UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2012/2013

COURSE NAME	:	3D MODELING AND ANIMATION
COURSE CODE	:	DAT 32203
PROGRAMME	:	2 DAT & 3 DAT
EXAMINATION DATE	:	OCTOBER 2012
DURATION	:	2½ HOURS
INSTRUCTIONS	:	ANSWER **ALL** QUESTIONS IN **SECTION A, B & C** **AND** ANSWER **TWO (2)** QUESTIONS IN **SECTION D**

THIS QUESTION PAPER CONSISTS OF FOURTEEN (14) PAGES

SECTION A

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

Q1 State the 4 main types of view in 3ds Max?

A Left, Right, Top, Bottom

B Left, Top, Front, Perspective

C Perspective, Right, Front, Over

D Center, Under, Over, Right

Q2 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

Q3 The way to change the radius of a sphere is .....

A By right-clicking the sphere and select, "Modify"

B Go under Parameters and type in the required radius

C Go under Dimensions and type in the required radius

D By right-clicking the sphere and select, "Change Radius"

Q4 Identify which toolbar has the option of changing the parameters of an object?

A Motion Toolbar

B Create Toolbar

C Modify Toolbar

D Display Toolbar

Q5 **Figure Q5** shows image sequence based on animation principles....

A Staging

B Anticipation

C Timing

D Exaggeration

Q6 A secondary action...

A is the second thing to happen in your animation

B is not recommended it confuses the animation

C is too hard and should be avoided

D adds to the main action or movement, giving it more life

Q7 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

Q8 Identify result, "***when you kick a ball....***"

A It will bounce back

B It will move in an arc shape as makes its way back to the ground

C Gravity will make it go in a oval shape

D It will move straight to the ground

Q9 Animating "***straight ahead action***" is

A Drawing the animation one frame at a time

B When a character walks straight

C Drawing straight lines

D Is like motion tweens in flash

Q10 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

Q11 Define the meaning of 3D object?

A Three dimensional create by pencil

B Object obtain the 3 dimensional view

C Three dimensional character design

D Object design based on three dimensional view

Q12 Identify the animation technique used to create "***The Simpsons***" in **figure Q12.**

A Cel animation

B Stop Motion

C Computer (CGI)

D 3D computer animation

Q13 Rotoscoping is a technique when you.....

A Take a series of photos to create movement

B Use a computer to create a 3D image

B Trace from a video or film sequence a single frame at a time

D Move an object a little at a time to create the illusion of movement

Q14 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

Q15 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

Q16 These are types of material EXCEPT.....

A Raytrace

B Blend

C Shellac

D Phong

Q17 Identify which of the listed processes ***DO NOT*** involved in ***Production Phase*** of 3D animation?

A Rendering

B Editing

C Modeling

D Effects

Q18 The "***images***" you assign to materials are called....

A Texture

B Maps

C Pattern

D Mapping

Q19 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

Q20 Identify from the list which software is used to create 3D animation?

A Softimage

B Director

C Toon Boom

D Fireworks

Q21 The images in **figure Q21** refer to....

A Texture Editor

B Material Editor

C Maps Editor

D Component Editor

Q22 NURBS surfaces can contain multiple sub-objects **EXCEPT**...

A NURBS Points

B NURBS Curves

C NURBS Surfaces

D NURBS Splines

Q23 Identify from the list which software is used to create 3D animation?

A Softimage

B Director

C Toon Boom

D Fireworks

Q24 Polygons are the main element in 3D objects.
Identify which is **NOT TRUE.**

A Vertices cannot be shared by polygons within the same 3D model.

B Polygon defines the surface area of the 3D model and volume boundary of the 3D model

C Polygon is constructed by connecting at least 3 vertices to form a defined surface area.

D Polygons had no curved surfaces, which are made up of lines and line are made of *points*

Q25 Identify the file format for 3D animations.

A .dir

B .max

C .gif

D .swf

SECTION B

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

Q26 You can animate a scene **without** selecting "AutoKey"

Q27 A 3D Studio Max file saves as a, ".MAX" file. e.g. : DNA.MAX

Q28 You can only create stop motion animation with a video camera

Q29 Intensity is a phenomenon where light becomes weaker with distance.

Q30 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.

SECTION C

INSTRUCTION: Answer all questions.

Q31 In developing a 3D animation, we have to be able to see the project as a whole and plan a strategy for accomplishing it. Basically, 3D animation process involves **THREE (3)** phases.

(a) List **THREE (3)** phases involve in 3D animation process.

