11 The Competition in
Advanced Mathematics Skills

Advanced Maths Test I & II

MODEL PAPERS

Class : VI

Eduranet
Intellectual Olympiad Foundation
(Promoted by Eduranet Educational Society (Regd. 309/09))

Hyderabad | India

Eduranet Intellectual Olympiad Foundation

SYLLABUS

I) Algebra & Arithmetic

1. Number System

2. Divisiblility Test, Factors, Multiples, HCF and LCM

3. Exponents

4. Algebraic expression & Identities

5. Linear Equation in one variable

6. Ratio and Proportion

II) Geometry

1. Basic Geometrical Ideas and Undersanding of Elementary Shapes

2. Mensuration

3. Data Handling

4. Symmetry, Reflection and Rotation

5. Practical Geometry

TABLE OF CONTENTS

ADVANCED MATHS TEST-I

Code : 1161   **PRELIMS**

Max. Marks : 75   **Duration : 75 Mins.**

General Instructions :

1. Which of the following describes the rule for the below given pattern ?

15,18,17,20,19,22,21

a) Add 3, add1   b) Add 3, subtract 1

c) Add,1 subtract3   d) Subtract 3, add1

2. If n^5 is odd, which of the following is NOT correct-

a) n is odd   b) n^2 is odd

c) n^3 is even   d) n^4 is odd

3. John wanted to write the numbers from the smallest number to the greatest number of three digits. How many times he needs to press the keys of the computer to do this job?

    a) 2708   b) 2889   c) 2644   d) 2978

4. Sum of the greatest 8 digit number and the smallest 9 digit number is

    a) 19999999   b)199999999

    c) 999999999   d) 10000999

5. What least number should be added to 1330 to get a number exactly divisible by 43?

    a) 46   b) 1   c) 3   d) 7

6. If $\dfrac{3}{5}$ of the property cost Rs.15,000 what is the cost of $\dfrac{1}{2}$ of it ?

    a) Rs. 7500   b) Rs. 12500

    c) Rs. 25000   d) Rs. 10000

7. In the following figure which fraction of the whole is represented by the shaded portion?

    a) $\dfrac{3}{12}$ b) $\dfrac{1}{4}$ c) $\dfrac{1}{3}$ d) $\dfrac{3}{8}$

8. Place value of 9 in 7,92,83,456

    a) ten lakhs   b) 9 lakhs

    c) 90,00,000   d) 90,000

9. **Closure property is satisfied in whole numbers w.r.t to _____ and _____.**

   a) addition and subtraction

   b) addition and division

   c) addition and multiplication

   d) multiplication and division

10. **The two consecutive numbers after 5009 are**

    a) 5010, 5020   b) 50010, 50011

    c) 5010, 5011   d) 5010, 5012

11. **Mixed fraction for $\dfrac{39}{12}$ is:**

    a) $3\dfrac{1}{12}$ b) $3\dfrac{2}{12}$ c) $3\dfrac{3}{12}$ d) $2\dfrac{14}{12}$

12. **If a & b are two whole numbers, then commutative law is applicable to subtraction if and only if**

    a) a = b   b) $a \neq b$ c) a > b   d) a < b

13. **The value of 555 × 193 – 555 × 93 is**

    a) 555,931   b) 1,210,321

    c) 53,912   d) 55,500

14. **On dividing 55,390 by 299 the remainder is 75. The quotient is**

    a) 195   b) 185   c) 175   d) 193

15. **What least number must be subtracted from 13,601 to get a number exactly divisible by 87 ?**

    a) 25   b) 29

    c) 27   d) 23

16. Which of the following statements is always correct about parallelograms?

a) All angles are congruent

b) All sides are congruent

c) Adjacent sides are perpendicular

d) opposite sides are parallel.

