Sections	Number of questions	Marks	Duration of Exam	
1. English Language	30	30		
2. Reasoning	35	35	60 minutes	
3. Quantities Aptitude	35	35		
	Total = 100 Qs.	Total marks = 100		

1. English Language

Direction (Q. 1 - 10): Read the following passage carefully and answer the questions given below appropriately. Certain words/phrases have been printed in bold to help you locate them while answering some of the questions.

If citizens can not have the right to commit suicide, they cannot be allowed to stay in an atmosphere full of smoke because that might cause certain chronic diseases leading to their unnatural death. Thus there should be a complete **ban** on smoking in all the public places across the country. The recent Supreme Court order banning smoking in public places is not restricted to a few metropolitan towns; it must be enforced in all the villages and cities.

The three-page order contains certain statements of fact. "Fundamental right guaranteed under Article 21, of the Constitution provides that none shall be deprived of his life without due process of law. Then why a non-smoker should be afflicted by various diseases including lung cancer or of heart only because he is required to go to public places?"

Some time back when the court ruled that suicide was unconstitutional and illegal, it had referred to Article 21, which says that the State alone has the right to deprive a citizen of his life, but with due process of law. Thus inhaling of smoke by passive smokers has been equated with commission of suicide, an act prohibited under law. But when a person who makes an unsuccessful attempt to commit suicide is liable to face criminal prosecution which may end in his conviction, a passive smoker, however, is immune from any penal action. If one is made to inhale smoke for no fault of his and also against his wishes, the **perpetrator** of offence of smoking gets away with a nominal fine for such a grave offence that costs the exchequer Rs. 13,500 crore annually in terms of loss of productivity. According to a WHO report, smoking may kill seven million people annually. During the last half century, smoking killed more than 10 million people in the developing countries alone. The court also felt that the persons not indulging in smoking cannot be compelled to or subjected to passive smoking on account of acts of the smokers. The ban on smoking order is judicial intervention, and not activism.

- 1. What does the author mean by 'commission of suicide'?
- 1) Act of suicide
- 2) Attempt of suicide
- 3) Condoning suicide
- 4) Punishing suicide

- 5) None of these
- 2. Which of the following statements is/are NOTTRUE in the context of the passage?
- A. The ban on smoking is not limited to metros.
- B. The ban order is a blanket ban on smoking.
- C. A smoker seems to be better off than a perpetrator of suicide.
- 1) Only A 2) Only B 3) Only C 4) Both A and C 5) Both B and C
- 3. Smoking in public places has been banned because causes academi
- 1) Health hazards
- 2) Instant unnatural death
- 3) Loss of productivity
- 4) All of these
- 5) Both 2 and 3
- **4.** How have smoking and suicide been equated?
- 1) Both may result in death.
- 2) Both are punishable offences.
- 3) Both violate fundamental right to life.
- 4) Both are unconstitutional.
- 5) None of these
- **5.** Which of the following is TRUE in the context of the passage?
- 1) Smoking has led to millions of deaths in developed countries.
- 2) Due process of law can deprive a citizen of his life
- 3) The State cannot deprive a citizen of his lite without a fair trial.
- 4) Passive smoking is as harmful as actual smoking
- 5) None of these
- **6.** What has the author questioned in the passage

- 1) Smoking
- 2) Passive smoking
- 3) The smoker getting away with a petty fine
- 4) The implementation of the ban order
- 5) Suicide being equated with smoking

Direction (Q. 7 - 8): Which of the following is most nearly the SAME in meaning as the word printed in bold as used in the passage?

- **7.** Ban
- academi 1) Order 2) Proscribe 3) Censure 4) Inhibit 5) None of these
- 8. Perpetrator
- 1) The one who commits crime
- 2) The one who attempts suicide
- 3) The one who suffers
- 4) Offender
- 5) Commissioner

Direction (Q. 9 - 10): Which of the following is most nearly the OPPOSITE in meaning of the word printed in bold as used in the passage?

