

*Key to*

*An Easy Approach to*

# MATHEMATICS

5

*Based on New Syllabus*

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# UNIT I

**1**

**1.**

- |            |            |           |           |          |
|------------|------------|-----------|-----------|----------|
| 1. 9999999 | 2. 1000000 | 3. 999999 | 4. 100000 | 5. 99999 |
| 6. 10000   | 7. 9999    | 8. 1000   | 9. 999    | 10. 100  |
| 11. 99     | 12. 10     | 13. 9     | 14. 0     |          |

**2.**

1. Seventy six thousand one Hundred and twelve
2. Ninety thousand and six
3. Five lakh sixty thousand one Hundred and Seven
4. Seven lakh thirty five thousand six hundred and twelve
5. Four lakh fifteen thousand and sixty nine
6. Three lakh four thousand and thirty five
7. Fifteen lakh six hundred and one
8. Thirty four lakh and nineteen

**3.**

- |             |              |             |             |
|-------------|--------------|-------------|-------------|
| 1. 30,608   | 2. 60,015    | 3. 3,42,907 | 4. 7,07,707 |
| 5. 9,09,090 | 6. 10,00,010 | 7. 9,99,999 |             |

**4.**

1.  $60000 + 5000 + 900 + 40 + 2$
2.  $700000 + 60000 + 8000 + 0 + 0 + 3$
3.  $300000 + 30000 + 8000 + 500 + 60 + 1$
4.  $700000 + 70000 + 7000 + 700 + 70 + 7$
5.  $900000 + 80000 + 5000 + 0 + 10 + 4$

**5.**

- |           |             |             |              |              |
|-----------|-------------|-------------|--------------|--------------|
| 1. 70,777 | 2. 6,43,928 | 3. 5,28,406 | 4. 99,99,909 | 5. 86,54,321 |
|-----------|-------------|-------------|--------------|--------------|

**6.**

- |              |            |              |
|--------------|------------|--------------|
| 1. 7,260,545 | 2. 845,948 | 3. 3,064,822 |
|--------------|------------|--------------|

**7.**

- |            |            |             |
|------------|------------|-------------|
| (a) 312489 | (b) 738320 | (c) 1169217 |
|------------|------------|-------------|

**8.**

- |            |            |            |
|------------|------------|------------|
| (a) 257804 | (b) 150702 | (c) 553749 |
|------------|------------|------------|

**9.**

- |            |            |            |
|------------|------------|------------|
| (a) 749064 | (b) 642125 | (c) 547328 |
|------------|------------|------------|

**10.**

- |       |        |       |         |        |         |
|-------|--------|-------|---------|--------|---------|
| (a) 5 | (b) 28 | (c) 3 | (d) 375 | (e) 65 | (f) 264 |
|-------|--------|-------|---------|--------|---------|

**11.**

- (a) 11719 (b) 384725

**12.**

- (i) ✗ (ii) ✗ (iii) ✓ (iv) ✓ (v) ✓ (vi) ✗

**13.**

- 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47

14.

- (i) 7      (ii) 120

15.

- (i) <      (ii) >      (iii) =

16.

- (i)  $\frac{5}{8}, \frac{7}{11}, \frac{2}{3}, \frac{3}{4}$

- (ii)  $\frac{3}{5}, \frac{23}{30}, \frac{9}{10}, \frac{14}{15}$

17.

- (i)  $\frac{17}{20}, \frac{11}{15}, \frac{7}{10}, \frac{19}{30}$

- (ii)  $\frac{7}{8}, \frac{5}{6}, \frac{1}{3}, \frac{1}{4}$

18.

- (i)  $\frac{19}{12}$       (ii)  $5\frac{1}{6}$

- (iii)  $5\frac{1}{10}$       (iv)  $\frac{11}{12}$

19.

- (i)  $\frac{1}{12}$       (ii)  $\frac{1}{6}$

- (iii)  $\frac{1}{24}$

20.

$\frac{11}{12}$

21.

(i)  $\frac{105}{14} = \frac{15}{2}$

(ii)  $\frac{36}{8} = \frac{9}{2}$

(iii)  $\frac{187}{34} = \frac{11}{2}$

22.

- (i)      (ii)

- (iii)

23.

- (i) .5      (ii) .09

- (iii) .27

- (iv) .008      (v) .047

- (vi) .165

24.

- (i)  $\frac{7}{10}$       (ii)  $\frac{96}{100}$

- (iii)  $\frac{3}{1000}$

25.

- (i) 29.930      (ii) 63.727

26.

- (i) 6.74      (ii) 2.03

27. 26.89

28.

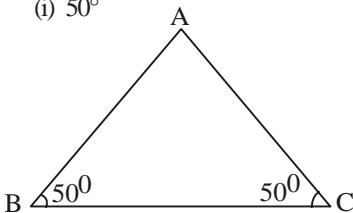
- (a) 16 hrs 20 minutes.

- (b) 385 min.

- (c) 168 hours

29.

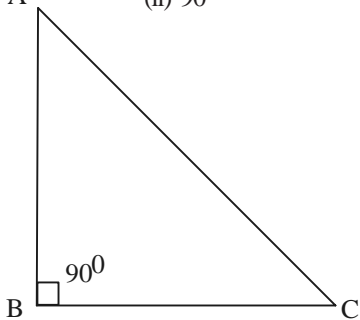
- (i)  $50^\circ$



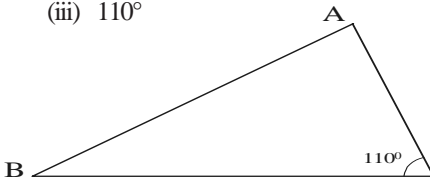
A

- (b) 385 min.

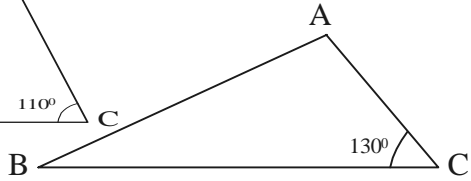
- (ii)  $90^\circ$



(iii)  $110^\circ$



(iv)  $130^\circ$



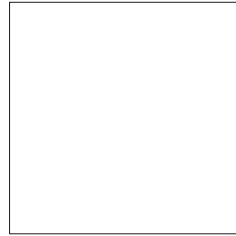
30. (a) 4 (g) 3

31. 38 metres

32.



33.



### **MULTIPLE CHOICE QUESTIONS-I**

- (1) b      (2) d      (3) c      (4) a      (5) d      (6) b      (7) d  
(8) b      (9) a      (10) c      (11) d      (12) c      (13) b      (14) b  
(15) a      (16) d  
(17) b      (18) d      (19) c      (20) c

## **UNIT II**

**1**

1. (a) Seven Lakh thirty two thousand nine hundred and sixty four
- (b) Sixty two lakh forty five thousand two hundred and eighty seven
- (c) Three crore twenty one lakh sixty five thousand seven hundred and sixty two
- (d) Eight crore five lakh and forty six
- (e) Nine crore twenty five lakh forty three thousand six hundred and seventy eight
- (f) Thirty six crore twenty nine lakh forty eight thousand four hundred and five
- (g) Fifty crore five hundred
- (h) Fifty eight crore sixty eight lakh forty two thousand nine hundred and thirty one
- (i) Seventy crore seven lakh seven thousand and seventy seven
- (j) Eighty six crore ten lakh six thousand four hundred and fifty three
- (k) Ninety three crore forty lakh seventy thousand eight hundred and nine
- (l) Ninety nine crore ninety nine lakh ninety nine thousand nine hundred and ninety nine

**II.**

1. 64,28,546      2. 8,92,46,365      3. 58,25,36,972      4. 6,62,40,916  
 5. 7,16,04,890      6. 12,10,00,545      7. 6,00,32,107      8. .  
 62,09,00,031  
 9. 81,00,06,020      10. 99,99,99,999

**III.**

- (i) 900000000, 80000000, 7000000, 600000, 50000, 4000, 300, 20, 1  
 (ii) 100000000, 20000000, 0, 300000, 0, 4000, 500, 60, 7

**IV.**

- (i)  $\begin{array}{r} 680723567 \\ \underline{\phantom{00000000}} \end{array}$        $\begin{array}{r} 8,00,00,000 \\ \underline{\phantom{00000000}} \end{array}$   
 (ii)  $\begin{array}{r} 589763142 \\ \underline{\phantom{00000000}} \end{array}$        $\begin{array}{r} 7,00,000 \\ \underline{\phantom{00000000}} \end{array}$   
 (iii)  $\begin{array}{r} 473275107 \\ \underline{\phantom{00000000}} \end{array}$        $\begin{array}{r} 70,000 \\ \underline{\phantom{00000000}} \end{array}$   
 (iv)  $\begin{array}{r} 658329416 \\ \underline{\phantom{00000000}} \end{array}$        $\begin{array}{r} 9,000 \\ \underline{\phantom{00000000}} \end{array}$

**V.**

- (a)  $6,00,000 + 20,000 + 8,000 + 400 + 30 + 9$   
 (b)  $80,00,000 + 6,00,000 + 40,000 + 2,000 + 100 + 70 + 8$   
 (c)  $90,00,00,000 + 8,00,00,000 + 70,00,000 + 3,00,000 + 60,000 + 9,000 + 500 + 40 + 5$   
 (d)  $10,00,00,000 + 6,00,00,000 + 0 + 7,00,000 + 40,000 + 5,000 + 900 + 20 + 3$   
 (e)  $70,00,00,000 + 0 + 60,00,000 + 0 + 90,000 + 8,000 + 400 + 70 + 2$   
 (f)  $80,00,00,000 + 5,00,00,000 + 30,00,000 + 0 + 40,000 + 7,000 + 600 + 20 + 9$

**VI.**

1. 59,62,47,315      2. 85,00,68,436      3. 3,03,03,303  
 4. 80,00,08,088      5. 9,00,00,077

**VII.**

1. 1,00,00,000    2. 10,00,00,000    3. 9,99,99,999    4. 99,99,99,999    5. 10,00,000

**VIII.**

1. 51,30,724,    51,30,824,    51,30,924  
 2. 43,25,965,    43,26,965,    43,27,965  
 3. 14,24,35,187,    15,24,35,187,    16,24,35,187

**IX.**

1. 10,34,579      2. 87,65,420      3. 10,00,00,000; 9,99,99,999

**X.**

1. 10,00,00,000    s2. 99,99,999    3. 70,000    4. 90,00,00,000    5. 100    6. 100

**I.**

- (a) 30,100,973 Thirty million one hundred thousand nine hundred and seventy three  
 (b) 60,715,907 Sixty million seven hundred and fifteen thousand nine hundred and seven  
 (c) 650,017,680 Six hundred and fifty million, seventeen thousand, six hundred and eighty  
 (d) 743,689,168 Seven hundred and forty three million six hundred and eighty nine thousand one hundred and sixty eight.

- (e) 843,589,263 Eight hundred and forty three million, five hundred and eighty nine thousand two hundred and sixty three.
- (f) 961,000,039 Nine hundred and sixty one million and thirty nine.
- (g) 784,409,008 Seven hundred and eighty four million four hundred and nine thousand and eight.
- (h) 900,029,701 Nine hundred million, twenty nine thousand seven hundred and one.
- (i) 260,000,010 Two hundred and sixty million and ten.
- (j) 999,999,999 Nine hundred and ninty nine million, nine hundred and ninety nine thousand, nine hundred and ninety nine.

## II.

- |                |                  |                |                 |
|----------------|------------------|----------------|-----------------|
| (1) 65,328,637 | (2) 906,006,075  | (3) 77,000,390 | (4) 409,103,048 |
| (5) 16,000,066 | (6) 894,010,200  | (7) 90,090,090 | (8) 736,928,337 |
| (9) 9,000,900  | (10) 999,999,999 |                |                 |

## III.

- |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
| (a) 3 | (b) 7 | (c) 8 | (d) 1 | (e) 3 | (f) 9 |
|-------|-------|-------|-------|-------|-------|

## IV.

- |         |        |        |         |
|---------|--------|--------|---------|
| (1) 100 | (2) 10 | (3) 10 | (4) 100 |
|---------|--------|--------|---------|

## V.

- $6 \Rightarrow 6 \text{ ones} = 6$        $7 \Rightarrow 7 \text{ tens} = 70$        $9 \Rightarrow 9 \text{ hundreds} = 900$   
 $8 \Rightarrow 8 \text{ thousands} = 8000$        $2 \Rightarrow 2 \text{ ten thousands} = 20000$   
 $7 \Rightarrow 7 \text{ hundred thousands} = 700,000$        $3 \Rightarrow 3 \text{ millions} = 3,000,000$   
 $4 \Rightarrow 4 \text{ ten millions} = 40,000,000$        $6 \Rightarrow 6 \text{ hundred millions} = 600,000,000$

## VI.

- (1) 200,000 (2) 500,000,000 (3) 8,000 (4) 30,000,000 (5) 100 (6) 300,000,000

## VII.

### INDIAN SYSTEM

- 1) 9,06,387 Nine lakh six thousand three hundred and eighty seven.
- 2) 71,42,965 Seventy one lakh forty two thousand nine hundred and sixty five.
- 3) 98,23,46,758 Ninty eight crore twenty three lakh forty six thousand seven hundred fifty eight.
- 4) 50,67,41,693 Fifty crore sixty seven lakh forty one thousand six hundred and ninety three
- 5) 72,85,36,423 Seventy two crore, eighty five lakh, thirty six thousand four hundred and twenty three

### INTERNATIONAL SYSTEM

- 1) 906,387 Nine thousand and six thousand three hundred and eighty seven
- 2) 7,142,965 Seven million one hundred and forty two thousand nine hundred and sixty five
- 3) 982,346,758 Nine hundred and eighty two million three hundred and forty six thousand seven hundred and fifty eight.

