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PROVINCIAL DEPARTMENT OF EDUCATION NORTH WESTERN PROVINCE

THIRD TERM TEST - 2018

MATHEMATICS - I

Grade 07 **Two Hours**

Name / Index No. :

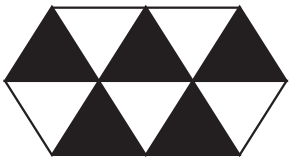
PART - I

- **Answer question number 01 to 20 on this paper itself. Correct answer for each question carries 02 marks.**

01. Write $\frac{2}{5}$ as a percentage.

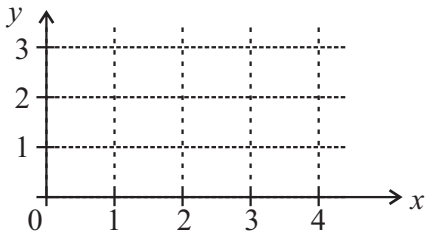
02. Find the least common multiple (LCM) of 60 and 45.

03. Which type is the following tessellation?



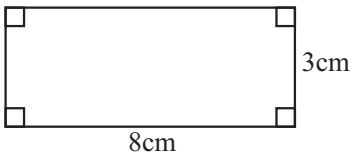
04. A fruit drink is made using Orange juice and water the ratio 1:6. If the quantity of orange juice used is 50ml, what is the total volume of the drink that is made?

05. Plot the A(1,3) and B(2,1) points on a cartesian plane.



06. Represent the set A = {2, 3, 5, 7} by a venn diagram.

07. Find the area of the following figure.



08. Simplify, $\frac{1}{3} + \frac{1}{6}$

09. Price of a pen is Rs. 9.75. Find the price of 100 pens.

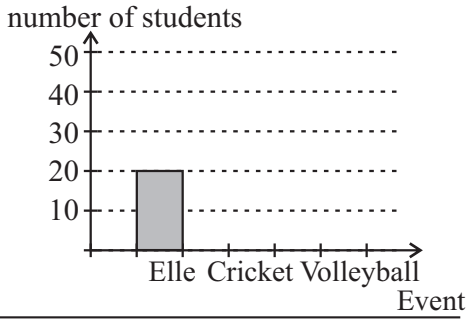
10. Simplify, (-7) + (-10)

11. Simplify,

l	*ml*
5	375
	x 6

12. Complete the bar graph according to the following information.

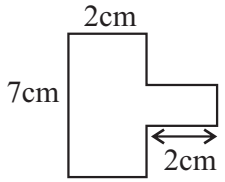
Event	Elle	Cricket	Volleyball
number of student	20	40	30



13. Select and underline the random event from the given below.
    (i) A fresh milk glass being white in colour.
    (ii) When a die is rolled with the sides of it marked 1, 2, 3, 4, 5 and 6, the side turning up being 7.
    (iii) An egg bought from a shop being a rotton one

14. In a scale diagram drawn to the scale 1:200, what is the actual length represented by 3cm.

15. Find the perimeter of the following figure.



16. Express 25g in miligrames.

17. Simplify, $3a \times a^2 \times b^3$

18. Solve, $x - 1 = 5$

19. Rs. 600 was divided between A and B in the ratio 2:1. Find how much money A received.

20. A and B are two solids using your knowledge on solids and complete the blanks.

Solid	Number of faces	Number of vertices	Number of edges
A	6	.....	12
B	.....	4	6

Grade 07 **PART - II** **MATHEMATICS**

- **Answer to the first question and 04 other questions.**
  First question carries 16 marks and other questions carry 11 marks.

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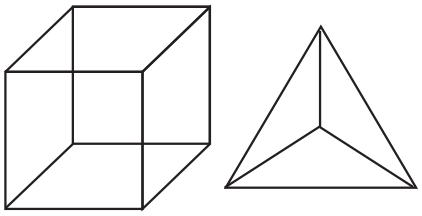
01. (a) Consider the following solids.



(i) Write down the number of faces, edges and verices of each solids. (02m.)

(ii) Verify Euler's relationship using the one solid. (03m.)

(b) Using the ruler and pair of compasses,

(i) Draw a straight line segment AB = 8cm. (01m.)

(ii) Mark the mid point of AB and name it as C. (02m.)

(iii) Construct the equilateral triangle ACD with AC as a side. (01m.)

(iv) Construct the circle taking DC as the radius and centre as D. (02m.)

(v) Construct the regular hexagon using the above circle. (05m.)

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02. (a) Express the following as percentages. (04m.)

(i) $\frac{3}{4}$ (ii) 0.8

(b) Simplify,

(i) $\frac{2}{7} + \frac{1}{7}$ (01m.) (ii) $\frac{3}{10} + \frac{1}{5}$ (02m.) (iii) $3\frac{1}{4} + 5\frac{1}{3}$ (04m.)