- 9. Afflicted
- 1) Insufferable 2) inviolate 3) charmed 4) Affected 5) Harmless
- **10.** Due
- 1) Pending 2) Proper 3) Legal 4) Unfair 5) Not rightfully

Direction (Q. 11 - 15): Rearrange the following five sentences (A), (B), (C), (D) and (E) in the proper sequence to form a meaningful paragraph and then answer the questions given below.

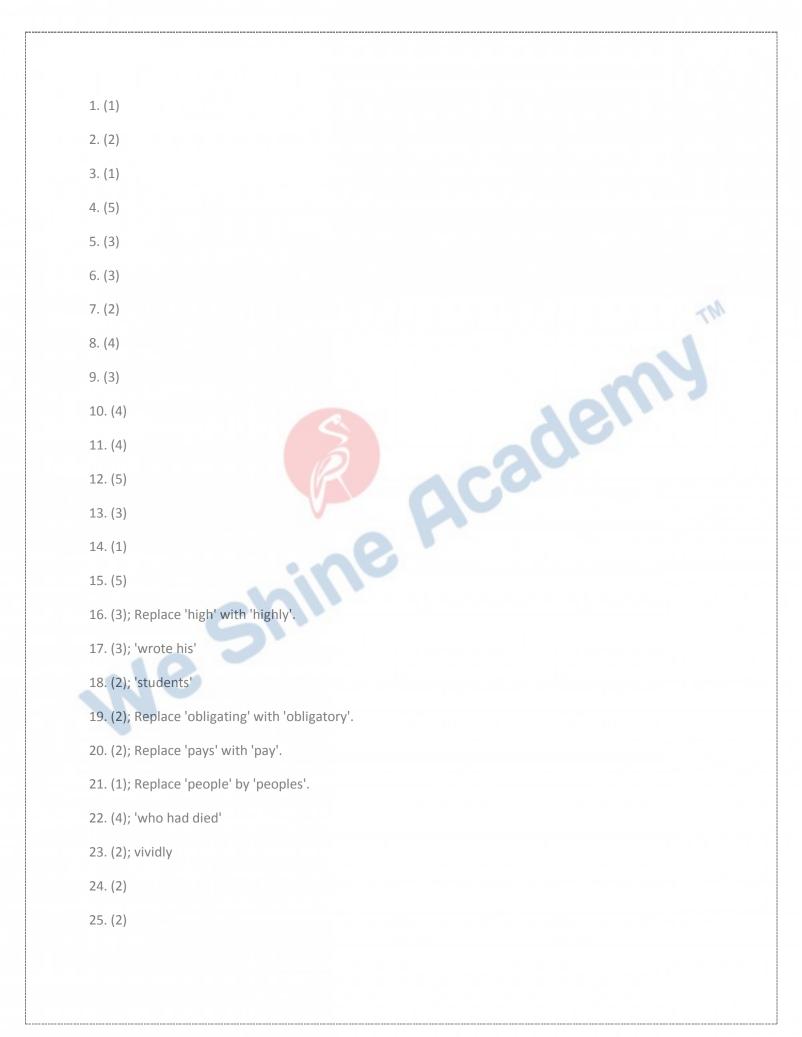
- A. That too, along with recovery and inter-operable storage management set-ups.
- B. It really depends on the nature of the business.
- C. What will determine if technology spending is an inextricable part of the investment strategy.
- D. And so would be financial, banking and telecommunications sectors.

- E. Also, in the wake of WTC disaster, they have become more aware of the need for seamless data.
- F. Businesses that rely heavily on technology would be more receptive to allocate technology budgets.
- 11. Which of the following sentences should be the SIXTH sentence after rearrangement?
- 1) D 2) E 3) C 4) A 5) B
- **12.** Which of the following sentences should be the SECOND sentence after rearrangement?
- 1) E 2) C 3) D 4) A 5) B
- **13.** Which of the following sentences should be the FOURTH sentence after rearrangement?
- 1) A 2) C 3) D 4) E 5) F
- 14. Which of the following sentences should be the THIRD sentence after rearrangement?
- 1) F 2) C 3) D 4) E 5) B
- **15.** Which of the following sentences should be the FIFTH sentence after rearrangement?
- 1) B 2) C 3) A 4) F 5) E

Direction (Q. 16 - 23): Read each sentence to find out whether there is any error in it. The error, if any, will be in one part of the sentence. The number of that part is the answer. If there is no error, the answer is 5). (Ignore errors of punctuation, if any.)