- 4) 506,741,693 Five hundred and six million, seven hundred and forty one thousand, six hundred and ninety three  
 5) 728,536,423 Seven hundred and twenty eight million five hundred and thirty six thousand four hundred and twenty three.

## 2

### I

- (a) 0      (b) 50      (c) 60      (d) 540      (e) 6990      (f) 7290

### II

- (a) 100      (b) 700      (c) 200      (d) 800      (e) 4600      (f) 5300

### III

- (a) 1000      (b) 2000      (c) 5000      (d) 9000      (e) 68000      (f) 96000

### IV

49 50 ; 27 30 ; 222 220      Now  $50 + 30 + 220 = 300$

### V

889 890 ; 155 160       $890 - 160 = 730$       700

### VI

- (b) 2450 to 2499      2501 to 2549  
 (c) 10750 to 10799      10801 to 10849  
 (d) 39950 to 39999      40001 to 40049

### VII

- (a) 42      (b) 349      (c) 6575

### VIII

65, 66, 67, 68, 69, 70, 71, 72, 73, 74

### IX

335, 336, 337, 338, 339, 340, 341, 342, 343, 344

### X

550 to 599 and 601 to 649

### XI

750 to 799 and 801 to 849

## MULTIPLE CHOICE QUESTIONS-II

- (I) d    (2) c    (3) a    (4) b    (5) b    (6) b    (7) b    (8) b    (9) a

## UNIT III

## 1

### I

- (a) XV      (b) XVII      (c) XXIII      (d) XXVII      (e) XXXII  
 (f) XXIX      (g) XIV      (h) XXX      (i) XXXVIII      (j) XXXIX  
 (k) XL      (l) XLV      (m) XLVII      (n) XLIX      (o) LV  
 (p) LX      (q) LXIX      (r) LXXII      (s) LXXXVIII      (t) XC

**II.**

- (a) 14      (b) 16      (c) 22      (d) 25      (e) 38      (f) 49  
 (g) 48      (h) 76      (i) 87      (j) 94      (k) 111      (l) 157  
 (m) 240      (n) 352      (o) 649      (p) 800

**III.**

- (a) ✗      (b) ✓      (c) ✗      (d) ✗      (e) ✗      (f) ✗  
 (g) ✓      (h) ✓      (i) ✗

**IV.**

- (a) MMDCIX      (b) MDXLVI      (c) LXIII      (d) MCL  
 (e) MCDI      (f) CLIX

**V.**

- (a) CM, CMXLV, MLX      (b) DXXXIV, DLIX, MCM

**VI.**

- (a) MDXLV, MCDI, MCL      (b) MCDLV, CLIX, LXIII

**UNIT IV****1**

- I.** (a) 5892588    (b) 10535035    (c) 6888462    (d) 9321582    (e) 103279309  
 (f) 12226561    (g) 71222016    (h) 102244355    (i) 150834746
- II.** (a) 32379848    (b) 47445022    (c) 95915505    (d) 106321954    (e) 362085856  
 (f) 681791676    (g) 755863270    (h) 696110167    (i) 14884330
- III.** (1) 83,69,649    (2) 2,81,67,439    (3) 6,61,91736    (4) 51,39,71,400

**2**

- I.** (a) 4762067      (b) 2885728      (c) 6158062      (d) 6480952      (e) 178779  
 (f) 119512      (g) 264929      (h) 48815168      (i) 15990225      (j) 29512557  
 (k) 322991910      (l) 291779999

WW

**II.**

- |  |  |   |
|--|--|---|
| $\begin{array}{r} 7\ 1\ 5\ 8\ 1\ 6 \\ +\ 2\ 4\ 4\ 3\ 5\ 4 \\ \hline 9\ 6\ 0\ 1\ 7\ 0 \end{array}$          | $\begin{array}{r} 5\ 9\ 2\ 4\ 0\ 6\ 2 \\ +\ 3\ 1\ 7\ 4\ 4\ 4\ 6 \\ \hline 9\ 0\ 9\ 8\ 5\ 0\ 8 \end{array}$ | $\begin{array}{r} 5\ 6\ 3\ 4\ 6\ 2\ 5 \\ -\ 2\ 7\ 2\ 1\ 4\ 6\ 3 \\ \hline 2\ 9\ 1\ 3\ 1\ 6\ 2 \end{array}$    |
| $\begin{array}{r} 9\ 5\ 4\ 5\ 6\ 3\ 5 \\ -\ 7\ 2\ 3\ 7\ 6\ 2\ 8 \\ \hline 2\ 3\ 0\ 8\ 0\ 0\ 7 \end{array}$ | $\begin{array}{r} 3\ 1\ 4\ 8\ 6\ 5\ 4 \\ -\ 1\ 9\ 5\ 2\ 7\ 8\ 9 \\ \hline 1\ 1\ 9\ 5\ 8\ 6\ 5 \end{array}$ | $\begin{array}{r} 1\ 1\ 0\ 0\ 5\ 2\ 0\ 0 \\ +\ 8\ 7\ 9\ 3\ 6\ 7\ 5 \\ \hline 2\ 2\ 1\ 1\ 5\ 2\ 5 \end{array}$ |

**3**

- (1) 11,19,15,324      (2) 1,60,36,229      (3) 22,33,84,786      (4) 6,37,620  
 Sq.Km.

- (5) Rs.18,79,430,040 (6) 1,00,99,99,99 (7) 1,00,99,99,999 (8) 14,27,190  
 (9) 5,75,03,648 bags (10) Rs. 4,34,97,155 (11) 1,80,66,459  
 (12) 22,67,45,947 (13) 1,59,38,908 (14) 1,86,77,788 (15) 32,06,307  
 (16) Rs.7,86,68,806 (17) Rs. 63,67,77,917 (18) 6,63,869  
 (19) 92,77,189 (20) Rs.6313 (21) 53,47,637 (22) 1916  
 (23) 33,775 (24) 16,478

### MULTIPLE CHOICE QUESTIONS-III

#### UNIT V

**1**

- (1) a (2) a (3) a (4) b (5) c (6) c (7) c (8) c (9) b (10) c

**I**

- (a) 2, 643 (b) 1 (c) 3748 (d) 0  
 (e) 24 (f) 1000 - 65 (g) 604 (h) 2,360

**II**

- (a) 37,150 (b) 1,78,630 (c) 4,61,200 (d) 39,42,700  
 (e) 50,68,000 (f) 2,64,39,000

**III**

- (a) 3,78,050 (b) 2,92740 (c) 20,48,700  
 (d) 1,11,06,000 (e) 11,93,400 (f) 16,52,84,000

**IV**

- (a)  $346 \times 2 \times 5 = 3460$  (b)  $1463 \times 5 \times 20 = 1,46,300$   
 (c)  $826 \times 4 \times 25 = 82,600$  (d)  $3728 \times 2 \times 500 = 37,28,000$

**V**

- (a) 2,320 (b) 4,356 (c) 2,500 (d) 45,045 (e) 73,206  
 (f) 76,980 (g) 86,066 (h) 18,375 (i) 9,01,185

**2**

**1.**

- (a) 2,87,700 (b) 23,89,010 (c) 11,77,848 (d) 32,86,082  
 (e) 85,57,959 (f) 86,29,752 (g) 8,51,115 (h) 20,85,135  
 (i) 8,32,464 (j) 42,92,822

**3**

- (1) Rs.658155 (2) Rs.1,68,63,750 (3) 3731970 (4) 176900 kg  
 (5) 1513170m (6) Rs.12,32,250 (7) Rs. 196500 (8) 8,32,545m  
 (9) Rs.12,69,53,750 (10) 375000

**4**

**I**

- (a) 415 (b) 21,050 (c) 1,72,375 (d) 2135  
 (e) 1,08,700 (f) 11,400 (g) 6835 (h) 9,875  
 (i) 19,100 (j) 2400 (k) 70,375 (l) 7,85,375

**5****I**

- (a) 12827      (b) 98805      (c) 6271200      (d) 75190      (e) 7021000  
 (f) 9370361      (g) 32232      (h) 30,12,000      (i) 29,33,775      (j) 1,49,240  
 (k) 2319630      (l) 54384

**6****II**

- (a) 16,137      (b) 16,47,044      (c) 59,170      (d) 30,46,950      (e) 8,10,000  
 (f) 6,21,126      (g) 30,81,915      (h) 4,75,000      (i) 79,60,000      (j) 60,37,900  
 (k) 14,994      (l) 90,24,650      (m) 1,95,840      (n) 1,34,43,543  
 (o) 87,33,258

**7****I**

- (a) 12      (b) 9      (c) 9      (d) 9      (e) 11      (f) 8

**II**

- (a) 182      (b) 107      (c) 33      (d) 49      (e) 61      (f) 22  
 (g) 12      (h) 22      (i) 65

**III**

- (a)  $Q = 36, R = 2$       (b)  $Q = 61, R = 0$       (c)  $Q = 131, R = 2$   
 (d)  $Q = 5, R = 5$       (e)  $Q = 4, R = 7$       (f)  $Q = 6, R = 2$

**IV**

- (a)  $Q = 34, R = 1$       (b)  $Q = 37, R = 23$       (c)  $Q = 243, R = 4$   
 (d)  $Q = 1435, R = 24$       (e)  $Q = 5647, R = 43$       (f)  $Q = 1764, R = 3$   
 (g)  $Q = 3549, R = 23$       (h)  $Q = 3549, R = 23$       (i)  $Q = 1949, R = 72$

**8****I**

- (a) 44,557      (b) 3,76,129      (c) 575682      (d) 2,73,435      (e) 622851

**II**

- (1) Rs 26708      (2) Rs 17895      (3) 6875 kg      (4) Rs. 567  
 (5) Rs 4796      (6) Rs. 143      (7) 2826 boxes

**III**

- (1) 2800 bags      (2) Rs 1,83,750

### **MULTIPLE CHOICE QUESTIONS-IV**

- (1) c      (2) d      (3) b      (4) c      (5) a      (6) b      (7) d      (8) c      (9) c      (10) d

## UNIT VI

**1****I**

- (a)  $10^2$       (b)  $10^3$       (c)  $10^4$       (d)  $10^5$       (e)  $10^6$       (f)  $10^7$

**II**

- (a) 8 zeros      (b) 5 zeros      (c) 7 zeros      (d) 6 zeros      (e) 1 zero

**III.**

- (a)
- $2^2$
- (b)
- $3^3$
- (c)
- $4^4$
- (d)
- $5^5$

**IV.**

- (a) 2, 4, 8, 16      (b) 3, 9, 27, 81      (c) 4, 16, 64, 256      (d) 5, 25, 125, 625
- 
- (e) 10, 100, 1000, 10000

**V.**

- (a) Base 10, Index = 4      (b) Base 4, Index = 3      (c) Base 3, Index = 7
- 
- (d) Base 2, Index = 3      (e) Base 8, Index = 5      (f) Base 9, Index = 2

**VI.**

- (a) 27      (b) 1024      (c) 16      (d) 1,00,00,000      (e) 49
- 
- (f) 625      (g) 256

**2****I.**

- (a)
- $3,00,000 + 70,000 + 5,000 + 400 + 60 + 2$
- 
- (b)
- $20,00,000 + 5,00,000 + 30,000 + 6,000 + 100 + 70 + 6$
- 
- (c)
- $5,000,000 + 9,00,000 + 80,000 + 6,000 + 300 + 70 + 4$

**II.**

- (a)
- $4 \times 10^5 + 9 \times 10^4 + 2 \times 10^3 + 7 \times 10^2 + 5 \times 10^1 + 6 \times 10^0$
- 
- (b)
- $7 \times 10^4 + 0 \times 10^3 + 3 \times 10^2 + 2 \times 10^1 + 4 \times 10^0$
- 
- (c)
- $2 \times 10^4 + 8 \times 10^3 + 3 \times 10^2 + 7 \times 10^1 + 6 \times 10^0$
- 
- (d)
- $4 \times 10^8 + 0 \times 10^7 + 3 \times 10^6 + 0 \times 10^5 + 7 \times 10^4 + 0 \times 10^3 + 1 \times 10^2 + 2 \times 10^1 + 8 \times 10^0$
- 
- (e)
- $3 \times 10^6 + 6 \times 10^5 + 5 \times 10^4 + 7 \times 10^3 + 8 \times 10^2 + 9 \times 10^1 + 2 \times 10^0$
- 
- (f)
- $9 \times 10^6 + 7 \times 10^5 + 6 \times 10^4 + 5 \times 10^3 + 3 \times 10^2 + 7 \times 10^1 + 2 \times 10^0$

