4} - \frac{1}{4} \text{ of } \frac{2}{3}}$ is: (+1, -0.25)

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

b. $\frac{60}{13}$

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

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

70. Study the given data and answer the question that follows. (+1, -0.25)

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. 70

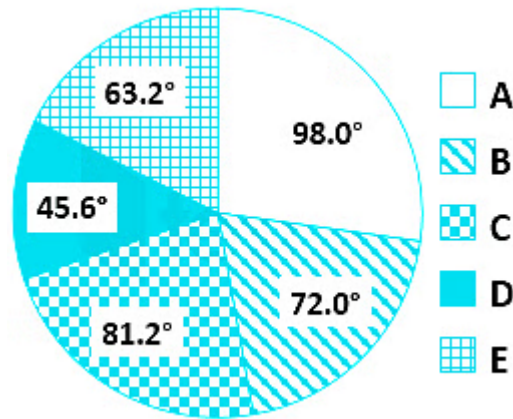
b. 90

c. 100

d. 80

71. Study the given pie chart and answer the question that follows: (+1, -0.25)

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:

- a. 176 and 180
- b. 172 and 176
- c. 164 and 168
- d. 168 and 172

72. If $(a + b) : (b + c) : (c + a) = 7 : 4 : 5$, and $a + b + c = 16$, then $(a^2 + b^2 + c^2) : (ab + bc + ca)$ is equal to: **(+1, -0.25)**

- a. 23 : 15
- b. 27 : 20
- c. 26 : 19
- d. 24 : 17

73. A and B can do a certain work in 25 days and 40 days, respectively. They work together for 8 days. C alone completes the remaining work in 24 days. A and C together will complete 60% of the same work in: (+1, -0.25)

- a. 9 days
- b. 12 days
- c. 10 days
- d. 8 days

74. 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: (+1, -0.25)

- a. 3,260.00
- b. 3,180.00
- c. 3,337.50
- d. 3,240.50

75. By selling an article for ₹882, a person loses 10%. If he sells it for ₹991.76, then the percentage loss/profit is: (+1, -0.25)

- a. profit, 1.2%
- b. loss, 5%
- c. profit, 12%
- d. loss, 1.5%

General Awareness

76. The 'Second Backward Classes Commission' in 1979 was headed by: (+1, -0.25)

- a. VK Sahni
 - b. Jai Prakash Narayan
 - c. BP Mandal
 - d. BR Ambedkar
-

77. Who assassinated Michael O'Dwyer, the British official responsible for the Jallianwala Bagh massacre? (+1, -0.25)

- a. Chandra Shekhar Azad
 - b. Udham Singh
 - c. Bhagat Singh
 - d. Ram Prasad Bismil
-

78. What percent of the total geographical area of the world does India account for (rounded off to nearest whole number)? (+1, -0.25)

- a. 2
 - b. 5
 - c. 4
 - d. 1
-

79. The property of iron which allows the manufacturing of a knife by beating a hot iron block is called: (+1, -0.25)

- a. lustrousness
 - b. sonority
 - c. malleability
 - d. ductility
-

80. In which state is Naharkatiya oil field situated? (+1, -0.25)

- a. Assam
 - b. Gujarat
 - c. Maharashtra
 - d. West Bengal
-

81. 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? (+1, -0.25)

- a. Retina
 - b. Iris
 - c. Fovea
 - d. Choroid
-

82. 'The fluid present between joints, that makes the movement of joints easy, is called:' (+1, -0.25)
- a. Tendon
 - b. Synovial
 - c. Cartilage
 - d. Bursae
-

83. Who among the following Indian Table Tennis players clinched the ITTF Challenger Plus Oman Open 2020? (+1, -0.25)
- a. Subhajit Saha
 - b. Sharath Kamal
 - c. Sanil Shetty
 - d. Anthony Amalraj
-

84. Who among the following assumed office as Iraq's new Prime Minister in May 2020? (+1, -0.25)
- a. Mohammed Allawi
 - b. Adel Abdul Mahdi
 - c. Mustafa al-Kadhimi
 - d. Adnan al-Zurfi
-

85. Who was the last king of the Mauryan dynasty? (+1, -0.25)

- a. Devavarman
 - b. Brihadratha
 - c. Samprati
 - d. Satadhanvan
-

86. As per a survey conducted in 2019-2020 by the World Bank, what is India's global rank in the category of 'New Firms Created'? (+1, -0.25)

- a. Third
 - b. Second
 - c. Sixth
 - d. First
-

87. What is the minimum amount which can be remitted through Real Time Gross Settlement (RTGS)? (+1, -0.25)

- a. ₹2,00,000
 - b. ₹5,00,000
 - c. ₹1,00,000
 - d. ₹3,00,000
-

88. Which of the following instruments is normally played in a vertical position and with an arched bow? (+1, -0.25)

- a. Shehnai
 - b. Veena
 - c. Sitar
 - d. Sarangi
-

89. Which of the following is the Jain festival, celebrated for eight days by the Svetambaras, and for ten days as Dasalaksanaparvan by the Digambaras? (+1, -0.25)

- a. Paryushana
 - b. Kartik Poornima
 - c. Navpad Oli
 - d. Jnan Panchami
-

90. In which state is Khangchendzonga Biosphere Reserve located? (+1, -0.25)

- a. Sikkim
 - b. Jharkhand
 - c. Himachal Pradesh
 - d. Kerala
-

91. As per Article 80 of the Constitution of India, the total number of members of the Rajya Sabha cannot be more than: **(+1, -0.25)**
- a. 235
 - b. 260
 - c. 240
 - d. 250
-

92. Who among the following won the All England Open Badminton Championship Men's Singles 2020 title? **(+1, -0.25)**
- a. Lin Dan
 - b. Lee Chong Wei
 - c. Chou Tien-chen
 - d. Viktor Axelsen
-

93. Who among the following presides over the joint sitting of the two Houses of Parliament? **(+1, -0.25)**
- a. Chairman of the Rajya Sabha
 - b. Deputy Chairman of the Rajya Sabha
 - c. Union Minister of Parliamentary Affairs
 - d. Speaker of the Lok Sabha
-

94. Who among the following was appointed as Finance Secretary in March 2020? **(+1, -0.25)**
- a. Amita Pandove
 - b. Satish Kumar Sharma
 - c. Bimal Julka
 - d. Ajay Bhushan Pandey
-

95. Which of the following mirror is used in vehicles as a headlight? **(+1, -0.25)**
- a. Convex mirror
 - b. Double Convex mirror
 - c. Plane mirror
 - d. Concave mirror
-

96. In the Mughal provincial administration, broadly speaking, Diwani meant: **(+1, -0.25)**
- a. criminal jurisprudence and jail administration
 - b. revenue administration
 - c. administration of law and order and criminal justice
 - d. criminal justice system
-

97. Rukmini Devi Arundale is associated with which of the following dance forms? **(+1, -0.25)**
-

- a. Bharatnatyam
 - b. Kathakali
 - c. Kathak
 - d. Kuchipudi
-

98. In which year did the Government of India introduce value-added tax (VAT) as an indirect tax in the Indian taxation system to replace the existing general sales tax? (+1, -0.25)

- a. 2007
 - b. 2005
 - c. 2013
 - d. 2011
-

99. Sarita Joshi, one of the recipients of Padma Shri 2020, has received the award in the domain of: (+1, -0.25)

- a. Literature and Education
 - b. Public Affairs
 - c. Trade & Industry
 - d. Art
-

100. Which of the following converts glucose into glycogen (a complex carbohydrate used for storage) and amino acids into proteins? (+1, -0.25)

- a. Small intestine
- b. Large intestine
- c. Lungs
- d. Liver

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Answers

1. Answer: d

Explanation:

The correct answer is 'pacify.'

★ Key Points

- 'Appease' means **pacify or placate (someone) by acceding to their demands.**
- Now let's understand the meaning of the given options:
 - 'Worsen' means **to become worse or make something worse.**
 - 'Excite' means **to make someone have strong feelings of happiness and enthusiasm.**
 - 'Irritate' means **to make someone angry or annoyed.**
 - 'Pacify' means **to make someone calm or satisfied.**
- When we try to match the meanings stated above, it is clarified that the word **pacify is the synonym of the word appease.**
- Hence, the correct answer is **Option 4.**

★ Additional Information

- Let's understand the words by using them in sentences.
 - An unfriendly environment in the hospital only **worsens** the situation.
 - I was **excited** about the trip that was sponsored by the company.
 - After a few days, he starts **irritating** his fellow employees.
 - It is always difficult for me to **pacify** my rigid friend.

2. Answer: a

Explanation:

The correct answer is 'was.'

★ Key Points

- When we read the sentence, we get to know some of the following information:
- The given sentence **is in the past tense**.
- In the sentence, **the main subject is 'the captain.'**
- We normally **use the helping verb on the basis of the main subject**.
- Hence, the correct answer is **Option 1**.

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

★ Additional Information

- Let's understand the concept with the help of some more examples:
 - **My manager**, with the rest of my team, **has** been awarded. (Main verb 'My manager')
 - **My friend**, as well as her entire family, **is** moving to Delhi. (Main verb 'My friend')

3. **Answer: b**

Explanation:

The correct answer is '**always believe in.**'

★ Key Points

- When we read the sentence, we get to know the following things:
- The sentence is in **the present perfect tense**.
- In the present perfect tense, we normally use "**has/have + verb 3rd form.**"
- The third form of the word '**believe**' is '**believed**' .
- Hence, the correct answer is **Option 2**.

So, the sentence would be – *India **has always believed** in the value of the family system.*

★ Additional Information

- Let's understand the concept with some more examples:
 - The employees of our company **have adjusted** themselves according to the situation.
 - A student **has understood** the importance of online education during the pandemic.
-

4. Answer: a

Explanation:

The correct answer is '**Schedule**.'

★ Key Points

- Let's understand the meaning of the given words.
- '**Schedule**' means **a list of planned activities to be done showing the times or dates when they are intended to be done.**
- '**Occupation**' means **a person's job and a regular activity or hobby.**
- '**Meeting**' means **a planned occasion when people come together to discuss something.**
- '**Scheme**' means **an officially organized plan or system.**
- When we observe the meaning of the given words, we get to know that the word '**Schedule**' serves the same meaning.
- Hence, the correct answer is **Option 1.**

★ Additional Information

- Let's understand the words with some more examples.
 - She has to follow her **schedule** in order to finish her task on time.
 - My friend has opted for the **occupation** that serves humanity.
 - We are not allowed to postpone the **meeting** without any relevant reason.
 - The government has launched a profitable **scheme** for the people who stay in the slums.
-

5. Answer: a

Explanation:

The correct answer is 'Disintegrate.'

★ Key Points

- Let's understand the meaning of the given words.
 - 'Disintegrate' means **to become weaker or be destroyed by breaking into small pieces.**
 - 'Dishevelled' means **untidy or disordered hair, clothes, or appearance of a person.**
 - 'Discontinue' means **to stop doing or providing something.**
 - 'Dislocate' means **to force a bone suddenly out of its correct position.**
- When we observe the meaning of the given words, we get to know that the word 'disintegrate' serves the same meaning that is asked in the question.
- Hence, the correct answer is **Option 1.**

★ Additional Information

- Let's understand the meaning of the given words with some more examples.
 - The rocket disintegrated as it entered a specific zone of our country.
 - I saw a boy with long dishevelled hair.
 - The company announced that the holiday every Saturday would be discontinued.
 - He dislocated his knee while doing some stretching exercises.

6. Answer: a

Explanation:

The correct answer is 'To increase the money available for expenditure.'

★ Key Points

- The idiom 'Loosen the purse-strings' means 'to increase the availability of money for spending purposes.'
 - For example, many middle-class people are loosening the purse string these days and making investments in the 'DDA scheme.'
- Hence, the correct answer is **Option 1.**

★ Additional Information

- Let's understand some more idioms for the given options.
 - To be miserly - Hand to mouth
 - To reduce the expenditure - Penny-pinching

7. Answer: d

Explanation:

The correct answer is 'at.'

★ Key Points

- The first option 'in' is incorrect here, it is used to express the situation of something that is or appears to be enclosed or surrounded by something else.
 - For example, I'm living in London.
- The second option 'on' is incorrect, it's used to show that something is in a position above something else.
 - For example, Your bag is on top of the wardrobe.
- The third option 'of' is incorrect, it's used to show possession.
 - For example, Being a member of the club, you are allowed to participate.
- The fourth option 'at' is correct, it's used to show the cause of something, especially a feeling.
 - For example, I was excited at the prospect.
- Hence, the correct answer is **Option 4.**

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

8. Answer: d

Explanation:

The correct answer is '**bare.**'

★ Key Points

- The meaning of the word '**vacant**' is '**not filled, empty, or bare, blank.**'
- For example, If a cupboard or room is **bare** , there is nothing in it.
- Hence, the correct answer is **Option 4.**

★ Additional Information

- Let's understand the meaning of other options.
 - **Busy** - *Having a great deal to do.*
 - **Used** - *Having already been used.*
 - **Full** - *Having no empty space.*

9. Answer: d

Explanation:

The correct answer is '**Avoid.**'

★ Key Points

- The word '**approach**' means **to deal with something.**
- For example, Our manager knows how to **approach** the clients.
- Let's look at the options:
 - '**Meet**' means **to see and talk to someone.**
 - '**Reach**' means **to arrive at a place.**
 - '**Near**' means **not far away.**
 - '**Avoid**' means **to stay away from someone or something, to try not to do something.**

- If we observe the options, the word '**avoid**' is the one that gives complete opposite meaning to the given word '**approach**.'
- Hence, the correct answer is **Option 4**.

10. **Answer: d**

Explanation:

The correct answer is '**went to Singapore**.'

★ Key Points

- When we look at the sentence, we get to know the following information.
- The sentence is in **the past tense (Indefinite)** because of the word '**last December**.'
- We normally use **2nd form of the verb in the past indefinite tense**.
- The 2nd form of the verb '**go**' is '**went**.'
- Hence, the correct answer is **Option 4**.

