PRACTICE SET 10

INSTRUCTIONS

- **This practice set consists of two sections. Quantitative Aptitude (Qs. 1-40) & Reasoning Ability (Qs. 41-80).**
- **All the questions are compulsory.**
- **Each question has five options, of which only one is correct. The candidates are advised to read all the options thoroughly.**
- **There is negative marking equivalent to $1/4^{th}$ of the mark allotted to the specific question for wrong answer.**

Time : 45 Min. **Max. Marks : 80**

QUANTITATIVE APTITUDE

DIRECTIONS (Qs. 1-10): What will come in place of the question mark (?) in the following questions ?

1. $3 \times ? + 30 = 0$

(a) -15 (b) 15
(c) 10 (d) -30
(e) None of these

2. $40.83 \times 1.02 \times 1.2 = ?$

(a) 49.97592 (b) 41.64660
(c) 58.7952 (d) 42.479532
(e) None of these

3. $3\frac{1}{3} + 6\frac{3}{7} \times 1\frac{1}{2} \times \frac{22}{7} = ?$

(a) 4.4 (b) $\frac{22}{7}$
(c) $\frac{5}{22}$ (d) 40.5
(e) None of these

4. $3978 + 112 \times 2 = ? \div 2$

(a) 8400 (b) 8406
(c) 8600 (d) 8404
(e) None of these

5. $\left(10^{3.7} \times 10^{1.3}\right)^2 = 10^{?}$

(a) 6 (b) 7
(c) 5 (d) 3
(e) None of these

6. $300 + 10^2 \times 2 = ?$

(a) 450 (b) 800
(c) 550 (d) 320
(e) None of these

7. $\frac{5 \times 1.6 - 2 \times 1.4}{1.3} = ?$

(a) 4 (b) 0.4
(c) 1.4 (d) 1.2
(e) None of these

8. $3\frac{2}{5} + 7\frac{1}{5} - 5\frac{1}{4} = ?$

(a) $5\frac{3}{10}$ (b) $5\frac{3}{20}$
(c) $5\frac{7}{10}$ (d) $5\frac{11}{20}$
(e) None of these

9. $25.05 \times 123.95 + 388.999 \times 15.001 = ?$

(a) 900 (b) 8950
(c) 8935 (d) 8975
(e) 8995

10. $(15.01)^2 \times \sqrt{730} = ?$

(a) 6125 (b) 6225
(c) 6200 (d) 6075
(e) 6250

11. A boy was asked to write $2^5 \times 9^2$ but he wrote 2592. The numerical difference between the two is:
(a) 0 (b) 3
(c) 2 (d) 9
(e) None of these

12. If the two numbers are respectively 20% and 50% of a third number, what is the percentage of the first number to the second ?
(a) 10 (b) 20
(c) 30 (d) 40
(e) None of these

13. A man gains 10% by selling a certain article for a certain price. If he sells it at double the price, then the profit made is:
(a) 120% (b) 60%
(c) 100% (d) 80%
(e) None of these

14. A, B and C enter into a partnership with investments of ₹ 3500, ₹ 4500 and ₹ 5500, respectively. In the first six months, profit is ₹ 405. What is A's share in the profit ?
(a) ₹ 200 (b) ₹ 105
(c) ₹ 250 (d) ₹ 151
(e) None of these

15. A tap can fill a cistern in 8 hours and another tap can empty it in 16 hours. If both the taps are opened simultaneously, the time taken (in hours) to fill the cistern will be :
(a) 8 (b) 10
(c) 16 (d) 24
(e) None of these

16. Pipes A and B can fill a tank in 5 and 6 hours, respectively. Pipe C can empty it in 12 hours. The tank is half full. All the three pipes are in operation simultaneously. After how much time, the tank will be full ?
(a) $3\frac{9}{17}$ h (b) 11 h
(c) $2\frac{8}{11}$ h (d) $1\frac{13}{17}$ h
(e) None of these

17. If the sum of the digits of an even number is divisible by 9, then that number is always divisible by :
(a) 24 (b) 12
(c) 18 (d) 27
(e) None of these

18. A water tank in the form of a cuboid has its base 20 m long, 7 m wide and 10 m deep. Initially, the tank is full but later when water is taken out of it, the level of water in the tank reduces by 2 m. The volume of water left in the tank is :
(a) $1120\,m^3$ (b) $400\,m^3$
(c) $280\,m^3$ (d) $140\,m^3$
(e) None of these

19. The area of a circular plot is twice the area of a rectangular plot. If the area of the rectangular plot is 11088 sq. metres., what is the perimeter of the circular plot?
(a) 484 metres (b) 572 metres
(c) 528 metres (d) 440 metres
(e) None of these

20. The sum of the two digits of a two-digit number and the difference between the two digits of the two-digit number is 8. What is the two digit number?
(a) 80 (b) 88
(3) 44 (d) Cannot be determined
(e) None of these