**III.**

- (a)
- $a^9$
- (b)
- $2^7$
- (c)
- $a^2$
- (d)
- $3^{15}$

**IV.**

- (a)
- $3^5 = 243$
- (b)
- $5^5 = 3125$
- (c)
- $4^4 = 256$

**V.**

- (a)
- $3^3 = 27$
- (b)
- $2^3 = 8$
- (c)
- $5^1 = 5$

**MULTIPLE CHOICE QUESTIONS-V**

- (1) d    (2) d    (3) a    (4) b    (5) b    (6) c    (7) a    (8) c    (9) b    (10) b

**UNIT VII**

- 1,438; 3,740; 96,832; 87,564
- 702; 585; 5,724
- 895; 4830; 3,785; 4,760
- 684; 1,629; 6,876; 9,468; 8,532; 5,553
- 820; 63,500; 9,070
- 462; 396; 715; 253; 231; 1,837

7. 46,82,304; 13,57,912; 31,65,200
8. 14,63,512; 53,79,704
9. 91,23,456
10. 9,214,356
11. 71,62,035; 92,14,320
12. 9,37,206
13. 71,34,825; 56,37,11,800
14. No 42 is divisible by 3, but it is not divisible by 9.
15. (a) 6 (b) 1 (c) 5 (d) 0 (e) 4 (f) 1 (g) 4

### **MULTIPLE CHOICE QUESTIONS-VI**

- (1) b (2) c (3) c (4) a (5) d (6) b (7) c (8) a (9) c (10) b

## UNIT VIII

### 1

- I.** (1) 1 (2) 2 and 3 (3) 2 (4) NO  
 (5) No, 9 and 15 are odd but not priem (6) 2
- II.**
- (1) 2, 3, 5, 7, 11, 13, 17 & 19
  - (2) 23, 29, 31, 37, 41, 43, 47
  - (3) 53, 59, 61, 67, 71, 73, 79, 83, 89, 97
  - (4) 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97
  - (5) 35 and 5, 7 and 11, 13 and 17, 19 and 29, 31 and 41, 43 and 59, 61 and 71, 73
- III.**
1. (a) 19 (b) 37 (c) 59 (d) 97
  2. (a) 23 (b) 61 (c) 83 (d) 101
- IV.**
- (a) False (b) True (c) True (d) True (e) False (f) False
- V.**
- (a) 3, 5 and 5, 7, and 41, 43 and 29, 31 and 17, 19
  - (b) 2, 7 and 7, 17 and 19, 47 and 23, 83

### 2

- I.**
- |  |   |
|--|---|
| (a) $64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$  | (b) $45 = 3 \times 3 \times 5$                            |
| (c) $48 = 2 \times 2 \times 2 \times 2 \times 3$           | (d) $72 = 2 \times 2 \times 2 \times 3 \times 3$          |
| (e) $32 = 2 \times 2 \times 2 \times 2 \times 2$           | (f) $75 = 3 \times 5 \times 5$                            |
| (g) $54 = 2 \times 3 \times 3 \times 3$                    | (h) $96 = 2 \times 2 \times 2 \times 2 \times 2 \times 3$ |
| (i) $63 = 3 \times 3 \times 7$                             | (j) $102 = 2 \times 3 \times 17$                          |
| (k) $144 = 2 \times 2 \times 2 \times 2 \times 3 \times 3$ | (l) $165 = 3 \times 5 \times 11$                          |
- II.**
- |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
| (a) c | (b) p | (c) c | (d) c | (e) c | (f) p |
| (g) p | (h) c | (i) c | (j) c | (k) p | (l) c |

**3****I.**

- (a) 11      (b) 7      (c) 7      (d) 3      (e) 3      (f) 7  
 (g) 3 and 5   (h) 11      (I) 5

**II.**

- (a) H.C.F. =  $2 \times 2 \times 3 = 12$       (b) H.C.F. =  $2 \times 2 \times 2 = 8$   
 (c) H.C.F. =  $5 \times 5 = 25$       (d) H.C.F. =  $3 \times 5 = 15$   
 (e) H.C.F. =  $2 \times 2 \times 2 \times 2 = 16$       (f) H.C.F. =  $2 \times 2 \times 3 \times 3 = 36$   
 (g) H.C.F. =  $2 \times 2 \times 2 \times 2 \times 3 = 48$       (h) H.C.F. =  $3 \times 3 \times 5 = 45$   
 (i) H.C.F. =  $2 \times 7 = 14$       (j) H.C.F. =  $5 \times 5 = 25$   
 (k) H.C.F. = 5      (l) H.C.F. =  $2 \times 3 = 6$   
 (m) H.C.F. = 5      (n) H.C.F. =  $3 \times 3 \times 3 = 27$   
 (o) H.C.F. =  $2 \times 3 = 6$       (p) H.C.F. =  $3 \times 3 \times 5 = 45$   
 (q) H.C.F. =  $2 \times 2 \times 2 = 8$       (r) H.C.F. =  $5 \times 5 = 25$

**4****I.**

- (a) 9      (b) 1      (c) 17      (d) 8      (e) 36      (f) 115  
 (g) 81      (h) 121      (i) 25

**5****I**

- (a) 14, 21, 28, 35      (b) 8, 12, 16, 20      (c) 10, 15, 20, 25      (d) 22, 33, 44, 55  
 (e) 18, 27, 36, 45      (f) 34, 51, 68, 85      (g) 36, 54, 72, 90      (h) 40, 60, 80, 100  
 (i) 26, 39, 52, 65      (J) 30, 45, 30, 75

**II.**

- (a) 15, 30, 45, 60      Least common multiple = 15  
 (b) 10, 20, 30, 40      Least common multiple = 10  
 (c) 12, 24, 36, 48      Least common multiple = 12  
 (d) 12, 24, 36, 48      Least common multiple = 12  
 (e) 30, 60, 90, 120      Least common multiple = 30

**III.**

- (a) 210      (b) 120      (c) 36      (d) 72      (e) 48      (f) 72  
 (g) 100      (h) 96      (i) 108      (j) 162      (k) 420      (l) 360  
 (m) 72      (n) 144      (o) 300      (p) 360      (q) 150      (r) 288

**I**

- (a) L.C.M. =  $2 \times 3 \times 7 \times 3 \times 2 \times 1 \times 7 = 1764$   
 (b) L.C.M. =  $2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 5 = 1440$   
 (c) L.C.M. =  $3 \times 5 \times 2 \times 2 \times 2 \times 3 \times 5 = 1800$   
 (d)  $2 \times 3 \times 3 \times 5 \times 2 = 180$   
 (e) L.C.M. =  $2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 7 \times 3 = 1008$   
 (f) L.C.M. =  $2 \times 2 \times 3 \times 3 \times 2 \times 3 \times 2 \times 41 = 17712$   
 (g) L.C.M. =  $2 \times 2 \times 2 \times 3 \times 2 \times 3 \times 3 \times 2 \times 7 = 6048$

- (h) L.C.M =  $2 \times 2 \times 3 \times 2 \times 3 \times 5 \times 1 \times 2 = 720$   
 (i) L.C.M =  $2 \times 2 \times 2 \times 3 \times 5 \times 2 \times 1 \times 3 \times 5 = 3600$   
 (j) L.C.M =  $2 \times 3 \times 3 \times 2 \times 5 \times 3 = 240$   
 (k) L.C.M =  $2 \times 2 \times 2 \times 3 \times 2 \times 5 \times 3 = 1080$   
 (l) L.C.M =  $2 \times 17 \times 2 \times 2 \times 3 \times 5 = 2040$

**6**

- (1) 25 cm  $\times$  25 cm    (2) 24    (3) 18    (4) 1p.m    (5) 432 cm    (6) 17

**7**

- (1) 48    (2) 60    (3) 25872    (4) 87    (5) 145    (6) 16

**MULTIPLE CHOICE QUESTIONS-VII**

- (1) b    (2) c    (3) d    (4) c    (5) b    (6) a    (7) c  
 (8) c    (9) d    (10) a

**UNIT IX**

**1**

**I.**

- (a) point five    (b) point eight    (c) point seven    (d) point nine

**II.**

- (a) .1    (b) .3    (c) .5    (d) .15    (e) .35

**III.**

- (a) .53    (b) .719    (c) .08    (d) .065    (e) .0009  
 (f) .0045    (g) .0862    (h) .5378    (i) .3009    (j) .709

**1.**

- (a) Value in fractions is  $9486.324 = 9000 + 400 + 80 + 6 + \frac{3}{10} + \frac{2}{100} + \frac{4}{1000}$   
 Value in decimal is  $9486.324 = 9000 + 400 + 80 + 6 + .3 + .02 + .004$
- (b) Value in fraction is  $8058.425 = 8000 + 0 + 50 + 8 + \frac{4}{10} + \frac{2}{100} + \frac{5}{1000}$   
 Value in decimal is  $8058.425 = 8000 + 0 + 50 + 8 + .4 + .02 + .005$
- (c) Value in Fraction is  $6504.937 = 6000 + 500 + 0 + 4 + \frac{9}{10} + \frac{3}{100} + \frac{7}{1000}$   
 Value in decimal  $6504.937 = 6000 + 500 + 0 + 4 + .9 + .03 + .007$
- (d) Value in fraction  $3216.139 = 3000 + 200 + 10 + 6 + \frac{1}{10} + \frac{3}{100} + \frac{9}{1000}$   
 Value in decimal  $3216.139 = 3000 + 200 + 10 + 6 + .1 + .03 + .009$
- (e) Value in Fraction  $4264.257 = 4000 + 200 + 60 + 4 + \frac{2}{10} + \frac{5}{100} + \frac{7}{1000}$   
 Value in decimal  $4264.257 = 4000 + 200 + 60 + 4 + .2 + .05 + .007$
- (f) Value in Fraction  $5642.428 = 5000 + 600 + 40 + 2 + \frac{4}{10} + \frac{2}{100} + \frac{8}{1000}$   
 Value in Decimal  $5642.428 = 5000 + 600 + 40 + 2 + .4 + .02 + .008$

**II.**

(a) 5647.325 (b) 7408.134 (c) 4792.543 (d) 8235.176

**III.**

(a) 5645.723 (b) 1234.612 (c) 8456.725 (d) 7642.357

**2****1.**(a)  $\frac{7}{10}$  (b)  $\frac{7}{100}$  (c) (d)(e) (f)  $1\frac{7}{10}$  (g) (h)

(i) (j) (k) (l) 20

**II.**(a) .9 (b) .8 (c) .32 (d) .43 (e) .002 (f) .081  
(g) 1.2 (h) 3.005 (i) 4.02 (j) 5.81 (k) 14.007 (l) 13.126**III.**

1. 2.