Correct Sentence – *Ritu **went to Singapore** for her holidays last December.*

★ Additional Information

- Let's understand the concept with some more examples.
 - **Last week**, she **went** to the market for shopping.
 - **Two years ago**, I **bought** this car and it's still in perfect condition.

11. **Answer: b**

Explanation:

The correct answer is '**break up**.'

★ Key Points

- When we look at the sentence, we get to know that the wrong phrase has been used here.
- The phrase '**break up**' means **to end the relationship or cause something to separate into several pieces, parts, or sections.**
 - For example, John and Marry have **broken up** .
 - They **broke up** for the holidays in June.
 - **Break up** the chocolate and place it in a bowl.
- So, the phrase '**break up**' has to be replaced with '**take a break.**'
- **Take a break** - to stop doing something for a short period of time.
 - For Example - I'm tired. Let's **take a break.**
- Hence, the correct answer is **Option 2.**

The sentence would be - *A vacation is the time to relax and take a break from the routine.*

12. Answer: d

Explanation:

The correct answer is '**companions.**'

★ Key Points

- Let's look at the options.
 - The first option - '**Substitute**' is the thing or person that can be used instead of another thing or person.
 - The second option - '**Guide**' is the one who shows the way.
 - The third option - '**Nurse**' is a person whose job is to care for someone at the time of illness.
 - The fourth option - '**Companion**' is the one with whom you spend a lot of time because you are friends or travelling together.
- When we observe the meaning of the given words, we get to know that the word '**companions**' is accurate for the blank.
- Hence, the correct answer is **Option 4.**

13. Answer: a

Explanation:

The correct answer is 'An improvement in the situation.'

★ Key Points

- The idiom 'change for the better' means an improvement in a situation or state of affairs over what was.
- For example, We can observe a change for the better in the admission process of the colleges.
- Hence, the correct answer is Option 1.

★ Additional Information

- Let's understand the other options.
 - Pretend to be someone else - Imposter.
 - Exchange an old product for new - Trade-in (exchange an old article in part payment for another.)
 - To keep loose change - The coins that you have in your pocket, keep them with you.

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14. Answer: c

Explanation:

The correct answer is 'Allready.'

★ Key Points

- Let's look at the options.
- The first option - 'Patient' is the one who is suffering from any disease.
- The second option - Intend means to have as a plan or purpose.
- The third option - Allready is incorrectly spelled.

- The correct spelling is '**already**' which means **before the present time**.
 - The fourth option - '**Disrupt**' means to prevent something, especially a system, process, or event from continuing as usual or as expected.
 - Hence, the correct answer is **Option 3**.
-

15. Answer: d

Explanation:

The correct answer is '**Early**.'

★ Key Points

- The meaning of the word '**tardy**' is **delaying or delayed beyond the right or expected time (late)**.
 - Now let's check the options to find out its opposite.
 - The first option - **late** is a synonym.
 - The second option - **slow** means not quick.
 - The third option - **lazy** means unwilling to work.
 - The fourth option - **early** means **happening or done before the usual or expected time**.
 - When we observe the meanings of the above options, we get to know that the word '**early**' is an antonym of the word '**tardy**'.
 - Hence, the correct answer is **Option 4**.
-

16. Answer: c

Explanation:

The correct answer is '**Defination**.'

★ Key Points

- Let's check the options.

- **Recognition** means the identification of someone or something or person from previous encounters or knowledge.
- **Stagnation** refers to the state of not flowing or moving; lack of activity, growth, or development.
- **Defination** is incorrectly spelled, the correct spelling is 'definition.'
 - It means 'what is meant by a word, text, concept, or action.'
- **Ammunition** means objects that can be shot from a weapon.
- So, only one word is incorrectly spelled and that is 'Defination.'
- Hence, the correct answer is **Option 3**.

17. **Answer: a**

Explanation:

The correct answer is 'used to eating.'

★ Key Points

- When we look at the sentence, we get to know that there is a **mistake in using the phrase 'be used to.'**
- **Be used to** means 'be accustomed to' or 'be familiar with'.
- It refers to the past, present, or future.
- We normally follow 'be used to' with the *-ing* form of a verb.
- Hence, the correct answer is **Option 1**.

The correct sentence would be *-I am not used to eating spicy and oily food.*

★ Additional Information

- Let's understand the concept with some more examples.
- I am used to traveling hill stations by bus.
- He was not used to having hot soup.

18. **Answer: b**

Explanation:

The correct answer is 'for.'

★ Key Points

- When we read the sentence, we get to know there is a **mistake related to prepositions**.
- **For** means **intended to be given to**.
- **For Examples:-**
 - There's a phone message **for** you.
 - I'd better buy something **for** the new baby.
 - There's a prize **for** the fastest three runners in each category.
- **Towards** means **in the direction of, or closer to someone or something**.
- **For Examples:-**
 - She stood up and walked **towards** him.
 - He leaned **towards** his wife and whispered, "Can we go home soon?"
- **For** will be used in the given sentence because the online classes were intended to be given to the primary classes.
- Hence, the correct answer is Option 2.

So, the sentence would be – *Our school has been issued instructions to restrict online classes to two hours for the primary classes.*

★ Additional Information

- Let's understand the concept with some more examples.
- He has been playing cricket for two hours.
- I have known him for ten years.

19. Answer: a

Explanation:

The correct answer is 'superior from me.'

★ Key Points

- When we look at the sentence, we get to know there is **a mistake in using the preposition**.
- Some Latin Adjectives like **Senior, Junior, Inferior, Superior, Posterior, Prior, and Anterior** are used as the adjectives of comparative degree.
- The preposition '**to**' is always used after them **not 'from'**.
- Hence, the correct answer is Option 1.

So, the sentence would be - *I know she is much **superior to** me in intelligence.*

★ Additional Information

- Let's understand the concept with some more examples.
 - John is **senior to** all his friends.
 - Indian doctors are **superior to** American doctors.
 - She is **inferior to** Marry in richness.

20. Answer: b

Explanation:

The correct answer is '**distract**.'

★ Key Points

- Let's look at the options.
 - **Attract** means to cause someone to have a liking for or interest in something.
 - **Distract** means to prevent someone from concentrating on something.
 - **Disturb** means interrupting sleep, relaxation, or privacy.
 - **Absorb** means to take up the attention of someone or interest greatly.
- When we look at the sentence, we observe that ***the child was crying for a toy and the mother would try to prevent him from concentrating on the toy so that he may stop crying.***
- Hence, the correct answer is Option 2.

So, the sentence would be – Mother tried to **distract** the child when he was crying for a toy.

★ Additional Information

- Let's understand the meaning of the words with some more examples.
 - He did not want to **attract** her attention.
 - My friend always **distracts** my attention from my study.
 - I have told you many times not to **disturb** me.
 - He sat in an armchair, **absorbed** in a novel.

21. Answer: a

Explanation:

The correct answer is 'samples.'

★ Key Points

- When we read the first line of the passage, we understand that the passage is about the **living species of our planet**.
- The next sentence starts with the word '**some**' and later on, examples have been presented about how different animals have evolved.
- So, the appropriate word for the blank is none other than '**samples**.'
- **Samples** – a small part or quantity intended to show what the whole is like.
 - **For Examples** – *Investigations involved analysing **samples** of handwriting.*
- Hence, the correct answer is **Option 1**.

Correct Paragraph: Every living species of our planet has changed or is changing. Some **samples**, such as the pre-historic sabre-toothed tigers (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.

★ Confusion Points

- A **sample** is a subset taken for some purpose from a larger population.
- A **specimen** is an individual member of the sample.

- For example, we might take a sample of 3 rocks from a bag. We have 3 specimens, but one sample.

★ Additional Information

- Let's understand the **meaning** of other words.
 - **Specimen** – an example of something regarded as typical of its class or group.
 - **Species** – a set of animals or plants, members of which have similar characteristics.
 - **Strains** – a force put pressure on something, sometimes causing damage.

22. Answer: a

Explanation:

The correct answer is 'have.'

★ Key Points

- When we read the first line of the passage, we understand that the passage is about the living species of our planet .
- In the sentence "*Some samples, such as the pre-historic sabre-toothed tigers _____ died out..*" we observe that **the present perfect tense should be used because recently the action is finished.**
- We normally use **has/have + 3rd form of the verb in the present perfect tense.**
- So, the appropriate word for the blank is none other than 'have.'
- Hence, the correct answer is **Option 1** .

Correct Paragraph: *Every living species of our planet has changed or is changing. Some samples, such as the pre-historic sabre-toothed tigers have 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.*

★ Additional Information

- Let's look at the other options.

- **Having** – It's incorrect because we don't use the *-ing form with the helping verb in this tense.*
- **Has** – It's incorrect because **the subject is plural.**
- **Had** – It's incorrect because the helping verb 'had' is used in the past perfect tense

23. Answer: d

Explanation:

The correct answer is 'gradually.'

★ Key Points

- When we read the first line of the passage, we understand that the passage is about the living species of our planet .
- In the sentence "*Some samples, such as the pre-historic sabre-toothed tigers have died out and some are _____ dying out.*" we observe that **the specific tigers have died out and some are dying out slowly over a period of time.**
- Gradually means slowly over a period of time.
- So, the appropriate word for the blank is none other than 'gradually.'
- Hence, the correct answer is Option 4.

Correct Paragraph: Every living species of our planet has changed or is changing. Some samples, such as the pre-historic sabre-toothed tigers have died out and some are **gradually** dying out. Sometimes new species appear. The dog is (4) _____ species which man has caused to (5) _____ from the wolf.

★ Additional Information

- Let's look at the meaning of other options.
 - **Regularly** – Often
 - **Readily** – Quickly
 - **Deliberately** – Intentionally

24. Answer: c

Explanation:

The correct answer is 'a'.

★ Key Points

- When we read the first line of the passage, we understand that the passage is about the living species of our planet .
- In the sentence "Sometimes new species appear. The dog is _____ species which man has..." we observe that the author wants to tell more about the subject.
- Species is a **singular noun** that starts with a **consonant sound**.
- It means **a group of living organisms consisting of similar individuals capable of exchanging genes or interbreeding**.
- It has not been made specific in the sentence, thus, the definite article ' the ' cannot be used.
- Hence, the indefinite article 'a' should be used.

Correct Paragraph: Every living species of our planet has changed or is changing. Some samples, such as the pre-historic sabre-toothed tigers have died out and some are gradually dying out. Sometimes new species appear. The dog is a species which man has caused to (5) _____ from the wolf.

25. Answer: a

Explanation:

The correct answer is 'evolve'.

★ Key Points

- When we read the first line of the passage, we understand that the passage is about the living species of our planet .

- The sentence "Sometimes new species appear. The dog is a species which man has caused to _____ from the wolf. "
- Evolve means to develop gradually, or to cause something or someone to develop gradually.
- So, the appropriate word for the blank is none other than 'evolve.'
- Hence, the correct answer is Option 1.

Correct Paragraph: Every living species of our planet has changed or is changing. Some samples, such as the pre-historic sabre-toothed tigers have died out and some are gradually dying out. Sometimes new species appear. The dog is a species which man has caused to evolve from the wolf.

★ Additional Information

- Let's look at the other options.
 - **Emerge** - to appear.
 - **Expand** - to increase in size or number.
 - **Derive** - to get something from something else.

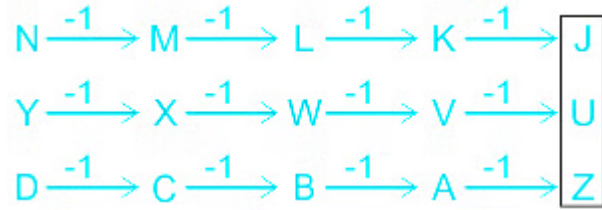
26. Answer: a

Explanation:

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Given: NYD, MXC, LWB, KVA, ?

The logic followed here is:



Hence, **JUZ** is the correct answer.

27. Answer: a

Explanation:

Given: 2 : 54 :: 4 : ?

The logic followed here is:

$$(1\text{st number} + 1)^{3 \times 2} = 2\text{nd number}$$

$$2 : 54 \rightarrow (2 + 1)^3 \times 2 = 3^3 \times 2 = 27 \times 2 = 54$$

Similarly,

$$4 : ? \rightarrow (4 + 1)^3 \times 2 = 5^3 \times 2 = 125 \times 2 = 250$$

Hence, **250** is the correct answer.

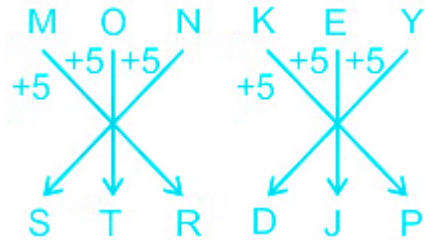
28. Answer: d

Explanation:

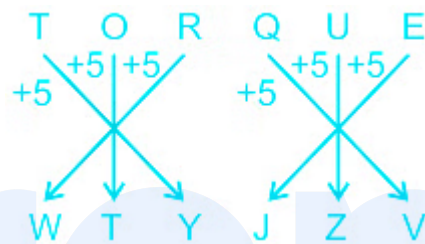
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Given: MONKEY : STRDJP :: TORQUE : ?

The logic followed here is:



Similarly,



Hence, WTYJZV is the correct answer.

29. Answer: b

Explanation:

The logic followed here is: the answer image is NOT embedded in the given figure, and other options are embedded as shown below,

(1)



It is embedded in the question figure.

(3)



It is embedded in the question figure.

(4)



It is embedded in the question figure.

Hence, **option (2)** is not embedded in the given figure.