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03. (a) The ratio of ripe mangoes and rotten mangoes is 5:1 in stock of mangoes which is bought by a vendor to sell.

(i) Find the total number of mangoes he bought. (03m.)

(ii) Find the total amount he spent on mangoes which he bought for Rs. 10 each. (02m.)

(b) Sunimal gave Rs. 300 to pay the following item displayed on the table given below.

Item	Price of a unit	Number of items
Pen	9.50	5
Exercise book	31.25	6

(i) Find the total amount he had to pay. (04m.)

(ii) Find the balance he will get back after paying. (02m.)

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04. (a) The length and breadth of a rectangular floor are 30m and 12m respectively. It is required to lay a square tile of side length 1m in that floor.

(i) Find the area of the rectangular floor. (02m.)

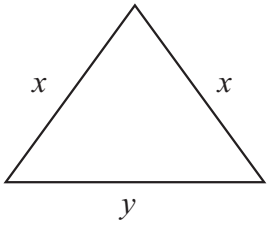
(ii) Find the area of a tile. (02m.)

(iii) Find the number of tiles that are required to lay the whole floor. (02m.)

(iv) Find the perimeter of the above rectangular floor. (02m.)

(b) Draw a scale diagram of the above rectangular floor, using the scale 1:600. (03m.)

05. (a) The lengths of the sides of the triangle is given below.



(i) Express the perimeter of the triangle as an algebric expression in terms of x and y. (02m.)

(ii) Find the value of the above algebric expression when $x = 8$cm, $y = 14$cm. (03m.)

(b) When Rs. 150 were given to buy five apples Rs. 15 remained.

(i) Construct an equation taking x as the price of one apple. (03m.)

(ii) Solve the above equation and find the price of an apple. (03m.)

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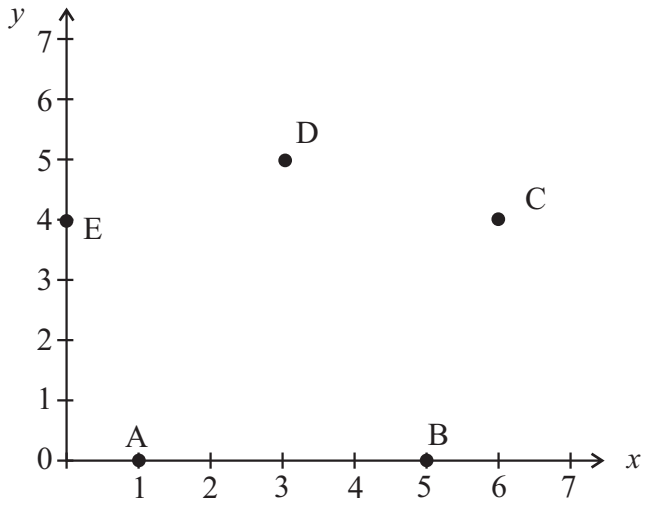
06. Copy the following Cartesian plane with points and answer the following questions.



(i) Write down the coordinates of the points A, B, C, D and E as ordered pairs. (05m.)

(ii) Join the points in alphabatical order and return to the starting point. (01m.)

(iii) Draw the symmetrical axis of the figure. (01m.)

(iv) Mark any two points on the symmetrical axis and write the coordinates of them. (04m.)

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07. The following table represent the amount of lorries used to transport vegetables and fruits to a certain market.

day / item	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of vegetable lorries	12	10	12	12	12	8	4
Number of fruit lorries	10	8	6	10	6	8	4

(i) Represent the above information in a multiple column graph. (07m.)

(ii) In which day has the least number of arrivals of lorries. (01m.)

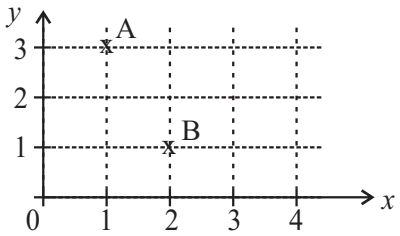
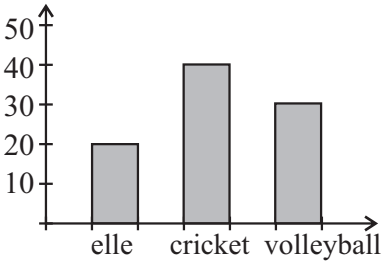
(iii) According to the graph,

(a) How many days did the same amount of lorries carrying vegetables arrived to the market? (01m.)

(b) How many days were there with the same amount of lorries transporting vegetables and fruits arrived on the same day? (02m.)