**3****I**(a) .73 (b) .07 (c) .37 (d) .362 (e) .976  
(f) .063 (g) 1.7 (h) 1.03 (i) 1.521**II.**

(a) .31 (b) .452 (c) .001 (d) .7643 (e) .013 (f) 1.45

**4**(a) 18.196 (b) 58.4494 (c) 90.2229 (d) 917.6875  
(e) 855.4849 (f) 255.8308 (g) 83.196 (h) 250.2337**I**(a) 34.5766 (b) 26.7490 (c) 85.1634 (d) 144.5141  
(e) 76.2744  
(f) 9.5655 (g) 42.08930 (h) 1634.5 (i) 331.58575 (j) 9.0001**II.**

(a) 4.53 (b) 4.61 (c) 19.7 (d) 576305.04151

**III.**(a) 700.90m (b) 517.33m (c) 23.572tonnes (d) 734.25m  
(e) 8.2530 (f) 267.516 (g) 60.778 ; 22.472  
(h) 50.8906 ; 30.8487 ; 20.0419 (i) 73.55 ; 26.45

**5**

- (a) 6      (b) .6      (c) .73      (d) 0.009      (e) 35.7      (f) 90.325  
 (g) 7      (h) .8      (i) .09      (j) 5.2      (k) 790      (l) 3700.8

**6****I**

- (a) 4.5      (b) .35      (c) .072      (d) 8.4

**II**

- (a) 39.42      (b) 26.056      (c) 70.015      (d) 14.084      (e) 198.08      (f) 165.4984  
 (g) 757.44      (h) 6045.116      (i) 5197.836      (j) 0.01728      (k) 207480.6      (l) 9.5

**7****I**

- (a) 204.75      (b) 34.335      (c) 105.393      (d) 593.664  
 (e) 18.9075      (f) 162.4      (g) 316.11      (h) 112.566  
 (i) 336.2055      (j) 726.0192      (k) 295.775      (l) 166.68716

**II**

- (a) 332.5km      (b) 103.05m      (c) 663.30l      (d) 97.5kg  
 (e) 191.45kg

**8****I**

- (a) .06      (b) .009      (c) .635      (d) 54.96      (e) 3.6823      (f) 56.256  
 (g) .039      (h) .0007      (i) .002      (j) .0004      (k) .00007      (l) 4.853  
 (m) .549      (n) .0067      (o) 25.4876      (p) 59.3105      (q) .0003      (r) .00004  
 (s) .000008      (t) .3167      (u) .61543      (v) .038537      (w) 9.13541      (x) 98.7654

**9****I**

- (a) 2.9      (b) 1.6      (c) 1.3      (d) 2.5      (e) 0.9      (f) 0.45

**II**

- (a) 2.48      (b) 12.78      (c) 1.6      (d) 0.22      (e) 16.93      (f) 7.47  
 (g) 15.24      (h) 16.97      (i) 18.36

**10****I**

- (a) 8      (b) 1.5      (c) 0.54      (d) 0.77      (e) 3.07      (f) 1.54

**II**

- (a) 12.78      (b) 16.93      (c) 3.58      (d) 16.97      (e) 21      (f) 36.1  
 (g) 34.7      (h) 6.24      (i) 7.24

**III**

- (1) Rs 4.25      (2) Rs 94.5      (3) 700      (4) 40.34 km      (5) 49.19 kg

**11****I**

- (a) 58 (b) 13 (c) 1 (d) 12 (e) 3 (f) 4 (g) 8

**II**

- (a) 1.7 (b) 1.5 (c) 7.4 (d) 6.4 (e) 1.2 (f) 4.3 (g) 3.8

**III**

- (a) 48.29 (b) 50.05 (c) 2.98 (d) 6.01 (e) 8.00 (f) 5.44

**IV**

- (a) 16.08 (b) 7.29 (c) 17.05 (d) 6.45 (e) 9.51 (f) 3.45

**MULTIPLE CHOICE QUESTIONS-VIII**

- (1) b (2) a (3) b (4) b (5) c (6) d (7) a (8) d (9) b (10) d

**UNIT X****1****I** (a) numerator = 5 and denominator = 12 in the fraction  $\frac{5}{12}$ 

- (b)
- $\frac{5}{9}, \frac{2}{7}, \frac{3}{8}$
- (c)
- $\frac{7}{3}, \frac{5}{2}, \frac{20}{17}$
- (d)
- $\frac{1}{11}, \frac{3}{11}, \frac{10}{11}$
- (e)
- $\frac{15}{4}, \frac{15}{10}, \frac{15}{8}$

**II**

1. (a)
- $1\frac{5}{7}$
- (b)
- $1\frac{7}{8}$
- (c)
- $3\frac{3}{5}$

2. (a)
- $\frac{10}{3}$
- (b)
- $\frac{19}{4}$
- (c)
- $\frac{38}{7}$

**III**

1. (a)
- $\frac{6}{10}, \frac{9}{15}, \frac{12}{20}, \frac{15}{25}$
- (b)
- $\frac{5}{40}, \frac{3}{24}, \frac{6}{48}$
- (c)
- $\frac{8}{16}, \frac{1}{2}, \frac{6}{12}$
- (d)
- $\frac{10}{4}, \frac{20}{8}, \frac{25}{10}$

2. (a)
- $\frac{2}{5} = \frac{4}{10} = \frac{6}{15} = \frac{8}{20} = \frac{10}{25}$
- (b)
- $\frac{3}{5} = \frac{6}{10} = \frac{9}{15} = \frac{12}{20}$

- (c)
- $\frac{2}{3} = \frac{10}{15} = \frac{12}{18} = \frac{8}{12}$

**IV**

- (a)
- $\frac{10}{13}$
- (b)
- $\frac{10}{16}$
- (c)
- $\frac{15}{9}$

**V**

- (a)
- $\frac{4}{12}$
- (b)
- $\frac{8}{11}$
- (c)
- $\frac{1}{4}$

**2**

- I**
- (a)
- $\frac{5}{4}$
- (b)
- $\frac{11}{4}$
- (c)
- $\frac{30}{9}$
- (d)
- $\frac{15}{4}$
- (e)
- $\frac{29}{6}$
- (f)
- $\frac{58}{9}$
- (g)
- $\frac{67}{12}$
- (h)
- $\frac{47}{3}$

- II**
- (a)
- $1\frac{4}{5}$
- (b)
- $4\frac{5}{8}$
- (c)
- $6\frac{2}{3}$
- (d)
- $3\frac{1}{8}$
- (e)
- $4\frac{3}{4}$
- (f)
- $4\frac{3}{10}$
- (g)
- $2\frac{3}{7}$
- (h)
- $9\frac{6}{11}$

III. Proper Fractions =  $\frac{3}{9}, \frac{2}{3}, \frac{99}{100}, \frac{7}{77}$

Improper Fractions =  $\frac{5}{2}, \frac{3}{2}, \frac{9}{7}, \frac{100}{99}, \frac{77}{7}$

Mixed numbers =  $6\frac{1}{6}, 1\frac{1}{4}, 2\frac{1}{2}$

**3**

I (a)  $\frac{14}{21} = \frac{14 \div 7}{21 \div 7} = \frac{2}{3}$  (b)  $\frac{9}{12} = \frac{9 \div 3}{12 \div 3} = \frac{3}{4}$  (c)  $\frac{6}{8} = \frac{6 \div 2}{8 \div 2} = \frac{3}{4}$

(d)  $\frac{10}{15} = \frac{10 \div 5}{15 \div 5} = \frac{2}{3}$  (e)  $\frac{3}{9} = \frac{3 \div 3}{9 \div 3} = \frac{1}{3}$  (f)  $\frac{9}{15} = \frac{9 \div 3}{15 \div 3} = \frac{3}{5}$

(g)  $\frac{24}{32} = \frac{24 \div 8}{32 \div 8} = \frac{3}{4}$  (h)  $\frac{36}{42} = \frac{36 \div 6}{42 \div 6} = \frac{6}{7}$

(i)  $\frac{42}{56} = \frac{42 \div 2}{56 \div 2} = \frac{21 \div 7}{28 \div 7} = \frac{3}{4}$  (j)  $\frac{63}{84} = \frac{63 \div 7}{84 \div 7} = \frac{9 \div 3}{12 \div 3} = \frac{3}{4}$

(k)  $\frac{55}{99} = \frac{55 \div 11}{99 \div 11} = \frac{5}{9}$  (l)  $\frac{30}{72} = \frac{30 \div 6}{72 \div 6} = \frac{5}{12}$

II (a) 6 (b) 8 (c) 15 (d) 12

**4**

I (a)  $\frac{3}{7}$  (b)  $\frac{4}{9}$  (c)  $\frac{3}{9} = \frac{3 \div 3}{9 \div 3} = \frac{1}{3}$  (d)  $\frac{8}{12} = \frac{8 \div 4}{12 \div 4} = \frac{2}{3}$

(e)  $\frac{15}{20} = \frac{15 \div 5}{20 \div 5} = \frac{3}{4}$  (f)  $\frac{14}{21} = \frac{14 \div 7}{21 \div 7} = \frac{2}{3}$  (g)  $\frac{12}{16} = \frac{12 \div 4}{16 \div 4} = \frac{3}{4}$

(h)  $\frac{15}{30} = \frac{15 \div 15}{30 \div 15} = \frac{1}{2}$  (i)  $\frac{9}{12} = \frac{9 \div 3}{12 \div 3} = \frac{3}{4}$

(j)  $\frac{250}{350} = \frac{250 \div 5}{350 \div 5} = \frac{50 \div 10}{70 \div 10} = \frac{5}{7}$  (k)  $\frac{240}{320} = \frac{24 \div 8}{32 \div 8} = \frac{3}{4}$

(l)  $\frac{550}{770} = \frac{55 \div 11}{77 \div 11} = \frac{5}{7}$

II 1.  $\frac{21}{31}$  2.  $\frac{1}{3}$  3.  $\frac{7}{15}$  4.  $\frac{1}{4}$  5.  $\frac{6}{5}$  6.  $\frac{5}{6}$  7.  $\frac{1}{5}$  8.  $\frac{4}{3}$

I (a) 10, 7 (b) 9, 2 (c) 6, 1 (d) 5, 1

II (a) Rs 12 (b) Rs 3 (c) Rs 15 (d) Rs 12  
(e) Rs 6 (f) Rs 44 (g) Rs 35 (h) Rs 56

**5**

I (a)  $\frac{3}{4}$  (b)  $\frac{8}{11}$  (c)  $\frac{5}{6}$  (d)  $\frac{3}{5}$  (e)  $\frac{5}{6}$  (f)  $\frac{7}{8}$

II (a)  $\frac{7}{12}$  (b)  $\frac{2}{3}$  (c)  $\frac{7}{10}$  (d)  $\frac{4}{9}$  (e)  $\frac{7}{10}$  (f)  $\frac{9}{16}$

- III** (a)  $\frac{3}{10}, \frac{2}{5}, \frac{7}{15}$  (b)  $\frac{1}{3}, \frac{2}{5}, \frac{1}{2}$  (c)  $\frac{7}{9}, \frac{5}{6}, \frac{11}{12}$  (d)  $\frac{8}{15}, \frac{11}{18}, \frac{7}{10}$   
 (e)  $\frac{2}{3}, \frac{3}{4}, \frac{7}{8}$  (f)  $\frac{4}{5}, \frac{7}{8}, \frac{9}{10}$
- IV** (a)  $\frac{5}{6}, \frac{13}{15}, \frac{9}{10}$  (b)  $\frac{2}{5}, \frac{5}{16}, \frac{3}{10}$  (c)  $\frac{7}{9}, \frac{2}{3}, \frac{1}{2}$  (d)  $\frac{7}{10}, \frac{5}{8}, \frac{3}{5}$   
 (e)  $\frac{7}{10}, \frac{2}{3}, \frac{3}{5}$  (f)  $\frac{5}{6}, \frac{3}{4}, \frac{7}{12}$

## 6

- I** (a)  $\frac{6}{8}$  (b)  $\frac{15}{19}$  (c)  $\frac{12}{11} = 1\frac{1}{11}$  (d)  $\frac{12}{12} = 1$  (e)  $\frac{15}{15} = 1$   
 (f)  $\frac{17}{10} = 1\frac{7}{10}$  (g)  $\frac{16}{16} = 1$  (h)  $\frac{15}{13} = 1\frac{2}{13}$  (i)  $\frac{17}{17} = 1$
- II** (a) 3 (b) 4 (c)  $4\frac{2}{5}$  (d)  $2\frac{6}{9} = 2\frac{2}{3}$  (e) 4 (f) 4 (g)  $4\frac{2}{5}$   
 (h)  $3\frac{5}{7}$  (i)  $5\frac{2}{4} = 5\frac{1}{2}$  (j)  $5\frac{2}{10} = 8\frac{1}{5}$  (k)  $7\frac{5}{8}$  (l)  $6\frac{6}{12} = 6\frac{1}{2}$
- I** (a)  $\frac{2}{3}$  (b)  $1\frac{5}{12}$  (c)  $\frac{8}{9}$  (d)  $\frac{7}{10}$  (e)  $1\frac{7}{30}$  (f)  $1\frac{11}{20}$  (g)  $1\frac{1}{2}$   
 (h)  $\frac{11}{12}$  (i)  $\frac{19}{24}$  (j)  $\frac{13}{18}$  (k)  $\frac{1}{2}$  (l)  $1\frac{7}{30}$
- I** (a)  $5\frac{1}{6}$  (b)  $9\frac{9}{20}$  (c)  $6\frac{1}{10}$  (d)  $9\frac{5}{6}$  (e)  $5\frac{10}{21}$  (f)  $4\frac{1}{9}$  (g)  $4\frac{5}{8}$   
 (h)  $7\frac{11}{12}$  (i)  $8\frac{1}{3}$  (j)  $6\frac{9}{16}$
- II** 1.  $7\frac{11}{12}$  hours 2.  $5\frac{1}{4}$  kg 3.  $15\frac{3}{8}$  kg 4.  $\frac{59}{60}$  5.  $6\frac{1}{10}$  m
- III** (a)  $1\frac{2}{3}$  (b)  $2\frac{1}{4}$  (c)  $2\frac{1}{9}$  (d)  $2\frac{11}{24}$  (e)  $\frac{19}{24}$   
 (f)  $1\frac{37}{40}$  (g)  $1\frac{3}{8}$  (h) 2