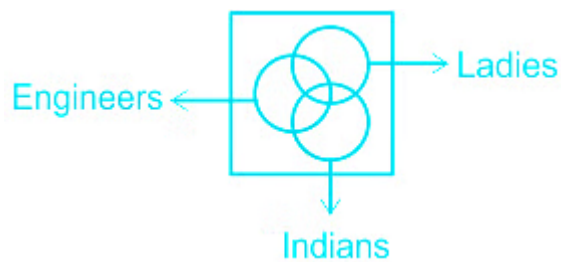
30. **Answer: d**

Explanation:

Given: Engineers, Indians, Ladies

The logic followed here is:

- Some ladies are engineers, some ladies are Indians, some Indians are engineers, and some ladies are both engineers and Indians.



Hence, **option (4)** is the correct answer.

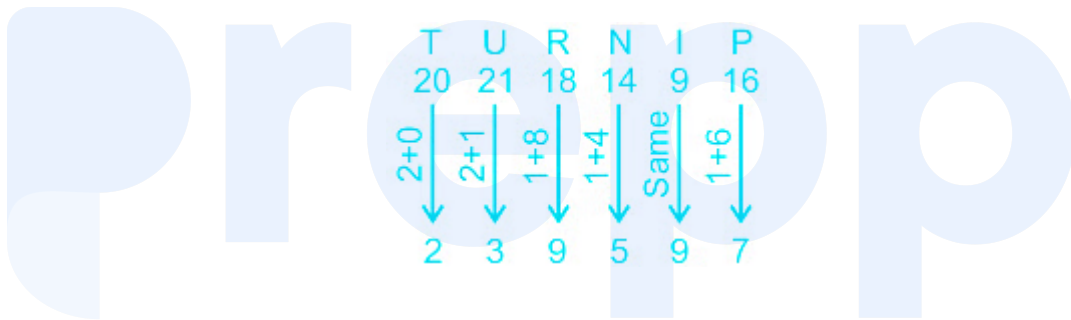
31. Answer: a

Explanation:

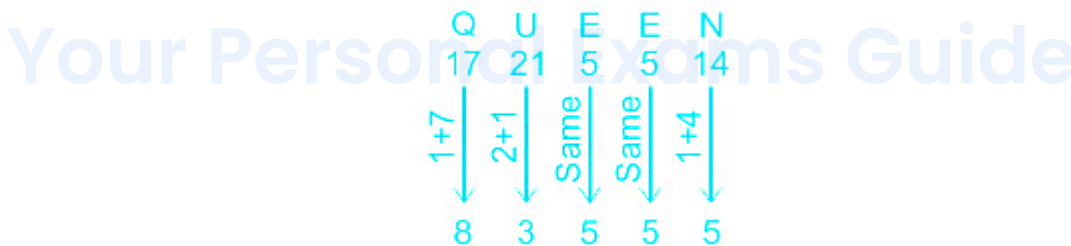
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Given: 'TURNIP' is written as '239597', and 'QUEEN' is written as '83555'.

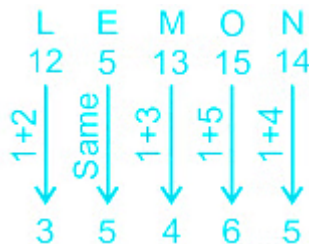
The logic followed here is: Sum of the digits of the positional values, as shown below,



And,



Similarly,



Hence, **35465** is the correct answer.

32. Answer: b

Explanation:

Given:

The logic followed here is:

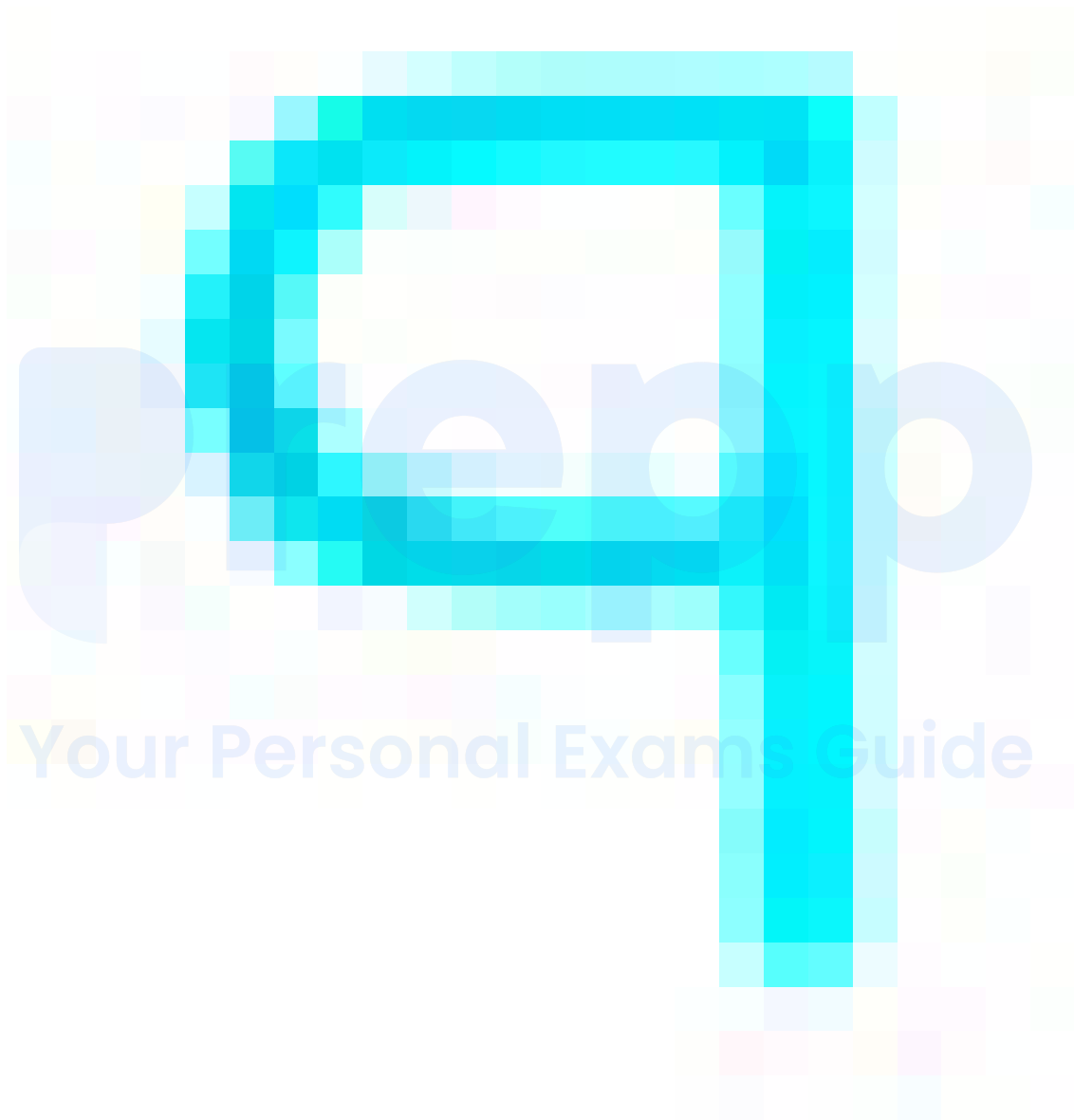


Detailed Explanation:

- The line MN is the mirror
- The given word "RGB68P" ends with 'P'. So the mirror image will start with "

prepp

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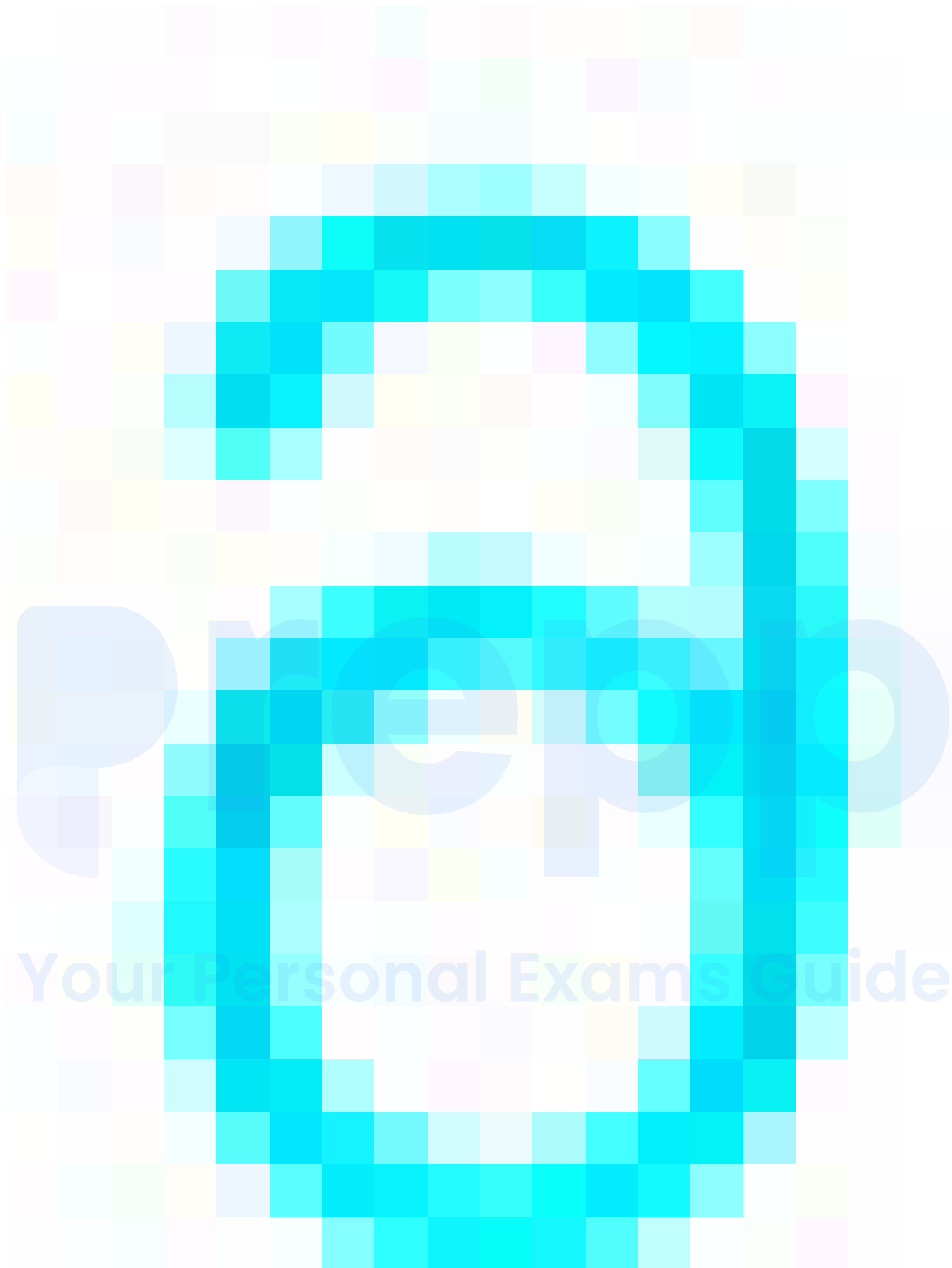


"⇒ Option 1 is eliminated.

- The given word "RGB68P" has the third last digit "6", So the mirror image should be "

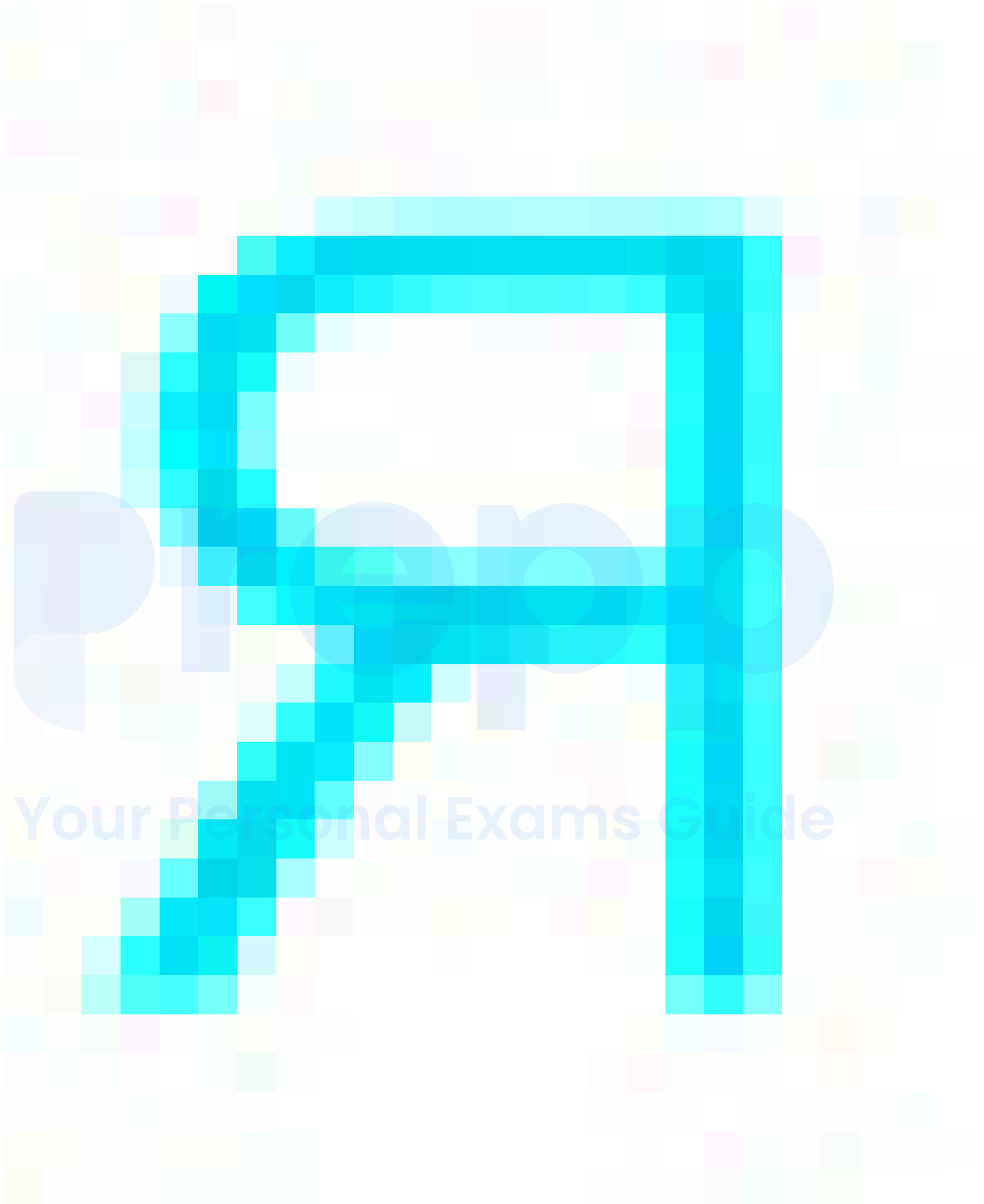
prepp

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" ⇒ Option 4 is eliminated.

