

SUMMATIVE ASSESSMENT-II, 2013

MATHEMATICS

Time : 3 hrs.

040713

M.M. : 100

General Instructions –

1. The question paper is divided into four sections A, B, C and D.
2. Section A comprises of **10** questions of **1** mark each. All the questions are compulsory.
3. Section B comprises of **7** questions of **3** marks each. Attempt **any 5** questions.
4. Section C comprises of **12** questions of **4** marks each. Attempt **any 10** questions.
5. Section D comprises of **6** questions of **7** marks each. Attempt **any 5** questions.
6. Draw neat diagrams wherever necessary.

Section – A

Q.1 20% of 155 is _____.

Q.2 The standard form of $\frac{-7}{-35}$ is –

- a) $\frac{-1}{5}$ b) $\frac{1}{5}$ c) 5 d) -5

Q.3 In ΔPQR , the included angle between sides PR and QP is _____.

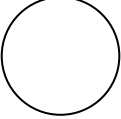

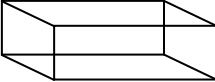
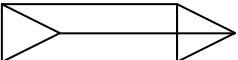
Q.4 Find the attitude of a parallelogram if the area of a parallelogram is 620 cm^2 and one of its side is 20cm.

Q.5 Write algebraic expression for the following.

‘Sum of numbers ‘a’ and ‘b’ added to their product.’

Q.6 Express 30564235 in the standard form.

Q.7 Match the following :

	A	B
(i)		cone
(ii)		prism
(iii)		sphere
(iv)		cubiod

Q.8 Find the ratio of 16 hours to 2 days.

Q.9 1 hectare = _____ m^2 .

Q.10 Name any two figures that have both line symmetry and rotational symmetry.

Section – B (Attempt any five questions)

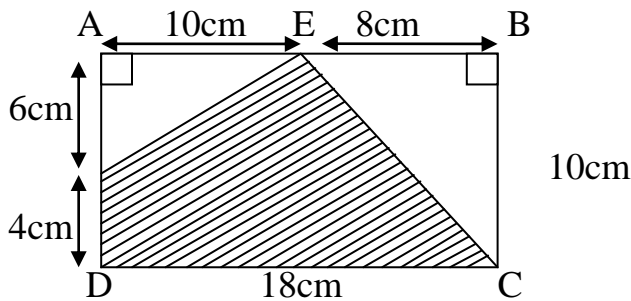
Q.11 Selling price of a toy car is Rs. 540. If the profit made by shopkeeper is 20%. What is the cost price of this toy?

Q.12 Arrange the rational numbers $\frac{1}{3}$, $\frac{-2}{9}$, $\frac{-4}{3}$ in ascending order.

Q.13 Simplify –

a) $7^2 \times 2^2$ b) $(-3)^2 \times (-5)^2$

Q.14 In the following figure, find the area of the shaded portion.



Q.15 If two cubes of dimensions 2cm by 2cm by 2cm are placed side by side. What would the dimensions of the resulting cuboid be?

Q.16 Construct ΔXYZ in which $XY = 4.5$ cm, $YZ = 5$ cm and $ZX = 6$ cm.

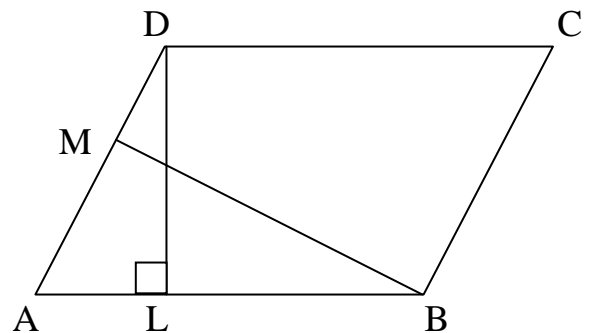
Q.17 What other name can you give to the line of symmetry of :

- a) An isosceles triangle b) a circle

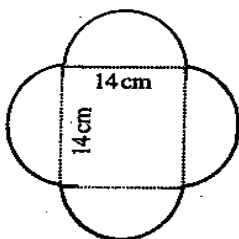
Section – C (Attempt any ten questions)

Q.18 A sum of Rs. 600 is lent for 3 years at the rate of 6% per annum. Find the interest. Also find the amount which is to be paid to the lender at the end of 3 yrs.

