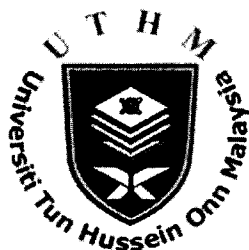


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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2012/2013**

COURSE NAME : 3D MODELING AND ANIMATION

COURSE CODE : DAT 32203

PROGRAMME : 3 DAT

EXAMINATION DATE : MARCH 2012

DURATION : 2 ½ HOURS

**INSTRUCTIONS : ANSWER ALL QUESTIONS IN
SECTIONS A, B & C
ANSWER FOUR (4) QUESTIONS
ONLY IN SECTION D**

THIS QUESTION PAPER CONSISTS OF THIRTEEN (13) PAGES

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SECTION A

INSTRUCTION: Choose the most **ACCURATE** answer to the following questions.

- Q1** Identify step to generate your final image/animation?
- A You must press play
 - B You must save it
 - C You must click "Generate" in the create toolbar
 - D You must "Render" the project
- Q2** Most objects needs time to accelerate and slow down, this is the principle of
- A Fast in, slow out
 - B Slow upwards slow downwards
 - C Animation
 - D Slow in slow out
- Q3** The principle of solid drawing means...
- A Animators should adhere to the same principles of flying as academic artists
 - B Draw lines that are solid
 - C Don't make your drawing too light
 - D Animators should adhere to the same principles of drawing as academic artists

- Q4** Identify "*Zoetrope*" is
- A A mechanical spinning device that gives an illusion of movement
 - B A very old camera for filming animation
 - C A technique of tracing over a film sequence
 - D A series of drawing on a wall
- Q5** In tradition cel animation what does the "*inbetween*" artist do?
- A Makes the tea between breaks
 - B Draws or paints the background
 - C Draws all the intermediate frames between key frames
 - D Decides the timing of the animation
- Q6** These are types of material **EXCEPT**.....
- A Raytrace
 - B Blend
 - C Shellac
 - D Phong
- Q7** Identify which of the listed processes **DO NOT** involved in *Production Phase* of 3D animation?
- A Rendering
 - B Editing
 - C Modeling
 - D Effects

- Q8** The “*images*” you assign to materials are called....
- A Texture
 - B Maps
 - C Pattern
 - D Mapping
- Q9** Select what is the main factor that contributes to the pricing of 3D animation?
- A Video resolution
 - B Scene complexity
 - C Length of 3D animation
 - D Compositing with live action
- Q10** Identify from the list which software is used to create 3D animation?
- A Softimage
 - B Director
 - C Toon Boom
 - D Fireworks
- Q11** NURBS surfaces can contain multiple sub-objects **EXCEPT...**
- A NURBS Points
 - B NURBS Curves
 - C NURBS Surfaces
 - D NURBS Splines

Q12 Identify the file format for 3D animations.

- A .dir
- B .max
- C .gif
- D .swf

Q13 Grids & Snaps is used to...

- A allow user to select type of measurement unit.
- B make a shape or object disappear from scene.
- C make the creation and alignment of shapes and objects easier.
- D attach number of different shapes or object together.

Q14

A variant of model animation which uses various techniques to create motion blur between frames of film, which is not present in traditional stop-motion.

The phrase above refer to.....

- A Go motion
- B Model animation
- C Cutout animation
- D Rotoscoping

Q15 What is the primary use of dummy object?

- A To link objects together.
- B To used as a wireframe cube with a pivot point.
- C To assist in creating complex animation.
- D To be used as a center for transforms

SECTION B

INSTRUCTION: State whether each of the following statement is **TRUE** or **FALSE**.

- Q16** Many of early inventions designed to animate images were meant as novelties for private amusement of children or small parties. Animation devices which fall into these categories include the zoetrope, magic lantern, and flip book.
- Q17** Pin Stack tools used to turns the effect of the modifier on and off.
- Q18** A Dummy helper object is a wireframe cube with a pivot point at its geometric center. It has a name but no parameters, you can't modify it, and it doesn't render.
- Q19** In order to sculpture a surface, you need to mesh your primitive object, to get to the objects component level, where points and faces can be move.
- Q20** Traditional animation also called cel animation or hand-drawn animation was the process used for most animated films of the 20th century.
- Q21** Mapping is the term used to describe applying textures to materials such as adding wood grain to a wooden object.
- Q22** Displacement Maps allows for highly realistic texture maps as your objects are literally being displaced by the map. This means that any light source casting on the object will cast true shadows and silhouettes.
- Q23** Intensity is a phenomenon where light becomes weaker with distance.

