

## Half Yearly Examination 2017-2018

Std. : VI

Subject : MATHEMATICS

Full Marks : ?????

Time : 2 Hrs.+15min.

### Q1. Mental Maths

[10]

- (a)  $-20 - (-20) =$  \_\_\_\_\_
- (b)  $98 +$  \_\_\_\_\_  $= -104$
- (c)  $x + x + 2x =$  \_\_\_\_\_
- (d) The decimal form of 46.8% is \_\_\_\_\_
- (e) Selling Price = Cost Price - \_\_\_\_\_
- (f)  $-24xy + 10xy - 12y^2 =$  \_\_\_\_\_
- (g) The complements of  $58^\circ$  is \_\_\_\_\_
- (h) The absolute value of  $-|-13|$  is \_\_\_\_\_
- (i) The sum of angle around a point is \_\_\_\_\_
- (j)  $-108$  \_\_\_\_\_  $-180$  (Put  $>$ ,  $<$ )

### Q2. Solve the following :

[20]

- (a) Find the sum of  $3x^2 + 5x - 4$  and  $6x^2 - x + 7$
- (b) Subtract the sum of  $-340$  and  $170$  from  $-40$ .
- (c) Find the gain or loss% if cost price of an article is Rs. 60 and gain is Rs. 6.
- (d) Increase Rs. 120 by 10%.
- (e) From  $-7abc$  take away  $-8abc + 3a$
- (f)  $2000 + 516 + (-517) - 1999$ .
- (g)  $792.02 + 101.32 - 306.764 - 114.9$
- (h) Find the breadth of a rectangle whose length is 70 cm and perimeter is 200 cm.
- (i) Write an expression for :  
four times  $r$  divided by 7.
- (j) Find the value of :  
(i)  $-7 - \{-4(8-10) + 16 \div -2\}$

### Q3. Choose the correct option —

[10]

- (a)  $14285.46 \times 25 \times .4 =$  \_\_\_\_ (1428546 / 2942890)

- (b)  $0.25 \div (0.5 \times 0.5) = \underline{\hspace{1cm}}$  (10 / 1)
- (c)  $-7$  subtracted from  $-8$  is  $\underline{\hspace{1cm}}$  ( $-15$  /  $-1$ )
- (d)  $20\%$  of  $300 = \underline{\hspace{1cm}}$  (600 / 60)
- (e) What is  $15\%$  of Rs. 34 ? (5.1 / 5.01)
- (f) Tanu buys a watch for Rs. 350 and sells for Rs. 392. The profit % is  $\underline{\hspace{1cm}}$  (20% / 12%)
- (g) In 14.135 the digit 5 is in the  $\underline{\hspace{1cm}}$  place. (Thousandths / Thousands)
- (h) Profit % or loss % is always calculated on  $\underline{\hspace{1cm}}$  (cost Price / Selling Price)
- (i) If  $a = 5$ ,  $b = 6$  and  $c = 10$ . The value of  $\frac{a+b}{c-a} +$  is  $\underline{\hspace{1cm}}$  ( $\frac{5}{11}$  /  $\frac{11}{5}$ )
- (j) The co-efficient of  $x$  in  $-2px$  is  $\underline{\hspace{1cm}}$  ( $-2$  /  $-2p$ )

**Q4. Solve the following :**

[15]

1.
  - (i) Find  $x$
  - (ii) Find  $\angle ABD$  ,  $\angle DBC$
  
2.
  - (i) Find  $\angle SRQ$
  - (ii)  $\angle SRP$
  
3. Simplify :  $2x^2y - 3xy^2 + x^2y - 4x^2 y - 2xy^2$
4. Express 30 paise as a percentage of Rs. 20.
5. Find the area of the shaded region.

**Q5. See the figure and answer the questions.**

**[5]**

- (i) Name the vertex.
- (ii) Name the rays
- (iii) Which type of angle is  $\angle 3$  ?
- (iv)  $\angle DOB = \underline{\hspace{2cm}}$  angle.
- (v) If  $\angle 2 + \angle 3 = 100^\circ$  what is  $\angle 1$  ?

**Q6. Word Problems —**

**[16]**

- (a) Sunil obtained 750 marks out of 800 and Preeti obtained 540 marks out of 600. Whose performance is letter ?
- (b) Peter bought an article for Rs. 1215 and spent Rs. 35 on its transportation. At what price should be sell the article to have a gain Of 16% ?
- (c) A rectangular field is 50 m by 40m. Mahesh goes 10 times round it. How much distance does the cover ?
- (d) A man earns Rs. 24000 per month. He spends  $\frac{8}{12}$  on household items and  $\frac{7}{12}$  on education of children. How much does he save ?

**Q7. Logical Question :**

**[4]**

- (a) What is the size of the Reflex angle between the hands of a clock at :
  - (i) 30' clock
  - (ii) 50' clock
  - (iii) 80' clock