21. The total number of students studying in a college is 4220. If the number of girls studying in the college is 2420, what is the respective ratio of the number of boys to the number of girls studying in the college?
(a) 90 : 131 (b) 90 : 121
(c) 121 : 70 (d) 121 : 80
(e) None of these

22. The cost of 14 kgs. of rice is ₹ 672, the cost of 12 kgs. of wheat is ₹ 432 and the cost of 18 kgs. of sugar is ₹ 504. What is the total cost of 20 kgs. of rice, 15 kgs. of wheat and 16 kgs. of sugar?
(a) ₹ 1,898 (b) ₹ 1,948
(c) ₹ 2,020 (d) ₹1,964
(e) None of these

23. If the length of a rectangular field is increased by 20% and the breadth is reduced by 20%, the area of the rectangle will be 192 m^2. What is the area of the original rectangle?
(a) $184\,m^2$ (b) $196\,m^2$
(c) $204\,m^2$ (d) $225\,m^2$
(e) None of these

24. The product of one-third of a number and 150% of another number is what per cent of the product of the original numbers?
(a) 80% (b) 50%
(c) 75% (d) 120%
(e) None of these

25. Inside a square plot, a circular garden is developed which exactly fits in the square plot and the diameter of the garden is equal to the side of the square plot which is 28 metres. What is the area of the space left out in the square plot after developing the garden?
(a) $98\,m^2$ (b) $146\,m^2$
(c) $84\,m^2$ (d) $168\,m^2$
(e) None of these

DIRECTIONS (Qs. 26-30) : Find the next term in the given series in each of the questions below.

26. 41, 31, ?, 17, 11, 5
(a) 19 (b) 21
(c) 23 (d) 27
(e) None of these

27. 8, 15, 28, 53, ?
(a) 106 (b) 98
(c) 100 (d) 102
(e) None of these

28. 24, 49, ?, 94, 15, 31, 59, 58
(a) 51 (b) 63
(c) 77 (d) 95
(e) None of these

29. 5, 10, 13, 26, 29, 58, ?, 122
(a) 60 (b) 61
(c) 111 (d) 91
(e) None of these

30. 2, 3, 10, 15, 26, ?, 55
(a) 32 (b) 33
(c) 34 (d) 35
(e) None of these

DIRECTIONS (Qs. 31-35) : What approximate value should come in place of the question mark (?) in the following questions? (You are not expected to calculate the exact value).

31. $\sqrt[3]{860000} = ?$
(a) 75 (b) 80
(c) 110 (d) 125
(e) 95

32. $1\frac{5}{8} + 5\frac{1}{3} + 2\frac{2}{5} = ?$
(a) 15 (b) 4
(c) 19 (d) 9
(e) 21

33. $8769 \div 82 \div 4 = ?$
(a) 27 (b) 44
(c) 429 (d) 12
(e) 512

34. ? % of 45.999 × 16% of 83.006 = 116.073
(a) 6 (b) 24
(c) 19 (d) 30
(e) 11

35. $12.998 \times 27.059 \times 17.999 = ?$
(a) 6020 (b) 6320
(c) 6800 (d) 6540
(e) 6150

DIRECTIONS (Qs. 36-40): Study the following table and answer the questions given below.

Export of electronic goods from India (in ₹Crore)

Year	Total Exports	Electronic Goods
2011	5,143	552
2012	5,404	624
2013	5,426	717
2014	5,999	653

36. **Approximately** what percent of the total exports were electronic goods in 2013?
(a) 13% (b) 19%
(c) 21% (d) 23%
(e) None of these

37. The fall in electronic goods exports in 2014 from 2013 was **nearly**
(a) 20% (b) 15%
(c) 9% (d) 12%
(e) 16%

38. If the electronic goods are not exported in the year 2012, then what are the total exports of that year?
(a) 4770 (b) 4780
(c) 4790 (d) 4760
(e) None of these

39. Percentage growth of electronic goods exports in the period of 2012 to 2013 exceeded the percentage growth of the total exports over the same period **approximately** by
(a) 3.5 (b) 12.5
(c) 15.5 (d) 11.5
(e) 14.5

40. Over the 4-year period from 2011 to 2014, the electronic exports rose by **nearly**
(a) 16.3% (b) 15.3%
(c) 14.3% (d) 18.3%
(e) 20.3%

REASONING ABILITY

DIRECTIONS (Qs. 41-45) : In each question below are two/three statements followed by two conclusions numbered I and II. You have to take the two/three given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Give answer (a) if **only** conclusion I follows.
Give answer (b) if **only** conclusion II follows.
Give answer (c) if **either** conclusion I or conclusion II follows.
Give answer (d) if **neither** conclusion I nor conclusion II follows.
Give answer (e) if **both** conclusion I and conclusion II follow.

41. **Statements** : All kites are birds. All aeroplanes are kites. No bird is a fish.
Conclusions : I. No fish is a kite.
II. All aeroplanes are birds.

42. **Statements** : Some wires are fires. All fires are tyres.
Conclusions : I. Atleast some tyres are wires.
II. Some fires are definitely not wires.