## 7

- I** (a)  $\frac{2}{11}$  (b)  $\frac{2}{5}$  (c)  $\frac{4}{13}$  (d)  $\frac{1}{3}$  (e)  $\frac{1}{2}$  (f)  $\frac{10}{13}$  (g)  $\frac{1}{5}$  (h)  $\frac{1}{3}$
- II** (a)  $\frac{7}{4}$  (b)  $\frac{11}{5}$  (c)  $\frac{3}{2}$  (d)  $\frac{13}{5}$  (e) 3 (f)  $\frac{5}{2}$  (g)  $\frac{29}{9}$  (h)  $\frac{7}{4}$
- I** (a)  $\frac{4}{5}$  (b)  $\frac{4}{9}$  (c)  $\frac{1}{9}$  (d)  $\frac{1}{3}$  (e)  $\frac{1}{8}$  (f)  $\frac{7}{10}$   
 (g)  $\frac{5}{4}$  (h)  $\frac{9}{5}$  (i)  $\frac{11}{7}$  (j)  $1\frac{3}{5}$  (k)  $1\frac{5}{7}$  (l)  $1\frac{3}{4}$
- I** (a)  $\frac{1}{12}$  (b)  $\frac{1}{12}$  (c)  $\frac{7}{15}$  (d)  $\frac{1}{35}$  (e)  $\frac{8}{45}$  (f)  $\frac{1}{8}$  (g)  $\frac{3}{10}$  (h)  $\frac{2}{15}$   
 (i)  $\frac{5}{24}$  (j)  $\frac{1}{8}$  (k)  $1\frac{1}{2}$  (l)  $2\frac{1}{8}$  (m)  $1\frac{3}{4}$  (n)  $\frac{5}{6}$  (o)  $1\frac{1}{12}$

**I** (a)  $\frac{1}{4}$  (b)  $1\frac{1}{6}$  (c)  $\frac{7}{12}$  (d)  $\frac{3}{4}$  (e)  $\frac{11}{24}$  (f)  $\frac{3}{4}$  (g)  $\frac{5}{8}$  (h)  $1\frac{1}{24}$

**II** (i)  $2\frac{23}{24}$  (ii)  $\frac{5}{8}$

**III** 1. Rs  $2\frac{1}{2}$  2.  $\frac{1}{15}$  3.  $\frac{5}{7}$  4.  $2\frac{3}{10}$  5.  $5\frac{1}{2}$  litres

**8**

**I** (a)  $\frac{9}{4}$  (b)  $\frac{30}{8} = 3\frac{3}{4}$  (c)  $\frac{8}{3} = 2\frac{2}{3}$  (d)  $\frac{30}{7} = 4\frac{2}{7}$

(e)  $\frac{18}{5} = 3\frac{3}{5}$  (f)  $\frac{10}{9} = 1\frac{1}{9}$  (g)  $\frac{30}{5} = 6$  (h)  $\frac{45}{5} = 9$

(i)  $\frac{30}{3} = 10$  (j)  $\frac{70}{6} = 11\frac{4}{6} = 11\frac{2}{3}$  (k)  $\frac{110}{2} = 55$

(l)  $\frac{120}{4} = 30$  (m)  $\frac{99}{6} = 16\frac{1}{2}$  (n)  $\frac{186}{9} = 20\frac{2}{3}$

**I** (a)  $\frac{8}{15}$  (b)  $\frac{1}{10}$  (c)  $\frac{3}{20}$  (d)  $\frac{11}{20}$  (e)  $\frac{2}{3}$  (f)  $\frac{15}{28}$  (g)  $\frac{7}{10}$

(h)  $\frac{3}{2} = 1\frac{1}{2}$  (i)  $\frac{1}{4}$

**II** (a) 1 (b)  $\frac{13}{6} = 2\frac{1}{6}$  (c) 3 (d)  $\frac{1}{2}$  (e)  $\frac{5}{4}$  (f)  $\frac{26}{17}$

(g)  $\frac{7}{2} = 3\frac{1}{2}$  (h)  $\frac{24}{5} = 4\frac{4}{5}$  (i)  $\frac{75}{16} = 4\frac{11}{16}$

**III** (1) 21 kg (2)  $13\frac{1}{8}$  km (3) 36 kg (4)  $37\frac{1}{2}$  litres (5) Rs 180 (6) Rs 35

**9**

**I** (a)  $\frac{3}{8}$  (b)  $\frac{2}{11}$  (c)  $\frac{2}{5}$  (d)  $\frac{2}{9}$  (e)  $\frac{5}{24}$  (f)  $\frac{2}{7}$

(g)  $\frac{9}{20}$  (h)  $\frac{7}{48}$  (i)  $\frac{3}{20}$  (j)  $\frac{2}{11}$  (k)  $\frac{1}{12}$  (l)  $\frac{1}{15}$

**II** (a) 3 (b) 6 (c) 24 (d) 4 (e) 9 (f) 30 (g) 10 (h) 15 (i) 8

**I** (a)  $1\frac{15}{49}$  (b)  $\frac{5}{6}$  (c) 2 (d)  $1\frac{1}{4}$  (e)  $2\frac{2}{9}$  (f)  $1\frac{1}{7}$  (g)  $\frac{9}{20}$

(h)  $2\frac{1}{4}$  (i)  $1\frac{1}{8}$  (j)  $4\frac{1}{6}$  (k) 12 (l)  $1\frac{3}{7}$

**II** (a)  $\frac{1}{2}$  kg (b)  $\frac{3}{4}$  m (c) 10 (d) 8

### **MULTIPLE CHOICE QUESTIONS-IX**

(1) b (2) a (3) b (4) a (5) c (6) a (7) b (8) a  
(9) b (10) a

**1.**

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**UNIT XI**

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**1****I**

- (a) 9563 cm (b) 675 cm (c) 5205 cm (d) 908 cm  
(e) 64070 cm (f) 501cm (g) 50090 cm (h) 1207 cm

**II**

- (a) 7.65 m (b) 9.673 m (c) 8.672 (d) 9264.6 m

**III**

- (a) 95.46846 (b) 73895 dm (c) 479.65 g (d) .965 cl

**IV**

- (a) 364.2 dag (b) 532.2 deg (c) 63447.6 dag (d) 2654.3 dag

**V**

- (a) 6.328 kg (b) 5.903 kg (c) 8.00246 kg (d) 9.462 kg

**VI**

- (a) 3.475 l (b) .896 l (c) 1.843 l (d) 25.860 l (e) 73.340 l (f) 9.075 l

**VII**

- (a) 9.125 km (b) 16.625 km (c) 75.009 km (d) 8.075 km
- 

**UNIT XII**

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**2****I**

- (a) 25 % (b) 37 % (c) 46 % (d) 69 % (e) 73 % (f) 89 %

**II**

- (a)  $\frac{40}{100} = 40\%$  (b)  $\frac{65}{100} = 65\%$  (c)  $\frac{70}{100} = 70\%$  (d)  $\frac{90}{100} = 90\%$   
(e)  $\frac{56}{100} = 56\%$  (f)  $\frac{66}{100} = 66\%$  (g)  $\frac{75}{100} = 75\%$  (h)  $\frac{50}{100} = 50\%$   
(i)  $\frac{75}{100} = 75\%$  (j)  $\frac{84}{100} = 84\%$  (k)  $\frac{86}{100} = 86\%$  (l)  $\frac{75}{100} = 75\%$   
(m)  $\frac{30}{100} = 30\%$  (n)  $\frac{32}{100} = 32\%$

**I**

- (a) 60% (b) 25% (c) 75% (d) 80% (e)  $12\frac{1}{2}\%$  (f)  
(g) (h)  $66\frac{2}{3}\%$  (i)  $83\frac{1}{3}\%$  (j) (k)  $45\frac{5}{11}\%$  (l)  $58\frac{1}{3}\%$   
(m) 60% (n) 40% (o) 75% (p) 20%

**3****I**

- (a)  $\frac{10}{100} = \frac{1}{10}$  (b)  $\frac{20}{100} = \frac{1}{5}$  (c)  $\frac{55}{100} = \frac{11}{20}$  (d)  $\frac{24}{100} = \frac{6}{25}$   
(e)  $\frac{90}{100} = \frac{9}{10}$  (f)  $\frac{36}{100} = \frac{9}{25}$  (g)  $\frac{75}{100} = \frac{3}{4}$  (h)  $\frac{72}{100} = \frac{18}{25}$

(i)  $\frac{25}{2 \times 100} = \frac{1}{8}$       (j)  $\frac{25}{4 \times 100} = \frac{1}{16}$       (k)  $\frac{100}{3 \times 100} = \frac{1}{3}$       ( l )  
 $\frac{15}{2 \times 100} = \frac{3}{40}$       (m)  $\frac{10}{3 \times 100} = \frac{1}{30}$       (n)  $\frac{100}{9 \times 100} = \frac{1}{9}$       ( o )  
 $\frac{25}{8 \times 100} = \frac{1}{32}$       (p)  $\frac{200}{3 \times 100} = \frac{2}{3}$

**4**

**I**

- (a) Rs 9      (b) Rs 16      (c) Rs 1      (d) Rs 8      (e) Rs 125  
 (f) Rs 32      (g) Rs 50      (h) Rs  $19\frac{1}{5}$       (i) Rs  $5\frac{3}{25}$       (j) Rs 15

**II**

1. Rs 2180      2. Rs 5000      3. 170      4. 175      5. 162  
 6. Rs 78      7. Rs 7680      8. Rs 4,20,000      9. Rs 4,000      10. Ra 2250

**5**

**I**

- (a) 70%      (b) 30%      (c) 20%      (d) 25%      (e) 50%      (f) 75%  
 (g) 80%      (h) 45%      (i) 90%      (j) 35%      (k) 10%      (l) 65%  
 (m) 7%      (n) 29.5%      (o) 8%      (p) 63%      (q) 5%      (r) 92%  
 (s) 13.5%      (t) 79%      (u) 16.7%      (v) 67.2%

**6**

**I**

- (a) .37      (b) .43      (c) .49      (d) .55      (e) .38      (f) .09  
 (g) .65      (h) .06      (i) .72      (j) .01      (k) .15      (l) .03  
 (m) .93      (n) .135      (o) .40      (p) .675

**7**

**I**

- (a) 40%      (b) 20%      (c) :  $66\frac{2}{3}\%$       (d) 10%  
 (e) 5%      (f) 20%      (g) 50%      (h) 20%

**II**

1. 70%      2. 20%      3. 10%      4. 90%      5. 80%

### **MULTIPLE CHOICE QUESTIONS - X**

- (1) a      (2) c      (3) c      (4) c      (5) b      (6) a      (7) c      (8) a      (9) d      (10) b

## UNIT XIII

**2**

**I**

- (a) 3 : 4      (b) 2 : 3      (c) 8 : 12 = 4 : 3      (d) 5 : 7  
 (e) 11 : 12      (f) 15 : 17      (g) 25 : 30 = 5 : 6      (h) 4 : 9

**II**

- (a)  $\frac{2}{5}$  (b)  $\frac{4}{5}$  (c)  $\frac{5}{8}$  (d)  $\frac{9}{17}$  (e)  $\frac{13}{19}$  (f)  $\frac{16}{25}$  (g)  $\frac{1}{2}$

**III**

- (a) 1 : 3 (b) 2 : 1 (c) 1 : 3 (d) 1 : 2 (e) 4 : 5  
 (f) 1 : 5 (g) 4 : 9 (h) 2 : 1 (i) 4 : 3 (j) 3 : 5

**IV**

- (a) 4 : 6, 6 : 9, 8 : 12, 10 : 15, 12 : 18, 14 : 21  
 (b) 4 : 10, 6 : 15, 8 : 20, 10 : 25, 12 : 30, 14 : 35  
 (c) 6 : 8, 9 : 12, 12 : 16, 15 : 20, 18 : 24, 21 : 28  
 (d) 8 : 14, 12 : 21, 16 : 28, 20 : 35, 24 : 42, 28 : 49  
 (e) 6 : 8, 9 : 12, 12 : 16, 15 : 20, 18 : 24, 21 : 28  
 (f) 6 : 22, 9 : 33, 12 : 44, 15 : 55, 18 : 66, 21 : 77  
 (g) 10 : 12, 15 : 18, 20 : 24, 25 : 30, 30 : 36, 35 : 42  
 (h) 2 : 10, 3 : 15, 4 : 20, 5 : 25, 6 : 30, 7 : 35  
 (i) 4 : 14, 6 : 21, 8 : 28, 10 : 35, 12 : 42, 14 : 49  
 (j) 16 : 24, 24 : 36, 32 : 48, 40 : 60, 48 : 72, 56 : 84

**V**

- (a) 2 : 3 (b) 2 : 3 (c) 1 : 2 (d) 1 : 2 (e) 5 : 6  
 (f) 2 : 5 (g) 4 : 3 (h) 4 : 3 (i) 2 : 3 (j) 3 : 4

**VI**

- (a) 3 : 4 (b) 3 : 2 (c) 1 : 2 (d) 3 : 2 (e) 2 : 3  
 (f) 22 : 23 (g) 3 : 5 (h) 2 : 3 (i) 5 : 6 (j) 3 : 2  
 (k) 3 : 4 (l) 4 : 5 (m) 7 : 1 (n) 2 : 3 (o) 3 : 7

