V. & C. Patel English School

Yearly Exam

Date : 10-3-18 **Std. – 8** **Marks-80**

Time : 3 hours **Sub.: Maths**

General Instructions :

All questions are compulsory.

Section A (Consists of 11 questions, Q.1 to Q.11 each of 1 mark)

Section B (Consists of 10 questions, Q.12 to Q.21 each of 2 marks)

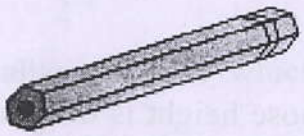
Section C (Consists of 7 questions, Q.22 to Q.28 each of 3 marks)

Section D (Consists of 7 questions, Q.29 to Q.35 each of 4 marks)

Section – A (1M)

Q-1 Two years ago Sunita was X years old. After 5 years, what will be her age.

Q-2 Name the shape of the solid shown in figure.



Q-3 What is the value of $m^4 - m^2n^2 \div m^2$.

Q-4 Name a graph which represents in the form of bars with no gap between them.

Q-5 What is the sum of all interior angles of a pentagon ?

Q-6 Name a unique quadrilaterial which can be constructed by knowing one side only.

Q-7 Find the sum of $3p^2q^2 - 5pq + 4$ and $7 + 7pq - 2p^2q^2$.

Q-8 What is the area of a rhombus whose diagonals are of lengths 10cm and 8.2 cm ?

Q-9 Find the value for $(2^{-1}+3^{-1}+4^{-1})$

Q-10 Write abscissa and ordinate of the point B (2–1)

Q-11 x and y are two things that vary such that $x/y = k$, what is k ?

Section – B (2M)

Q-12 Factorise the following using identities. (a) $169 - 25y^2$ (b) $a^2+8a+16$.

Q-13 Find the factors of $x^2 - 14x + 45$ by splitting middle terms.

Q-14 Seven more than half of a number is 42. Find the number.

Q-15 If 5 pens cost ₹10, how much will 12 pens cost ?

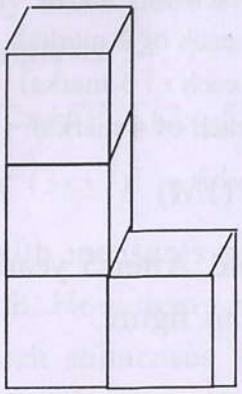
Q-16 Find the value of A and B.

$$\begin{array}{r} 1\ 2\ A \\ +\ 6\ A\ B \\ \hline A\ 0\ 9 \end{array}$$

Q-17 Verify that $-(-x)$ is the same as x for $x = \frac{13}{17}$

Q-18 A farmer has enough food to feed 20 animals in his cattle for 6 days. How long would the food last if there were 10 more animals in his cattle ?

Q-19 a. Draw the front view, side view and top view of the figure.



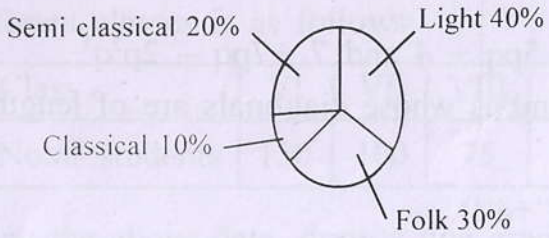
b. Draw a square pyramid.

Q-20 Find the area of a trapezium whose height is 6cm and length of two parallel sides are 10 cm and 5cm.

Q-21 Subtract $4a-7ab+3b+12$ from $12a-9ab+5b-3$.

Section – C (3M)

Q-22 A survey was made to find the type of music liked by 1000 young people in a city. From the given pic chart answer the following questions.



a. Find the number of young people who like folk.

b. Which type of music is liked by maximum number of people ?

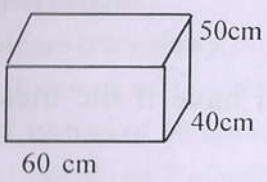
c. How does listening to music help you in life ?

Q-23 Solve and check your result for. $\frac{m-4}{4} = \frac{m-5}{5}$

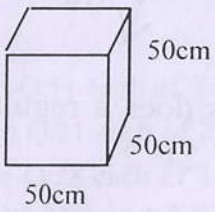
Q-24 Using Euler's formula find the unknown.

	a	b	c
Faces	?	5	20
Vertices	6	?	12
Edges	12	9	?

Q-25 There are two cuboidal boxes as shown in the following figures. Which box requires the lesser amount of material to make ?



(a)



(b)

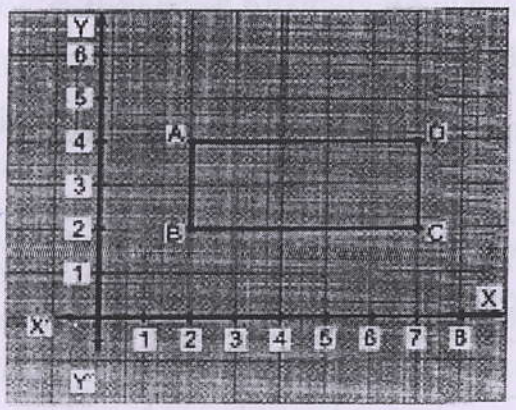
Q-26 a. Write the following numbers in standard form :

(i) 0.000000564 (ii) 45000

b. Evaluate : $\frac{8^{-1}x5^{3}}{2^{-4}}$

c. Find the value of m for which $5^{m} \div 5^{-3} = 5$.

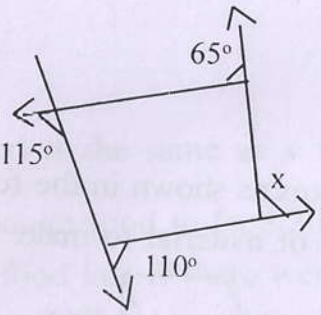
Q-27 Write the coordinates of the vertices of the figure and also find its area.



Q-28 If 31z5 is a multiple of 9, where z is a digit, what is the value of z ? You may have two answers, find why is this so ?

Section – D (4 marks)

Q-29 a. Find the measure of x in the figure.



b. How many sides does a regular polygon have if the measure of an exterior angle is 24° ?

Q-30 a. Simplify $(2x+5)^2 - (2x-5)^2$ using identity.

b. Show that $(3x+7)^2 - 84x = (3x - 7)^2$

Q-31 A suitcase with measures 80cm x 48cm x 24 cm is to be covered with a tarpaulin cloth. How many metres of tarpaulin of width 96cm is required to cover 100 such suitacases ?

Q-32 Simplify and write the answer in the exponential form.

a. $(2^5 \div 2^8)^5 \times 2^{-5}$ (b) $\frac{1}{8} \times (3)^{-3}$.

Q-33 a. Construct a quadrilateral DEAR, where DE=4cm, EA=5cm, AR=4.5cm, E = ∠60° and A = ∠90°.

b. What is the measure of angle between any diagonal and a side in a square ?

Q-34 The number of students who prefer to use pen to take notes in six different classes is as follows.

Class	VI	VII	VIII	IX	X	XI
No.of students	150	100	75	50	75	25

Using the above data, draw a line graph.

Q-35 If x and y vary inversely, find the value of the unknowns.

x	3	x_2	10	4	x_5
y	y_1	30	6	y_4	15