43. **Statements** : No clip is a pin. All badges are pins.
Conclusions : I. No badge is a clip.
II. All pins are badges.

44. **Statements** : No colour is a paint. No paint is a brush.
Conclusions : I. No colour is a brush.
II. All brushes are colours.

45. **Statements** : All stars are planets. All planets are galaxies.
Conclusions : I. All galaxies are planets.
II. All starts are galaxies.

DIRECTIONS (Qs. 46-50) : Study the following arrangement carefully and answer the questions given below :

B U B D C E D B D E U B **A D C B E** A C D A E B A U A C D B C AC

46. How many such pairs of alphabets are there in the series of alphabets given in BOLD (A to E) in the above arrangement each of which has as many letters between them (in both forward and backward directions) as they have between them in the English alphabetical series ?
(a) None (b) One
(c) Two (d) Three
(e) More than three

47. Which of the following is the eighth to the left of the twentieth from the left end of the above arrangement ?
(a) C (b) E
(c) U (d) B
(e) A

48. How many meaningful words can be formed with the alphabets which are first, second, fifth and sixth from the left end of the above arrangement ?
(a) None (b) One
(c) Two (d) Three
(e) More than three

49. How many such consonants are there in the above arrangement each of which is immediately preceded by a vowel and also immediately followed by a consonant ?
(a) One (b) Two
(c) Three (d) Four
(e) More than Four

50. If all as are dropped from the above arrangement, which of the following will be eleventh from the right end of the above arrangement ?
(a) E (b) C
(c) D (d) U
(e) None of these

DIRECTIONS (Qs. 51-55) : Study the following information to answer the given questions :

Eight people are sitting in two parallel rows containing four people each, in such a way that there is an equal distance between adjacent persons. In row-1 P, Q, R and S are seated (but not necessarily in the same order) and all of them are facing south. In row-2 A, B, C and D are seated (but not necessarily in the same order) and all of them are facing north. Therefore, in the given seating arrangement each member seated in a row faces another member of the other row.

R sits second to the right of P. A is an immediate neighbour of the person who faces R. Q sits second to left of the person who faces A. Only one person sits between B and C. C does not face P. C does not sit at any of the extreme ends of the line.

51. Four of the following five are alike in a certain way based on the given seating arrangement and thus form a group. Which is the one that does not belong to that group ?
(a) A (b) P
(c) R (d) B
(e) S

52. Who amongst the following faces B ?
(a) P (b) Q
(c) R (d) S
(e) Cannot be determined

53. Which of the following is true regarding S ?
(a) S sits exactly between R and P
(b) S sits second to left of Q
(c) P is an immediate neighbour of S
(d) D is an immediate neighbour of the person who faces S
(e) None is true

54. Who amongst the following faces Q ?
(a) A (b) B
(c) C (d) D
(e) Cannot be determined

55. Who amongst the following faces the person who sits exactly between B and C ?
(a) P (b) Q
(c) R (d) S
(e) Cannot be determined

DIRECTIONS (Qs. 56-60): In each question below is given a group of letters followed by four combinations of digits/symbols numbered (a), (b), (c) and (d). You have to find out which of the combinations correctly represents the group of letters based on the coding system and the conditions given below and mark the number of that combination as your answer. If none of the combinations correctly represents the group of letters, mark (e) i.e. 'None of these' as your answer.

Letters	P	M	A	E	J	K	D	R	W	H	I	U	T	F
Digits/symbols Conditions	4	$	1	2	3	#	5	@	©	6	%	δ	7	9

(i) If the first letter is a consonant and the last letter is a vowel, the codes of both these are to be interchanged.
(ii) If both the first and the last letters are consonants both these are to be coded as per the code of the last letter.
(iii) If the first letter is vowel and the last letter is a consonant both these are to be coded as ' '

Note: All the remaining letters are to be coded as per their original codes.

56. ERWHKA
(a) 2@©6#1 (b) 1@©6#2 (c) 1@©6#I
(d) 2@©6#2 (e) None of these

57. MPEKDU
(a) $42#5δ (b) $42#5$ (c) δ42#5δ
(d) δ425#$ (e) None of these

58. TMEIUF
(a) 7$2%δ9 (b) 7$2%δ7 (c) 9$2%δ7
(d) 9$2%δ9 (e) None of these

59. JTAERI
(a) % 712@3 (b) 3712@3 (c) 712@
(d) %712@% (e) None of these

60. UKTMIH
(a) #7$%6 (b) 6#7$%δ (c) #7$%
(d) 7#$%6 (e) None of these

61. In a certain code GRANT is written as UOBSH and PRIDE is written as FEJSQ, How is SOLD written in that code?
(a) EPMT (b) TPME
(c) EMPT (d) CKNR
(e) ETPM

62. 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?
(a) 19 (b) 17
(c) 13 (d) 27
(e) 37

63. How many meaningful English words can be made with the second, the fourth, the sixth and the seventh letters of the word STUMBLE using each letter only once in each word?
(a) None (b) One
(c) Two (d) Three
(e) More than three

64. What should come in place of the question mark (?) in the following letter series based on the English alphabetical order?
BE GJ LO QT ?
(a) UX (b) VY
(c) SV (d) RU
(e) WZ

65. How many such pairs of letters are there in the word GOVERNMENT each of which has as many letters between them in the word (in both forward and backward directions) as in the English alphabet?
(a) None (b) One
(c) Two (d) Three
(e) More than three

DIRECTIONS (Qs. 66-70): Study the following information carefully and answer the given questions.