17. Choose the correct word to complete the statement:
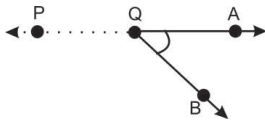
$\angle AQB$ ...... angle.

a) Reflex   b) Right

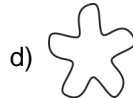c) Acute   d) Obtuse

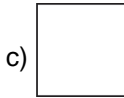**18. Two adjacent sides of a parallelogram are equal and the included angle is a right angle. what is the specific name for this figure.**

a) Rhombus   b) Trapezium

c) Rectangle   d) Square

19. Which of the following angles is Right angle ?

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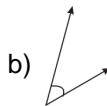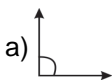
20. Which one of the following figure is the hexagon?

a)

b)

c)

d)
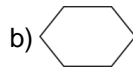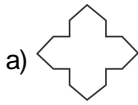
21. ABCD is a parallelogram in which $\angle DAB = 75^0$ and $\angle DBC = 60^0$ then $\angle CDB =$ ....

    a) 60^0 b) 75^0 c) 45^0 d) 135^0

22. In a quadrilateral PQRS, if $\angle P = \angle R = 100^0$ and $\angle S = 75^0$ What is the measure of $\angle Q$?

    a) 50^0 b) 85^0 c) 120^0 d) 360^0

23. In the adjoining figure, line $P \parallel$ line Q and line M and N are transversals. As per information in figure, find $m\angle a + m\angle b$.
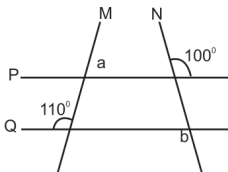
    a) 225^0 b) 90^0 c) 180^0 d) 170^0

24. A sum of money lent out at S.I amounts to Rs. 2,800 in 4 years and to Rs. 2,200 in 1year. What is the principal ?

    a) Rs. 500   b) Rs. 1,000   c) Rs. 1,500   d) Rs. 2,000

25. 18 of [59 – {7× 8 + (26 – 3 of 5)}]

    a) – 188   b) +144   c) –144   d) none

26. **If the exponent of a negative integer is odd then the result is a ___ integer.**

a) positive   b) negative   c) 0   d) none

27. **A man walked 3 km towards North then 8 km towards South. His position at the end of the walk is**

a) 5 km towards East   b) 3 km towards South

c) 8 km towards North   d) 5 km towards South

28. **Which number should come in place of $\square$?**

$$\frac{1}{7}+\frac{2}{7}+\frac{\square}{7}=1\frac{3}{7}$$

a) 1   b) 2   c) 3   d) 7

29. **Simplified value of $2\frac{1}{2}+3\frac{5}{7}\times\frac{3}{13}-\frac{1}{2}\div 4$ is**

a) $\dfrac{188}{56}$ b) $-\dfrac{181}{56}$ c) $-3\dfrac{13}{56}$ d) $3\dfrac{13}{56}$

30. **Represent the shaded region in fraction form.**
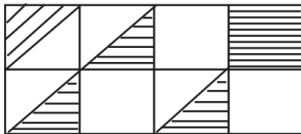
a) $\dfrac{3}{8}$ b) $\dfrac{5}{8}$ c) $\dfrac{6}{8}$ d) $\dfrac{7}{16}$

31. **Expanded form of $(-ab)^4$ is**

a) $(-ab) \times (-ab) \times (-ab) \times (-ab)$

b) $4 \times (-ab)$

c) $(-ab) \times (-ab)$

d) $(-ab) \times (-ab) \times (-ab)$

32. The statement which holds correct is

a) $N \subset W \subset I$ b) $I \subset N \subset W$

c) $N \subset N \subset I$ d) $I \subset W \subset N$

33. Product of $\dfrac{12}{24} \ and \ \dfrac{36}{72}$ is

a) $\dfrac{16}{24}$ b) $\dfrac{3}{5}$ c) 4   d) $\dfrac{1}{4}$

34. A badminton player won 6 games and lost 4. The fraction of the games he won is

a) $\dfrac{6}{4}$ b) $\dfrac{4}{6}$ c) $\dfrac{6}{10}$ d) $\dfrac{5}{10}$

35. Guru reads $\dfrac{3}{5}$ of a book. He finds that there are still 80 pages left to be read. Total number of pages in the book are

a) 100   b) 200   c) 300   d) 400

36. The value of $3\dfrac{1}{12} - \left[1\dfrac{3}{4} + \left\{ 2\dfrac{1}{2} - \left(1\dfrac{1}{2} - \dfrac{1}{3} \right) \right\} \right]$ is

a) $\dfrac{1}{2}$ b) 2   c) 1   d) 0

37. The daily consumption of milk of a family is $3\dfrac{1}{4}$ litres. The quantity of milk consumed by the family during the month of September 2003 is