- The given word "RGB68P" starts with 'R'. So the *mirror image will start with "*



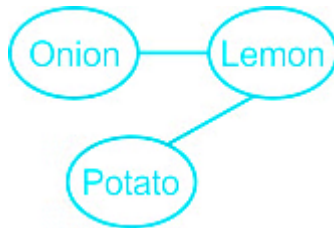
" \Rightarrow Option 3 is eliminated.

Hence, **option (2)** is the correct answer.

33. Answer: b

Explanation:

The least possible diagram is as follows:



Conclusions:

I. No onion is a potato → False (it is possible but not definite)

II. No potato is a lemon → True (as no lemon is a potato)

Hence, **only conclusion II follows.**

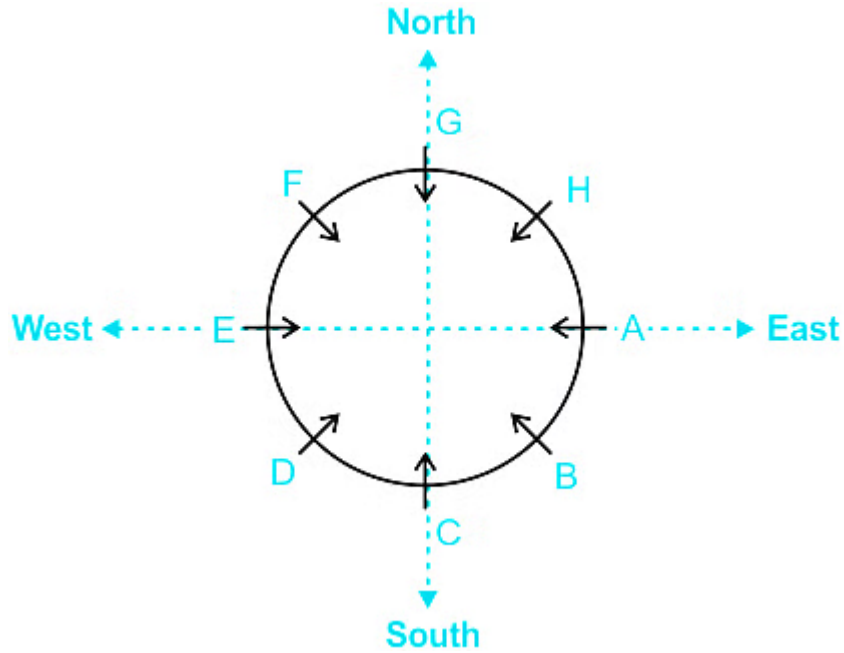
34. Answer: c

Explanation:

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.

And,

If C is sitting in the south direction. Then the final seating arrangement is as follows,



Hence, F is in the north-west direction.

35. Answer: a

Explanation:

Given: Amphibian : Frog :: Reptile : ?

The logic followed here is:

Frog is an Amphibian.

Similarly,

Lizard is a Reptile.

Hence, **lizard** is the correct answer.

★ Important Points

Amphibian → a cold-blooded vertebrate animal of a class that comprises the frogs, toads, newts, salamanders, and caecilians.

Reptile → a vertebrate animal of a class that includes snakes, lizards, crocodiles, turtles, and tortoises. They are distinguished by having a dry scaly skin and typically laying soft-shelled eggs on land.

- **Cockroaches** are insects of the order Blattodea, which also includes termites.
- Kangaroos are marsupials. However, as marsupials are one of the three subgroups of mammals, kangaroos are also mammals, or “**pouched mammals**”.
- Mouse is a mammal in the animal kingdom. As a member of the order Rodentia, **it is a rodent**.

36. Answer: b

Explanation:

By using BODMAS RULE :

B	Brackets in order (), {}, []	ब्रैकेट (), {}, [] क्रम में
O	of	का
D	Division (÷)	विभाजन (÷)
M	Multiplication (×)	गुणा (×)
A	Addition (+)	जोड़ (+)
S	Subtraction (-)	घटाव (-)

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

By checking options and substituting accordingly,

(1) $\times, \div, +, -, =$

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

$$\text{LHS} = 25 \times 5 \div 6 + 15 - 3$$

$$= 25 \times 0.833 + 15 - 3$$

$$= 20.825 + 15 - 3$$

$$= 35.825 - 3$$

$$= 32.825$$

$$\neq 50$$

LHS \neq RHS

(2) +, \times , -, \div , =

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

$$\text{LHS} = 25 + 5 \times 6 - 15 \div 3$$

$$= 25 + 5 \times 6 - 5$$

$$= 25 + 30 - 5$$

$$= 55 - 5$$

$$= 50$$

LHS = RHS

(3) \times , +, \div , -, =

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

$$\text{LHS} = 25 \times 5 + 6 \div 15 - 3$$

$$= 25 \times 5 + 0.4 - 3$$

$$= 125 + 0.4 - 3$$

$$= 122.4$$

$$\neq 50$$

prepp
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LHS \neq RHS

(4) $\div, \times, -, +, =$

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

$$\text{LHS} = 25 \div 5 \times 6 - 15 + 3$$

$$= 5 \times 6 - 15 + 3$$

$$= 30 - 15 + 3$$

$$= 33 - 15$$

$$= 18$$

$$\neq 50$$

LHS \neq RHS

Hence, $+, \times, -, \div, =$ is the correct answer.

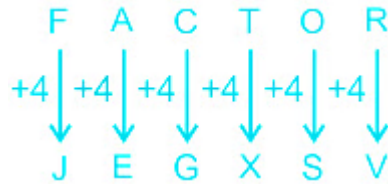
37. Answer: a

Explanation:

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Given: 'FACTOR' is written as 'JEGXSV'.

The logic followed here is:



Similarly,



Hence, QEVMRE is the correct answer.

38. Answer: b

Explanation:

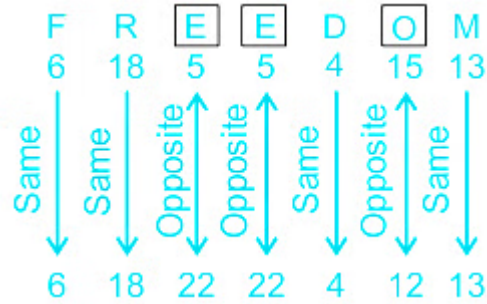
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Given: 'FREEDOM' is written as '618222241213'.

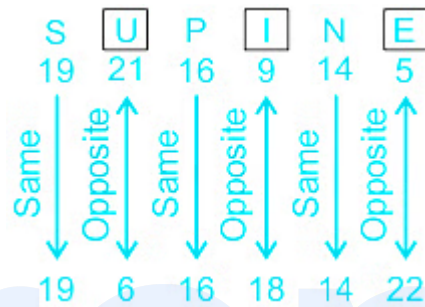
Logic: Consonant is coded as their positional value,

Vowels are coded as their opposite letter's positional value.

The logic followed here is:



Similarly,

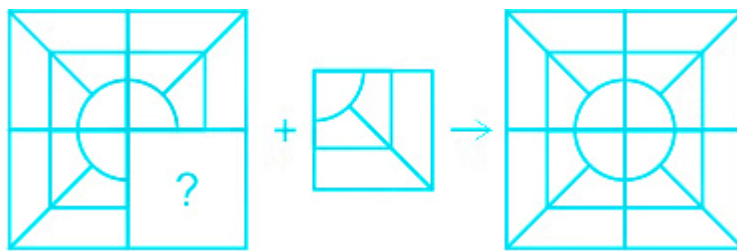


Hence, **19616181422** is the correct answer.

39. Answer: c

Explanation:

The logic followed here is: The complete pattern is as shown below,



Hence, **option(3)** is the correct answer.

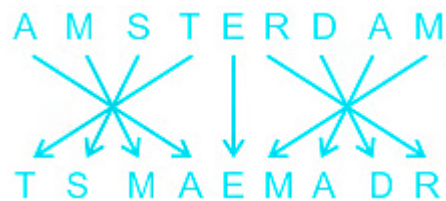
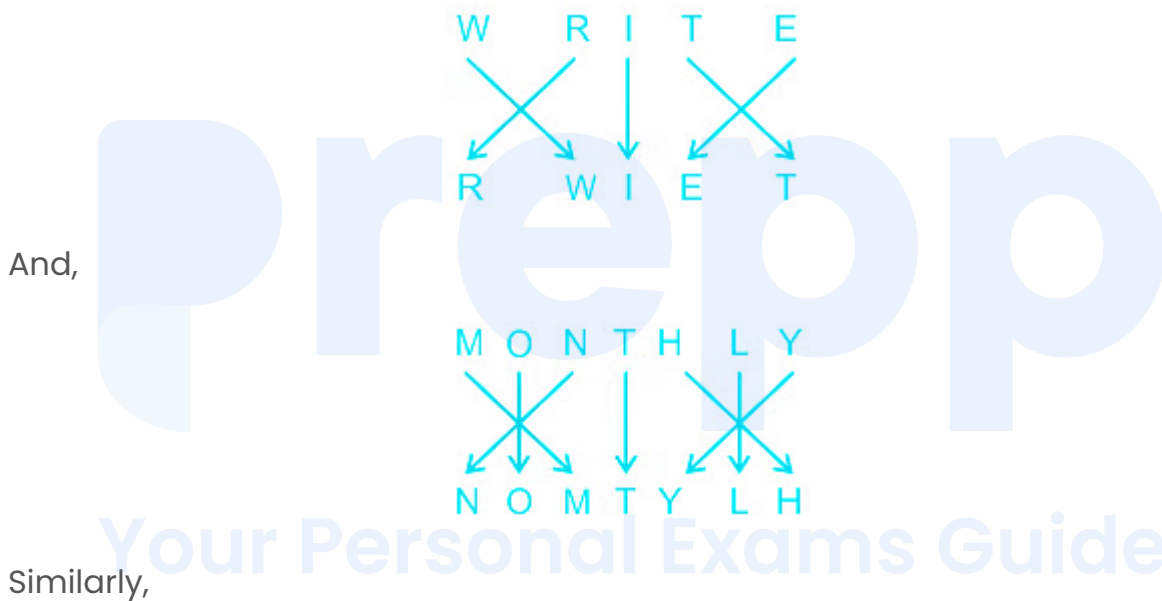
40. Answer: a

Explanation:

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Given: 'WRITE' is written as 'RWIET', and 'MONTHLY' is written as 'NOMTYLH'.

The logic followed here is:



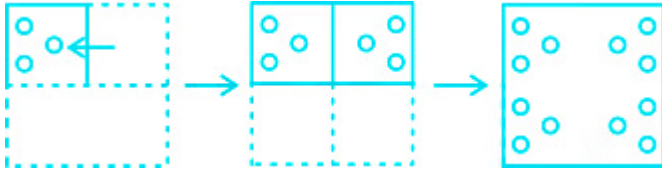
Hence, TSM AEMADR is the correct answer.

41. Answer: d

Explanation:

The logic followed here is:

The paper when unfolded will look like this:



Hence, **option (4)** is the correct answer.

42. Answer: a

Explanation:

Given:



The logic followed here is:



→ upper part shaded in the first step and lower in the next step, thus the same pattern continues.

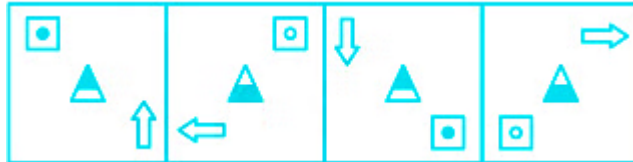


→ moves 90° in the clockwise direction, shaded in first and not shaded in next step.



→ moves 90° in the clockwise direction, and 90° anticlockwise in its own orientation.

The complete series is as follows:



Hence, **option (1)** is the correct answer.

43. Answer: d

Explanation:

Given: $H > M = D > P$ and $K = H > T > Z$

By combining: $Z < T < K = H > M = D > P$

By checking options:

(1) $P < M \rightarrow$ True (as, $M = D > P \rightarrow M > P$)

(2) $H > D \rightarrow$ True (as, $H > M = D \rightarrow H > D$)

(3) $Z < H \rightarrow$ True (as, $Z < T < K = H \rightarrow H > Z$)

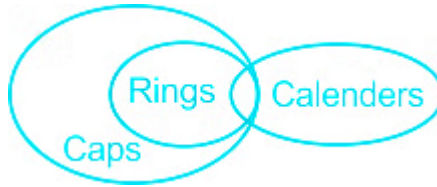
(4) $Z > K \rightarrow$ False (as, $Z < T < K$, implies $Z < K$)

Hence, $Z > K$ is not correct.

44. Answer: a

Explanation:

The least possible diagram is as follows:



Conclusions:

I. All calendars are rings → False (it is possible but not definite as shown in the diagram above)

II. At least some calendars are caps → True (as all rings are calendars and all rings are caps, so the part of the calendar which are rings are caps too)

Hence, **only conclusion II follows.**

45. Answer: d

Explanation:

Given: Bed : Sleep :: Chair : ?