Eight colleagues, A, B, C, D, E, F, G and H, are sitting around a circular table facing the centre but not necessarily in the same order. Each one of them holds a different post–Manager, Company Secretary, Chairman, President, Vice President, Group Leader, Financial Advisor and Managing Director.

A sits third to the right of the Managing Director. Only two people sit between the Managing Director and H. The Vice President and the Company Secretary are immediate neighbours. Neither A nor H is a Vice President or a Company Secretary. The Vice President is not an immediate neighbour of the Managing Director. The Manager sits second to the left of E. E is not an immediate neighbour of H. The Manager is an immediate neighbour of both the Group Leader and the Financial Advisor. The Financial Advisor sits third to the -right of B. B is not the Vice President. C sits on the immediate right of the Chairman. A is not the Chairman. F is not an immediate neighbour of A. G is not an immediate neighbour of the Manager.

66. Who amongst the following sits third to the left of E?
(a) Manager (b) G
(c) A (d) Financial Advisor
(e) B

67. Four of the following five are alike in a certain way based on the given arrangement and thus form a group. Which is the one that does not belong to that group?
(a) F-Chairman (b) G-President
(c) D-Manager (d) A-Financial Advisor
(e) Managing Director

68. Who among the following is the President of the company?
(a) A (b) C
(c) H (d) G
(e) D

69. Which of the following is true with respect to the given seating arrangement?
(a) The Group Leader of the company is an immediate neighbour of the Vice President.
(b) G sits second to the right of D.
(c) The Group Leader and the Company Secretary are immediate neighbours.
(d) The Chairman of the company sits to the immediate left of the Managing Director.
(e) The Group Leader sits second to the left of D.

70. Which of the following posts does B hold in the company?
(a) Chairman (b) Manager
(c) Company Secretary (d) Vice President
(e) Financial Advisor

DIRECTIONS (Qs. 71-75) : In the following questions, the symbols δ, %, $, # and @ are used with the following meaning as illustrated below:

'P $ Q' means 'P is not smaller than Q'.
'P @ Q' means 'P is not greater than Q'.
'P δ Q' means 'P is neither smaller than nor equal to Q'.
'P # Q' means 'P is neither greater than nor equal to Q'.
'P % Q' means 'P is neither smaller than nor greater than Q'.

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

Give answer
(a) if only Conclusion I is true.
(b) if only Conclusion II is true.
(c) if either Conclusion I or II is true.
(d) if neither Conclusion I nor II is true.
(e) if both Conclusions I and II are true.

71. **Statements:** F @ N, N δ R, H @ R
Conclusions: **I.** H δ N
II. F # R

72. **Statements:** M # T, T @ K, K $ N
Conclusions: **I.** M # N
II. K δ M

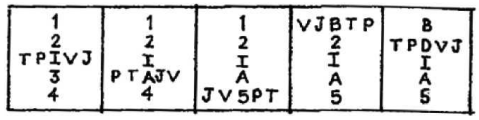
73. **Statements:** T % H, H $ W
Conclusions: **I.** W # T
II. W % T

74. **Statements:** N δ K, K # D, D % M
Conclusions: **I.** M δ K
II. D δ N

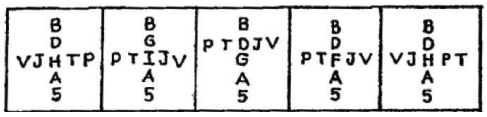
75. **Statements:** J $ B, B % R, R δ F
Conclusions: **I.** F # B
II. R @ J

DIRECTIONS (Qs. 66-70) : In each of the questions given below which one of the five answer figures on the right should come after the problem figures on the left, if the sequence were continued ?

76. **Problem Figures**

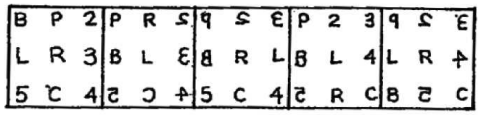


Answer Figures

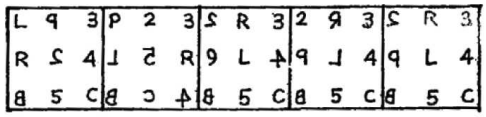


(a) (b) (c) (d) (e)

