SA-II 2/2015

SUBJECT : MATHEMATICS

CLASS : VI

Time : 3 hrs. **M.M. : 80**

General Instructions :

(i) All questions are compulsory.

(ii) Read all questions very carefully.

(iii) Questions 1 to 10 carry 1 mark each.

(iv) Questions 11 to 18 carry 2 marks each.

(v) Questions 19 to 28 carry 3 marks each.

(vi) Questions 29 to 34 carry 4 marks each.

Q1. Represent 1.7 on the number line.

Q2. Form an expression for the following statement:
n multiplied by 2 and 15 subtracted from the product

Q3. Write the successor of (–512).

Q4. Find the perimeter of the triangle with the sides measuring 5cm, 7cm and 10cm.

Q5. Write the given number in decimal form:

$$1000 + 4 + \frac{8}{10} + \frac{2}{100}$$

Q6. Indicate the following statement as integer :
A deposit of rupees 500.

Q7. The side of a regular pentagon is denoted by *p*. Express the perimeter of the pentagon using the variable *p*.

Q8. Fill in the blank: $\frac{24}{40} = \frac{\square}{5}$

Q9. Name the triangle which has only one line of symmetry.

Q10. Write the greatest negative integer.

Q11. Express 16kg 250g into kg using decimals.

Q12. The area of a rectangular poster is 3060 sq.cm and its length is 17cm. What is the width of the poster?

Q13. Using the number line write the integer which is 4 less than (–2).

Q14. If Rita's present age is x years:

(a) What will be her age 6 years from now?

(b) If her grandfather is 5 times her age. What is her grandfather's age?

Q15. Mr. Kunal earns ₹80,000 in a month and saves ₹20,000 per month. Find the ratio of the money he saves to the money he spends.

Q16. (a) Add 60.05 to 9.5

(b) Subtract 11.7 from 13.2

Q17. Kavya bought 25 blankets for ₹475 and donated them to an orphanage. Raj bought 30 blankets for ₹450 and donated them to another orphanage on Children's Day. Find out who got the blankets at a cheaper price.

Q18. Write the number of lines of symmetry which you can draw for the following figures:

(a) Circle (b) Square

Q19. In peak summer, the weekly sale of fridges in a shop is given for a particular week. Study the pictograph and answer the questions below it.

Scale : □ = 10 fridges

Days	Number of fridges sold
Monday	□
Tuesday	□ □
Wednesday	□ □ □
Thursday	□ □ □ □ □
Friday	□ □ □
Saturday	□ □ □ □
Sunday	□ □ □ □ □ □

(a) On which day maximum number of fridges were sold? How many are they?

(b) On which two days same number of fridges were sold? How many are they?

(c) How many more fridges were sold on Saturday than on Friday?

Q20. Divide ₹120 between Rohan and Kamal in the ratio 3:2.

Q21. The cost of a dinner set is 2475 rupees and 95 paise and the cost of a tea set is 725 rupees and 65 paise. Find the total cost (in rupees) of both the items.

Q22. One side of a square plot is 300m. Find its area. Also, find the cost of cementing it if the rate of cementing is ₹5 per square metre.

Q23. Draw a line segment $\overline{PR}$ of length 8cm and construct its perpendicular bisector. Also write the steps of construction.

Q24. Fill in the blanks with >, < or = sign.

(a) $1 - (-1)$ _____ $(-1) - (1)$

(b) $(-10) - (-11)$ _____ $(-10) + 11$

Q25. Sandeep pays ₹5200 as the rent for 4 months for a room in a guest house. Find out the rent he has to pay for 1 year.

Q26. A medical test was conducted in a class. The following figures indicate the weight (in kg) of 18 students in the class. Organise the given data using tally marks.

40 , 48 , 42 , 45 , 42 , 48 , 45 , 46 , 40

45 , 47 , 45 , 48 , 42 , 45 , 40 , 46 , 42

Q27. Are the ratios 15cm : 20cm and 10sec : 3 minutes in proportion?

Q28. Find the rule which gives the number of matchsticks required to make the following matchstick patterns. Use a variable to write the rule.

(a) A pattern of letter T as

(b) A pattern of letter Z as

(c) A pattern of letter F as

Q29. Draw an angle of 140° (using protractor) and divide it into four equal parts (using ruler and compasses).

Q30. Mrs. Sinha wants to cover the floor of her kitchen with tiles. The length and the breadth of the kitchen are 5m and 3m respectively. The length and breadth of each tile is 20cm and 15cm respectively. Find the number of tiles required to cover the floor.

Q31. Mahesh covered a distance of 500km by train, by bus and by car. He travelled 275.25km by train and 75.60km by bus. Find the distance travelled by the car.

Q32. Pick out the solution from the values given in the bracket next to the equation. Show that the other values do not satisfy the equation.

$$r - 8 = 0 \ (-8, 0, 8, 1)$$

Q33. (a) Solve: $(-402) + (529) - (-310) + 200$.

(b) Write 0.066 as a fraction in lowest form.

Q34. The number of Science magazines sold by a shopkeeper on 4 consecutive days is shown below:

Days	Sunday	Monday	Tuesday	Wednesday
Number of magazines sold	50	65	70	35

(a) Draw a bar graph to represent the above information choosing the scale of your choice.

(b) What is the importance of reading Science magazines?