- **16.** 1) Almost all were /2) shocked at the news /3) that the only son of a high regarded ex-govt official /4) was kicked out of his self-made dream house. /5) No error
- 17. 1) Each student /2) went up the board /3) and wrote their /4) name on it. /5) No error
- **18.** 1) A group of successful /2) student of BSC Academy hired /3) a luxury bus for their picnic /4) to celebrate their dream success. /5) No error
- 19. 1) In our team /2) it was obligating /3) for every player to /4) buy his own jersey. /5) No error
- **20.** 1) Several govt employees have been /2) deprived of their pays /3) because of the severe /4) economic crisis the state is facing. /5) No error
- **21.** 1) All the people of S AARC /2) have resolved to /3) help one another /4) for the welfare of their citizens. /5) No error
- **22.** 1) He was deeply /2) aggrieved at the death /3) of his younger brother /4) who died just two months before. /5) No error
- 23. 1) Her remarks /2) vivid indicate /3) the pathetic state /4) of law and order. /5) No error

Direction (Q. 24 - 30): Complete the following sentences.
24. Nothing but trees
1) was seen 2) were seen 3) is planted 4) should plant 5) None of these
25. I am sure it
1) was him 2) was not he 3) was not me 4) was your 5) None of these
26. She never climbs ladders or trees because she
1) has symposia
2) was maniac
3) has acrophobia
4) had sycophancy
5) None of these
27. Our govt is trying to keep in touch with our in the USA.
1) counsel 2) consult out 3) consul 4) commissionaires 5) None of these
28differences exist among the party leaden; on the issue of including caste in census
1) None 2) Not 3) Serious 4) Neither 5) None of these
29. His face was
1) motley with fear
2) peevish by nature
3) livid with rage
4) shy and reserved
5) None of these
30. The ship was laden with
1) rich merchandise 2) armorial 3) arsenals 4) stevedores 5) None of these
Answers:



- 26. (3)
- 27. (3)
- 28. (3)
- 29. (3)
- 30. (1)

2. Reasoning

- **1.** In a class of thirty students, Ashutosh's rank from the t op is eleventh. Alok is seven ranks below Ashutosh. What is Alok's rank from the bottom?
- 1) 11th 2) 12th 3)13th 4) 14th 5) None of these
- **2.** Four of the following five are alike in a certain way and so form a group. Which is the one that does not belong to that group?
- 1) Jowar 2) Paddy 3) Millet 4) Sesame 5) None of these
- **3.** How many pairs of letters are there in the word SCHOOL which have as many letters between them in the word as in the English alphabetical series?
- 1) None 2) One 3) Two 4) Three 5) More than three
- 4. In a certain code, 'CORDIAL' is written as 'SPDCMBJ', How would 'DAYLONG' be written in that code?
- 1) ZBEKHOP 2) ZEBKHOP 3) ZBEHKOP 4) ZEBOKHP 5) None of these
- **5.** A is older than B. C is younger than B and D. D is not as old as A. Who among A, B, C and D is the oldest?
- 1) A 2) B 3) A or B 4) Data inadequate 5) None of these
- **6.** The position of how many digits in the number 7354612 will remain unchanged, if the digits are rearranged in ascending order from left to right?
- 1) None 2) One 3) Two 4) Three 5) More than three
- **7.** If 'A' means '+', 'B' means '+', 'C' means '-' and 'D' means 'x', then what should come in place of question mark in the following equation?

20B16D5A10C8=?

1)36 2)20 3)36.5 4)12 5) None of these

- **8.** In a certain code, 'LAND' is written as '5136' and 'DOWN' is written as '6723'. How would 'LOAW be written in Thai code?
- 1) 5712 2) 5172 3) 5721 4) 5127 5) None of these
- **9.** In a certain code, 'bad and good' is written as '725', 'two and none' is written as '932' and 'that is bad' is written as '154' How would 'two' be written in that code?
- 1) 9 2) 3 3) 2 4) Data inadequate 5) None of these
- **10.** Which of the following is the middle digit of the highest number among the five numbers given below?