77. **Problem Figures**

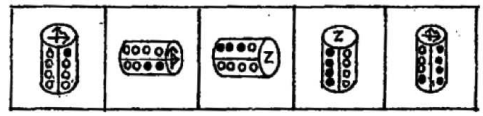


Answer Figures

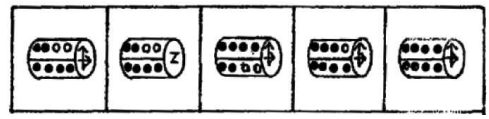


(a) (b) (c) (d) (e)

78. **Problem Figures**

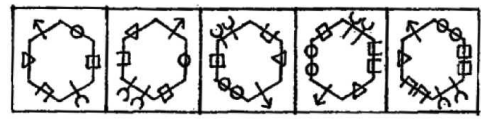


Answer Figures

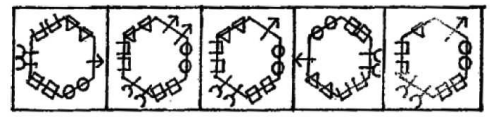


(a) (b) (c) (d) (e)

79. **Problem Figures**

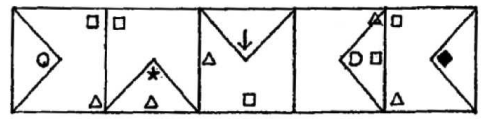


Answer Figures

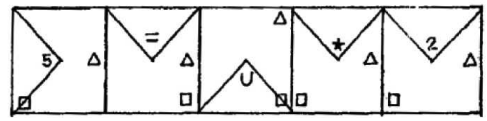


(a) (b) (c) (d) (e)

80. **Problem Figures**



Answer Figures



(a) (b) (c) (d) (e)

HINTS & EXPLANATIONS

1. (e) $3 \times ? + 30 = 0$

$\Rightarrow ? = \frac{-30}{3} = -10$

2. (a) $? = 40.83 \times 1.02 \times 1.2 = 49.97592$

3. (e) $? = 3\frac{1}{3} + 6\frac{3}{7} \times 1\frac{1}{2} \times \frac{22}{7}$

$= \frac{10}{3} + \frac{45}{7} \times \frac{3}{2} \times \frac{22}{7} = 2.44$

4. (d) $3978 + 112 \times 2 = ? \div 2$

$\therefore ? = (3978 + 224) \times 2 = 8404$

5. (e) $\left(10^{3.7} \times 10^{1.3}\right)^2 = 10^?$

$\Rightarrow \left(10^{3.7+1.3}\right)^2 = 10^? \quad [\because a^b \times a^c = a^{b+c}]$

$\therefore 10^? = \left(10^5\right)^2 = 10^{5\times 2} \quad \left[\because \left(a^b\right)^c = a^{bc}\right] = 10^{10}$

6. (e) $? = 300 + (100 \times 2) = 300 + 200 = 500$

7. (a) $? = \frac{5 \times 1.6 - 2 \times 1.4}{1.3} = \frac{8 - 2.8}{1.3} = \frac{5.2}{1.3} = 4$

8. (e) $3\frac{2}{5} + 7\frac{1}{5} - 5\frac{1}{4} = (3 + 7 - 5) + \left(\frac{2}{5} + \frac{1}{5} - \frac{1}{4}\right) =$

$5 + \left(\frac{8 + 4 - 5}{20}\right) = 5\frac{7}{20}$

9. (c) $25 \times 124 + 389 \times 15 = 3100 + 5835 = 8935$

10. (d) $(15)^2 \times \sqrt{730} = 225 \times 27 = 6075$

11. (a) $2^5 \times 9^2 = 32 \times 81 = 2592$.

$\therefore$ Difference $= 2^5 \times 9^2 - 2592$

$= 2592 - 2592 = 0$

Hence, the numerical difference is 0.

12. (d) Let the third number be 100. Then, the first and second numbers will be 20 and 50, respectively.

Required % $= \frac{20}{50} \times 100 = 40$

13. (a) Let the cost price of an article be ₹ 100

then, S.P. $= 100 + 10 =$ ₹ 110

If S.P. $= 2 \times 110 =$ ₹ 220

then, profit % $= \frac{(220 - 100)}{100} \times 100 = 120\%$

14. (b) Ratio of investment

$= 3500 : 4500 : 5500 = 35 : 45 : 55 = 7 : 9 : 11$

Since, Ratio of investment is same as ratio of profit.

$\therefore$ Ratio of profit $= 7 : 9 : 11$

Now, profit = ₹ 405

$\therefore$ A's share $= \frac{7}{27} \times 405 =$ ₹ 105

15. (c) Part of the tank filled in one hour $= \frac{1}{8} - \frac{1}{16} = \frac{1}{16}$

Hence, the tank will be filled in 16 hours.

16. (d) Part of the tank filled by the three pipes working simultaneously in one hour is $= \frac{1}{5} + \frac{1}{6} - \frac{1}{12} = \frac{17}{60}$

i.e. it takes $\frac{60}{17}$ hours to fill up the tank completely.