a) 90 lit   b) $100\dfrac{1}{2}$ lit

c) $97\dfrac{1}{2}$ lit   d) none

38. The value of $\dfrac{2^{m+3} \times 3^{2m-n} \times 5^{m+n+3} 6^{n+1}}{6^{m+1} \times 10^{n+3} \times 15^{m}}$ **is equal to**

a) 0

b) 1

c) 2^{m}

d) none of these

39. How many one- fourths need to be added to $2\dfrac{1}{4}$ **to make 4**

a) 3

b) 4

c) 5

d) 7

40. The decimal number for $20 + \dfrac{2}{10} + \dfrac{2}{100} =$ _____

a) 202

b) 24

c) 20.02

d) 20.22

41. Place value of a digit increases by ___ times as the digit moves from the right to the left place by place.

a) 100

b) 1

c) 10

d) None

42. If A is HCF of 546, 294 and 3066; and B is the LCM of 42,14 and 21, what is the relationship between A and B?

a) A = B

b) A> B

c) A< B

d) none of these

43. DIRECTION : Read the following graph carefully and answer the following question

Number of students in medical schools in the United States, 1950-1985 (in thousands)

Number of years in which there were more than twice as many students in medical schools as there were in 1950 is

a) None   b) one

c) Two   d) Three

44. **Four classes at Green's Elementary School participated in the student election.**

Read the table and answer the following question.

Classes	VI	VII	VIII	IX
Raja	12	14	10	12
Joseph	8	11	14	13
Anthony	15	12	10	11
Shikhar	10	11	13	13

Number of students in class VIII who voted for Anthony is

a) 7   b) 10

c) 18   d) 15

45. **The following graph shows the supply and demand of electricity of a town for first six months of the year.**
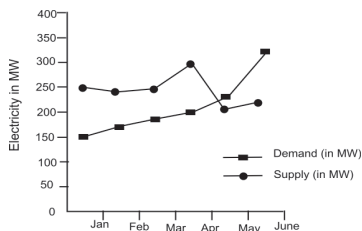
Based upon the above graph answer the following question.

Number of months, the supply was greater than the demand is

a) 3   b) 4   c) 5   d) 6

46. **The marks(out of 10) obtained by 28 students in a Mathematics test are listed as below :**

8,1,2,6,5,5,5,0,1,9,7,8,0,5,8,3,0,8,10,10,3,4,8,7, 8,9,2,0

The number of students who obtained marks more than or equal to 5 is

a) 13   b) 15   c) 16   d) 17

47. Area of the shaded figure is
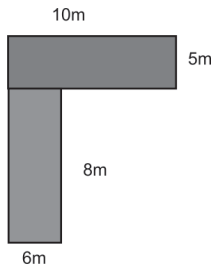
a) 2400 sq m   b) 48 sq m   c) 50 sq m   d) 98 sq m

48. The area of the square ABCD in the given figure is
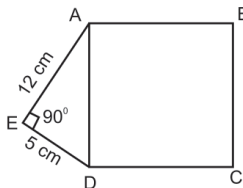
a) 60 cm²   b) 90 cm²   c) 169 cm²   d) 144 cm²

49. A rectangle field ABCD IS 40 m × 20 m. Total cost to fill the field if 10 sqm of field can be filled for Rs.60, is

a) Rs. 4800   b) Rs. 9600

c) Rs. 2400   d) Can't be calculated

50. Five equal squares are placed side by side to make a single rectangle whose perimeter is 372 inches. The number of squares inches in the area of one of these squares is

a) 72   b) 324

c) 900   d) 961

51. A rectangular garden ABCD is 20 m × 10m. A 5m wide path is laid all around it to form rectangle PQRS. A fence is put all along the boundary of the bigger rectangle except for the gate XY which is 5 m broad. The fence length is
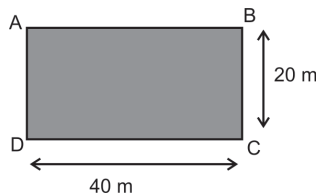

a) 100m   b) 105 m

c) 95 m   d) 90 m

52. The cost of painting the walls of room at the rate of Rs. 1.35 per squre metre is Rs 340.20 and the cost of matting the floor at the rate of Rs. 0.85 per m^2 is Rs.91.80. If the length of the room is 12m, then the height of the room is