**I**

1. 5:2                      2. 4:1                      3. 5:3                      4. 1:2  
 5. Rs 25, Rs 35          6. Rs 30, Rs 39          7. Rs 115, Rs 138      8. Rs 150, Rs  
 250                      9. Rs 600, Rs 720      10. Rs 400, Rs 600, Rs 500

**3****I**

- (a) 5:6 :: 15:18 (b) 6:5 :: 36:30 (c) 3:4 :: 12:16 (d) 2:3 :: 4:6  
 (e) 3:7 :: 21:49 (f) 4:9 :: 36:81 (g) 15:11 :: 30:22 (h) 12:13 ::  
 36:39

**II**

- (a) 10 (b) 36 (c) 15 (d) 4 (e) 11 (f) 1  
 (g)  $\frac{16}{7}$  (h)  $\frac{4}{3}$  (i) 75 (j) 25

**MULTIPLE CHOICE QUESTIONS - XI**

- (1) c (2) c (3) b (4) a (5) a (6) a (7) b (8) c (9) b (10) d

□

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**UNIT XIV**

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**1**

**I** (a) 8 (b) Rs 8.65 (c) 62.5 paise (d) 22 cm (e) 21 km (f) 360 g (g) 274

**II** (a) 5 (b) 5 (c) 30 (d) 50 (e) 11

**2**

1. 75      2. 58      3. 77      4. Rs 5790      5.  $35.1^{\circ}$  c 6. Rs 1,737  
7. 1.5 cm    8. 56 km    9. 155 cm    10. 51.5 kg

**3**

1. 525 kg    2. 365    3. 1890    4. 88.9    5. 702    6. Rs 1,11,240  
7. 12.6 cm    8. 352    9. 1804 cm    10. 278.8 kg

**MULTIPLE CHOICE QUESTIONS - XII**

1. (d) 2. (b) 3. (c) 4. (d) 5. (a) 6. (b) 7. (c) 8. (a) 9. (b) 10. (a)

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**UNIT XV**

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**1**

**1.** (a) Rs 25 (b) Rs 20 (c) Rs 65 (d) Rs 13 (e) Rs 15

**2.** (a) Rs 15 (b) Rs 36 (c) Rs 70 (d) Rs 500 (e) Rs 106

**3.** (a) Loss = Rs 24 (b) Profit = Rs 73 (c) Loss = Rs 21  
(d) Profit = 100 (e) Profit = Rs 103

**4.** 1. Rs 11 2. Rs 122 3. Rs 360 4. Rs 875

**2**

**I** (a) Rs 1020 (b) Rs 1158 (c) Rs 1440 (d) Rs 1400

**II** (a) Rs 13,080 (b) Rs 13,100 (c) Rs 13,000 (d) Rs 24,000

**III**  
1. Rs 8400      2. Rs 3200      3. Rs 44,000      4. Rs 5840  
5. Rs 1810      6. Rs 3896      7. Rs 57,340      8. Rs 3135

**3**

**I**  
(a) 6 % (b) 20 % (c) 10 % (d) 6 % (e) 5 %  
(f) 12 % (g) 6 % (h) 20 % (i) 25 %

**II**

1. 5 %    2. 20 %    3. 10 %    4.  $9\frac{1}{11}\%$     5. 10 %    6. 10 %    7. 5 %    8. 5 %

**MULTIPLE CHOICE QUESTIONS - XIII**

1. (b) 2. (a) 3. (b) 4. (a) 5. (c) 6. (b) 7. (a) 8. (c) 9. (b) 10. (c)

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**UNIT XVI**

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**1****I**

(a) Rs 28 (b) Rs 56 (c) Rs 430.50 (d) Rs 5175 (e) Rs 8325.60

**II**

(a) Rs 3 (b) Rs 11.30 (c) Rs 75 (d) Rs 2.25 (e) Rs 1860

**III**

(a) Rs 500 (b) Rs 335 (c) Rs 54.50 (d) Rs 579.50 (e) Rs 8900

**2****I**

1. Rs 42    2. Rs 32    3. Rs 72    4. Rs 102    5. Rs 675  
6. Rs 864    7. Rs 4000    8. Rs 450    9. Rs 1200    10. Rs 1200  
11. Rs 2000    12. Rs 1000    13. Rs 1800    14. Rs 1152    15. Rs 10000

**MULTIPLE CHOICE QUESTIONS - XIV**

1. (a)    2. (c)    3. (a)    4. (a)    5. (b)    6. (d)    7. (c)    8. (d)    9. (c)    10. (d)

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**UNIT XVII**

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**1**

1. Rs 624    2. Rs 4152.50    3. Rs 273.75    4. Rs 3441.25    5. Rs  
19158.75    6. Rs 3906    7. Rs 1,56,975    8. Rs 29.25    9. Rs 4860  
10. Rs 6750

11. 31.5 km    12. 252 km    13. 14 hours    14. 2    15.  $\frac{31}{7}$   
days    16. 2275    17. 2538.1 kg    18. 864 km    19. 84.6  
km    20. 4 days

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**UNIT XVIII**

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**1****1.**(a) 56 cm    (b) 3456 mm    (c) 93 mm    (d) 827 cm    (e) 935 cm  
(f) 303 cm    (g) 1000 mm    (h) 5000 mm    (i) 2040 mm    (j) 8500 mm**2.**(a) 1000 m    (b) 1,00,000 cm    (c) 500 cm    (d) 3750 m    (e) 3065 m  
(f) 9007 m    (g) 3579 m    (h) 900009 cm    (i) 600504 cm    (j) 7036 mm**3.**(a) 8 km 529 m    (b) 15 km 648 m    (c) 1 m 87 cm    (d) 3 m 6 dm 8 cm  
(e) 4 m 7 dm    (f) 5 m 9 dm 2 cm 3 mm    (g) 8 km 7 hm 6 dam 4 m**4.**

(1) 120 km 335 m    (2) 202 km 327 m    (3) 126 m 16 cm    (4) 12 m 7 dm 8 cm

**5.**

(1) 4 km 567 m    (2) 27 km 663 m    (3) 66 m 77 cm    (4) 3 m 2 dm 5 cm

6. 281 km 4 hm 2 dam 4 m      7.52 m 9 dm 2 cm
8. 13 km 5 hm 6 dam 3 m      9.269 m 80 cm
10. (1) 302 km 9 hm 4 dam 4 m      (2) 425 m 2 dm 9 cm 5 mm  
 (3) 44 km 40 m      (4) 3585 km 528 m
11. Rs. 1650      12. 7 dm 2 cm      13. 7 dm 9 cm

## 2

1. (a) 5000 g (b) 9475 g (c) 6120 g (d) 8050 g (e) 3007 g (f) 6789 g  
 (g) 3035 g (h) 465 cg (i) 8937 cg (j) 56 mg (k) 100 kg (l) 500 kg  
 (m) 1000 kg (n) 7000 kg (o) 69 q (p) 5007 kg (q) 8 kg (r) 6 kg 500 g  
 (s) 9 t (t) 5 t 7 q (u) 100 q (v) 1000 t
2. (1) 174 kg 6 hg 7 dag      (2) 154 kg 4 hg 6 dag  
 (3) 22 g 8 dg 6 cg      (4) 25 t 6 q 67 kg
3. (1) 37 dag 4 g 6 dg      (2) 32 kg 4 hg 8 dag      (3) 4 g 7 dg 6 cg  
 (4) 2 t 5 q 58 kg      (5) 3687 kg 886 g      (6) 35 t 567 kg
4. (a) 61 g 0 dg 2 cg (b) 75 g 7 dg 6 cg (c) 652 kg 1 hg 2 dag  
 (d) 581 kg 2 hg 5 dag (e) 150 kg 750 g (f) 262 t 7 q 44 kg  
 (g) 1541 m 55 cm (h) 1327 m 0 dm 3 cm 2 mm  
 (i) 161 m 425 mm
5. (a) 0 kg 9 hm 9 dam 7 m (b) 11 hm 4 dam 3 m (c) 7 m 3 dm 3 cm  
 (d) 2 km 809 m (e) 36 g 1 dg 1 cg (f) 9 g 3 dg 3 cg  
 (g) 14 kg 1 hg 5 dag (h) 1 q 44 kg (i) 18 g 5 dg 7 cg
6. 271 kg 798 g      7. 19 g 85 cg      8. 8 T 654 kg  
 9. 134 kg 650 g      10. 2336 T 6 Q 77 kg      11. 48 g 7 dg 5 cg  
 12. 134 kg      13. 60 m 7 dm 5 cm      14. 183 m 7 dm 5 cm  
 15. 48 kg 750 g      16. 215 g      17. 80 kg  
 18. 9 dag 7 g

## 3

1. (a) 5000 ml (b) 3000 ml (c) 4000 l (d) 7000 l (e) 6000 ml  
 (f) 5050 ml (g) 9 kl (h) 7 l (i) 61275 ml (j) 5 kl 986 l
2. (1) 204 l 0 dl 5 cl (2) 254 l 6 dl 3 cl (3) 32 l 480 ml (4) 1162 kl 910 l
3. (1) 38 dl 5 cl 6 ml (2) 16 l 5 dl 7 cl (3) 5 l 280 ml (4) 435 kl 157 l

4.

(1) 391 l 6 dl 8 cl

(2) 128 l 970 ml

(3) 1012 kl 5 hl 2 dal

(4) 436 kl 770 l

5.

(1) 12 dal 5 l 8 dl

(2) 10 hl 3 dal 4 l

(3) 19 l 9 dl 7 cl

(4) 18 dl 3 cl 4 ml

6. 299 l 4 dl 6 cl 7. 37 l 110 ml 8. 134 kl 400 L 9. 87 L 3 dl 5 cl

10. 114 kl 1 hl 7 dal 5 L 11. 86 kl 25 L 12. 2 hg 4 dag 5 g

### MULTIPLE CHOICE QUESTIONS - XV

1. (a) 2. (c) 3. (b) 4. (a) 5. (b) 6. (d) 7. (a) 8. (c) 9. (a) 10. (c)

## UNIT XIX

1

I 1. Rs. 519.50 2. Rs. 404.00 3. Rs. 687.00 4. Rs. 685.00

5. Rs. 1422.00 6. Rs. 1168.50

II 1. Rs. 726.00 2. Rs. 2655.00 3. Rs. 595.50 4. Rs. 340.75

III 1. Rs. 1223.50 2. Rs. 9410.00 3. Rs. 6462.50

IV 1. Rs. 594.00 2. Rs. 252.50 3. Rs. 2895.00 4. Rs. 4150.00 5. Rs. 457.00

## UNIT XX

1

1. Leap years 1960, 1976, 1560

2. Ordinary years 1982, 1966, 1438, 1886

3.

(a) 1301 - 1400 (b) 1601 - 1700 (c) 701 - 800 (d) 1901 - 2000 (e) 1 - 100

(f) 1801 - 1900 (g) 1001 - 1100 (h) 401 - 500 (i) 2001 - 2100

(j) 2401 - 2500

4. 8th, 1st, 19th, 9th, 12th, 11th, 14th, 18th, 19th, 15th, 20th, 20th, 17th, 14th, 4th, 13th, 16th

5. 1. 75 years 2. 17 years 3. 1935 4. 182 days 5. 184 days

2

I

(a) 6.20 (b) 14.35 (c) 11.55 (d) 15.45 (e) 12.00 (f) 21.10

(g) 12.50 (h) 22.20 (i) 23.50 (j) 17.20 (k) 23.30 (l) 13.40

(m) 22.45 (n) 16.50 (o) 20.15 (p) 19.30

II

(a) 1.10 pm (b) 6.20 pm (c) 2.15 pm (d) 7.45 pm (e) 5.40 pm (f) 4.30 pm

(g) 11.30 pm (h) 3.40 pm (i) 10.10 pm (j) 8.45 pm (k) 8.40 pm (l) 00.15 pm

III

1. 5.00 = 5 hours 2. 9.40 = 9 hours 40 minutes 3. 6.40 = 6 hours 40 minutes

**3**

- I** 1. 111 days                      2. 186 days                      3. 163 days                      4. 89 days  
 5. 186 days                      6. 191 days                      7. 49 days                      8. Rs 319.50

**4**

- I.** a. 46 days    b. 61 days    c. 66 days    d. 37 days    e. 20 days    f. 35 days

**II.**

- a. 1257 hours                      b. 831 hours                      c. 644 hours  
 d. 1763 hours                      e. 2198 hours                      f. 1044 hours

**III.**

- a. 515 min                      b. 580 minutes                      c. 445 minutes  
 d. 355 minutes                      e. 255 minutes                      f. 190 minutes

**IV.**

- a. 18925 sec                      b. 16550 sec                      c. 26740 sec  
 d. 33917 sec                      e. 31225 sec                      f. 12045 sec