Now, $\frac{1}{2}$ of the tank is filled with all the pipes open, simultaneously together in $\frac{60}{17} \times \frac{1}{2} = 1\frac{13}{17}$ hours

17. (c) Any even number is given by 2n for all $n \in Z$, where Z is a set of integers. This is divisible by 9 if it form $9 \times 2n = 18n$, which is divisible by 18.

For example, number 36 is even and sum of digits (3 + 6) is 9, which is divisible by 9. Hence, the number 36 is divisible by 18.

18. (a) Volume of water left in the tank $= \ell \times b \times h$

$= 20 \times 7 \times (10 - 2) = 1120\ m^3$

19. (c) $\pi r^2 = 2 \times 11088$

$\Rightarrow \frac{22}{7} \times r^2 = 2 \times 11088$

$\Rightarrow r^2 = \frac{2 \times 11088 \times 7}{22} = 7056$

$\therefore r = \sqrt{7056} = 84$ metre

$\therefore$ Circumference $= 2\pi r = 2 \times \frac{22}{7} \times 84 = 528$ metre

20. (a) $x + y = 8$

$x - y = 8$

$2x = 16$

$\Rightarrow x = 8$

$\therefore y = 0$

$\therefore$ Two digit number $= 80$

21. (b) Required ratio

$= (4220 - 2420) : 2420$

$= 1800 : 2420$

$= 90 : 121$

22. (b) C.P. of 20 kg of rice

$= ₹ \left(\frac{672}{14} \times 20\right)$

$= ₹ 960$

C.P. of 15 kg of wheat

$= ₹ \left(\frac{432}{12} \times 15\right)$

$= ₹540$

C.P. of 16 kg of sugar

$= ₹\left(\frac{504}{18} \times 16\right)$

$= ₹448$

$\therefore$ Total cost price

$= ₹(960 + 540 + 448)$

$= ₹1948$

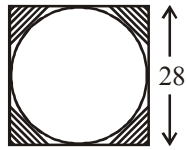
23. (e) Let the length and breadth of the original rectangle be 'L' m and 'B' m respectively.
After increasing the length by 20% and decreasing the breadth by 20% area is 192.
$(1.2\,L) \times (0.8\,B) = 192$
or $0.96\,LB = 192$
$LB = 200$

24. (b) Let the original numbers be x and y and their product be xy.

Product of $\frac{1}{3}$rd of x and 150% of $y = \frac{x}{3} \times \frac{3}{2} y = \frac{xy}{2}$

Required answer $= \frac{xy}{2 \times xy} \times 100 = 50\%$

25. (d)



We have to calculate the area of the shaded region which is equal to area of square – Area of the circle

Required answer $= (28)^2 - \frac{22}{7} \times 14 \times 14$

$= 784 - 616 = 168\ m^2$

26. (c) This is a series of prime number

27. (d) Let x = 8
then $15 = 2x - 1 = y$
$28 = 2y - 2 = z$
$53 = 2z - 3 = m$
Next term in the pattern should be $2m - 4 = 2 \text{ x } 53 - 4$
$= 102$

28. (d) It is a combination of two series, namely
24, 49, – 94; and 15, 31, 59, 58
The two series correspond to
$x, (2x + 1), (4x - 1), (4x - 1), (4x - 2)$
Hence the missing term is
$4 \times 24 - 1 = 95$

29. (b) Add 3 after doubling the previous number.

30. (d) The series exhibits the pattern of $n^2 + 1$, $n^2 - 1$, alternatively, n taking values 1, 2.....

31. (a) $\therefore$ Requred % $= \frac{717}{5426} \times 100 = 13.21$
$\approx 13\%$ (Approx)

32. (c) Percentage fall in electronic goods exports in 2014 from 2013

$= \frac{(717 - 653)}{717} \times 100 = 8.92\% \approx 9\%$

33. (b) Required total exports of the year 2012
$= 5404 - 624 = 4780$

34. (e) Percentage growth of electronic goods exports in the period of 2012 to 2013

$= \frac{717 - 624}{624} \times 100 = 14.90\%$

$\Rightarrow$ % growth of total exports over the same period

$= \frac{5426 - 5404}{5404} \times 100 = 0.40\%$

$\therefore$ Difference $= 14.90 - 0.40$
$= 14.50\%$

35. (d) From 2011 to 2014, % rise in electronic exports

$= \frac{(653 - 552)}{552} \times 100 = 18.29\%$

$\approx 18.3\%$

36. (e) Let x be there in the question mark.

So, $\sqrt[3]{860000} = x \Rightarrow x^3 = 860000$

Taking $\log_{10}$ on boths the sides $3\log_{10} x = 5.9345$
$\log x = 1.9782$, Taking antilog we get $x \approx 95$
[$\log x$ is nearly 2 so, x will be near to but less than 100]

37. (d) $1\frac{5}{8} + 5\frac{1}{3} + 2\frac{2}{5} = \frac{13}{8} + \frac{16}{3} + \frac{12}{5}$

$= \frac{15 \times 13 + 40 \times 16 + 12 \times 24}{120} = \frac{195 + 640 + 288}{120}$

$= \frac{1123}{120} = 9.35 \approx 9.$

38. (a) $8769 \div 82 \div 4 = \frac{8769}{4 \times 82} = \frac{8769}{328} = 26.73 \approx 27$

39. (c) Let x be there in place of question mark so, x% of $45.999 \times 16\%$ of $83.006 = 116.073$.