Q24 Warm colors such as blues and violets tend to evoke evening stillness and calm.

Q25 You can animate a scene **without** selecting "AutoKey"

SECTION C

INSTRUCTION: Answer all questions.

Q26 You have to be able to see the project as a whole and plan a strategy for accomplishing it. There are **THREE (3)** major process used to create a 3D animation.

(a) List those **THREE (3)** major processes that you had learned.

(3 marks)

(b) Describe each of the major process that you had listed above in details.

(6 marks)

(c) Describe **THREE (3)** criteria of 3D Model.

(6 marks)

Q27 In producing 3D animation usually it's involve understanding on the basic information and principle and process behind it.

(a) Determine the meaning of 2D and 3D.

(4 Marks)

(b) List down **THREE (3)** differences between 2D computer graphic and 3D computer graphic.

(6 marks)

Q28 Lighting has a big impact on the appearance of final renderings. There are 5 main light sources in 3D programs

(a) List **FOUR (4)** main sources that you had learned.

(4 marks)

(b) Describe **THREE (3)** light sources that you had listed above.

(6 marks)

SECTION D

INSTRUCTION: Answer **ONLY FOUR (4)** questions.

Q29 Light Parameters is the lighting controllers and effects in 3d software. When a light is selected, several different rollouts appear. The options contained in these rollouts enable you to turn the lights on and off and determine how a light affects object surfaces.

(a) List **FIVE (5)** light parameters that you had learned.

(5 marks)

(b) Define the definition of modeling.

(2 marks)

(c) List **THREE (3)** main tools that can be used throughout the whole process of modeling in 3d max.

(3 marks)

Q30 Lighting in portraits is how you want your character to be seen. The exact same character with the same pose and expression can be seen in completely different ways depending on how they are lit. Three-point lighting is a very flexible technique and it can be used to illuminate the subject in an attractive way. Three-point lighting consists of three separate lights which can be used to control the lighting, shading and shadows of the subject.

(a) List **THREE (3)** types of lights consist in the three-point lighting.

(3 marks)

(b) Describe on each types of lights consist in the three-point lighting that you had listed above in details.

(6 marks)

(b) List **ONE (1)** lighting setup other than three-point lighting.

(1 marks)

Q31 The **Twelve Basic Principles of Animation** is a set of principles of animation introduced by the Disney animators Ollie Johnston and Frank Thomas in their 1981 book *The Illusion of Life: Disney Animation*.

(a) List **FOUR (4)** Principles of Animation.

(4 Marks)

(b) Describe only **THREE (3)** principles of animation that you had listed above in details.

(6 Marks)

Q32 Another way of modeling in 3ds Max is with “*NURBS surfaces and curves*”. *NURBS*, which stands for *Non-Uniform Rational B-Splines*, is an industry standard for designing and modeling surfaces. *NURBS* are a type of spline which is particularly useful for modeling smooth 3D surfaces. The lines themselves, called *NURBS curves*, are used to create *NURBS surfaces* or objects.

(a) List **TWO (2)** types of *NURBS surfaces*.

(2 marks)

(b) List **TWO (2)** types of *NURBS curve objects*.

(2 marks)

(c) Modifiers allow you to perform operations on the internal structure of an object in object space.

(i) List **TWO (2)** types of modifier.

(ii) Describe the modifier that you had listed above.

(6 marks)

Q33 The most common method of presenting animation is as a motion picture or video program, although there are other methods. The purpose of animation is to serve the story – to capture images of life and as a process to communicate with others.

(a) Define the definition of animation.

(3 marks)

(b) List **THREE (3)** types of animations.

(3 marks)

(c) Describe **TWO (2)** types of animations that you had listed above in details.

(4 marks)

Q34 Applying materials is the phrase used in 3ds Max to describe applying colour and texture to an object. Materials can affect object color, glossiness, opacity, and so on.

(a) Define the definition of material.

(2 marks)

(b) There are 5 types of material. List **FOUR (4)** of them.

(4 marks)

(c) Explain **TWO (2)** types of material that you are familiar with.

(4 marks)

- END OF QUESTION -