**I.**

- (a) 5 weeks 5 days                      (b) 11 hours 14 min                      (c) 6 weeks 3 days  
 (d) 14 hours 56 min                      (e) 4 weeks 2days                      (f) 9 hours 7 min  
 (g) 9 weeks 3 days                      (h) 24 hours 38 min                      (i) 14 days 14 hours  
 (j) 16 min 48 sec                      (k) 20 days 20 hours                      (l) 2 hours 35 min 45 sec  
 (m) 3 weeks 6 days 7 hours                      (n) 2 hours 25 min 0 sec  
 (o) 2 weeks 4 days 20 hours                      (p) 2 hours 34 min 0 sec  
 (q) 12 hours 5 min                      (r) 2 hours 52 min 45 sec

**5****I.**

1. 21 weeks 5 days 15 hours                      2. 25 weeks 2 days 15 hours

3. 23 hours 59 min 8 sec                      4. 28 hours 55 min 13 sec

**II.**

1. 4 weeks 4 days 20 hours                      2. 4 weeks 4 days 18 hours

3. 2 weeks 4 days                      4. 5 weeks 4 days

**6****I.**

1. 61 weeks 5 days                      2. 2 days 11 hours 30 min  
 3. 2 days 0 hours 4 min 30 sec

**7**

1. 1 days 19 hrs 20 min                      2. 8 hrs 45 min                      3. 1 day 2 hrs  
 4. Rs 360.00                      5. Rs 1200.00                      6. 4 hours 20 min  
 7. 7 hours 45 min                      8. 9.50 am

### ***MULTIPLE CHOICE QUESTIONS - XVI***

1. (c)    2. (a)    3. (a)    4. (b)    5. (a)    6. (a)    7. (d)    8. (c)    9. (b)    10. (c)

---

**UNIT XXI**

---

**1****I**

- (a)  $A = 25 \text{ cm}^2$       (b)  $A = 49 \text{ cm}^2$       (c)  $A = 121 \text{ cm}^2$       (d)  $A = 225 \text{ cm}^2$   
(e)  $A = 81 \text{ cm}^2$       (f)  $A = 289 \text{ cm}^2$       (g)  $A = 1225 \text{ cm}^2$       (h)  $A = 625 \text{ cm}^2$   
(i)  $A = 2500 \text{ cm}^2$       (j)  $A = 100 \text{ cm}^2$       (k)  $A = 3600 \text{ cm}^2$       (l)  $A = 10000 \text{ cm}^2$

**II**

1.  $1225 \text{ cm}^2$                       2.  $3025 \text{ cm}^2$                       3.  $576 \text{ m}^2$   
4.  $2000 \text{ sq m}$                       5.  $7,20,000 \text{ sq.cm}$

**III**

- (a)  $54 \text{ cm}^2$       (b)  $108 \text{ cm}^2$       (c)  $150 \text{ cm}^2$       (d)  $400 \text{ cm}^2$       (e)  $48 \text{ m}^2$   
(f)  $300 \text{ m}^2$       (g)  $1200 \text{ m}^2$       (h)  $3375 \text{ m}^2$       (i)  $5940 \text{ m}^2$

**IV**

1.  $3375 \text{ sq.cm}$                       2.  $300 \text{ sq. m}$                       3.  $2420 \text{ sq. cm}$   
4.  $15,000 \text{ sq. m}$                       5.  $3196 \text{ sq. m}$                       6.  $150 \text{ sq.m}$

**2**

1. Rs 20250.00                      2.  $10,00,000 \text{ sq. cm}$                       3. 625                      4. Rs 12656.25  
5. Rs 13566.00                      6. Rs 1382.40                      7. Rs 6825.00

**3****I**

- (a) 9 cm      (b) 11 cm      (c) 12 cm      (d) 15 cm      (e) 13 cm      (f) 35 cm      (g) 19 sq.cm

**II**

- (a) 6 cm      (b) 7 cm      (c) 5 cm      (d) 5 cm      (e) 6 cm      (f) 7 cm  
(g) 8 cm      (h) 35 cm

**4****I**

- (a)  $P = 36 \text{ cm}$                       (b)  $P = 340 \text{ cm}$       (c)  $P = 48 \text{ cm}$       (d)  $P = 72 \text{ cm}$   
(e)  $P = 400 \text{ cm}$                       (f)  $P = 80 \text{ cm}$       (g)  $P = 96 \text{ cm}$       (h)  $P = 500 \text{ cm}$   
(i)  $P = 148 \text{ cm}$

**II**

- (a)  $P = 46 \text{ cm}$                       (b)  $P = 86 \text{ cm}$       (c)  $P = 220 \text{ cm}$       (d)  $P = 120 \text{ cm}$   
(e)  $P = 74 \text{ cm}$                       (f)  $P = 148 \text{ cm}$

**III**

1. 352 cm                      2. 290 cm                      3. 96m                      4. 740m  
5. Rs 550                      6. Rs 3222.00                      7. Rs 8400.00                      8. Rs 5513.00

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**UNIT XXII**

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**1****I**

- (a)  $1440 \text{ cm}^3$       (b)  $882 \text{ cm}^3$       (c)  $2880 \text{ cm}^3$       (d)  $1802.625 \text{ cm}^3$   
(e)  $556.875 \text{ cm}^3$       (f)  $390 \text{ cm}^3$       (g)  $310 \text{ cm}^3$

**II.**

- (a)  $V = 2744 \text{ cm}^3$  (b)  $V = 15625 \text{ cm}^3$  (c)  $V = 343 \text{ cm}^3$  (d)  $V = 91.125 \text{ cm}^3$   
 (e)  $V = 1157.625 \text{ cm}^3$  (f)  $V = 1 \text{ cm}^3$  (g)  $V = 1.728 \text{ cm}^3$   
 (h)  $V = 274.625 \text{ cm}^3$

**III.**

1.  $1050 \text{ m}^3$  2.  $31.875 \text{ m}^3$  3.  $2025 \text{ m}^3$  4.  $468 \text{ m}^3$   
 5.  $729 \text{ m}^3$  6.  $42.879 \text{ m}^3$  7.  $6.859 \text{ m}^3$  8.  $1728000 \text{ cm}^3$

**MULTIPLE CHOICE QUESTIONS - XVII**

1. (a) 2. (d) 3. (c) 4. (d) 5. (c) 6. (b) 7. (c) 8. (b) 9. (d) 10. (a)

**UNIT XXIII****1**

- I.** (a)  $86^\circ \text{ F}$  (b)  $176^\circ \text{ F}$  (c)  $125.6^\circ \text{ F}$  (d)  $32^\circ \text{ F}$  (e)  $152.6^\circ \text{ F}$  (f)  $109.4^\circ \text{ F}$   
 (g)  $131^\circ \text{ F}$  (h)  $167^\circ \text{ F}$  (i)  $59^\circ \text{ F}$  (j)  $212^\circ \text{ F}$

**II.**

- (a)  $35^\circ \text{ C}$  (b)  $45^\circ \text{ C}$  (c)  $\left(\frac{100}{3}\right)^\circ \text{ C}$  (d)  $\left(\frac{445}{9}\right)^\circ \text{ C}$  (e)  $5^\circ \text{ C}$   
 (f)  $20^\circ \text{ C}$  (g)  $30^\circ \text{ C}$  (h)  $50^\circ \text{ C}$  (i)  $40^\circ \text{ C}$  (j)  $85^\circ \text{ C}$

**MULTIPLE CHOICE QUESTIONS - XVIII**

1. (b) 2. (a) 3. (a) 4. (c) 5. (b) 6. (b) 7. (d) 8. (d) 9. (a) 10. (b)

**UNIT XXIV****1**

- I.** (a) 3 (b) 5 (c) 7 (d) 9 (e) 4  
 (f) 3 (g) 8 (h) 4 (i) 10 (j) 1

**III.**

- (a) a squared (b) a cubed (c) a to the fourth  
 (d) a to the fifth (e) a to the sixth (f) a to the seventh  
 (g) a to the twentieth (h) b to the fourth (i) x to the fifth  
 (j) m to the ninth

**IV.**

- (a)  $a^5$  (b)  $c^3$  (c)  $x^6$  (d)  $m^3$  (e)  $r^2$   
 (f)  $p^3$  (g)  $a^7$  (h)  $m^{20}$  (i)  $m^n$  (j)  $c^9$

**V.**

- (a)  $x^4 = x \times x \times x \times x$  (b)  $x^7 = x \times x \times x \times x \times x \times x \times x$   
 (c)  $a^5 = a \times a \times a \times a \times a$  (d)  $p^n = p \times p \times p \times p \times \dots \times p$  (n times)  
 (e)  $b^7 = b \times b \times b \times b \times b \times b \times b$   
 (f)  $m^6 = m \times m \times m \times m \times m \times m$   
 (g)  $n^9 = n \times n \times n \times n \times n \times n \times n \times n \times n$  (h)  $r^3 = r \times r \times r$   
 (i)  $s^2 = s \times s$  (j)  $q^3 = q \times q \times q$

**VI.**

1.  $x \times y$      $x \cdot y$      $xy$

3.  $t \times u$      $t \cdot u$      $tu$

4.  $45 = 4 \times 10 + 5$   
 $4.5 = 4 \times 5 = 20$

2.  $a \div b$      $\frac{a}{b}$

5.  $243 = 2 \times 100 + 4 \times 10 + 3$   
 $2.4.3 = 2 \times 4 \times 3 = 24$   
 $243 - 24 = 219$   
243 is greater than 219

**2****I**

(a)  $4 + 3$

(b)  $a + b$

(c)  $a + c$

(d)  $a + 5$

(e)  $7 + a$

(f)  $xy$

(g)  $5n$

(h)  $7n$

**II**

(a) 45

(b) 70

(c) 20

(d) 81

(e) 14

(f) 13

(g) 4

(h) 1

(i) 5

(j) 9

**III**

(a) 7

(b) 1

(c) 14

(d) 9

(e) 24

(f) 4

(g) 39

(h) 4

**IV**

(a) 56

(b) 12

(c) 54

(d) 40

(e) 16

(f) 42

(g) 34

(h) 26

**V**

(a) 6

(b)  $\frac{2}{3}$

(c) 16

(d) 18

(e)  $\frac{1}{2}$

(f) 24

(g) 30

(h) 1

(i)  $\frac{4}{3}$

(j) 126

(k) 4

(l)  $\frac{63}{2}$

(m) 180

(n) 15

(o) 3

**VI**

(a) 8

(b) 3

(c) 0

(d) 0

(e) 0

(f) 12

(g) 0

(h) 6

(i) 2

(j) 12

**I**

(a) 40

(b) 80

(c) 2

(d) 200

(e) 40

(f) 30

(g) 12

(h) 54

(i) 2025

(j) 10

(k) 200

(l) 480

(m) 16

(n) 600

(o) 8000

**II**

(a) 10

(b)  $\frac{24}{7}$

(c)  $\frac{5}{8}$

(d)  $\frac{24}{7}$

(e) 4

(f) 3

(g) 1

(h) 1

**III**

1. 105

2. 3

3. 285

4. 5

5. 15

6. 10, 32

7. 45

8. 180; 300

9. 71

10. 45

**I**

(a) Expression

(b) Expression

(c) Term

(d) Expression

(e) Term

(f) Expression

(g) Expression

(h) Term

(i) Term

(j) Expression

(k) Term

(l) Expression

**II**

- (a)  $3, +4a, -5b$     (b)  $5x^2, +7y^2, -3z^2$     (c)  $8a, -6b, +3c$     (d)  $1, +2a^2 + 6b^2$

**III**

- (a) Unlike                      (b) Like                      (c) Like                      (d) Like  
(e) Unlike                      (f) Unlike                      (g) Like                      (h) Unlike

**I**

- (a) 19                      (b) 31                      (c) 7                      (d) 29                      (e) 40                      (f) 36

**II**

15

### **MULTIPLE CHOICE QUESTIONS - XIX**

1. (d)    2. (c)    3. (d)    4. (a)    5. (c)    6. (b)    7. (a)    8. (d)    9. (d)    10. (b)

## **UNIT XXV**

**1**

**II**

4. (a) The points which are on the same line are called collinear points.  
(b) The points which are not on the same line are called non-collinear points.  
(c) A line-segment extended endlessly in one direction is called a ray.  
(d) A line-segment extended endlessly on both direction is called a line.  
(e) Let A and B be 2 points on a plane of paper and join the points A and B. Then the straight path from A to B is called the line-segment AB.

**III**

1. end points                      2. line                      3. ray                      4. initial point                      5. length  
6. length                      7. 1                      8. no                      9. can not

### **MULTIPLE CHOICE QUESTIONS - XX**

1. (d)    2. (b)    3. (a)    4. (b)    5. (b)    6. (c)    7. (a)    8. (b)    9. (a)    10. (a)

**2**

1. (ii), (iv), (vi)                      2. (ii), (iii), (vi)  
3. (i) Vertex = M; Arms = ML and MN    (ii) Vertex = Y; Arms = YX and YZ  
(iii) Vertex = U; Arms = UW and UV    (iv) Vertex = O; Arms = OA and OB  
(v) Vertex = Q; Arms = QP and QR  
4. (i)  $\angle PQR$                       (ii)                      (iii)                      (iv)                      (v)  
5. Vertex = B ; Arms = BA and BC  
6.  
(i) 3 angles;                      ,                      and  
(ii) 6 angles:  
(iii) 8 angles:

**8.**

**3**

1.

