

**M. Sc. (Mathematics with  
Applications in Computer  
Science) M. Sc. (MACS)  
Term-End Examination  
December, 2018**

**COMPUTER GRAPHICS**

*Time :  $1\frac{1}{2}$  Hours*

*Maximum Marks : 40*

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- Note :** (i) There are *two* questions in this paper, totalling 30 marks.  
(ii) Answer both questions.  
(iii) Remaining 10 marks are for viva-voce.
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1. Write a 'C' program to generate and display English letters 'M' and 'Q' with regular font type and italic font type using : 15
  - (i) bitmap method
  - (ii) outline method.
2. Write a 'C' program to implement the flood fill algorithm to fill a closed area given by the equation  $4x^2 + y^2 - 4 = 0$  in the  $xy$ -plane. 15