a) 6m   b) 12m   c) 1.2m   d) 12.6m

53. The length of room is double its breadth. The cost of colouring the ceiling at Rs 25 per sq.m is Rs.5,000 and the cost of painting the four walls at Rs 240 per sq.m is Rs 64,800. The height of the room is

a) 4.5m   b) 4m   c) 3.5m   d) 5m

54. The ratio of areas of two squares. One haveing double its diagonal then the other is :

a) 2 : 1   b) 3 : 1   c) 3 : 2   d) 4 : 1

55. Find the area of shaded protion if radii of inner and outer circle are 210 mm and 224 mm respectively.
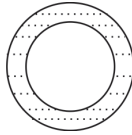
a) 19096 sq. mm

b) 47040 sq. mm

c) 13860 sq. mm

d) 21624 sq. mm

56. Find the area of the given figure :
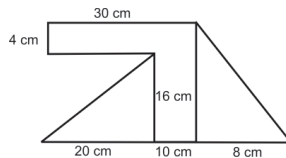
a) 224 cm²

b) 424 cm²

c) 360 cm²

d) 284 cm²

57. $\dfrac{x}{4} - \dfrac{y}{6} = 3 \, and \, \dfrac{x}{2} - y = -2$ then find the values of x, y

a) x = 20 and y = 12

b) x = 12 and y = 20

c) x = 10 and y = 24

d) x = 15 and y = 20

58. The solution of 0.2(2x – 1) – 0.5 (3x – 1) = 0.4 is

a) $\dfrac{1}{11}$

b) $-\dfrac{1}{11}$

c) $\dfrac{3}{11}$

d) $\dfrac{-3}{11}$

59. The ratio of two numbers is a : b. If one of them is x, then other is

a) $\dfrac{ab}{x}$

b) $\dfrac{b}{ax}$

c) $\dfrac{b}{a+b}x$

d) $\dfrac{bx}{a}$

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60. $\frac{1}{5}$ th of a flagpole is black, $\frac{1}{4}$ th is white and the remaining three metres is painted yellow. Find the length of the flagpole.

a) $5\frac{5}{11}\,m$

b) $\frac{60}{11}$ cm

c) 5 km

d) None of these

61. If the average of four consecutive even numbers is 17. Find the largest number of them.

a) 20

b) 18

c) 22

d) 68

62. Anagha, Sushant and Faizal are climbing the steps to a hill top. Anagha is at the step *p*. Sushant is 10 steps ahead and Faizal is 6 steps behind Anagha. Where are Sushant and Faizal? The Total number of steps to the hill top is 3 steps less than 8 times what Anagha has reached. Express the total number of steps using *p*.

a) 5

b) 3

c) 4

d) None of these

63. To solve 61 × 59 which of the following formulae can be used?

a) $(a+b)^2$

b) $(a-b)^2$

c) a^2+b^2

d) $(a+b)(a-b)$

64. If a = 3, b = 5, c = b − a, then which of the following expressions represent 10?

a) $(a+c)\times b$

b) $(a+b) - c$

c) $(b+c) +a$

d) $(a-b)+c$

65. If there are 45 persons in an office and number of femals is 25, remaining are males then the ratio of the number of females to number of males, is

a) 3 :4   b) 4 : 3

c) 4 : 5   d) 5 : 4

66. 175 men can dig a canal 3150 m long in 36 days. How many men are required to a dig a canal 3900 m long in 24 days?

a) 325   b) 350

c) 450   d) 400

67.   For 25 : 10 : : 10 : 4, the mean proportion is

a) 25   b) 10

c) 4   d) 100

68. The ratio 400 metres to kilometres in its simplest form is

a) 2 : 15   b) 1 : 5

c) 3 : 5   d) none

69. A $\dfrac{3}{4}$ cup of sugar is equivalent to 12 table spoons of sugar. Number of table spoons in 3 cups of sugar is.