We take $\frac{x}{100} \times 46 \times \frac{16}{100} \times 83 = 116$

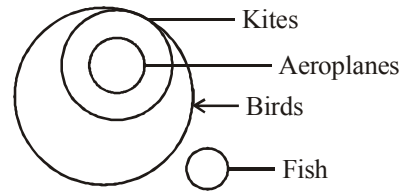
$x \times 0.46 \times 13.28 = 116$

or $x \times 6.11 = 116$

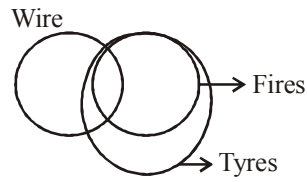
$\Rightarrow x = 18.98 \approx 19.$

40. (b) $12.998 \times 27.059 \times 17.999$

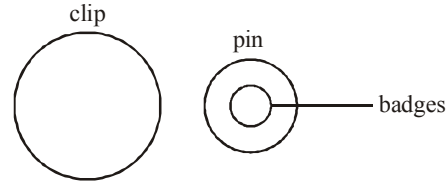
41. (b)



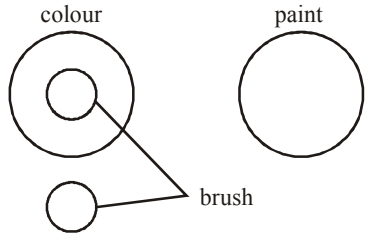
42. (a)



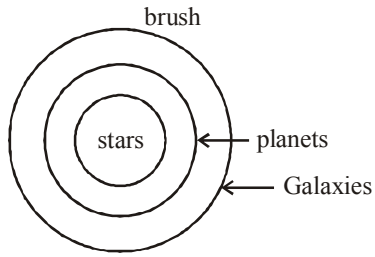
43. (a)



44. (c)



45. (b)



46. (e)

47. (d) The given arrangement is:

8th to the left of 20th

B U B D C E D B D E U (B) A D

C B E A C (D) A E B A U A C D

B C A C

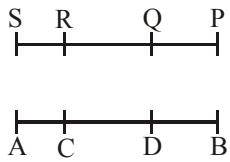
20th from the left

48. (b) B U C E
C U B E

49. (d) U B D
C E D
A D C
A C D

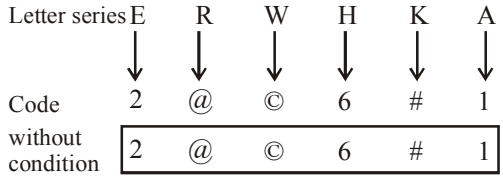
50. (a) E

51-55.

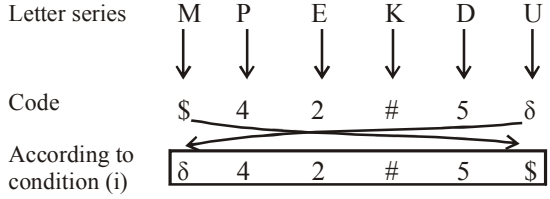


51. (a) 52. (a) 53. (e) 54. (d) 55. (b)

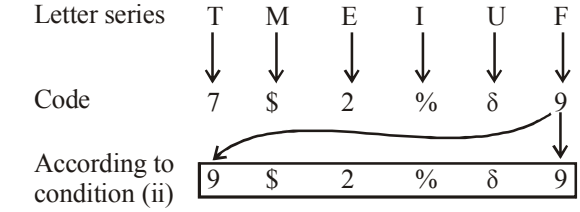
56. (a)



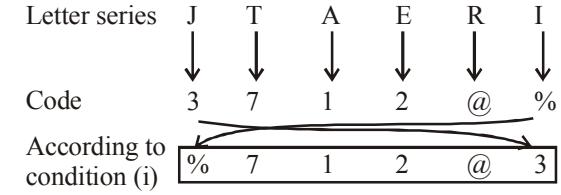
57. (e)



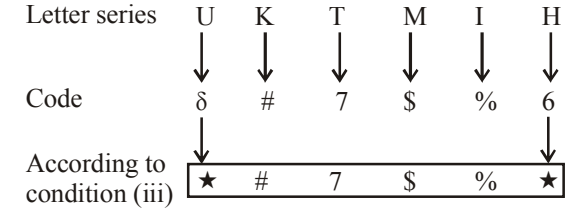
58. (d)



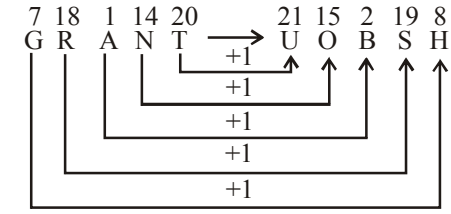
59. (a)