371 582 493 245 816

1) 1 2) 7 3) 8 4) 9 5) 4

Direction (Q. 11 - 17): In each of these questions below are given three statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts.

- 1) If only conclusion I follows
- 2) If only conclusion II follows.
- 3) If either conclusion I or II follows.
- 4) If neither conclusion I nor II follows.
- 5) If both conclusions I and II follow.
- 11. Statements: All balls are goals.

All goals are penalty.

All penalties are corners.

Conclusions: I. All corners are balls.

- II. Some penalties are balls.
- 12. Statements: All men are women.

Some women are girls.

All girls are children.

Conclusions: I. Some children are women.

II. Some children are men.

13. Statements: Some wickets are bats.

Some bats are balls.

All balls are wades.

Conclusions: I. Some wickets are wades.

II. Some wades are bats.

14. Statements: Some towers are flowers. ACAIDE MA

No flower is trees.

Some trees are petals.

Conclusions: I. Some petals are towers.

II. Some trees are towers.

15. Statements: All benches are tables.

All tables are chairs.

No chair is desk.

Conclusions: I. No bench is desk.

II. No desk is table.

16. Statements: Some schools are colleges.

Some colleges are industries.

All industries are institutions.

Conclusions: I. Some industries are schools.

II. Some industries are not schools.

17. Statements: All houses are windows.

All doors are windows.

Some windows are locks.

Conclusions: I. Some locks are houses.

II. No lock is house.

Direction (Q. 18 - 25): Study the following arrangement carefully and answer the following questions.

E5JT1A3MQN87IKW6FD9U2Y4VR

- **18.** Four of the following five are alike in a certain way based on their positions in the above arrangement and so form a group. Which is the one that does not belong to that group?
- 1) E5A 2) N8K 3) A3N 4) W69 5) T1M
- **19.** How many such numbers are the rein the above arrangement, each of which is immediately preceded by a consonant but not immediately followed by a consonant?
- 1) None 2) One 3) Two 4) Three 5) More than three
- **20.** How many such vowel sari the rein the above arrangement, each of which is immediately preceded by a number and immediately followed by a consonant?
- 1) None 2) One 3) Two 4) Three 5) More than three
- 21. Which of the following is exactly in the middle of M and U in the above arrangement?
- 1) A 2) 1 3) K 4) 7 5) None of these
- **22.** If all the numbers in the above arrangement are dropped, then which of the following will be eighth to the left of W?
- 1) 3 2) M 3) Q 4) 8 5) None of these
- 23. Which of the following is sixth to the left of eleventh from the left end of the above arrangement?
- 1) M 2) 1 3) 9 4) W 5) None of these
- **24.** How many elements are there between the seventh element from the left and the eighth element from the right?
- 1) 9 2) 10 3) 11 4) 12 5) None of these
- **25.** Which of the following is the fourth to the right of the tenth from the right end of the above arrangement?
- 1) 8 2) D 3) U 4) T 5) None of these

Direction (Q. 26 - 30): Study the following information carefully and answer the following questions.

Bhola, Nalin, Ranjit, Sudhir, Avinash and Rangesh are six students studying in a class. Each of them is of different height and weight. The tallest may not be the heaviest. Avinash is taller than only Bhola but lighter than Ranjit. Nalin is taller than Sudhir and Bhola and heavier than only Avinash and Rangesh.

Bhola is lighter than only Sudhir. Avinash is heavier than Rangesh. Sudhir is taller than Rangesh and Nalin is not the tallest.

- **26.** How many of them are heavier than Avinash?
- 1) One 2) Two 3) Three 4) Five 5) None of these
- **27.** How many of them are shorter than Nalin?
- 1) Two 2) Four 3) Three 4) Five 5) None of these
- **28.** Who among the following is the tallest?
- 1) Rangesh 2) Bhola 3) Avinash 4) Ranjit 5) None of these
- dem **29.** Who among them is third from the top if arranged in descending order of height?
- 1) Nalin 2) Rangesh 3) Sudhir 4) Data inadequate 5) None of these
- **30.** Who among the following is the lightest?
- 1) Rangesh 2) Avinash 3) Bhola 4) Ranjit 5) None of these

Direction (Q. 31 - 35): In the following questions, the symbols \$, £ , ` , € and ¥ are used with the following meanings:

'A \$ B' means 'A is smaller than B'.

