Summative Assessment II in **MATHEMATICS – Std. 8**   M. Marks : 90
22-2-2016   Time : 3 hrs.

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Total printed pages   :   02
Total printed questions :   34

General Instructions:
1. All questions are compulsory.
2. This question paper consists of 34 questions divided into four sections A, B, C and D.
3. Section A comprises of 8 sections of 1 mark each, section B comprises of 6 questions of 2 marks each, section C comprises of 10 questions of 3 marks each and section D comprises of 10 questions of 4 marks each.

SECTION – A   (1 x 8 = 8 marks)

1. Find the perimeter of a rectangle whose length and breadth are 6 cm and 8 cm respectively.

2. On which axis do the points $(0, -6)$ and $(2, 0)$ lie?

3. Write the common factors of the terms: $3x^2y^3$, $10x^2y^2z^2$, $6xy^2z$.

4. Divide $34a^2bc^2$ by $17abc$ and write the quotient.

5. Find the product of $(2x - 3)$ and $(x + 5)$.

6. Find the ratio of 16m to 4km.

7. Write the length of the perpendicular drawn from point A$(4, 6)$ to y-axis.

8. Write a binomial of degree 15.

SECTION – B   (2 x 6 = 12 marks)

9. A bag contains 5 red, 3 blue and 4 white balls. What is the probability that a ball selected at random will be   (a)   a blue ball?   (b)   non-white ball?

10. Subtract $4xy - 3x^2y^2 + 3y - 9$ from $16 - 4xy - 4y + 3x^2y^2$.

11. Find the volume of cuboidal slab of iron whose length, breadth and height is given by 1.5m, 25cm and 150cm respectively.

12. Factorize : $12x - 8 + 3xy - 2y$

13. Sumit lost Rs. 140 by selling an article for Rs. 1610. What is his loss percent?

14. Fill in the blanks:
    a) A point whose x-coordinate is zero and y-coordinate is a non-zero number will lie on _____ axis.
    b) The ordinate in point A(-4, 3) is _____.
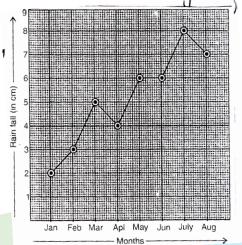
SECTION – C   (3 x 10 = 30 marks)

15. Salma types 850 words in an hour. How many words she would type in 6 minutes?

16. Determine the area of the cardboard required to make a closed cuboidal box of length 14cm, breadth 9cm and height 5cm. Also find volume of this cuboid.

17. The marks obtained by 25 students of a class in mathematics test are as follows :
    63, 61, 48, 84, 63, 61, 48, 45, 48, 84, 63, 58,
    35, 48, 84, 63, 45, 55, 38, 73, 49, 69, 58, 52, 57
    a) Prepare a grouped frequency table with intervals as 30 - 40, 40 - 50 etc.
    b) Represent the data obtained in the frequency table by drawing histogram.

18. A shirt was sold for Rs.884 after allowing a discount of 15% on the marked price. Find the marked price of the shirt.

19. Simplify: $(5m - 4n)^2 - (4m - 5n)^2$

20. Subtract the sum of $2(a +b - 3c)$ and $3(a - 2b - c)$ from $2(2a +3b - 3c)$.

21. Walking at a speed of 4km/h, a man covers a certain distance in 2 hours 45 minutes. If he runs at a rate of 16.5 km/h, find the time taken by him to cover the same distance.

22. Factorize: $x^4 - (z - x)^4$.

23. The graph shows the monthly rainfall in a city from January 2007 to August 2007. Observe the graph and answer the following.
    a) What is represented by the graph?
    b) In which month was the rainfall minimum?
    c) Which was the wettest month?

24. The following table gives information regarding the number of persons employed to do a piece of work and time taken to complete the work.

No. of persons	12	6	4	3
Time taken(days)	2	4	6	8

Draw a graph to represent this information.

SECTION – D   (4 x 10 = 40 marks)

25. Rakesh borrowed Rs. 1,28,000 from a bank to buy a TV set at the rate of 15% per annum compounded half yearly. What amount will he pay at the end of 1 year 6 months to clear the loan?

26. Factorize the following:
    a) $(x^2 – 2xy + y^2) – z^2$
    b) $(a + b)^2 – 4ab$

27. Plot the points P(1, 2), Q(6, 3), R(6, 7) and S(1,6) on a graph and name the figure so formed after joining P, Q, R and S in order.

28. The area of trapezium is 68cm^2 and the length of one of the parallel sides is 20cm and its height is 4cm. Find the length of the other parallel side.

29. There are 200 students in a hostel. Food provision for them is for 18 days. How long these provisions last if 25 more students join the group?

30. The following table shows the monthly expenditure of a firm. Draw a pie-diagram for the data.

Items	Rent	Wages	Electrical & Water	Taxation	Others
Amount (Rs)	1200	720	480	1080	840

31. Evaluate the following using appropriate identities:
    a) 194 x 204   b) $(1.02)^2 – (0.98)^2$

32. An article is available for Rs. 1430 inclusive of sales tax at the rate of 10%. Find its price before tax was added to it. What will be its selling price if the rate of sales tax changes to 12%?

33. A cuboid is of dimensions 60cm x 27cm x 30cm. How many small cubes of side 6cm can be placed in the given cuboid?

34. Divide the following:
    a) $p^2 (4pq^3 – 3p^2q^2) ÷ p^3q^2$
    b) $8x^2y^2(3z – 24) ÷ 27xy(z – 8)$

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