

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, December 2019**

**Programme Name: BTech. (CSE spl. GG)**

**Course Name : Web Programming for GG (HTML5 and WebGL)**

**Course Code : CSGG3001**

**Nos. of page(s) : 2**

**Semester: V**

**Time: 03 hrs**


**Max. Marks: 100**

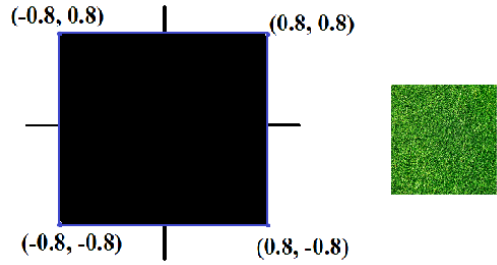
Instructions: Wherever required write clear and well formatted code, and webpage only in HTML5

**SECTION A**

S. No.		Marks	CO
Q 1	Name any four standard attributes supported by all HTML5 tags?	4	CO1
Q2	Write in short about any four events available in HTML?	4	CO1
Q3	What is the purpose of placeholder attribute? Write an example code?	4	CO1, CO2
Q4	For what purpose in WebGL, below two data types are used? i) sampler2D                      ii) vec4	4	CO3
Q5	Briefly explain how background color can be cleared with blue in WebGL?	4	CO2, CO3

**SECTION B**

Q6	Write the code for displaying below figure with the help of SVG? Also provide the geometrical coordinates used for drawing each individual object of the figure?  	10	CO2, CO3
Q7	Write the canvas code for displaying a moving image horizontally on the web browser?	10	CO3
Q8	Write the typical ten steps required for mapping a texture image over a WebGL geometry?  <p align="center">OR</p> Write the JavaScript array, vertex shader code and fragment shader code only for applying below texture over the specified geometry?	10	CO4



Q9	Define the JavaScript vertex array, vertex shader code and fragment shader code only to draw a triangle with three vertices in red, green and blue color respectively?	10	CO5
<b>SECTION-C</b>			
Q10	Write the typical steps involved in rotating a 3D geometry in WebGL? ( No need to write code)	20	CO4, CO5
Q11	<p style="text-align: center;">OR</p> <p>Write the code for scaling a 3D triangle by 2 times about each standard X, Y and Z axis, every time user presses a button in WebGL?</p>	20	CO4, CO5