'A £ B' means' A is either smaller than or equal to B'.

'A `B' means 'A is greater than Q'.

'A € B' means 'A is either greater than or equal to B'.

'A¥ B' means 'A is equal to B'.

Now in each of these questions, assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true.

- 1) If only I is true.
- 2) If only II is true.
- 3) If either I or II is true.
- 4) If neither I nor II is true.
- 5) If both I and II are true.
- 31. Statements: B\$T, T ¥ M, M`F

Conclusions: I. B \$M II. B \$F

32. Statements: M ¥ R , R `T , T €K

Conclusions: I. K £ M II. K \$ M

33. Statements: W \$ D , D f H , H ¥N

Conclusions: I. N € D II. W \$N

34. Statements: W \pm D , D \in R , R \updownarrow K

Conclusions: I. R¥ W II. R` W

35. Statements: F € J , J` V , V\$N

Conclusions: I. N € F II. N` J

Answers:

1. (3);

Ashutosh's rank = 11th from top

:. Alok's rank from top = 11 + 7 = 18th

:. Alok's rank from bottom = (30 - 18 + 1 =) 13th

2. (4);

All others are coarse grains while sesame is an oilseed.

academiy

3. (2); OS

SCHOOL

4. (1);



5. (1);

A > B; B, D > C; A > D

Combining, we get A > B, D > C

6. (2);

$$? = 20 + 16 \times 5 \div 10 - 8$$

$$=20+\frac{16\times5}{10}-8=20$$

8. (1);

L	Α	Ν	D	0	W
5	1	3	6	7	2

Therefore, LOAW - 5712

The highest number is 816.

11. (2);

cademiy All balls are goals + All goals are penalty = A + A = A = All balls are penalty – conversion – Some penalties are balls (I). Hence II follows. All balls are penalty + All penalties are comers = A + A = A = All balls are comers – conversion – Some comers are balls. Hence I does not follow.

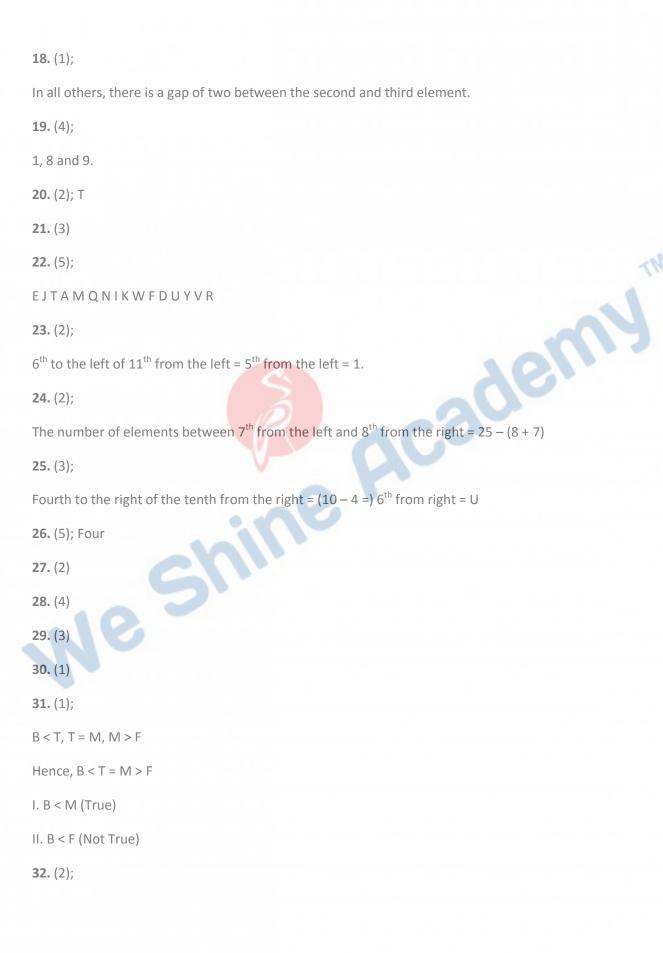
12. (1);

Some women are girls + All girls are children = I + A = I = Some women are children – conversion – some children are women (I). Hence I follows. All men are women + Some women are children = A + I = No conclusion. Hence II does not follow.