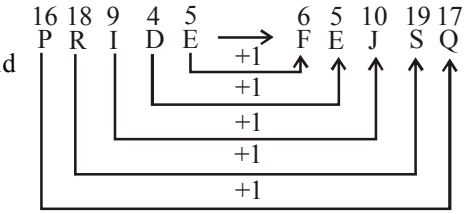
60. (c)



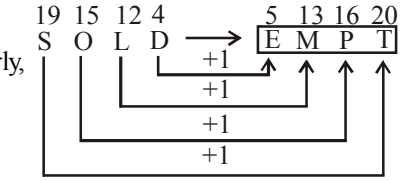
61. (c) Given that



and



Similarly,

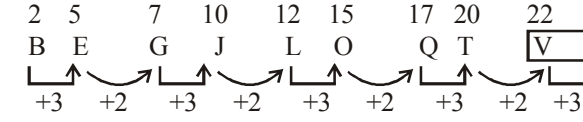


∴ SOLD ⇒ EMPT

62. (d) All others are prime number Except 27.

63. (b) Second, Fourth, sixth and seventh letters of word "STUMBLE" are T, M, L & E respectively
and meaningful word made by then letter is 'MELT'

64. (b) Given letter series:-



⇒ : ? = V Y

65. (e) According to question.

7	15	22	5	18	14	13	5	14	20
G	O	V	E	R	N	M	E	N	T

Such couple are G - M, O - R, M - N and N - R and is more than three.

Solution : 61 to 65

$P \$ Q \Rightarrow P \geq Q$

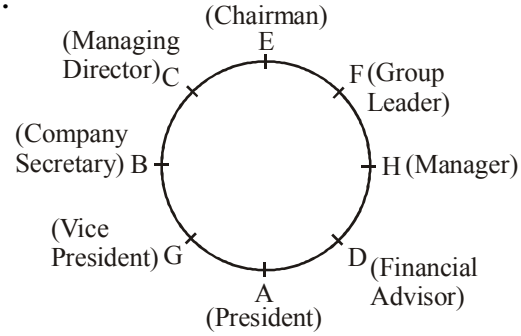
$P @ Q \Rightarrow P \leq Q$

$P \delta Q \Rightarrow P > Q$

$P \# Q \Rightarrow P < Q$

$P \% Q \Rightarrow P = Q$

(66-70) :



66. (d) 67. (e) 68. (a) 69. (d) 70. (c)

71. (d) Accordingly,

$F @ N \Rightarrow F \leq N$

$N \delta R \Rightarrow N > R$

$H @ R \Rightarrow H \leq R$

$\therefore F \leq N > R \geq H$

Conclusion : I. $H \delta N \Rightarrow H > N$ [not true]

II. $F \# R \Rightarrow F < R$ [not true]

If neither conclusion I not II is true.

72. (b) Accordingly,

$M \# T \Rightarrow M < T$

$T @ K \Rightarrow T \leq K$

$K \$ N \Rightarrow K \geq N$

$\therefore M < T \leq K \geq N$

Conclusion : I. $M \# N \Rightarrow M < N$ [not true]

II. $K \delta M \Rightarrow K > M$ [not true]

Only conclusion II is true.

73. (c) Accordingly,

$T \% H \Rightarrow T = H$

$H \$ W \Rightarrow H \geq W$

$\therefore T = H \geq W$

Conclusion : I. $W \# T \Rightarrow W < T$ [true]

II. $W \% T \Rightarrow W = T$ or

If either conclusion I or II is true. [true]

74. (a) Accordingly,

$N \delta K \Rightarrow N > K$

$K \# D \Rightarrow K < D$

$D \% M \Rightarrow D = M$

$\therefore N > K < D = M$

Conclusion : I. $M \delta K \Rightarrow M > K$ [true]

II. $D \delta N \Rightarrow D > N$ [not true]

Only conclusion I is true.

75. (e) Accordingly,

$J \$ B \Rightarrow J \geq B$

$B \% R \Rightarrow B = R$

$R \delta F \Rightarrow R > F$

$\therefore J \geq B = R > F$

Conclusion : I. $F \# B \Rightarrow F < B$ [true]

II. $R @ J \Rightarrow R \leq J$ [true]

Both conclusion I and II are true.

76. (d) Next figure of each problem figure changes like that the horizontal line shifted to downward and the letters changes their position on either side of vertical lines and middle letter of horizontal line changes by new letter.

77. (b)

78. (a) Next second figure of each problem figure is rotated clockwise by 90° and in next figure of each problem figure one more circle is darken.

79. (e) First right of each problem figure change like : The figures on hexagonal side are rotated clockwise one side and two side respectively and one more same figure added on particular side.

80. (b) Next right figure of each problem figure is rotated anticlockwise clockwise respectively by so and the figure at appex is changes to new Figure.

❑❑❑