a) 84   b) 48

c) 36   d) 63

70. The ratio of the ages of the father and the son at present is 3 :1. Four years earlier, the ratio was 4 :1. Present ages of the son and the father are

a) 21 and 36   b) 36 and 21

c) 12 and 36   d) 36 and 12

71. **An electric pole casts a shadow of length 20 meters at a time when a tree 6 meters high casts a shadow of length 8 metres, then the height of the pole is**

a) 15 m   b) 51 m   c) 20 m   d) 8 m

72. **In an office the working hours are 10.30 AM to 5.30 PM and in between 30 minutes are spent on lunch.The ratio of office hours to the time spent for lunch is**

a) 7 : 30   b) 1 : 14   c) 14 : 1   d) 30 : 7

73. **Ratio of number of boys to number of girls in a tutorial is 2 : 3. If there are 180 girls the number of boys is**

a) 36   b) 60

c) 120   d) 100

74. **Two gear wheels A and B are incontact. One wheel (A) has 36 teeth, the other wheel (B) has 24 teeth. The number of times must the smaller wheel turn before the larger wheel completes a revolution is**
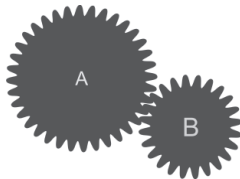
a) $1\dfrac{1}{2}$ b) 2   c) $2\dfrac{1}{2}$ d) 3

75. **Mala and Bala got 75 marks and 25 marks in an examination. Find the ratio of the marks scored by Malato the total marks obtained by both of them?**

a) 3 : 4   b) 3 : 1

c) 1 : 3   d) 4 : 3

KEY TO MODEL PAPER - I

1. b	2. c	3. b	4. b	5. c	6. b
7. c	8. c	9. c	10. c	11. c	12. a
13. d	14. b	15. b	16. d	17. c	18. d
19. a	20. b	21. c	22. b	23. d	24. d
25. c	26. b	27. d	28. d	29. d	30. a
31. a	32. a	33. d	34. c	35. b	36. d
37. c	38. b	39. d	40. d	41. c	42. a
43. d	44. b	45. b	46. d	47. d	48. c
49. a	50. d	51. c	52. a	53. a	54. d
55. a	56. b	57. a	58. b	59. d	60. a
61. a	62. d	63. d	64. c	65. d	66. a
67. b	68. a	69. b	70. c	71. a	72. c
73. c	74. a	75. a			

ADVANCED MATHS TEST-II

Code : 1162 **FINALS**

Max. Marks : 60 **Duration : 60 Mins.**

General Instructions :

1. Please find the separate Answer Sheets along with the question paper.

2. Mention your Test Code, Student ID, Name, Class, Section, Contact no. and School Name on the Answer Sheet as per Question Paper and Hall Ticket.

3. This question paper contains VI sections, duration is 60 minutes.

4. Please read the instructions carefully before attempting the question.

5. Answer questions in Answer Sheet only.

6. Don't write or tick anything on the question paper.

7. Use only Black or Blue Ball Point Pen to answer the question in Answer Sheet.

8. Submit only answer sheet(s) to the invigilator.

SECTION - I **10 × 1 = 10**

DIRECTIONS : (1 – 10) : Complete the following statements with an appropriate word/term to be written in the answer sheet.

1. When a number is divided by 125, the remainder is 82, When the same number is divided by 25, the remainder will be _____.

2. $\dfrac{101+103+105....+199}{1+3+5+7.....+99}$ is equal to _____

3. The HCF of $\dfrac{2}{5}, \dfrac{6}{25} \, and \, \dfrac{8}{35}$ is _____

4. Value of x in 2(3x+1) – 7 =13, is _____

5. Length of a room is 30m and its breadth is 20m, So, the ratio of length to breadth of the room is _____

6. _____ is a factor of 1113.

7. 7^{6n} - 6^{6n}, where n is an integer > 0, is divisible by _____.

8. The exponential form of $\sqrt{\sqrt{2} \times \sqrt{3}}$ is _____.

9. Order of rotational symmetry is_____

10. When the perimeter and area of a square are numerically equal, then the numerical value of its side is _____

SECTION - II   10 × 1 = 10

DIRECTIONS: (11 - 20) – Read the following statements and write true or false with reasons or solutions; in the answer sheet.