13. (2);

Some bats are balls + All balls are wades = I + A = I = Some bats are writes – conversion – Some wades are bats (I). Hence II follows. Some wickets are bats + Some bats are wades = I + I = No conversion. Hence I does not follow.

- **14.** (4)
- **15.** (5)
- **16.** (3)
- **17.** (3)



 $M = R, R > T, T \ge K$

Hence, $M = R > T \ge K$

I. $K \leq M$ (Not True)

II. K < M (True)

33. (5);

 $W < D, D \le H, H = N$

Hence, $W < D \le H = N$

I. $N \ge D$ (True)

II. W < N (True)

34. (4);

 $W \le D, D \ge R < K$

Hence, $W \le D \ge R < K$

I. R = W (Not True)

II. R > W (Not True)

35. (4);

 $F \ge J, J > V, V < N$

Hence, $F \ge J > V < N$

I. N \geq F (Not True)

II. N > J (Not True)

3. Quantities Aptitude

ine academy

Direction (Q. 1 - 25): What value should come in place of question mark (?) in. the following equations?

1.
$$(4)^{1.3} \times (16)^{2.35} \div (64)^2 \times (2)^4 = (4)^?$$

2. 135% of 440-35% of 4400 = ?

- 1) 594 2) 1540 3) 946 4) 2134 5) None of these
- **3.** $\frac{1}{3}$ of $\frac{2}{7}$ of $\frac{3}{11}$ of 3465 = ?
- 1) 84 2) 90 3) 96 4) 108 5) 116
- **4.** $\sqrt[3]{12167} = ?$
- 1) 19 2) 21 3) 23 4) 27 5) 29
- **5.** $\frac{?}{147} = \frac{12}{?}$
- 1) 42 2) 48 3) 54 4) 36 5) 64
- **6.** 17.8 x 15.5 x 2.7 = ?
- academiy 1) 649.24 2) 696.86 3) 744.93 4) 758.04 5) None of these
- **7.** 171.296+210.152 + 781.402=? + **353.**5
- 1) 801.35 2) 809.35 3)813.65 4) 817.75 5) 823.25
- **8.** (36441 + 17811 + ?) ÷54= 1716
- 1) 38412 2) 36732 3) 39874 4) 34346 5) 32432
- **9.** (12.35% of 240 + 0.8% of 440) x 15 =?
- 1) 392.7 2) 404.84 3) 497.4 4) 512.8 5) 524.24
- **10.** $(3381 \div \sqrt{2401}) \div 3 = ?$
- 1) 29 2) 27 3) 23 4) 21 5) 19
- **11.** (55% of 264) x ? = 726
- 1) 5 2) 8 3) 12 4) 13 5) 16
- **12.** 66% of $(\frac{2}{3} \text{ of } \frac{5}{8} \text{ of } 360) = ?$
- 1) 72 2) 84 3) 92 4) 99 5) 102
- **13.** (37)2 = ? ÷ 3 7
- 1) 37 2) 1369 3) 50653 4) 1 5) None of these
- **14.** (44 x 32.5) 8 = ?
- 1) 172.25 3) 178.75 3) 182.50 4) 184 5) 187.5

15. 23.32+2.323+232.3+2233 = ?

1) 2490.943 2) 249.343 3) 2313.693 4) 2439.36 5) None of these

16. 24% of ? = 78

1) 320 2) 324 3) 325 4) 328 5) 332

17. $(13.3)^2 - (11.7)^2 = ?$

1) 32.70 2) 36 3) 40 4) 42.14 5) None of these

18. $(\frac{3}{8} + \frac{9}{20}) \times ? = 1089$

academy 1) 1180 2) 1320 3) 1260 4) 1540 5) None of these

19. $\sqrt{21.16} = ?$

1) 4.6 2) 4.8 3) 4.3 5) 4.08 5) 4.88

20. 1360% of 450-450% of l36 = ?