Q.19 DL and BM are the heights on sides AB and AD respectively of parallelogram ABCD. If the area of the parallelogram is 1470 cm^2 , $AB=35$ cm and $AD=49$ cm, find the length of BM and DL.



Q.20 Find the perimeter of the given shape.



Q.21 Simplify the expression and find its value when $a = 5$ and $b = -3$

$2(a^2 + ab) + 3 - ab$

Q.22 From the sum of $4 + 3x$ and $5 - 4x + 2x^2$, subtract the sum of $3x^2 - 5x$ and $-x^2 + 2x + 5$.

Q.23 Simplify $\frac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$.

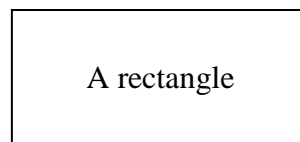
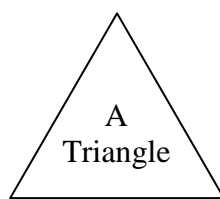
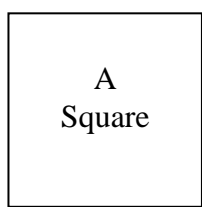
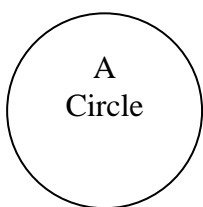
Q.24 Compare the following numbers :

- a) 4.2×10^8 and 2.4×10^9
 b) 2.7×10^{12} and 1.5×10^8

Q.25 Draw the rough sketch and name the type of the following figures:

- a) a triangle with both line and rotational symmetries of order more than 1.
 b) a quadrilateral with a rotational symmetry of order more than 1 but not a line of symmetry.

- Q.26** Here are the shadows of some 3-D objects. When seen under the lamp of an overhead projector. Identify the solids that match each shadow.



- Q.27** Construct a $\triangle ABC$ in which $AC=CB=5\text{cm}$ and $\angle B = 45^\circ$. Is this a right triangle?
- Q.28**
- If $y\%$ of 250 is 21, find the value of y .
 - A basket contains 120 oranges. 24 oranges were distributed among the students. Find the percentage of oranges left in the basket.
- Q.29** List three rational numbers between -2 and -1.

Section – D (Attempt any five questions)

- Q.30**
- The marked price of an article increases from Rs. 15 to Rs. 21. What is the percentage increase in the marked price of the article?
 - If Rs. 450 amounts to Rs. 504 in 3 years, find the rate of interest.
- Q.31** Find the value of –
- $\frac{-5}{8} + \frac{7}{12} + \frac{11}{6}$
 - $(-9) \div \left(\frac{-5}{18}\right)$
 - $\frac{19}{17} \times \frac{-51}{33}$
- Q.32**
- Below are given the measures of certain sides and angles of triangles. Give reason for each of them. Why you cannot construct them.
 - $\triangle ABC \rightarrow m\angle A = 85^\circ, m\angle B = 115^\circ, AB = 5\text{cm}$
 - $\triangle XYZ \rightarrow XY = 2\text{cm}, YZ = 4\text{cm}, XZ = 2\text{cm}$
 - $\triangle PQR \rightarrow PQ = 5\text{cm}, QR = 6\text{cm}, \angle R = 90^\circ$
 - Construct $\triangle ABC$, given $m\angle A = 60^\circ, m\angle B = 30^\circ$ and $AB = 5.8\text{ cm}$.
- Q.33** Two cross roads, each of width 10m, cut at right angles through the centre of a rectangular park of length 700m and breadth 300m and parallel to its sides. Find the area of the roads. Also find the area of the park excluding cross roads. Find the cost of constructing the roads at the rate of Rs. 100 per m^2 .
- Q.34**
- Classify into monomial, binomial or trinomial
 - $5x + 3$
 - $7x$
 - $x+y+3$
 - What should be added to x^2+xy+y^2 to obtain $2x^2+3xy$
 - What should be the value of 'a' if the value of $2x^2+x-a$ equals to 5, when $x=0$?
- Q.35**
- Express 729×64 as a product of prime factors only in exponential form.
 - A wire is in the shape of a rectangle. Its length is 40cm and breadth is 22cm. If the same wire is rebent in the shape of a square. What will be the measure of each side. Also find which shape encloses more area?

