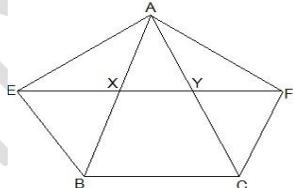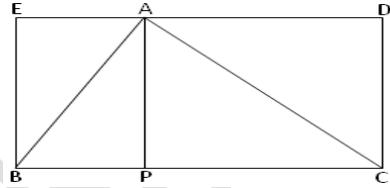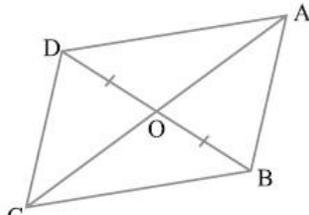**Subject: MATHEMATICS**   **Assignment No: 3**
Allotment Date: 7/12/18   **Submission Date: 11/12/18**
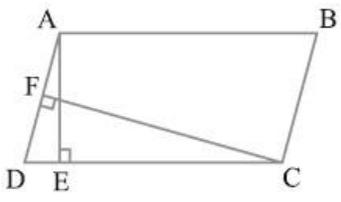
S.No	QUESTION	MARKS	LEVEL
	OBJECTIVE TYPE		
1	ABCD is a rhombus such that angle ACB = 40º. Then angle ADB is: (A) 40º (B) 45º(C) 50º(D) 60º	1 mark	Knowledge
2	The median of a triangle divides it into two (A) Triangles of equal area (B) Congruent triangles (C)Right triangles (D) Isosceles triangles	1 mark	Understanding
3	The quadrilateral formed by joining the mid points of sides of a quadrilateral PQRS, taken in order, is a rectangle, if (A) PQRS is a rectangle (B) PQRS is a trapezium (C) Diagonals of PQRS are unequal (D) None of these	1 mark	H.O.T.
	SHORT ANSWER TYPE I		
4	Prove that parallelograms on the same base and between same parallels are equal in area.	2 Marks	Knowledge
5	In given figure, ABCD is a parallelogram, AE is perpendicular to DC and CF is perpendicular to AD. If AB = 16 cm, AE = 8 cm and CF = 10 cm, find AD.	2 Marks	Understanding
6	If an angle of a parallelogram is two-third of its adjacent angle, find all the interior angles of the parallelogram.	2 Marks	logic
7	In the given figure BC || EF, EB ||AC and CF|| AB. Prove that area(ΔAEB) =(ΔACF)	2 Marks	H.O.T.
	SHORT ANSWER TYPE II		
8	Show that "In a parallelogram, opposite sides are equal"	3 Marks	Understanding
9	A farmer has distributed his field in the form of a parallelogram amongst his son and daughter. According to the given figure area of triangle BAC of the land was given to son and combined lands comprising of area of triangle AEB and area of triangle DAC to his daughter (a) Is the distribution of land between son and daughter equal? Justify your answer (b) What value inculcated by the farmer.	3 Marks	Value based
10	ABC is an isosceles triangle in which AB = AC. AD bisects exterior angle PAC and CD || AB. Show that: angle DAC = angle BCA	3 Marks	Multi concept
11	In given figure, diagonals AC and BD of quadrilateral ABCD intersect at O such that OB = OD. If AB = CD, then show that: (i) ar (DOC) = ar (AOB) (ii) ar (DCB) = ar (ACB) (iii) DA || CB or ABCD is a parallelogram	5 Marks	H.O.T.
12	ABCD is a trapezium in which AB|| DC, DC = 30cm and AB= 50cm. If X and Y are respectively the mid points of AD and BC, prove that area (DCYX) = $\frac{7}{9}$ area (XYBA)	5 Marks	Logic