11. The rational numbers $\dfrac{1}{3} \, and \, \dfrac{-7}{3}$ are on opposite sides of 0 on the number line.

12. There is end to the multiples you can get for a particular number.

13. Expression of $\left[\left(3^2 \right)^4 \times 2^8 \right] \times 6^5 \div 6^2$ is equal to 6^{12}

14. Quotient of y by 5 added to x is $\dfrac{y}{x} + 5$

15. In the given figure magnitude of angles shown are 45^0, 135^0
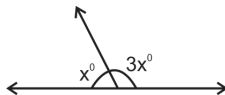
16. If $4^x - 4^{x-1} = 24$ then value of $(2x)^x$ is $5 \times 5^{\frac{5}{2}}$

17. 100 - 4[25 – {5 +12 – 9}] = (+ 32)

18. 3 is the root of $\dfrac{x+1}{2} + \dfrac{x-1}{2} = 3$

19. The average of a 6 numbers is 8. If 2 is subtracted from each of these numbers, then the total of new number is 36.

20. The length of a rectangle is $\frac{6}{5}$ th of its breadth. If its perimeter is 132 m, its area is 1808 m^2

SECTION - III   10 × 1 = 10

DIRECTIONS : (21 - 30) – Each question contains statements given in two columns which have to be matched. Match the statements (21,22,...30) in column I with statements (A,B,...P) in column II . Arrange the matched statements in order and write in the answer sheet.

Column - I	**Column - II**
21) 132,72,1320,8612 Numbers are divisible by	A) 39
22) $\dfrac{81 \times 7^3 \times 100}{10^2 \times 3^4 \times 7} =$	B) 0.2
23) The value of $\sqrt[3]{\sqrt{0.000064}}$	(C) 2 and 3
24)	D) Infinite Numbers
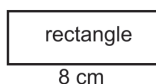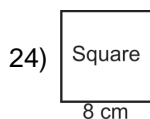
Square   rectangle
8 cm   8 cm

The area of the square is twice   of lines of
that of the rectangle. Perimeter of the   symmetry
rectangle is

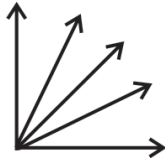| 25) Circle	E) 49
26) 5[4x – 3{10x – 2(2x + 5)}] – 9 = 1 then x =	F) 110

27) How many angles are there in the given figure.

G) 24 cm

28) The base of an isosceles right triangle is 30 cm. Its area is

H) 6 times the area of the rectangle

29) $\dfrac{36}{63} = \dfrac{-4}{\square}$

I) 4

30) $2805 \div 2.55 = 1100$ then

$2805 \div 25.5 =$

J) 10

K) 2

L) No line symmetry

M) 5

N) 225 cm²

O) − 7

P) 4 and 2

SECTION - IV　　　　10 × 1 = 10

Directions : (31 - 40) **Identify the correct answer from the given options and write in the answer sheet.**

31. The value of $5 - \dfrac{5}{1 + \dfrac{1}{3 + \dfrac{1}{2 + \dfrac{1}{4}}}}$ is

a) $\dfrac{40}{31}$　　　b) $\dfrac{4}{9}$　　　c) $\dfrac{9}{8}$　　　d) $\dfrac{31}{40}$

32. 67,61,p,q,r,s, 41 is an arrangement of prime numbers in a decreasing order. Among the following, which is the number 53,

    a) P   b) q   c) r   d) s

33. When $x = \sqrt{3}$, then the value of $2x^4 - x^2 + 5x - 4\sqrt{3}$ is

    a) $15 + \sqrt{2}$ b) $15 - \sqrt{2}$ c) $15 - \sqrt{3}$ d) $15 + \sqrt{3}$

34. What is the value of $\dfrac{P+Q}{P-Q}, if \dfrac{P}{Q} = 7$?

    a) $\dfrac{4}{3}$ b) $\dfrac{2}{3}$ c) $\dfrac{2}{6}$ d) $\dfrac{7}{8}$

35. In a college, $\dfrac{1}{4}$ of the students walk to college $\dfrac{1}{4}$ comes by car and the remaining 1300 come by bus.

    No of students in the college is

    a) 3000   b) 2600   c) 3200   d) 3500

36. How many times does the 29th day of the month occur in 400 consecutive years?

    a) 4497   b) 1237   c) 5012   d) 4126

37. The ratio of number of males to number of females in a club are 7 : 4. If there are 84 males in the club, the total number of members in the club are

    a) 126   b) 132   c) 136   d) 148

38. If ABCD is a parallelogram, then $\angle A - \angle C = $ ___

    a) 180^0 b) 0^0 c) 360^0 d) 90^0

39. The sides of a triangle are 11 cm, 15 cm and 16 cm. The altitude to largest side is

    a) $30\sqrt{7}\, cm$ b) $\dfrac{15\sqrt{7}}{2}\, cm$ c) $\dfrac{15\sqrt{7}}{4}\, cm$ d) 30 cm

DIRECTIONS : (40) Study the graph and answer the question.