1) 6120 2) 612 3) 1550.8 4) 5508 5) 0

21. $\frac{11}{13}$ x $\frac{1755}{33}$ x $\frac{43}{270}$ x 36 = ?

1) 256 2) 258 3) 264 4) 268 5) None of these

22. (33 x 11 x 5.5) + ? = 2010

1) 13.5 2) 14.5 3) 16.5 4) 17.5 5) 18.5

23. (43 + 113) x (27.45 - 8.9) = ?

1) 2793.8 2) 2893.8 3) 2993.8 4) 2693.8 5) 3000

24. $(22)^7 \times (22)^{-4} \div (22)^{11} \div (22)^{-13} = (22)^{?}$

1) 3 2) 4 3) 5 4) 6 5) 7

25. (12.5)2 x (22% of ?) = 6875

1) 440 2) 400 3) 220 4) 200 5) 240

Direction (Q. 26 - 30): In the following table the medal tally of seven countries is given. Based on this data answer the following questions.

Country	No. of players	Gold	Silver	Bronze
	participated			

Australia	312	84	69	69
England	348	36	40	34
Canada	254	26	29	31
India	183	22	17	11
S Africa	190	12	13	13
Scotland	166	11	7	11
Jamaica	110	10	4	8

- 26. How many medals are won by these seven countries together?
- 1) 555 2) 556 3) 557 4) 558 5) None of these
- 27. What is the ratio of the total medals won by England to the total number of medals won by India?
- 1) 10:7 2) 11:5 3) 9:7 4) 5:3 5) 5:43
- **28.** What is the difference between the total number of gold medals won by all countries together and the total number of silver medals won by all countries?
- 1) 22 2) 23 3) 24 4) 25 5) 26
- **29.** Total number of medals won by **South Afri**ca is what percentage of t he total number of medals won by India?
- 1) 60% 2) 64% 3) 72% 4) 76% 5) 80%
- **30.** Total number of m e d a l s won by England is what percentage more than the total number of medals won by Canada? (Approximate value)
- 1) 22.5% 2) 24.6% 3) 25% 4) 27.9% 5) 28.5%
- **31.** What value should come in place of question mark (?) in the given number series?
- 1, 11, 42, 156, 664, ?
- 1) 3140 2) 3210 3) 3280 4) 3320 5) 3370
- **32.** Which is the largest fraction among the following?
- 2/3, 4/7, 3/5, 9/13, 11/15
- 1) $\frac{2}{3}$ 2) $\frac{4}{7}$ 3) $\frac{3}{5}$ 4) $\frac{9}{13}$ 5) $\frac{11}{15}$
- 33. A canteen requires 7 dozen of eggs daily. How many eggs will it require in 7 weeks?
- 1) 588 2) 4116 3) 840 4) 3343 5) 2712

34. A person is carrying a bag which contains 140 25-paisa coins, 84 50-paisa coins, 62 one-rupee coins, 28 two rupee coins and 13 five-rupee coins. What is the total amount that the person is carrying?

1) Rs. 260 2) Rs. 272 3) Rs. 275.5 4) Rs. 278.25 5) Rs. 284

35. The price of 18 pens and 33 pencils is 2S2. What will be the price of 30 pens and 55 pencils?

1) 464 2) 470 3) 478 4) 485 5) 492

Answers:

1. (2);

