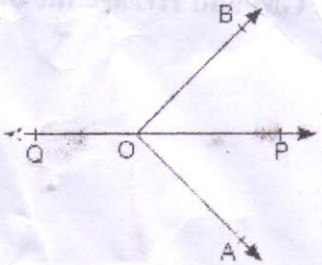
AMITY INTERNATIONAL SCHOOL,PUSHP VIHAR

CLASS 9 MATHEMATICS UT-2

M.M-30 **SET B** **DURATION -1 HR**

General instructions-This question paper consists of 11 questions .All questions are compulsory.

1. **Write the coefficient of x in the expansion of $(4 - x)^2$.** **(1)**
2. **Check whether the equation $2x(x - 5) - 2x^2 - 7y + 5 = 0$ is a linear equation in 2 variables or not.** **(1)**
3. **The angles of a triangle ABC are in the ratio 1 : 2: 3. Find the largest angle of the triangle.** **(1)**
4. **If $p(x) = x^2 + 3x - 5$, find $p(1) + p(-1)$** **(2)**
5. **Ray OP bisects $\angle AOB$ and OQ is the ray opposite to OP. Show that $\angle QOB = \angle QOA$.**

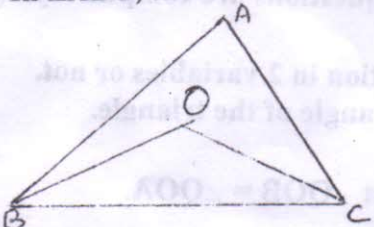


(2)

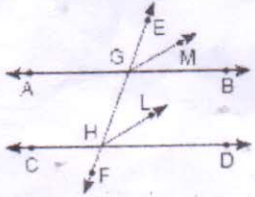
6. **If the polynomial $f(x) = px^3 + 3x^2 - 3$ and $g(x) = 2x^3 - 5x + p$ are divided by $(x - 4)$, then the remainder in each case is the same. Find the value of p.** **(3)**

7. **Show that when two lines intersect each other ,then the vertically opposite angles are equal.** **(4)**

8. In ΔABC, the bisector of $\angle B$ and $\angle C$ meets at O. Prove that $\angle BOC = 90 + \angle A/2$. (4



9. In the given figure, EF is the transversal to two parallel lines AB and CD. GM and HL are the bisector of the corresponding angles EGB and EHD. Prove that GM || HL (4)



10. Factorise the following: (4)

(i) $24x^4 - 375x$ (ii) $6x^2 + 17x + 5$

11. Draw the graph of the equation $3x + y = 6$. Using the graph, find the value of y, when x= 2. (4)