The logic followed here is:

Bed is used as a place to sleep.

Similarly,

Chair is used for sitting on.

Hence, **sit** is the correct answer.

46. Answer: b

Explanation:

The logic followed here is: Row wise,

$$\text{Row (1)} \rightarrow (15 \div 2) \times 12 = 7.5 \times 12 = 90$$

$$\text{Row (2)} \rightarrow (16 \div 2) \times 13 = 8 \times 13 = 104$$

Similarly,

$$\text{Row (3)} \rightarrow (12 \div 2) \times 18 = 6 \times 18 = 108$$

Hence, **108** is the correct answer.

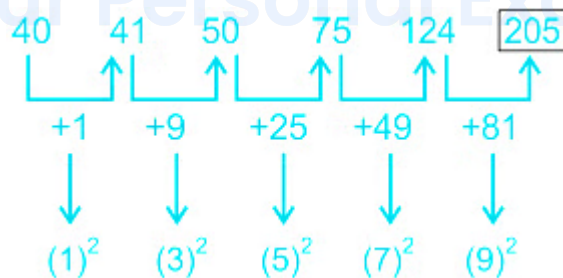
47. Answer: a

Explanation:

Given: 40, 41, 50, 75, 124, ?

The logic followed here is:

The addition of the square of odd numbers, as shown below,



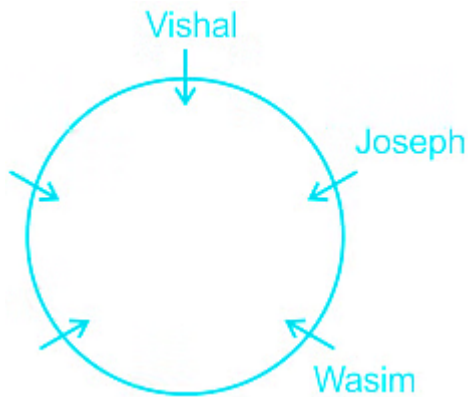
Hence, **205** is the correct answer.

48. Answer: a

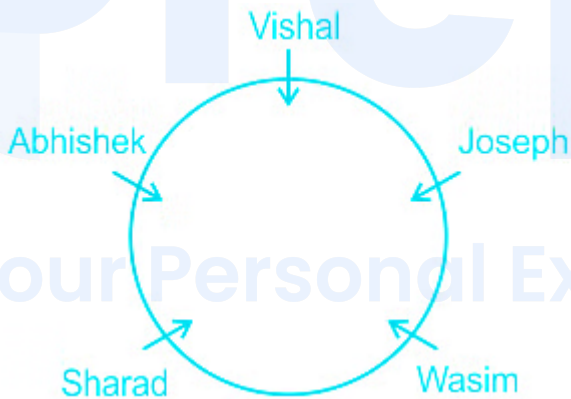
Explanation:

Total friends: five.

- (1) Joseph is to the immediate right of Wasim.
- (2) Vishal is third to the left of Wasim.



- (3) Abhishek is sitting to the immediate left of Sharad.
- Therefore, the final seating arrangement is as follows:



Hence, Vishal is sitting between Joseph and Abhishek.

49. Answer: a

Explanation:

Given: 5, 20, 65, 200, ?

The logic followed here is:



Hence, "605" is the correct answer.

50. Answer: a

Explanation:

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

By checking options and changing signs accordingly,

(1) + and ×

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

= $7 \times 3 - 4 + 12$

= $21 - 4 + 12$

= $33 - 4$

= 29

LHS = RHS

(2) ÷ and ×

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

= $7 + 3 - 24 \times 0.5$

= $7 + 3 - 12$

= $10 - 12$

= - 2



≠ 29

LHS ≠ RHS

(3) + and -

$$\text{LHS} = 7 - 3 + 24 \div 6 \times 12$$

$$= 7 - 3 + 4 \times 12$$

$$= 7 - 3 + 48$$

$$= 55 - 3$$

$$= 52$$

≠ 29

LHS ≠ RHS

(4) × and -

$$\text{LHS} = 7 + 3 \times 24 \div 6 - 12$$

$$= 7 + 3 \times 4 - 12$$

$$= 7 + 12 - 12$$

$$= 19 - 12$$

$$= 7$$

≠ 29

LHS ≠ RHS

Hence, + and × is the correct answer.

51. Answer: b

Explanation:

Concept used:

Required number = LCM of given numbers - common difference of remainders

Calculation:

$$\text{Common difference} = (5 - 2) = (6 - 3) = (7 - 4) = 3$$

$$\text{LCM of } 5, 6, 7 = 210$$

$$\text{Smallest 4 digit number which is divisible by } 5, 6, 7 = 210 \times 5 = 1050$$

Now according to the concept,

$$\text{The number is } (1050 - 3) = 1047 [\because 3 \text{ is the common difference}]$$

$$\text{Now, Sum of digits} = 1 + 0 + 4 + 7 = 12$$

\therefore Required answer is 12

52. Answer: d

Explanation:

Calculation:

$$\text{Average number of employees in D and E} = 4500 \times (63.2 + 45.6)/(360 \times 2)$$

$$\Rightarrow 680$$

$$\text{Total number of employees in A} = 4500 \times 98/360$$

$$\Rightarrow 1225$$

$$\text{Required \%} = (680/1225) \times 100 = 55.510 \approx 55.5\%$$

\therefore Required answer is 55.5%

53. Answer: d

Explanation:

Given:

Average of 12 numbers = 25.5

Average of first six numbers = 22.4

Average of last three numbers = 28.2

Formula used:

Average = Sum of all observations/Number of observations

Calculation:

Let 7th number be x then,

8th number be $(x + 5)$

And 9th number be $(x + 10)$

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

Sum of first six numbers = $22.4 \times 6 = 134.4$

Sum of last three numbers = $28.2 \times 3 = 84.6$

According to the question,

we get, $306 = 134.4 + 84.6 + x + x + 5 + x + 10$

$$\Rightarrow 3x = 72$$

$$\Rightarrow x = 24$$

7th number = $x = 24$

8th number = 29

9th number = 34

Average of 8th and 9th numbers = $(29 + 34)/2 = 63/2 = 31.5$

∴ The average of 8th and 9th numbers are 31.5.

54. Answer: a

Explanation:

Given:

Total principal = Rs. 3364

Rate of interest = 5%

Concept used:

$$A = P(1 + r/100)^n$$

Calculation:

Let 1st part be A and 2nd part be B

According to the question,

$$A(1 + 5/100)^3 = B(1 + 5/100)^5$$

$$\Rightarrow A/B = (21/20)^5 / (21/20)^3$$

$$\Rightarrow A/B = (21/20)^2 = 441/400$$

$$A = 441$$

$$B = 400$$

$$A + B = 841$$

$$\text{Difference} = 441 - 400 = 41$$

Now,

$$\text{Here } 841 = 3364$$

$$\text{So, } 1 = 4$$

$$41 = 164$$

∴ The difference between the two parts is Rs. 164

55. Answer: b

Explanation:

Given:

A sum of ₹ 7,560 is divided between A, B, C and D

Calculation:

According to the question,

Ratio of A, B, C, D as follow

$$\begin{array}{cccc} A & : & B & : & C & : & D \\ 4 & : & 5 & : & 5 & : & 5 \\ 3 & : & 3 & : & 4 & : & 4 \\ 5 & : & 5 & : & 5 & : & 7 \\ \hline 60 & : & 75 & : & 100 & : & 140 \\ \curvearrowright & & & & & & \\ 12 & : & 15 & : & 20 & : & 28 \end{array}$$

$$\text{So, Difference between B and D} = 28 - 15 = 13$$

$$\text{Amount} = 7560 \times 13/75 = 1310.4$$

∴ The difference (in ₹) between the shares of B and D is 1310.4

56. Answer: b

Explanation:

Given:

Kapil rows $2\frac{1}{2}$ km against the current in 15 minutes

Kapil rows $2\frac{1}{2}$ km along the current in 8 minutes

Concept used:

$$\text{Speed} = D/t$$

$$\text{Upstream} = u - v$$

$$\text{Downstream} = u + v$$

u = speed of the object

v = speed of the current

Calculation:

$$\text{Speed of upstream} = 5/2 \times 60/15 = 10 \text{ km/h}$$

$$\text{Speed of downstream} = 5/2 \times 60/8 = 18.75 \text{ km/h}$$

So,

$$u + v = 18.75 \quad \text{----(i)}$$

$$u - v = 10 \quad \text{----(ii)}$$

By subtracting (ii) from (i) we get,

$$\Rightarrow 2v = 8.75$$

$$\Rightarrow v = 8.75/2 \text{ or } 35/8$$

\therefore The speed (in km/h) of the current $35/8$

57. Answer: a

Explanation:

Given:

A sum was invested at simple interest at x% p.a. for 2 years

Concept used:

$$S.I = PTR/100$$

Calculation:

According to the question,

Rs. 1800 is for extra 4% for 2 years,

So,

$$4\% \times 2 = 1800$$

$$\Rightarrow 8\% = 1800$$

$$\Rightarrow 1\% = 225$$

$$\Rightarrow 100\% = 22500 = \text{Principal}$$

Now,

$$SI = (22500 \times 17 \times 8)/(100 \times 3)$$

$$\Rightarrow \text{Rs. } 10200$$

\therefore Required interest is Rs. 10200

58. Answer: c

Explanation:

Given:

Radius of a metallic solid sphere is 21.6 cm

Length of the wire is 259.2 m

Formula used:

Volume of a sphere = $\frac{4}{3} \pi r^3$

Volume of a cylinder = $\pi r^2 h$

Calculation:

Here volume of solid sphere will be equal of the cross section

So,

$$\frac{4}{3} \pi r^3 = \pi r^2 h$$

$$\Rightarrow \frac{4}{3} \times 21.6 \times 21.6 \times 21.6 = 25920 r^2 \quad [1 \text{ m} = 100 \text{ cm}]$$

$$\Rightarrow 28.8 \times 21.6 \times 21.6 = 25920 r^2$$

$$\Rightarrow 0.5184 = r^2$$

$$\Rightarrow r = 0.72 \text{ cm}$$

\therefore The radius of the wire is 0.72 cm

59. Answer: b

Explanation:

Given:

24% spends on groceries

16% spends on rent and

55% of the remaining spends on children's education

Calculation:

Let the total monthly income be Rs.100 units

⇒ groceries = 24

⇒ rent = 16

⇒ children's education = $(100 - 24 - 16) \times 55/100$

⇒ children's education = 33

⇒ Total spending = $24 + 16 + 33 = 73$

⇒ Total monthly savings = $100 - 73$

⇒ 27

According to question,

27 units = Rs.5940

⇒ 1 unit = Rs.220

⇒ 16 unit = Rs.3520

∴ Surekha spends Rs.3520 on rent

60. **Answer: c**

Explanation:

Given:

A train of length 240 m crosses a pole in 16

The same train crosses a platform in 42 seconds

Concept used:

Speed = Distance/Time

When a train crosses a pole then it covers its length

When a train crosses a platform then it covers its length + length of the platform

Calculation:

According to the question,

Speed of the train = $240/16 = 15$ m/sec

Now, in 42 sec the train will cover $42 \times 15 = 630$ m

So, the length of the platform is $630 - 240 = 390$ m

\therefore The length (in m) of the platform is 390.

61. **Answer: c**

Explanation:

Given:

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

Concept used:

Average = Sum of elements/Number of elements

Calculation:

Let the number of boys and girls be $5x$ and $7x$

Total weight of the boys = $5x \times 56 = 280x$

Total weight of the girls = $7x \times 50 = 350x$

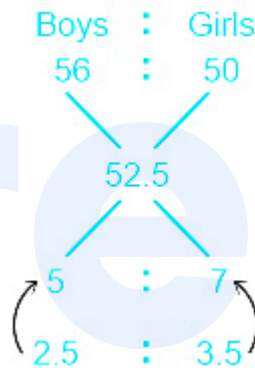
Total weight of the boys and girls = $280x + 350x = 630x$

Now the average of boys and girls = $630x/12x$

$\Rightarrow 52.5$

\therefore The average weight (in kg) of all the boys and girls in the class is 52.5

★ Shortcut Trick



62. Answer: d

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Explanation:

Given:

A can do a piece of work in 8 days

The efficiency of B is half the efficiency of A, and the efficiency of C is 50% more than the efficiency of B

Calculation:

Let efficiency of A be $4x$

So, B's efficiency is $2x$ and C's is $3x$

Now,

$$\text{Total work} = 4x \times 8 = 32x$$

$$\text{In 2 days they will do } 4x + 2x + 3x = 9x \times 2 = 18x$$

$$\text{So, required part} = 18x/32x = 9/16$$

∴ Required answer is 9/16

63. Answer: c

Explanation:

Given:

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

Concept used:

B	Brackets in order {}, {}, []	ब्रैकेट {}, {}, [] क्रम में
O	of	का
D	Division (÷)	विभाजन (÷)
M	Multiplication (×)	गुणा (×)
A	Addition (+)	जोड़ (+)
S	Subtraction (-)	घटाव (-)

Calculation:

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

$$\Rightarrow 5/16 + 3/5 \times 15/8 \div 2/3 - 49/8 \div (21/4 \div 3/7 \times 1/2) \text{ of } 6/7$$

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

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

$$\Rightarrow 5/16 + 3/5 \times 15/8 \div 2/3 - 49/8 \div 49/2 \text{ of } 6/7$$

$$\Rightarrow 5/16 + 3/5 \times 15/8 \div 2/3 - 49/8 \div 21$$

$$\Rightarrow 5/16 + 3/5 \times 45/16 - 7/24$$

$$\Rightarrow 5/16 + 27/16 - 7/24$$

$$\Rightarrow (15 + 81 - 14)/48$$

$$\Rightarrow 82 / 48 = 41/24$$

\therefore Required answer is $41/24$

64. Answer: a

Explanation:

Given:

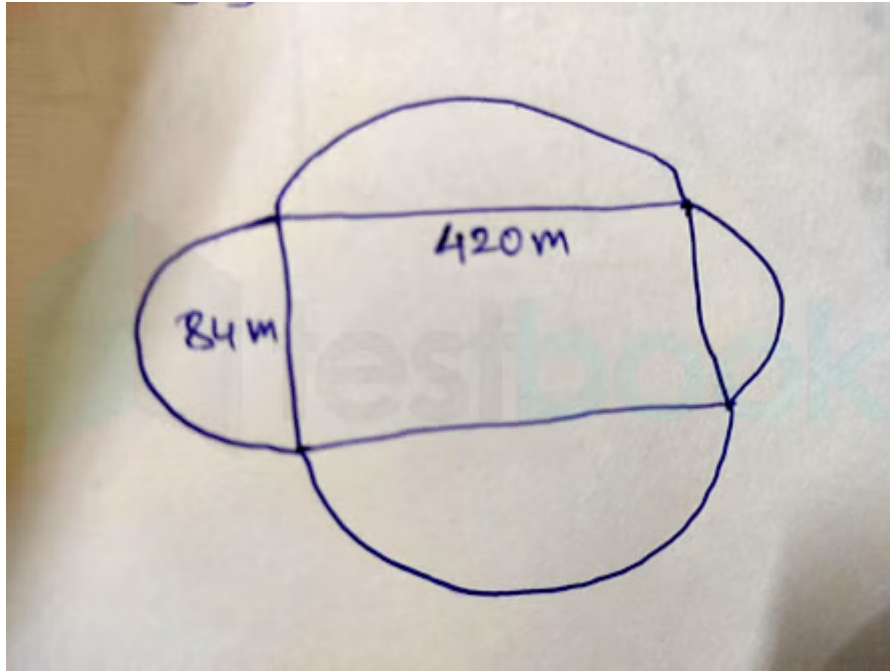
A rectangular plot is 420 m long and 84 m wide

Concept used:

Area of rectangle = $l \times b$

Area of a circle = πr^2

Calculation:



According to the diagram,

There are 1 rectangle and 2 circles are present

So,

$$\text{Area of the rectangle} = 420 \times 84$$

$$\Rightarrow 35280$$

$$\text{Area of the 1st circle} = \frac{22}{7} \times 210 \times 210 = 138600$$

$$\text{Area of the 2nd circle} = \frac{22}{7} \times 42 \times 42 = 5544$$

$$\text{Total area} = 35280 + 138600 + 5544 = 179424 \text{ m}^2 \approx 17.9$$

\therefore Required area is 17.9

65. Answer: a

Explanation:

Given:

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

Concept used:

B	Brackets in order (), {}, []	ब्रैकेट (), {}, [] क्रम में
O	of	का
D	Division (÷)	विभाजन (÷)
M	Multiplication (×)	गुणा (×)
A	Addition (+)	जोड़ (+)
S	Subtraction (-)	घटाव (-)

Calculation:

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

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

$$\Rightarrow 145 - [125 - \{64 \div 8 \text{ of } 4 - 16\}]$$

$$\Rightarrow 145 - [125 - \{64 \div 32 - 16\}]$$

$$\Rightarrow 145 - [125 - \{2 - 16\}]$$

$$\Rightarrow 145 - [125 + 14]$$

$$\Rightarrow 145 - 139$$

$$\Rightarrow 6$$

∴ Required answer is 6

66. Answer: c

Explanation:

Given:

When an article is sold for ₹ 1,188, the percentage profit earned is $x\%$

When it is sold for ₹ 1,435.50, then the percentage profit is $(x + 25)\%$

Calculation:

According to the question.

$$(1435.5 - 1188) = 25\% \text{ of CP}$$

$$\Rightarrow 247.5 = 25\% \text{ of CP}$$

$$\Rightarrow \text{CP} = 990$$

$$\text{Profit at the 1st sale} = 1188 - 990 = 198$$

$$\% \text{ of profit} = (198/990) \times 100 = 20\% = x$$

\therefore The value of x is 20

67. Answer: d

Explanation:

Calculation:

$$\text{Total employees in C} = 4500 \times 81.2/360 = 1015$$

$$\text{Total employees in A} = 4500 \times 98/360 = 1225$$

$$\text{Now, total female employees in A} = 1225 \times 4/7 = 700$$

$$\text{Difference} = 1015 - 700 = 315$$

$$\% = 315/700 \times 100 = 45\%$$

\therefore Required percentage is 45

68. Answer: a

Explanation:

Given:

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

Calculation:

Let the two numbers be 5x and 6x

According to the question,

$$(5x - 8) : (6x - 8) = 4 : 5$$

$$\Rightarrow 25x - 40 = 24x - 32$$

$$\Rightarrow x = 8$$

$$\text{Now, } 5x + 6x = 11 \times 8 = 88$$

\therefore The required answer is 88

★ Shortcut Trick

When the same number is added or subtracted, then the difference between the ratio is not changed

N_1	5	6
N_2	4	5

$$(5 - 4) = (6 - 5) = 1 \text{ unit}$$

$$\text{So, } 1 \text{ unit} = 8$$

$$\text{Sum } (5 + 6) \text{ units} = 11 \times 8 = 88$$

∴ The correct answer is 88.

69. Answer: b

Explanation:

Given:

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

Concept used:

B	Brackets in order {}, {}, []	ब्रैकेट {}, {}, [] क्रम में
O	of	का
D	Division (÷)	विभाजन (÷)
M	Multiplication (×)	गुणा (×)
A	Addition (+)	जोड़ (+)
S	Subtraction (-)	घटाव (-)

Calculation:

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

$$\Rightarrow \frac{\frac{1}{4} \div \frac{1}{20}}{1\frac{2}{3} \text{ of } \frac{3}{4} - \frac{1}{4} \text{ of } \frac{2}{3}}$$

$$\Rightarrow \frac{\frac{1}{4} \times 20}{1\frac{2}{3} \text{ of } \frac{3}{4} - \frac{1}{4} \text{ of } \frac{2}{3}}$$

$$\Rightarrow (5) / (5/4 - 1/6)$$

$$\Rightarrow (5) / (13/12)$$

$$\Rightarrow 60/13$$

∴ Required answer is $\frac{60}{13}$

★ Additional Information

When a fraction is with a bracket without a multiplication sign according to the BODMAS rule at first we multiply the fraction with the value of the result of the operation in the bracket.

70. Answer: c

Explanation:

Concept used:

Median of a grouped data = $N/2$

Where $N = \sum f$

Calculation:

Class	f	C.f
0 - 10	3	3
10 - 20	18	21
20 - 30	5	26
30 - 40	7	33
40 - 50	16	49

$$N/2 = 49/2 = 24.5$$

24.5 lies in 20 - 30

So, lower limit = 20 = x

Modal class = class with maximum frequency

Therefore modal class is 10 - 20

So, upper limit = 20 = y

Now,

$$(3x + 2y) = 60 + 40 = 100$$

∴ Required answer is 100

71. Answer: b

Explanation:

Calculation:

$$\text{Number of employees are in B} = 4500 \times \frac{72}{360} = 900$$

$$\text{Number of employees are in C} = 4500 \times \frac{81.2}{360} = 1015$$

$$\text{Number of employees are in D} = 4500 \times \frac{45.6}{360} = 570$$

$$\text{Number of employees are in D after inclusion} = 570 + 900 \times \frac{3}{10} = 840$$

$$\text{Difference} = 1015 - 840 = 175$$

∴ x lies between 172 and 176

72. Answer: c

Explanation:

Given:

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

Calculation:

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

$$2a + 2b + 2c = 16x$$

$$a + b + c = 8x$$

So,

$$8x = 16$$

$$x = 2$$

$$(a + b) = 14$$

$$(b + c) = 8$$

$$(c + a) = 10$$

$$\text{So, } a = 8, b = 6, c = 2$$

Now,

$$(a^2 + b^2 + c^2) : (ab + bc + ca) = (8^2 + 6^2 + 2^2) : (8 \times 6 + 6 \times 2 + 8 \times 2)$$

$$\Rightarrow 104 : 76$$

$$\Rightarrow 26 : 19$$

\therefore Required answer is 26 : 19

73. Answer: c

Explanation:

Given:

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

Concept used:

Total work = LCM of time taken by the workers

Calculation:

LCM of 25 and 40 is 200 i.e total work

So, efficiency of A and B is 8 and 5

Now, in 8 days they will complete $13 \times 8 = 104$ units of the work

So, remaining $200 - 104 = 96$ units of the work will be completed by C in 24 days

So, C's efficiency = $96/24 = 4$

Now, A and C can complete the 60% of the in $(200 \times 3/5)/(12) = 120/12$

$\Rightarrow 10$ days

\therefore Required time taken to complete the task is 10 days

74. Answer: c

Explanation:

Given:

Marked price of an article is ₹4,450

Concept used:

$SP = MP - MP \times \text{Discount\%}$

Calculation:

$SP = 4450 \times 9/10$

$\Rightarrow 4005$

Now $4005 = 120\%$ of CP

So, $CP = 4005 \times 5/6 = \text{Rs. } 3337.5$

\therefore The cost price of the article is Rs. 3337.5

75. Answer: a

Explanation:

Given:

SP of the article = Rs. 882

Loss = 10%

Concept used:

$$SP = CP + CP \times \text{profit \%}$$

Calculation:

According to the question,

$$882 = 90\% \text{ of CP}$$

$$\text{So, } 100\% \text{ of CP} = 980$$

$$\text{Now in the 2nd sale profit} = 991.76 - 980 = 11.76$$

$$\text{Profit \%} = \left(\frac{11.76}{980} \right) \times 100$$

$$\Rightarrow 1.2\%$$

\therefore The profit percentage is 1.2%

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76. Answer: c

Explanation:

The correct answer is BP Mandal.

★ Key Points

- The ' **Second Backward Classes Commission**' in 1979 was headed by **BP Mandal**.
- It is also known as **Mandal Commission**.
- It was formed in 1979 to determine the criteria to identify the socially or educationally backward classes of India.

- Adhering to **Article 340** of the Constitution of India, the **First Backward Classes Commission** was set up by a presidential order on **29 January 1953** under the chairmanship of **Kaka Kalelkar**.

★ Additional Information

- Jayaprakash Narayan popularly referred to as JP or Lok Nayak was an Indian independence activist, theorist, socialist and political leader.
 - He is remembered for leading the mid-1970s opposition against Prime Minister Indira Gandhi, for whose overthrow he had called for a "total revolution".
 - In **1999**, he was posthumously awarded the **Bharat Ratna**, India's highest civilian award, in recognition of his social service. Other awards include the **Magsaysay award** for Public Service in **1965**.
- **Bhimrao Ramji Ambedkar** was an Indian jurist, economist, and Dalit leader who headed the committee drafting the Constitution of India from the Constituent Assembly debates served as Law and Justice Minister in the first cabinet of Jawaharlal Nehru and inspired the Dalit Buddhist movement after renouncing Hinduism.
 - In **1990**, the Bharat Ratna, India's highest civilian award, was posthumously conferred on Ambedkar.

77. Answer: b

Explanation:

The correct answer is Udham Singh.

★ Key Points

- **Sardar Udham Singh** assassinated Michael O'Dwyer in London.
- Udham Singh was born on December 26, 1899, in the Sangrur district of Punjab.
- He was present at Jallianwala Bagh when Massacre took place on April 13, 1919, and was deeply moved by the mishap.
- After that, he went to Africa to work as a labourer and from there moved to the USA.

- In the USA, he worked with the **Ghadar Party** .
- He returned to India after being called by Bhagat Singh in **1927** but was arrested here because of being involved in the activities of the **Ghadar Party**.
- He was released in 1931 and went to Germany and to England in 1933 .
- On March 13, 1940 , Michael O'Dwyer was attending a meeting of the East India Association and Central Asian Society, of which Udham Singh was also a part.
- As soon as the meeting concluded, Udham Singh shot O'Dwyer dead.

★ Additional Information

- Jallianwala Bagh Massacre:
 - The incident happened in the backdrop of protests against the Rowlatt Act and the subsequent arrest of Dr. Satyapal and Saifuddin Kichlew.
 - To control the violence that emerged after the arrest of the two nationalists, restrictions were imposed on the movement of people and holding the demonstrations in Amritsar.
 - But on the day of Baisakhi, April 13, 1919 , thousands of people were unaware of the restrictions gathered at Jallianwala Bagh.
 - General Dyer following the orders of Michael O'Dwyer (Lt. Governor of Punjab) directed the troops to surround the gathering and shoot the people without any warning.
 - As a result, thousands of people were killed and injured.
 - After this incident, Rabindra Nath Tagore renounced his Knighthood.
 - Mahatma Gandhi gave up the title of Kaiser-i-Hind and withdrew the Satyagrah against Rowlatt act.

78. **Answer: a**

Explanation:

The correct answer is 2.

★ Key Points

- India accounts for about 2.4 percent of the total surface area of the world.

- India has an area of 32,87,263 sq. km making it the seventh-largest country of the world.

★ Additional Information

- The east to west width from the Rann of Kutch to Arunachal Pradesh is 2,933 km.
- The north to south extent of India from Indira Col in Kashmir to Kanyakumari is 3,214 km.
- The southernmost point of the country is the Pygmalion Point or Indira Point located at 6 deg. 45 inches North latitude.
- The **northernmost point of India** is located in the state of **Jammu and Kashmir**. The point is known as **Indira Col**.
- The Tropic of Cancer passes through the middle of the country dividing it into two latitudinal halves.
- The **8 Indian states** through which tropic of cancer passes are:
 - Gujarat.
 - Rajasthan.
 - Madhya Pradesh.
 - Chhatisgarh.
 - Jharkhand.
 - West Bengal.
 - Tripura.
 - Mizoram

79. Answer: c

Explanation:

The correct answer is malleability.