(i)  $120^\circ$  (ii)  $80^\circ$  (iii)  $45^\circ$  (iv)  $120^\circ$  (v)  $90^\circ$  (vi)  $70^\circ$  (vii)  $140^\circ$  (viii)  $30^\circ$

2.  $180^\circ$

3. protractor

4. 180

**4**

I

(a) Acute angle (b) Obtuse angle (c) Right angle (d) Obtuse angle  
(e) Obtuse angle (f) Obtuse angle (g) Straight angle (h) Acute angle  
(i) Acute angle (j) Obtuse angle

II. 3.

(i) Acute angle (ii) Acute angle (iii) Obtuse angle (iv) Acute angle  
(v) Acute angle (vi) Right angle (vii) Acute angle

IV.

(a) Right angle (b) Acute angle (c) Obtuse angle (d) Straight angle  
(e) Acute angle (f) Right angle (g) Obtuse angle (h) Obtuse angle  
(i) Acute angle (j) Obtuse angle

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I (a)  $65^\circ$  (b)  $45^\circ$  (c)  $54^\circ$  (d)  $48^\circ$  (e)  $8^\circ$   
(a)  $155^\circ$  (b)  $144^\circ$  (c)  $138^\circ$  (d)  $115^\circ$  (e)  $170^\circ$

IV. (b) (d)

V. (b) (e)

### ***MULTIPLE CHOICE QUESTIONS - XXI***

1. (c) 2. (b) 3. (d) 4. (a) 5. (c) 6. (d) 7. (d) 8. (b) 9. (c) 10. (b) 11. (d)

**6**

1. (b) (d) (e)

3. (c) (d)

4. (a) 3 cm (b) 5 cm (c) 4 cm

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1. (b) (c) (e)

3. 25p, 50p, Rs 1, Rs 5

**7**

1. O

2. (i) OA, OC, OB and OD (ii) AB and CD (iii) BD, BC

3. (i) OA, OH, OG, OF, OE, OD, OC, OB (ii) AE, HD, GC (iii) AB, HG, FE

4. 6 chords ; 2 chords, BD and AC

5.

(a) true (b) false (c) true (d) false (e) true (f) true (g) false

6. H, C, E

7. 7 cm

8. 7.5 cm

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3. Any Number

4. (a) Longest chord (b) Equal (c) Diameter (d) 2 (e) Chord

6. Yes 7. Yes

8. Yes

**8**

3. diameter = 9 cm 4. Yes, a large number of 5. radius = 5cm

6. Radius of outer circle = 5.5 cm ; Diameter of outer circle = 11cm

**9**

- I**
1. A plane figure enclosed by three sides is called a triangle.
  2. A triangle has 3 sides and 3 angles.
  3. The sum of the angles in a triangle is  $180^\circ$ .
  4. There are three kinds of triangles regarding their sides.
  5. There are 3 kinds of triangles regarding angles.
  6. A triangle in which all the three sides are equal is called an equilateral triangle.
  7. A triangle is said to be a right-angled triangle when one of its angles is a right-angle.
  8. A triangle in which two sides are equal is called an isosceles triangle.
  9. A triangle is said to be an acute-angled triangle when each of its angles is acute.
  10. A triangle is called scalene triangle when its sides are unequal.
  11. A triangle is said to be an obtuse-angled triangle when one of its angles is an obtuse angle.

**II.**

(a) Equilateral triangle (b) Isosceles triangle (c) Scalene triangle

**III.**

(a) Right angled triangle (b) Obtuse angled triangle (c) Acute angle triangle

**IV.**

1. Triangle 2. Vertices 3. Equal 4. Right

**MULTIPLE CHOICE QUESTIONS - XXII**

1. (c) 2. (a) 3. (c) 4. (b) 5. (d) 6. (c) 7. (b) 8. (c) 9. (d) 10. (a)

**10**

AB = 6 cm

BC = 6 cm

CA = 6 cm

AB  $\angle$  BC + CA

BC  $\angle$  AB + CA

CA  $\angle$  AB + BC

$$AB + BC = 6 + 6 = 12$$

$$6 < 12 \quad \therefore CA < AB + BC$$

2.  $180^\circ$     3. (a) ✓ (b) ✗ (c) ✗ (d) ✓    4. (a) ✓ (b) ✗ (c) ✗ (d) ✗ (e) ✓  
5. (i)  $60^\circ$ , (ii)  $65^\circ$ , (iii)  $90^\circ$ , (iv)  $60^\circ$

## 11

II. (a) The lines which intersect each other and form an angle of  $90^\circ$  with each other are called perpendicular lines.

(b) Lines which do not intersect are called parallel lines.

III. Parallel lines do not intersect at any point

Parallel lines will never meet however far they are extended.

The distance between the two parallel lines are always equal.

- IV. (a) False      (b) False      (c) False      (d) True      (e) True  
(f) False      (g) True      (h) False      (i) True

---

## UNIT XXVI

---

### 1

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1. The animals were grazing in a grass field.  
2. 35      3. 8 cows    4. 5 bulls    5. 4 ponies    6. Yes      7. 7 horses  
8. 2 calves    9. 3 goats    10. No      11. Yes

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2. 40    3. 45    4. 35    5. 20    6. 20    7. 60    8. 80    9. 210

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10. 41  
11. 24  
12. Scale : 1 sticker denotes 5 students.  
14. (a) 48 runs, 24 runs, 12 runs, 20 runs  
(b) Naren scored the minimum runs  
(c) Johny scored the maximum runs  
15. (a) 800    (b) 400    (c) 1600  
17. (a) 50    (b) 70    (c) 95    (d) 65    (e) 85    (f) 365    (g) Mathematics  
(h) English

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## Model Test Paper - I

### PART : A

#### I.

1. (d)      2. (c)      3. (d)      4. (b)      5. (b)  
6. (c)      7. (b)      8. (a)      9. (c)      10. (a)

### PART : B

#### II.

1. Nine hundred and seventy five million six hundred and forty three thousand two hundred and eight nine.

2. MMIII    3. 663567    4. 8338653    5. 24

6. 8

7. \_\_\_\_\_ ,  $3000+200+10+5+.2+.04+.008$

8. 175

9. 21 weeks 5 days 15 hours

10. 22 weeks 1 day

11. (a) A line segments which extends on both sides endlessly is called a line  
(b) A line segment which extends endlessly in one direction is called a ray
12. (a) The points which are on the same line are called collinear points.  
(b) A triangle in which 2 sides are equal is called an isolates triangle.

### PART : C

#### III.

1. Rs 6800      2. 3

3. Ratio = 4 : 6 : 5

Sum of the ratios =  $4 + 6 + 5 = 15$

Each part =  $\text{Rs } 30000 \div 15 = \text{Rs } 2,000$

First shrare =  $\text{Rs } 4 \times 2000 = \text{Rs } 8,000$

Second share =  $\text{Rs } 6 \times 2000 = \text{Rs } 12,000$

Third share =  $\text{Rs } 5 \times 2000 = \text{Rs } 10,000$

4. Rs 450      5. 15000 sq. m      6. Rs 1840      7. 1080

8. 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43 and 47

9. Diameter = 7cm

10. (a) Perpendicular lines:- The lines which intersect each other and form an angle of  $90^\circ$  with each other called perpendicular lines.  
(b) Parallel Lines:- Lines which do not intersect are called parallel lines.

11. (a) Equilateral triangle:- A triangle in which all the three sides are equal is called equilateral triangle.
- (b) Isosceles triangle:- A triangle in which two sides are equal is called an isosceles triangle.
- (c) Scalene triangle:- a triangle with all sides unequal is called Scalene.
12. 13500 cu cm

### PART : D

#### IV.

1. 1,60,36,229

2.  $16\frac{3}{8}$

#### 3.

S. No	Descrip.	Quantity	Price per Unit	Amount
1	Wheat	5 kg	Rs 7.50	$7.50 \times 5 = 37.50$ <b>Rs 37.50</b>
2	Sugar	5 kg	Rs 18	$1 \times 5 = 90$ <b>Rs 90.00</b>
3	Ghee	3 kg	Rs 75.25	$75.25 \times 3 = 225.75$ <b>Rs 225.75</b>
4	Pepper	500 g	Rs 18	$1 \times 5 = 90$ <b>Rs 90.00</b>
5	Dry Chilies	4 kg	Rs 32	$32 \times 4 = 128$ <b>Rs 128.00</b>
6	Butter	5 kg	Rs 72	$72 \times 5 = 360$ <b>Rs 360.00</b>
Total				<b>Rs 901.25</b>

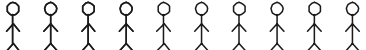
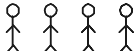

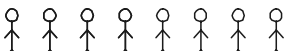

### PART : E

#### V.

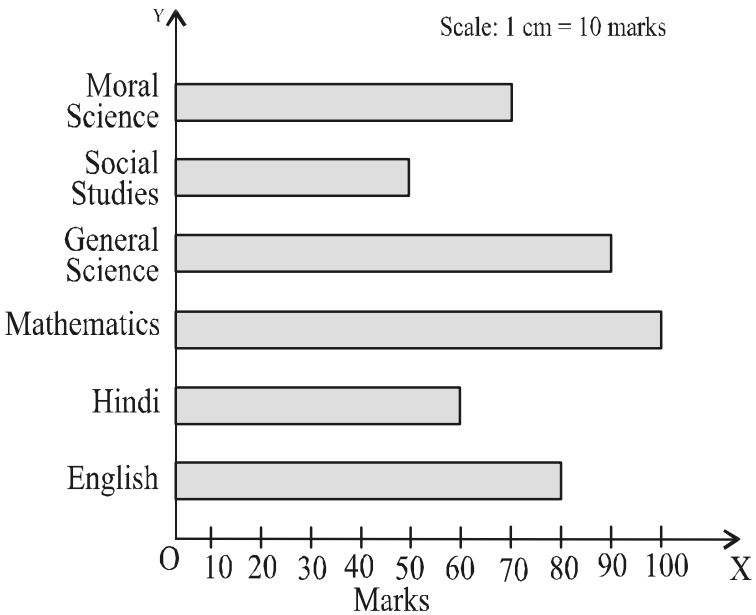
$$\angle DOA = 120^\circ$$

- (i) Draw a ray OA of any length
  - (ii) With O as center and with any convenient radius draw an arc, cutting the ray OA at C
  - (iii) With C as centre and with the same radius draw an arc cutting the first arc at B
  - (iv) With B as centre and with the same radius draw another arc
  - (v) Join OD
  - (vi) Now  $\angle DOA$  is the required angle of  $120^\circ$
2.  $OA = 4.5$  cm  
O is the center; OA is a radius; BC is a diameter; PR is a chord; PQR is an arc; BAC is a semi-circle.

3.

MODE OF TRAVELING	PICTURES OR DIAGRAMS
School Bus	
Rickshaw	
Car	
Walk	
Public Bus	

(b)



## Model Test Paper - II

### PART : A

#### I

1. (b)      2. ( )      3. (b)      4. (a)      5. (b)  
6. (d)      7. (c)      8. (c)      9. (b)      10. (c)

### PART : B

#### II

1. XLVIII, XCIII, XXIV, LXXXVII  
2. Rs 598                      3. 80 kg  
4. (a) 4,60,866; 5,58,641; 6,58,505; 8,40,405; 56,04,486      (b) 63855  
5. 12                              6. Rs 2,000                      7. 70cm  
8. Obtuse angle:- An angle whose measure is greater than  $90^\circ$  but less than  $180^\circ$  is called an obtuse angle  
Acute angle:- An angle whose measure is greater than  $0^\circ$  but less than  $90^\circ$  is called an acute angle.  
9. Rs 25  
10. 275  
11. Rs  $46\frac{1}{8}$   
12. (a) 56 %      (b) 45 %

### PART : C

#### III

1. 53,00,965                      2. 20 %                      3. 31220 sec  
4. Rs 1650                      5. 35                      6. 180  
7. A rectangle is a plane figure bounded by four straight lines whose opposite sides are equal and each angle is a right angle.  
Triangles are classified into three kinds regarding their sides.  
They are equilateral triangle, isosceles triangle and scalene triangle.  
8. Rs 400  
9.  $\frac{4}{7} = \frac{8}{14} = \frac{12}{21} = \frac{16}{28} = \frac{20}{35}$   
10. 103.471  
11. 64 sq. cm  
12. Circle having the same centre, but different radii are called concentric circles.

## PART : D

### IV.

1. 1,39,33,329

2. 1,15,956

3.  $66\frac{4}{5}$  kg