Names of candidates
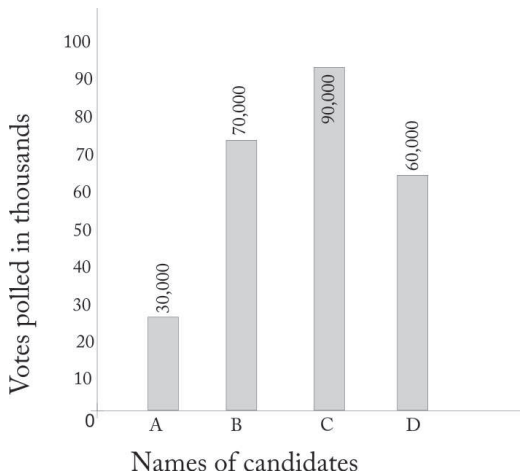
40. If 1000 votes are declared invalid and total number of votes in the constituency is 4,00,000 what is the percentage of voting?

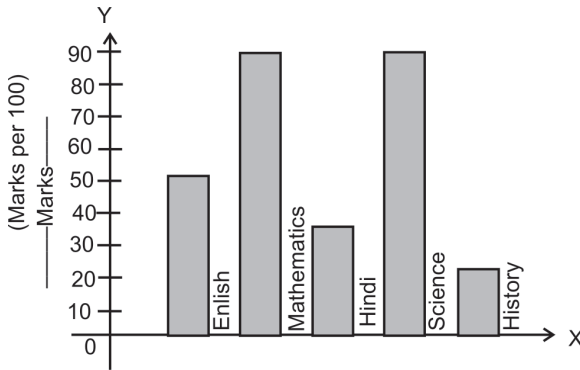a) 60%   b) 62.75%   c) 70%   d) 72.25%

SECTION - V   10 × 1 = 10

DIRECTIONS: (41 - 50) – Choose the correct answers (More than one correct answer) from the given options and write in the answer sheet.

41. Which of the following equations is completly true with respect to BODMAS.

a) $3 \times 3 + 3 = 18$ b) $(7+4) \times 3 = 33$

c) $5 + 5 \times 0 = 0$ d) $(8 \div 2) + 5 = 9$

42. Which of the following statement is false

a) 1 is the smallest prime number

b) Every prime number is an odd number

c) The sum of two prime numbers is always a prime number

d) None of these

43. If a = 3, b = 5, c = b - a then which of the following expression represent 10?

    a) (a+b) + c   b) (a +b) – c   c) (b+c) + a   d) (a - b) + c

44. A Quadrilateral is a rhombus but not a square in which is not correct .

    a) Its diagonals do not bisect each other

    b) it's diagonals are not perpendicular

    c) opposite angles are not equal

    d) The length of diagonals are not equal.

45. Choose the correct statements

    a) There is no largest natural numbers

    b) 'o' is the smallest whole Number

    c) Every natural numbers is a whole numbers

    d) All natural numbers together with zero are called integers.

46. The following Examples in which are not binomial.

    a) 4x+5y+z   b) x + y + z

    c) x^2+y^3 d) x^3

47. In the following figure which Quadrilaterals have equal Angles.

    a) Paralleogram   b)Rectangle

    c) Rhombus   d) Square

48. In the following triangles which are congruent

Directions : Read the following graph and answer the question given below :

49. At which subject is the student sharp?

    a) English   b) Mathematics

    c) Science   d) History

50. Which of the following perimeter is same
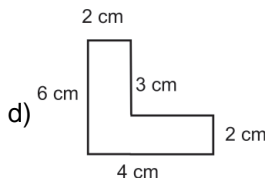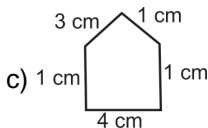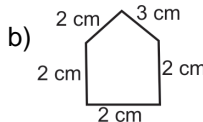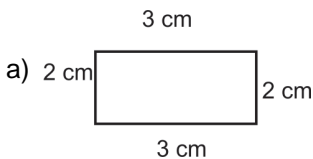
SECTION - VI   **10 × 1 = 10**