ANSWER PAPER

PART - I

01.	$\frac{2}{5} \times \frac{20}{20} = \frac{40}{100}$ $= 40\%$	01	02
02.	$60 = 2 \times 2 \times 3 \times 5 = 2^2 \times 3 \times 5$ $45 = 3 \times 3 \times 5 = 3^2 \times 5$ L.C.M. $= 2^2 \times 3^2 \times 5$ $= 180$	01	02
03.	Pure tessellation		02
04.	7 x 50 350*ml*	01	02
05.			02
06.	A → 2 3 5 7		02
07.	8 x 3 $24cm^2$	01	02
08.	$\frac{2}{6} + \frac{1}{6} = \frac{3}{6}$ $\frac{1}{2}$	01	02
09.	9.75 x 100 Rs. 975	01	02
10.	-17		02
11.	32*l* 250*ml*		02
12.			02
13.	(iii)		02
14.	1cm 200cm = 2m 3cm 6m	01	02
15.	7 + 7 + 2 + 2 + 2 + 2 22cm	01	02
16.	25000mg		02
17.	$3a^3 b^3$		02
18.	$x - 1 + 1 = 5 + 1$ $x = 6$		02
19.	$\frac{600}{3} = 200$ 200 x 2 = රු. 400	01	02
20.			02

solid	number of faces	number of vertices	number of edges
A	6	8	12
B	4	4	6

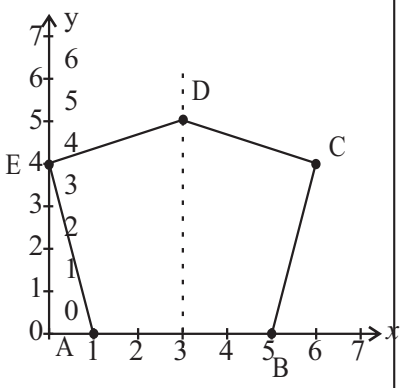
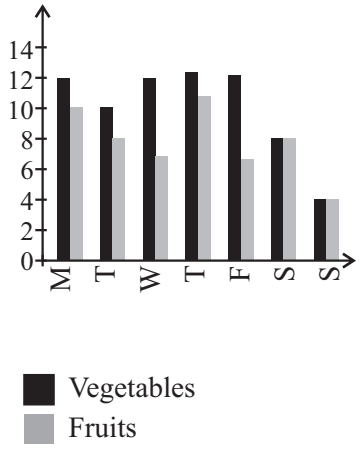
40

PART - II

01.	(a) (i) 8, 6, 12	01	
	4, 4, 6	01	02
	(ii) 8 + 6 = 14	01	
	12 + 2 = 14	01	
	V + F = E + 2	01	03
	(b) (i) Drawing AB	01	01
	(ii) Marking C point	01	
	Marking the mid point	01	02
	(iii) Constructing the ACD	01	01
	(iv) Drawing a circle	02	02
	(v) completing the hexagon	05	05
			16
02.	(a) (i) $\frac{3}{4} \times \frac{25}{25} = \frac{75}{100}$	01	
	$= 75\%$	01	02
	(ii) 0.8 $\frac{8}{10}$	01	
	$\frac{8}{10} \times \frac{10}{10} = \frac{80}{100} = 80\%$	01	02
	(b) (i) $\frac{3}{7}$	01	01
	(ii) $\frac{3}{10} + \frac{2}{10}$	01	
	$\frac{5}{10} = \frac{1}{2}$	01	02

ANSWER PAPER

	(iii) $8\frac{1}{4} + \frac{1}{3}$	01	
	$8\frac{3}{12} + \frac{4}{12}$	01	
	$8\frac{7}{12}$	02	04
			11
03.	(a) (i) $\frac{250}{5} = 50$	02	
	300	01	03
	(ii) 300 x 10	01	
	Rs. 3000	01	02
	(b) (i) 9.50 x 5 = 47.50	01	
	31.25 x 6 = 187.50	01	
	Rs. 235.00	01	03
	(ii) 300.00	01	
	-235.00		
	Rs. 65.00	02	03
			11
04.	(a) (i) 30 x 12	01	
	360m²	01	02
	(ii) 1m x 1m	01	
	1m²	01	02
	(iii) 1 x 360		
	360		01
	(iv) 30 + 12 + 30 + 12	01	
	84m	01	02
	(b) for scale diagram		04
			11
05.	(a) (i) $x + x + y$	01	
	$2x + y$	01	02
	(ii) 2 x 8 + 14	01	
	30cm	02	03
	(b) (i) $5x + 15 = 150$		03
	(ii) $5x + 15 - 15 = 150 - 15$	01	
	$\frac{5x}{5} = \frac{135}{5}$	01	
	$x = 27$	01	03
			11

06.	(i) A (1, 0) , B (5, 0)		
	C (6, 4) , D (3, 5)		
	E (0 , 4)	05	05
	(ii) 		01
	(iii) for symmetrical axis		01
	(iv) marking two points	02	
	writing coordinates	02	04
			11
07.	(i) 		07
	(ii) Sunday		01
	(iii) (a) 4		01
	(b) 2		02
			11