(3 marks)

(b) Discuss each of the phases in details and give one example on the minor process that involve in each of the phase that you had mentioned earlier.

(9 marks)

(c) List **FOUR (4)** area or field that usually used 3D animations?

(4 marks)

(d) Give **FOUR (4)** jobs title examples that involve in 3D modeling and animation industry.

(4 marks)

Q32 In producing 3D animation usually it's involve understanding on the basic information and principle and process behind it.

(a) State the definition of 3D modeling

(2 Marks)

(b) List **THREE (3)** principles of 3D graphics

(3 marks)

(c) Discuss on each of the principles that you have mention above.

(6 marks)

(d) There are 4 basic components in 3D object.
List **THREE (3)** of them and explain briefly on each of the component.

(9 marks)

Q33 Transformation of 2D and 3D objects into new shape can be made by using ***Boolean Compound Object*** in 3Ds Max operations. A new shape in ***Boolean Operation*** is called ***Operands***.

(a) List **THREE (3)** ***Boolean Operation*** on them.

(3 marks)

(b) Discuss each of the ***Boolean Operation*** that you had mentioned above.

(7 marks)

SECTION D

INSTRUCTION: Answer **ONLY TWO (2)** question.

Q34 Virtual cameras have a massive advantage over their real-world counterparts. In 3D space, cameras are free to move anywhere in the scene, even inside objects.

(a) List **FOUR (4)** camera movement that you had learn.

(4 marks)

(b) Describe **THREE (3)** of camera movements that you had listed above.

(6 marks)

Q35 Camera should be treated as an observer and should be able to move to whatever angle best suits the message or image the director is trying to convey.

(a) List **TWO (2)** camera viewpoints angle that can be used to capture image based on director point of view.

(2 marks)

(b) Explain each of camera viewpoints angle that you had listed above.

(4 marks)

(c) Define "***The Line of Action***".

(2 marks)

(d) Define "***Focal Length*** ".

(2 marks)

Q36 3D program seek to duplicate the behaviour of light in the real world to make 3D scenes appear as natural and realistic as possible.
There are 3 basic lighting usually used in the 3D program.

(a) List **FOUR (4)** basic lightings setup in 3D program.

(4 Marks)

(b) There are four main light sources in 3D programs.
List **TWO (2)** light sources.

(2 Marks)

(c) Discuss each of the light sources you listed above in details.

(4 Marks)

FINAL EXAMINATION

SEMESTER / SESSION : SEM I / 2012/2013 PROGRAMME : 2 DAT & 3 DAT
COURSE NAME : 3D MODELING AND ANIMATION COURSE CODE : DAT 32203

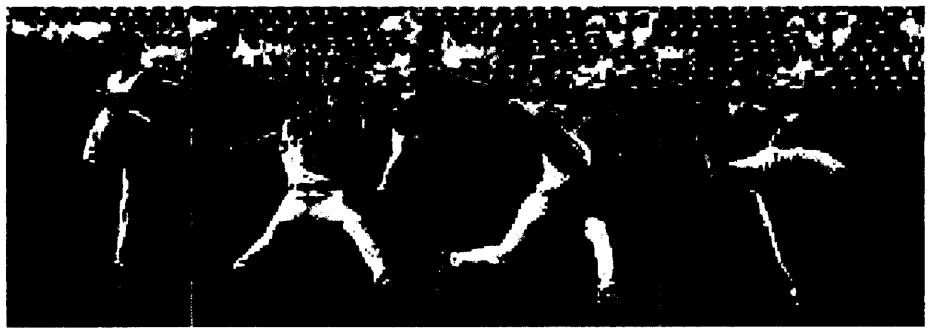

FIGURE Q7 : PICHER THROWING A BALL

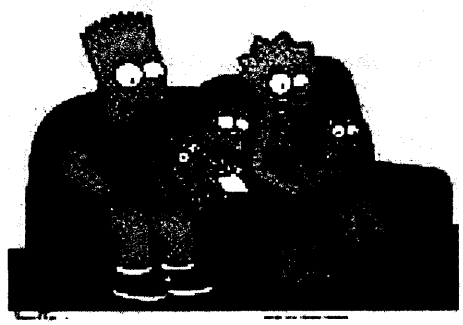

FIGURE Q14 : THE SIMPSONS CARTOON SERIES

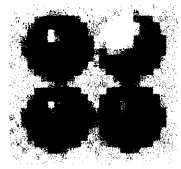

FIGURE 25 : ICON IMAGE IN 3DS MAX