★ Key Points

- The property of iron that allows the manufacturing of a knife by beating a hot iron block is called malleability.

- **Malleability** is the property by virtue of which a material may be hammered or rolled into thin sheets without rupture.
- This property generally increases with the increase of temperature.
- Malleability is the ability of a metal to exhibit large deformation or plastic response when being subjected to compressive force.
- **Lead has maximum malleability.**
- The malleable materials commonly used in engineering practice (in order of diminishing malleability) are lead, soft steel, wrought iron, copper, and aluminium.

★ Additional Information

- **Sonority** is the characteristic of metal to emit a deep resonant sound when struck.
- **Plasticity** is the deformation of a material undergoing non-reversible changes of shape in response to applied forces.
- **Ductility** is a mechanical property commonly described as a material's amenability to drawing. In materials science, ductility is defined by the degree to which a material can sustain plastic deformation under tensile stress before failure.
- Metals have a characteristic shine which is known as the **metallic lustre**. This lustre is present because the surface of the metal can reflect the rays of light which are incident on it. Hence, metals are known to be **lustrous**.

80. Answer: a

Explanation:

The correct answer is Assam.

★ Key Points

- Naharkatiya is one of the **two famous oil fields of Assam**.
- The Naharkatiya field is located at a distance of 32 km southwest of Digboi at the left bank of the Burhi Dibing river.
- The oil was discovered in 1953 and production started in 1954.

- Naharkatia is a town and a town area committee in the **Dibrugarh district** in the Indian state of Assam.
- It is well known for its petroleum and gas reserves. Earlier, **Duliajan** , the head office town of **Oil India Limited** was in its circle.

★ Additional Information

- The first oil well was discovered in Assam in Digboi .
- Crude oil was discovered in Digboi in the late 19th century and the first oil well was dug in 1866 .
- Digboi is known as the Oil City of Assam where the first oil well in Asia was drilled. The Assam Oil Company was established in 1899 to oversee production.
- In 1901 , Digboi Refinery was commissioned supplanting the earlier refinery at Margharita .
- The Indian Oil Corporation Ltd (IOC) took over the refinery and marketing management of Assam Oil Company Ltd. with effect from 1981 and created a separate division. This division has both refinery and marketing operations.
- The refinery at Digboi had an installed capacity of 0.50 million tonnes per year .
- Assam has 4 refineries - Noonmati Refinery, Namuligarh Refinery, Bongaigaon Refinery, and Digboi Refinery .

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81. Answer: b

Explanation:

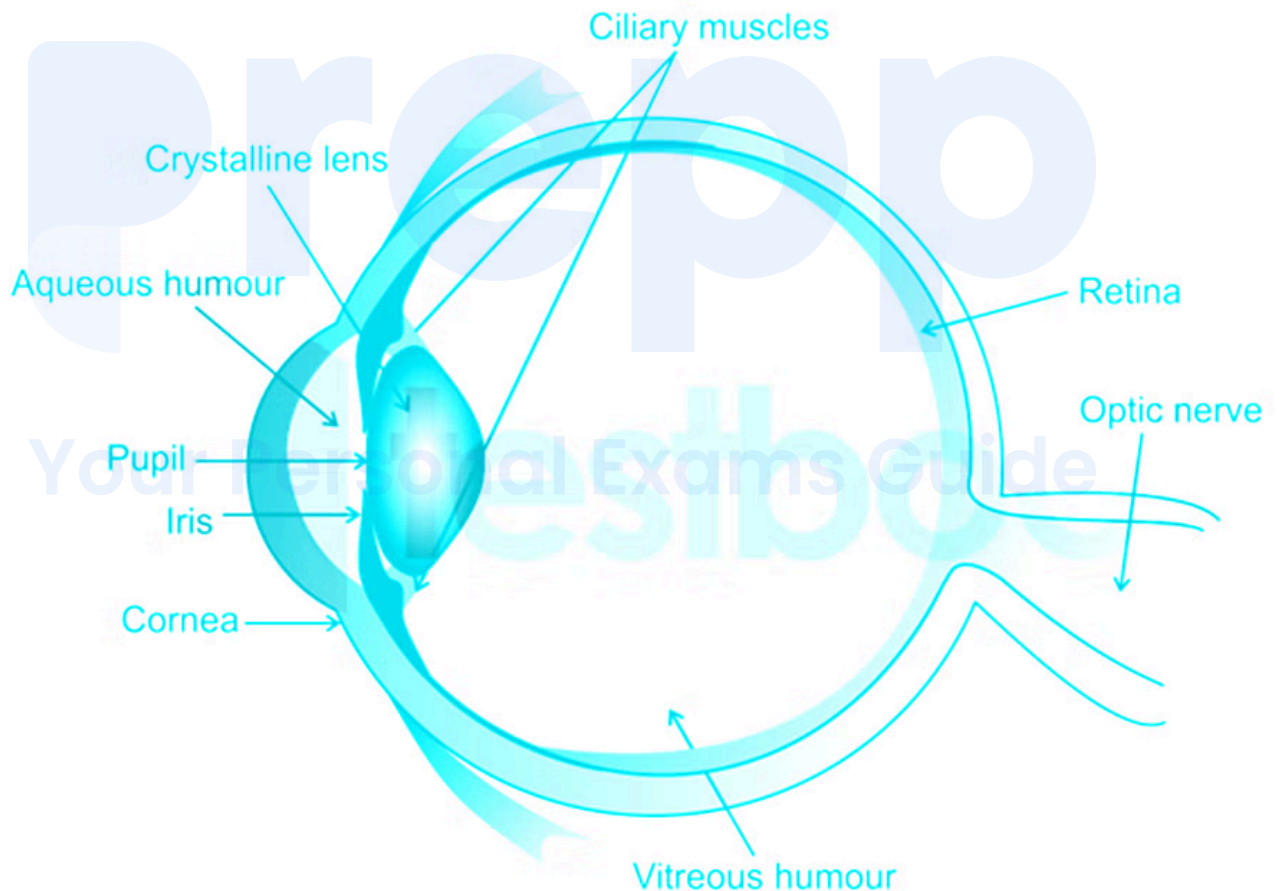
The correct answer is **Iris**.

★ Key Points

- **Iris**
 - The coloured **circular membrane** in the eye just behind the cornea is called the **iris** . Hence, the iris is correct.
 - The iris controls the amount of light entering the eye through the pupil, which is the opening in the center of the iris that looks like a tiny black

circle.

- Like a camera, which controls the amount of light coming in to prevent both overexposure and underexposure, the iris becomes wider and narrower, changing the size of the pupil to control the amount of light entering the eye.
- The pupil gets bigger when more light is needed to see better and smaller when there's plenty of light.
- The eye's lens sits just behind the iris. Just like a camera lens, the eye's lens focuses light to form sharp, clear images. The light that has been focused through the cornea and aqueous humour hit the lens, which then focuses it further, sending the light rays through the vitreous humour and onto the retina.



★ Additional Information

Name of the Part	Characteristics	Function
Cornea	The transparent spherical membrane covering the front part of the eye	Light enters the eye through this membrane; Most of the refraction happens here
Eye Lens	transparent, biconvex structure in the eye	provides finer adjustment required to focus objects on the retina
Iris	The dark muscular diaphragm between the cornea and the lens	controls the size of the pupil
Pupil	An opening between the iris through which light enters the eye	regulates the amount of light entering the eye
Ciliary Muscles	Attached to the eye lens	hold the lens in position and modify the curvature of the lens.
Retina	the light-sensitive surface of an eye on which the image is formed	generate signals which are transmitted to the brain through optical nerves
Optic Nerve	Attached to retina	transmits visual information from the retina to the brain

82. Answer: b

Explanation:

The correct answer is Synovial.

★ Key Points

- Synovial fluid helps in locomotion and many other movements .

- It is characterized by the presence of a fluid-filled synovial cavity present between the articulating surface of the two bones.
- In this type of joint two bones joint by facing each other. Synovial fluid helps in lubrication and reduces the friction between the two bones.
- Examples of such joints are **ball and s**ocket joint, pivot joint, gliding joint, hinge joint, and saddle joint .

★ Additional Information

- A **tendon** is a fibrous connective tissue that attaches **muscle to bone** .
- **Cartilage** is a soft, elastic, and flexible connective tissue that protects the bone from rubbing against each other.
- **Bursae** are small fluid-filled sacs that reduce friction between moving parts in your body's joints.

83. Answer: b

Explanation:

The correct answer is Sharath Kamal.

★ Key Points

- Achanta Sharath Kamal won the ITTF Challenger Plus Oman Open.
- He beat top-seeded Marcos Freitas of Portugal 4-2 in the final played in Muscat on 15 March 2020.

★ Additional Information

- **Subhajit Saha** is a professional table tennis player from West Bengal, India.
 - He won the men's doubles **gold** at the 19th Commonwealth Games' table tennis championship held in New Delhi in **2010** .
- **Sanil Shankar Shetty** is an Indian table tennis player.
 - In the 2018 Commonwealth Games held at Gold Coast, Australia, he won gold in men's team event.

- **Amalraj Anthony Arputharaj** is a professional table tennis player from Tamil Nadu India.
 - He won the silver medal at the 2014 Commonwealth Games in doubles with Sharath Kamal.
-

84. Answer: c

Explanation:

The correct answer is Mustafa al-Kadhimi.

★ Key Points

- Mustafa al-Kadhimi was appointed as the sixth Prime Minister of Iraq.
- He is a former head of Iraq's intelligence agency.
- The majority of 255 parliamentarians approved the proposal for the name of Mustafa.
- Iraq is presently facing a massive crisis because of a decline in oil revenue.

★ Additional Information

- Iraq President - **Barham Salih**
 - Capital - **Baghdad**
 - Currency - **Iraqi dinar**
-

85. Answer: b

Explanation:

The correct answer is Brihadratha.

★ Key Points

- Brihadratha:
 - He was the last ruler of the Mauryan dynasty.

- He was assassinated by **Pushyamitra Sunga**.
- Pushyamitra Sunga was the Brahmin Commander-in-chief of Brihadratha.
- He founded the **Sunga dynasty**.

★ Additional Information

- **Devvarman** was the successor of **Shalishuka Maurya** and reigned for a short period of seven years.
- **Samprati** was an emperor of the Maurya dynasty. He was the son of Ashoka's blind son, **Kunala**, and succeeded his cousin, **Dasharatha**, as emperor of the Maurya Empire. He was a great patron of Jainism.
- Chandragupta Maurya was the founder of the Mauryan dynasty.
 - He defeated the Nanda king Dhanananda with the help of Chanakya/Kautilya.
- Ashoka was the son of Bindusar and one of the greatest rulers of the Mauryan Empire.
 - Ashoka fought the battle of Kalinga in **261 BC**.

86. Answer: a

Explanation:

The correct answer is Third.

★ Key Points

- The Global rank of India in terms of the number of new firms created globally is **third** as per Economic Survey 2020.
- The Survey stated that the birth of new firms is very heterogeneous across Indian districts and sectors.
- It is dispersed across all India.
- Number of New Firms Created:
 - 1,24,000 New Firms Created in 2018 Compared to 70,000 In 2014.
- Growth Rate

- Against a **3.8 per cent** Growth Rate in the Number of New Firms Created During 2006-14, the Growth Rate During 2014-18 Rose to 12.2 per cent .

★ Additional Information

- The Economic Survey of India
 - Ministry: Ministry of Finance
 - Department: Department of Economic Affairs
 - The Chief Economic Advisor: **V Anantha Nageswaran**
 - Minister of Finance : **Nirmala Sitharaman** .

87. Answer: a

Explanation:

The correct answer is ₹2,00,000.

★ Key Points

- Rs. 2,00,000 is the minimum amount that can be remitted through Real Time Gross Settlement (RTGS).
- The acronym "RTGS" stands for **Real-Time Gross Settlement** , which can be described as a mechanism where fund transfers are settled continuously and in real-time, individually on a transaction basis (without netting).
- "Real-Time" means the delivery of instructions at the time of receipt; "Gross Settlement " means the settlement of instructions for the transfer of funds happens separately.
- The RTGS system is intended specifically for large-value transactions.

88. Answer: d

Explanation:

The correct answer is Saranggi.

★ Key Points

Sarangi

- It is also called **saran** or **Saranga**, short-necked fiddle used throughout South Asia, particularly for folk and classical Hindustani music. Measuring about 76 cm (30 inches) long, the instrument has a roughly rectangular slightly waisted body and broad fretless neck generally carved from a single piece of wood.
- It has three melody strings made of gut, usually tuned a fifth and a fourth apart, and 11 to 37 sympathetically vibrating metal strings.
- **The musician, who is seated, normally holds the instrument against his left shoulder in a vertical position and plays with an arched bow held in an underhand grip in his right hand. Hence, Option 4 is correct.**
- The cuticles (or sometimes the space on the fingernail just above the cuticles) of the left hand are pressed against the strings to sound specific pitches.

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★ Additional Information

Shehnai

- It is double-reed conical oboe of North India .
- The Shehnai is made of wood, except for a flaring metal bell attached to the bottom of the instrument, and measures about 12–20 inches (30–50 cm) in length, with six to eight keyless finger holes along its body.

Veena

- It is among the oldest Indian musical instruments.

- From the references to Vedic writings, it can date back to around the first millennium B.C. Temple sculptures from the 2nd century B.C. show a type of veena being played.
- The Saraswati Veena is predominant in Carnatic music and the Rudra veena is the most played veena in Hindustani music.
- The Saraswati veena has seven strings strung over twenty-four fixed frets.
- It is played by sitting cross-legged, with the resonator to the player's right.
- The veena is said to be the **only instrument that can play all the Gamakas** (oscillations) in Carnatic music, usually something that only the most proficient vocalists can achieve.
- The Hindu Goddess of Knowledge, Saraswati, is said to play the Veena.
- Pictures depict her sitting on a lotus and playing the instrument.