Assertion & Reason

DIRECTIONS : (51-60) – **Each of these questions contains an Assertion followed by reason. Read them carefully and answer the question on the basis of following options. You have to select**

the one that best describes the two statements and write in the answer sheet.

a) If both **Assertion** and **Reason** are **correct** and Reason is the **Correct explanation** of Assertion.

b) If both **Assertion** and **Reason** are correct, but Reason is **not the correct explanation** of Assertion.

c) If **Assertion** is **correct** but **Reason** is **incorrect.**

d) If **Assertion** is **incorrect** but **Reason** is **correct.**

51. **Assertion:** If L.C.M. of two numbers 6 and 8 is 24, then their H.C.F is 2.

    Reason: First number × Second number = L.C.M × H.C.F

52. **Assertion:** x = 2 is a solution of the equation 2 – x = 4.

    Reason: x = – 2 satisfies the equation 2 - X = 4

53. **Assertion:** A ratio can be equal to 1.

    Reason: Ratio is unity, provided both numerator and denominator are equal.

54. **Assertion:** If radius of a circle is 5 cm, then its diameter is 10 cm.

    Reason: A part of a circumference is called an arc.

55. **Assertion:** If a square has a length of 4 cm, then its perimeter is 8 cm.

    Reason: Perimeter of a square is given by the summation of all of its sides.

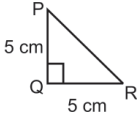56. **Assertion:** If base and height of a triangle are 6 cm and 8 cm respectively, they its area is 24 cm^2.

    Reason: Area of a triangle = $\frac{1}{2} \times base \times height$

57. **Assertion:** In the equation. 7p - 12 = 2, the variable is p.

    Reason: p is the unknown that varies

58. **Assertion:** 3 : 5 : : 9 : 15 are equivalent ratios.

    Reason: Both ratios are equal, when simplified.

59. **Assertion:** In a figure $PQ \perp QR$, PQ = 5 cm,

    QR = 5 cm

    $\angle PQR$ is Right angle triangle

    Reason : ΔPQR is isocesles right angle triangle

60. **Assertion:** The equation $0.2(2x - 1) - 0.5 (3x - 1) = 0.4$ has solution.

    Reason: x = 11 is solution.

SOLUTIONS TO MODEL PAPER - II

SECTION – I

Fill in the Blanks

1) 7   2) 3   3) $\dfrac{2}{175}$ 4) 3

5) 3:2   6) 3, 7, 53   7) 13   8) $b^{\frac{1}{4}}$

9) $\dfrac{360^0}{Angle\,of\,rotation}$ 10) 4

SECTION – II

True / False

11) True   12) False   13) False   14) False

15) True   16) False   17) True   18) True

19) True   20) False

SECTION – III

Match the Following

21) → P;   22) → E;   23) → B ;   24) → G;

25) → D;   26) → K;   27) → J;   28) → N ;

29) → O;   30) → F

SECTION – IV

Multiple Choice Questions

31) c   32) b   33) d   34) a

35) b   36) a   37) b   38) b

39) c   40) b

SECTION – V
More than one correct answers

41) a,c   42) a,b,c,d   43) a,c   44) a,b,c,d

45) a,b,c   46) a,b,d   47) b,d   48) b,c

49) b,c   50) a,c

SECTION – VI
Assertion & Reason

51. a) If both **Assertion** and **Reason** are **correct** and Reason is the **Correct explanation** of Assertion.

52. d) If **Assertion** is **incorrect** but **Reason** is **correct.**

53. a) If both **Assertion** and **Reason** are **correct** and Reason is the **Correct explanation** of Assertion.

54. b) If both **Assertion** and **Reason** are correct, but Reason is **not the correct explanation** of Assertion.

55. d) If **Assertion** is **incorrect** but **Reason** is **correct.**

56. a) If both **Assertion** and **Reason** are **correct** and Reason is the **Correct explanation** of Assertion.

57. a) If both **Assertion** and **Reason** are **correct** and Reason is the **Correct explanation** of Assertion.

58. a) If both **Assertion** and **Reason** are **correct** and Reason is the **Correct explanation** of Assertion.

59. a) If both **Assertion** and **Reason** are **correct** and Reason is the **Correct explanation** of Assertion.

60. c) If **Assertion** is **correct** but **Reason** is **incorrect.**