1. (2);

$$(4)^{1.3} \times (4^2)^{2.35} + (4^3)^2 \times (4)^2$$

 $= 4^{1.3+4.7\cdot6+2} = (4)^2$
Therefore, ? = 2
2. (5);
 $\frac{135 \times 440}{100} - \frac{35 \times 4400}{100}$
 $= 594 - 1540 = -946$
3. (2); 90
4. (3); 23
5. (1); 42
6. (3); 744.93

$$=4^{1.3+4.7-6+2}=(4)^2$$

Therefore, ? = 2

2. (5);

$$\frac{135 \times 440}{100} - \frac{35 \times 4400}{100}$$

9. (3);
$$(\frac{12.35}{100} \times 240 + \frac{0.8}{100} \times 440) \times 15$$

$$= (29.64 + 3.52) \times 15 = 33.16 \times 15 = 497.4$$

10. (3);

$$(3381 \div 79) \div 3 = 69 \div 3 = 23$$

11. (1);

$$(\frac{55}{100} \times 264) \times ? = 726$$

Therefore,
$$? = \frac{726}{145.2} = 5$$

12. (4);

$$\frac{66}{100}$$
 x $(\frac{2 \times 5 \times 360}{3 \times 8})$ = 99

13. (3);

$$? = (37)^2 \times 37 = 50653$$

$$? = \frac{78 \times 100}{24} = 325$$

$$(13.3)^2 - (11.7)^2$$

14. (2);
178.75
15. (1);
2490.943
16. (3);

$$? = \frac{78 \times 100}{24} = 325$$

17. (3);
 $(13.3)^2 - (11.7)^2 = (13.3 + 11.7) (13.3 - 11.7) = 25 \times 1.6 = 40$
18. (2);
 $(\frac{3}{8} + \frac{9}{20}) \times ? = 1089$

$$= 25 \times 1.6 = 40$$

$$\left(\frac{3}{8} + \frac{9}{20}\right) \times ? = 1089$$

$$\left(\frac{15+18}{40}\right)$$
 x ? = 1089

Therefore,
$$? = \frac{1089 \times 40}{33} = 1320$$

19. (1);

$$\sqrt{21.16} = \sqrt{\frac{2116}{100}} = \frac{46}{10} = 4.6$$

20. (4);

$$\frac{1360 \times 450}{100} - \frac{450 \times 136}{100}$$

21. (2);

258

$$? = \frac{11 \times 1755 \times 43 \times 36}{13 \times 33 \times 270} = 258$$

$$? = 2010 - (33 \times 11 \times 5.5)$$

$$= 2010 - 1996.5 = 13.5$$

$$(22)^7 \times (22)^{-4} \div (22)^{11} \div (22)^{-13}$$

$$= (22)^{7-4-11+13} = (22)^{5}$$

? = 2010 – (33 x 11 x 5.5)
= 2010 – 1996.5 = 13.5
23. (2);
? = 156 x 18.55 = 2893.8
24. (3);

$$(22)^7 \times (22)^{-4} \div (22)^{11} \div (22)^{-13}$$

= $(22)^{7-4-11+13} = (22)^5$
25. (4);
 $(12.5)^2 \times \frac{22}{100} \times ? = 6875$
? = $\frac{6875 \times 100}{22 \times 1156.25} = 200$
26. (3); 557
27. (2); 11:5

$$? = \frac{6875 \times 100}{22 \times 156.25} = 200$$

Required % =
$$\frac{38}{50}$$
 x 100 = 76%

30. (4);

Reqd % =
$$\frac{(110-86)}{86}$$
 x 100

$$=\frac{2400}{86}=27.9\%$$

No. of eggs =
$$7x12x7x7 = 4116$$

Total amount

Total amount
$$= \frac{140}{4} + \frac{84}{2} + 62 + (28x2) + (13 \times 5)$$

$$= 35 + 42 + 62 + 56 + 65 = 260$$
35. (2);

Let the price of a pen be x and that of a pencil be y.

Therefore, $18x + 33y = 282$ (I)

Multiplying equation (I) by 5/3, we get
$$18x \times \frac{5}{3} + 33y \times \frac{5}{3} = 282 \times \frac{5}{3}$$

$$30x + 55y = 470$$

$$= 35 + 42 + 62 + 56 + 65 = 260$$

Let the price of a pen be x and that of a pencil be y.

Therefore,
$$18x + 33y = 282$$
(I)

Multiplying equation (I) by 5/3, we get

$$18x \times \frac{5}{3} + 33y \times \frac{5}{3} = 282 \times \frac{5}{3}$$

$$30x + 55y = 470$$