

# **CBSE | DEPARTMENT OF SKILL EDUCATION**

## **MULTIMEDIA (SUBJECT CODE 415)**

**CLASS X (SESSION 2021-2022)**

**MARKING SCHEME FOR TERM - II**

**Max. Time Allowed: 1 Hour (60 min)**

**Max. Marks: 25**

### **General Instructions:**

- Please read the instructions carefully
- This Question Paper is divided into 03 sections, viz., Section A, Section B and Section C.
- Section A is of 05 marks and has 06 questions on Employability Skills.
  - Questions numbers 1 to 4 are one mark questions. Attempt any three questions.
  - Questions numbers 5 and 6 are two marks questions. Attempt any one question.
- Section B is of 12 marks and has 12 questions on Subject Specific Skills.
  - Questions numbers 7 to 12 are one mark questions. Attempt any four questions.
  - Questions numbers 13 to 18 are two marks questions. Attempt any four questions.
- Section C is of 08 marks and has 03 competency-based questions.
  - Questions numbers 19 to 21 are four marks questions. Attempt any two questions.
- Do as per the instructions given in the respective sections.
- Marks allotted are mentioned against each section/question.

## **SECTION A**

**(3 + 2 = 5 marks)**

| <b>Answer any 3 questions out of the given 4 questions. Each question is of mark.</b> |  | <b>1 x 3 = 3</b> |
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| <b>Q.1</b>  | <b>Name the five elements of nature.</b><br>The five elements of nature – Prithvi (Earth), Agni (Fire), Jal (Water), Vaayu (Air), Aakash (Space).  | <b>1</b>         |
| <b>Q.2</b>  | <b>An economy is called Green economy when it is based on the principles of _____.</b><br>Sustainable Development  | <b>1</b>         |
| <b>Q.3</b>  | <b>An _____ is a person who establishes a business or a venture that generates some value to the customer and proves to be profitable for him.</b><br>Entrepreneur   | <b>1</b>         |
| <b>Q.4</b>  | <b>Entrepreneurship has some positive impact on society. Mention any two.</b><br>- Accentuates economic Growth<br>- Fosters Creativity<br>- Stimulates Innovation and Efficiency<br>- Creates Jobs and Employment Opportunities<br>- Solves the problems of the society<br>- Encourages welfare of the society <b>(Any Two)</b>  | <b>1</b>         |
| <b>Answer any 1 question out of the given 2 questions. Each question is of mark.</b>  |  | <b>2 x 1 = 2</b> |
| <b>Q.5</b>  | <b>List any four characteristics of entrepreneurship.</b><br>a. Ability to take up risks<br>b. Believe in hard work and discipline<br>c. Adaptable and flexible to achieve the goals of enhancing quality and customer satisfaction<br>d. Knowledge of the product and services and their need or demand in the market<br>e. Financial literacy and money management skills<br>f. Effective planning and execution | <b>2</b>         |

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| <b>Q.6</b> | <p><b>What are the five sources of energy available to us?</b><br/> There are 5 fundamental sources of energy :</p> <p>(i) Nuclear fusion in the Sun (solar energy),<br/> (ii) Gravity generated by the Earth and Moon,<br/> (iii) Nuclear fission reactions,<br/> (iv) Energy in the interior of the Earth, and<br/> (v) Energy stored in chemical bonds. Most of the energy we use today come from fossil fuels (stored solar energy).<br/> But fossils fuels have a disadvantage in that they are non-renewable on a human time scale, and causes other potentially harmful effects on the environment.</p> | <b>2</b> |
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## SECTION B