Sitar

- **It is a** stringed instrument of the lute family that is popular in northern **India, Pakistan, and Bangladesh** .
- The instrument was invented in medieval India, flourished in the 16th and 17th centuries, and arrived at its present form in 18th-century India.
- Used widely throughout the Indian subcontinent, the sitar became popularly known in the wider world through the works of **Ravi Shankar** , beginning in the late 1950s and early 1960s.

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89. Answer: a

Explanation:

The correct answer is Paryushana.

★ Key Points

- Paryushana is the annual festival of Jains.
 - It is celebrated **eight days** in the month of Bhadrapada by the Svetambara sect.
 - The Digambara sect celebrates it for **ten days** .

★ Additional Information

- **Paryushan Parv** is the most important annual holy event for Jains.
 - It is celebrated in August /September in Bhadrapad Month's Shukla Paksha.
 - The Jain community keeps fast and similarly, prayer/meditation takes place.
 - The five main vows are emphasized during this time of Paryushan Parv. The five main vows of Jainism are **Ahimsa (non-violence), Satya (truthfulness), Asteya (not stealing), Aparigraha (non-acquisition), and Brahmacharya (chaste living)**.
- **KartikaPurnima** is a Hindu, Sikh, and Jain cultural festival celebrated on the Purnima (full moon) day of the Kartik month as per the traditional Hindu calendar.

90. Answer: a

Explanation:

The correct answer is Sikkim.

★ Key Points

- **Khangchendzonga National Park** also, **Kanchenjunga Biosphere Reserve** is a national park and a biosphere reserve located in **Sikkim**, India.
 - In 2018, the Khangchendzonga Biosphere Reserve became the 11th Biosphere Reserve from India that has been included in the UNESCO designated World Network of Biosphere Reserves (WNBR).
 - The decision to include Khangchendzonga Biosphere Reserve in WNBR was taken at the 30th Session of the International Coordinating Council (ICC) of Man and Biosphere (MAB) Programme of UNESCO.
 - It was inscribed on the UNESCO World Heritage Sites list in July 2016, becoming the **first "Mixed Heritage" site of India**.
 - The park is named after the mountain **Kangchenjunga** (alternative spelling **Khangchendzonga**), which is the third-highest peak in the world

at **8,586** meters tall.

★ Additional Information

- Internationally designated **Biosphere Reserves** in India and the year of their inclusion are:
 - Nilgiri, 2000
 - Gulf of Mannar, 2001
 - Sunderban, 2001
 - Nanda Devi, 2004
 - Nokrek, 2009
 - Pachmarhi, 2009
 - Similipal, 2009
 - Achanakmar-Amarkantak, 2012
 - Great Nicobar, 2013
 - Agasthyamala, 2016
 - Khangchendzonga, 2018
 - Panna biosphere reserve, 2020

91. Answer: d

Explanation:

The correct answer is 250.

★ Key Points

- Article 80 of the Constitution lays down the maximum strength of Rajya Sabha as 250.
- Out of 250 seats of Rajya Sabha, 12 members are nominated by the President and 238 are representatives of the States and of the two Union Territories.
- The present strength of Rajya Sabha is 245, out of which 233 are representatives of the States and Union territories of Delhi and Puducherry and 12 are nominated by the President.
- The members nominated by the President are persons having special knowledge or practical experience in respect of such matters as literature,

science, art and social service.

★ Additional Information

- Rajya Sabha (Council of States):
 - The Government of India Act, 1919 provided for the creation of a 'Council of State' as a second chamber of the then legislature.
 - Rajya Sabha is the Upper house of the bicameral Parliament of India.
 - Allocation of Seats:
 - The Fourth Schedule of the Constitution provides for the allocation of seats to the States and Union Territories in Rajya Sabha.
 - The allocation of seats is made on the basis of the population of each State.

92. Answer: d

Explanation:

The correct answer is Viktor Axelsen.

★ Key Points

- **Viktor Axelsen** won the All England Open Badminton Championship Men's Singles 2020 title.
- The championship was held in **Birmingham, England** .
- It was a part of the All England Open championships, which had been held since **1899** .
- In the women's category, **Tai Tzu-Ying** won the championship.
- Viktor Axelsen is a Danish badminton player. He is the 2017 World champion and the 2020 Olympic champion. He won the 2010 World Junior Championships, beating South Korea's Kang Ji-Wook in the final to become the first-ever European player to hold the title.

★ Additional Information

- **Lee Zii Jia** won the All England Open Badminton Championship 2021 in the men's category.
- **Nozomi Okuhara** won the All England Open Badminton Championship 2021 in the women's category.
- **Lin Dan** is a Chinese former professional badminton player. He is a two-time Olympic champion, five-time World champion, as well as a six-time All England champion.
- **Lee Chong Wei** is a Malaysian former badminton player. As a singles player, Lee was ranked first worldwide for 349 weeks, including a 199-week streak from 21 August 2008 to 14 June 2012.
- **Chou Tien-Chen** is a badminton player from Taiwan. He became the first local shuttler in 17 years to win the men's singles title of the Chinese Taipei Open in 2016 since Indonesian-born Fung Permadi won it in 1999.

93. Answer: d

Explanation:

The correct answer is Speaker of the Lok Sabha.

★ Key Points

- **The Speaker of the Lok Sabha** presides over the joint sitting of the two Houses of Parliament.
- Article 108 of the Indian Constitution of India provides for a Joint sitting of both Houses.
- A joint session can be summoned:
 - If a bill is passed by one House and transmitted to the other House and the other House rejects this bill, or
 - The Houses do not agree on the amendments made to the bill, or
 - More than six months elapsed with the bill being received by the other House without it being passed.
- In that situation of a deadlock over a bill, President can summon the joint sitting of the parliament.
- The speaker of Lok Sabha presides over a joint sitting of the two houses.

★ Additional Information

- About Speaker of the Lok Sabha
 - The Lok Sabha, which is the highest legislative body in the country, chooses its Speaker who presides over the day-to-day functioning of the House.
 - Electing the Speaker of the House is one of the first acts of the newly constituted House.
 - The office of the Speaker is a Constitutional Office.
 - The Speaker is guided by the constitutional provisions and the Rules of Procedure and Conduct of Business in Lok Sabha.
 - The Speaker is placed very high in the Warrant of Precedence in the country i.e. at rank 6.
 - Adequate Powers are vested in the office of the Speaker to help her/him in the smooth conduct of parliamentary proceedings.
 - The constitution provides that the Speaker's salary and allowances are not to be voted by the Parliament and are to be charged to the Consolidated Fund of India.
 - In the Lok Sabha chamber, the Speaker's chair is distinctively placed to enable a commanding view of the entire House.
 - The Speaker is assisted by the Secretary-General of the Lok Sabha and senior officers of the Secretariat on parliamentary activities, practice, and procedure.
 - In the absence of the Speaker, the Deputy Speaker discharges the functions. A member from the Panel of Chairmen presides over the House in the absence of both the Speaker and the Deputy Speaker.

94. Answer: d

Explanation:

The correct answer is Ajay Bhushan Pandey.

★ Key Points

- **Ajay Bhushan Pandey** was appointed as the Finance Secretary in March 2020.
- The current finance secretary of India is **T. V. Somanathan** . (as of April 2022)
- He is a 1984 batch Indian Administrative Service officer belonging to the Maharashtra cadre. He is also a former **chief executive officer** of the **Unique Identification Authority of India (UIDAI)** , the nodal agency of the Government of India responsible for implementing Aadhaar.

★ Additional Information

- **Mr Bimal Julka** is an Indian Administrative Service (IAS) Officer of the 1979 batch belonging to the Madhya Pradesh Cadre. He held the prestigious position of Chief Information Commissioner, Government of India, until September 2020.
- **Yashwardhan Kumar Sinha** is the **11th Chief Information Commissioner** of India.
- **Amita Pandove** is an **information commissioner** .

95. Answer: d

Explanation:

The correct answer is a Concave mirror.

★ Key Points

- A concave mirror
 - It is used in a car headlight . The explanation is that a concave mirror is a converging mirror, as opposed to a convex mirror, which is a diverging mirror. Hence, Option 4 is correct.
 - A concave mirror is used in headlights of vehicles because when the bulb of the headlight is placed at the focus of the concave mirror, it allows the light to spread out to infinity (longer distances).
 - Convex mirrors often deviate from the beams of light falling on it. It is therefore never used in a vehicle's headlight.
 - If the hollow sphere is split into pieces and the outer surface of the cut part is painted, it becomes a mirror with its inner surface as a reflection surface. This type of mirror is referred to as a concave mirror.

★ Additional Information

- **Convex Mirror**
 - If the cut section of the hollow sphere is painted from the inside, the outside surface of the hollow sphere becomes the reflective surface. This type of mirror is known as a convex mirror.
 - Convex mirrors are also spherical mirrors. They bulge out and distort the reflected image, **making it smaller**.
 - The focal length of a convex mirror is Positive.
 - Use **Vehicle mirrors, Magnifying glasses, Street light reflectors** , etc.
- Spherical mirrors
 - Spherical mirrors are mirrors with curved surfaces that are painted on one side.
- **Plane Mirror**
 - A flat smooth reflective surface is a plane mirror.
 - These are flat mirrors that **reflect images in their normal proportions, reversed from left to right** .
 - Use **looking glass, solar cookers, periscope, kaleidoscope** , etc.

96. Answer: b

Explanation:

The correct answer is revenue administration.

★ Key Points

- The Mughal provincial administration had two main branches - **Nizamat** and **Diwani** .
- Broadly speaking, **Nizamat** meant **civil administration** and **Diwani** , **revenue administration** . The provincial subahdar was in charge of **Nizamat** (he was also called Nazim) and the **diwan** was in charge of **revenue administration** .

★ Additional Information

- Name of some of the **important departments** during the Mughal administration are :

Diwan-i-Wazarat	Department of revenue & finances
Diwan-i-Arz	Military department
Diwan-i-quza	Justice department
Diwan-i-Raslatmuhtasib	Foreign affairs department
Diwan-i-insha	Custodian of govt. papers

97. Answer: a

Explanation:

The correct answer is Bharatnatyam.

★ Key Points

- Rukmini Devi Arundale was an Indian classical dancer who led the renaissance of the Bharatnatyam dance form.
- She founded the Kalakshetra Foundation in Madras (now Chennai).
- She was also a theosophist who was greatly inspired by Annie Besant.
- Bharatnatyam is an almost 2000-year-old dance form and also the oldest surviving classical dance in India.
- It originates in the state of Tamil Nadu in southern India.

★ Additional Information

- 8 Classical Dances of India and States:

Dance	State
Bharatanatyam	Tamil Nadu
Kathak	Uttar Pradesh
Kathakali	Kerala
Kuchipudi	Andhra Pradesh
Odissi	Odisha
Sattriya	Assam
Manipuri	Manipur
Mohiniyattam	Kerala

98. Answer: b

Explanation:

The correct answer is 2005.

★ Key Points

- **Value Added Tax (VAT)** is an indirect value-added tax that was introduced into the Indian taxation system on **1st April 2005**.
- A value-added tax (VAT) is a consumption tax levied on a commodity whenever it adds value at any point in the supply chain, from production to sale.
- The amount of VAT that the consumer pays is based on the **cost of the product, minus any previously taxable costs of products used in the product.**
- As a taxation concept, VAT replaced **Sales Tax**.
- VAT was introduced to make India a single integrated market.
- However, it was introduced at the state level. On **2nd June 2014**, VAT was implemented in all states and union territories of India, except **Andaman and Nicobar Islands** and **Lakshadweep Islands**.

99. Answer: d

Explanation:

The correct answer is Art.

- **Sarita Joshi**, one of the recipients of Padma Shri 2020 has received the award in the domain of art.

★ Additional Information

- Padma Shri award List (Nov 2021)

Name	Belongs To
Dr. Harish Chandra Verma	Science and Engineering
Smt. Tulsi Gowda	Social Work
Dr. Padma Bandopadhyay	Air Marshal (Retired))
Ekta Ravi Kapoor	Art
Lalbiak Thanga Pachuan	Journalist
Adnan Sami	Art
Sarita Joshi	Art
Karan Johar	Art
Rani Rampal	Captain of Women's Hockey Team
Kangana Ranaut	Art
Oinam Bembem	Sports

100. Answer: d

Explanation:

The correct answer is Liver.

★ Key Points

- The biochemical process in which glucose is converted into glycogen in the liver is known as glycogenesis.
- **The liver** converts glucose into glycogen (a complex carbohydrate used for storage) and amino acids into proteins.
- The cell must have an excess of glucose for starting this process.
- Glucose is the starting molecule and is converted through the process of glycogenesis.
- When the body does not have readily available glucose, the body creates glycogen through the process of glycogenesis.
- This process is activated during rest periods in the liver and also activated by insulin in response to high levels of glucose.
- When the body gets an excess meal and the blood glucose levels are high, the pancreas releases insulin hormone to store glucose.

★ Additional Information

- Glycogenolysis:
 - Glycogenolysis is the breakdown of the molecule glycogen into glucose.
 - Glycogenolysis occurs in muscle and liver cells when more energy needs to be produced.
- Gluconeogenesis:
 - Gluconeogenesis is a process that transforms non-carbohydrate substrates (such as lactate, amino acids, and glycerol) into glucose.
 - Gluconeogenesis takes place in the liver and kidneys. Gluconeogenic substrates include glycerol, lactate, propionate, and certain amino acids.
- Glycolysis:
 - Glycolysis is a cytoplasmic pathway that breaks down glucose into two three-carbon compounds and generates energy.

- This process occurs in the cytosol of the cell cytoplasm. Glycolysis is an oxygen-independent metabolic pathway.

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