**(4 + 8 = 12 marks)**

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| <b>Answer any 04 questions out of the given 06 questions</b> |  | <b>1 x 4 = 4</b> |
| <b>Q.7</b>   | <p><b>Explain Diffuse map.</b><br/> The diffuse map is a tilable image which gives the color information, but does not contain lighting or height information for the texture.</p>   | <b>1</b>         |
| <b>Q.8</b>   | <p><b>What is Stamp New Layer?</b><br/> When working on a few layers, one can merge the layers together into a new layer. In Photoshop, this is called Stamp New Layer.</p>  | <b>1</b>         |
| <b>Q.9</b>   | <p><b>Write the shortcut command to activate the Stamp Visible.</b><br/> Command-Alt- Shift-E/ Control-Alt-Shift-E</p>   | <b>1</b>         |
| <b>Q.10</b>  | <p><b>In which format does one store a photoshop document?</b><br/> .psd</p>   | <b>1</b>         |
| <b>Q.11</b>  | <p><b>How are 3D Texture maps controlled?</b><br/> 3D Texture maps are controlled by something called UV's or UVW (in some cases)</p>  | <b>1</b>         |
| <b>Q.12</b>  | <p><b>What does IOR stands for?</b><br/> IOR stands for Index of Refraction</p>  | <b>1</b>         |
| <b>Answer any 04 questions out of the given 06 questions</b> |  | <b>2 x 4 = 8</b> |
| <b>Q.13</b>  | <p><b>What is Displacement Maps? Explain in brief.</b><br/> Displacement maps are grayscale textures you map to objects to create true surface relief (elevations and depressions) on an otherwise flat object.</p>  | <b>2</b>         |
| <b>Q.14</b>  | <p><b>What makes high pass sharpening a unique method?</b><br/> The difference between high pass sharpening and most other methods of sharpening is that high pass sharpening does not actually adjust or change any pixels in your original image. Also, because high pass exists as a separate layer, you can adjust the layer's Opacity and Blending Modes to control the strength of sharpening over the entire image.</p>   | <b>2</b>         |
| <b>Q.15</b>  | <p><b>Explain IOR parameter.</b><br/> The IOR parameter (Index of Refraction) defines the material's Fresnel reflectivity and is by default the angular function used. Effectively the IOR will define the balance between reflections on surfaces facing the viewer and on surface edges.</p>   | <b>2</b>         |
| <b>Q.16</b>  | <p><b>How can one work with the transparency of an object?</b><br/> You can work with the transparency of an object in the following ways:</p> <ul style="list-style-type: none"> <li>· Change the transparency level of an object adjusting the transparency attribute of a material applied to the object.</li> <li>· Apply a texture as a transparency map to the material's transparency attribute to designate which areas of an object are opaque, transparent or semi-transparent.</li> </ul> | <b>2</b>         |
| <b>Q.17</b>  | <p><b>Elaborate Anisotropy.</b><br/> Anisotropy reflects and transmits light with a directional bias and causes materials to appear rougher or glossier in certain directions. The default value for Anisotropy is 0, which means 'isotropic.' As you move the control towards 1.0, the surface is made more anisotropic in the U axis.</p>  | <b>2</b>         |

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| <b>Q.18</b> | <p><b>What is the importance of Roughness?</b></p> <p>Roughness controls the glossiness of the specular reflections. The lower the value, the sharper the reflection. In the limit, a value of 0 will give you a perfectly sharp mirror reflection, while 1.0 will create reflections that are close to a diffuse reflection. You should connect a map here to get variation in the specular highlight.</p> | <b>2</b> |
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**SECTION C** **(2 x 4 = 8 marks)**  
**(COMPETENCY BASED QUESTIONS)**

| <b>Answer any 02 questions out of the given 03 questions</b> |  |          |
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| <b>Q.19</b>  | <p><b>What are the uses of Specular Maps?</b></p> <p>Some surfaces are shinier than others (for example a wet fish has a shinier surface than a dry leaf). By mapping a texture to the Specular attribute of an object's material, you create a specular map which lets you describe how shine appears on objects (by controlling highlight). Shiny objects reflect light directly; matte objects diffuse light. Specular highlights show the places on the object where the light sources are reflected at consistent angles; reflections on an object show, among other things, light bounced from surrounding objects. Specular highlights depend directly on the view (camera), not the position of the light, like diffuse shading does. The size of a specular highlight on a surface makes the surface look either flat or shiny. Note: Only materials with specular attributes (Anisotropic, Blinn, Phong, and PhongE) have surface highlights. The specular highlight is the white shiny glow on the material.</p>  | <b>4</b> |
| <b>Q.20</b>  | <p><b>What steps will you require to create true reflections?</b></p> <ol style="list-style-type: none"> <li>1. Create a sphere and a plane, and position the sphere over the plane. Create a light to illuminate both surfaces.</li> <li>2. Create a specular material (a Phong or PhongE) and assign it to the sphere. The sphere is reflected in the plane.</li> <li>3. Create a second material and assign it to the plane. The plane reflects the sphere.</li> <li>4. Make each surface a different color so you can see the reflection of one in the other.</li> <li>5. In the Raytracing Quality section of the Render Settings window, turn on Raytracing. This tells Maya to raytrace any surface whose Visible in Reflections/Refractions is toggled on. These attributes are on by default for all surfaces, but raytracing only works when you turn on Raytracing in the Render Settings window. To learn more about the Render Settings, see Render Settings window.</li> <li>6. Perform a test render to visualize the results. If you want the sphere to reflect the plane, open the plane's Attribute Editor and turn on Render Stats &gt; Visible in Reflections.</li> </ol> <p>To test iterations of a scene, see Visualize interactively with IPR</p> | <b>4</b> |
| <b>Q.21</b>  | <p><b>What are the different ways in which you can work with color in MAYA?</b></p> <p>You can work with color in Maya in so many different ways:</p> <ul style="list-style-type: none"> <li>· Change the basic color of an object by adjusting the color attribute of a material applied to the object. See Set a color for the object for a visual demonstration.</li> <li>· Apply a texture as a color map to the material's color attribute. See Map a texture to any of the material attributes for a visual demonstration, and Map a 2D or 3D texture to a material for more information.</li> <li>· Use a Ramp Shader for extra control over the way color changes with light and view angle. You can simulate a variety of exotic materials and tweak traditional shading in subtle ways.</li> <li>· Expand, enhance, or manipulate colors in applied textures using utilities such as Blend Colors, Clamp, Gamma Correct, and so forth. For example, you can blend colors, adjust contrast, and convert HSV to RGB. For a description of each of the utilities and what you can use them for, see Utility nodes.</li> </ul>   | <b>4</b> |