



Undergraduate Programme
Department of Computer Science and Mathematics
Semester 2 Year 2019

FINAL EXAMINATION PAPER

ITC224 Virtualization and Animation

Important Instructions to Students:

1. Read the questions, instructions carefully and answer the questions.
2. You are allowed an **extra 10 minutes reading time** (during this time, you are not allowed to write with pen) and **180 minutes (3 Hours) to complete this paper**.
3. Silent, non-programmable calculators are allowed, but not supplied.
4. Write all your answers in the answer booklet provided. If you need extra sheets, please ask from the supervisor. Write your name, course code and student identification number in the answer booklet and in the attendance sheet.
5. **This Final Course Examination Paper is worth 100 marks contributes 50% of the total course assessments.**
6. This paper contains three (4) sections A, B, C and D. All questions are compulsory to answer.
7. Write all your answers legibly. The marker has the right to award zero for answers that are not legible.
8. This is a **Closed Book Examination**. The University views plagiarism, cheating and dishonest practice as serious offences and if found, offenders are penalized.

Examination Paper Content (Format):

<u>Section</u>	<u>Question</u>	<u>Content</u>	<u>Marks</u>	<u>Suggested Time</u>
A	1-20	Multiple Choice	20	36 minutes
B	1-10	True/False Questions	10	18 minutes
C	2	Open Ended Questions	50	90 minutes
D	1	Essay	20	36 minutes
		TOTAL	100	180 Minutes

1. You are developing several different Adobe Flash projects for the same client. Which statement about websites, desktop applications, and mobile applications is true?
 - A. You should create AIR applications because HTML5 is not supported on most mobile devices.
 - B. You should download and install the AIR Native Extension to debug mobile applications.
 - C. You should test the Adobe Flash content on all targeted browsers, devices, and platforms.
 - D. You should optimize content for the web, but you don't need to optimize application content.
2. You are writing ActionScript 3.0 code and you want to declare a variable. What is the correct syntax to use?
 - A. declare:var.variableName = variableValue;
 - B. import variable:variableName, variableValue;
 - C. var variableName:dataType = variableValue;
 - D. var = variableName; dataType.Value;
3. You are testing an Adobe Flash application and the Output panel displays the message 'Access of undefined property.' What does that mean?
 - A. More memory is required to compile the code on your system.
 - B. The script is attempting to access an object that does not exist.
 - C. A variable with the same name occurs more than once within the same scope.
 - D. The script references object instances that are not contained within Stage bounds.
4. What part of the menu bar allows you to hide/unhide panels?
 - A. View
 - B. Edit
 - C. Window
 - D. None of the above
5. The tool that allows you to create a polygon and a star.
 - A. Star poly tool
 - B. Polystar
 - C. Custom shape tool
 - D. polygon tool

6. ___, when used appropriately, adds to the viewer's experience, making for a much richer and enjoyable activity.
- A. Advertisements
 - B. Sound
 - C. Commericals
 - D. Tweens
7. You have imported an image from your desktop into Flash Professional. Later you edit and resave the image on your desktop. You must ___ in Flash Professional to import the latest changes.
- A. do nothing. The image will update automatically.
 - B. right-click (CTRL-Click) on the image in the Library panel and choose Update.
 - C. drag a copy of the image from the Library to the stage.
 - D. select the image on the stage and press F5 to refresh the image
8. Given the ActionScript 3.0 event:

myClip.addEventListener(TransformGestureEvent.GESTURE_ZOOM, onZoom);

The ActionScript statement that correctly removes the Gesture Zoom event from myClip is ___.

- A. myClip.removeEvent(TransformGestureEvent.GESTURE_ZOOM, onZoom);
 - B. myClip.removeListener(TransformGestureEvent.GESTURE_ZOOM, onZoom);
 - C. myClip.removeEventListener(TransformGestureEvent.GESTURE_ZOOM, onZoom);
 - D. myClip.remove(TransformGestureEvent.GESTURE_ZOOM, onZoom);
9. Use this to move symbols from one point to another. All animation happens between key frames (point A and B). The timeline turns purple between the key frames when this feature is being used. This is known as ____.
- A. Shape Tween
 - B. Mask
 - C. Motion Tween
 - D. Action Script
10. ___ is a way to take a word and animate each letter separately.
- A. Distribute to layers
 - B. Break apart
 - C. Frame-by-frame
 - D. Convert to symbol

11. ____ is a way to partially hide an image in the layer immediately below another layer. The 2 layers get "locked" together to produce the effect.
- A. Morphing
 - B. Tweening
 - C. Stacking
 - D. Masking
12. What is the shortcut if you want to create a keyframe?
- A. F5
 - B. Shift + F5
 - C. F6
 - D. F9
13. What is the shortcut if you want to delete frames from a movie clip?
- A. F5
 - B. Shift + F5
 - C. Ctrl + Del
 - D. F9
14. If you change the _____ of an object it will appear as the object is growing or shrinking.
- A. Size
 - B. Position
 - C. Axis
 - D. Color
15. You have a movie clip that is located in many places in your Flash document, what is the panel that is used to find the places where the movie clip is in the document?
- A. The Library panel
 - B. The Timeline panel
 - C. The Movie Explorer panel
 - D. The Components panel
16. You have a project that you have just completed and would like to remove any library items that did not make it into the final project. The option in the library panel would assist you with this is ____.
- A. Project Clean
 - B. Select Unused Items
 - C. Delete Unused Items
 - D. Optimize Project

17. Which type of tween requires that the tweened object is NOT a symbol?

- A. Alpha Tween
- B. Shape Tween
- C. Motion Tween
- D. Classic Tween

18. ___ text field type which allows real time update when triggered by action script.

- A. Input
- B. Dynamic
- C. Static
- D. Editable

19. You want to optimize your published SWF to the smallest possible file size. The best thing to do is ____.

- A. Use and reuse symbols whenever possible
- B. Use bitmap images whenever possible
- C. Import WAV audio files instead of mp3 whenever possible
- D. Break fonts apart whenever possible

20. ___ ActionScript event will cause a movie to go to frame 50 of scene 2 and play when the frame is reached on the timeline.

- A. gotoandplay(50,2);
- B. gotoandplay(2,50);
- C. gotoandplay(50); scene(2);
- D. gotoandplay(2); Frame(50);

1. AS2 and AS3 files support the bones feature in flash.
2. In Theatrical Timing its weight is always a huge factor in determining how it should move.
3. Any object, including Flash objects, can be turned into a Button symbol.
4. A character's pose should not be exaggerated at any time in the span of an animation.
5. Changes made to symbols are reflected in all their associated instances.
6. No matter how much the character squashes, the volume of the character must change.
7. Changes made to instances do not affect their symbol.
8. The Up button state represents how the button appears when the mouse pointer is not over it.
9. It is the quality of a particular image or drawing or frame of film that matters, not the quality of the movement.
10. The objects created in one layer cannot be moved to another one, because each layer is closely bound to its objects.

Question 1**[20 marks]**

- A. Write the steps which can be used to carry out the following scenarios.
- i. Organize the document so that the object car is in front of the road background. [1 mark]
 - ii. Position the rectangle so that the X position is 0 and the Y position is 260. Explain 3 ways you can complete the task. [3 marks]
 - iii. Extend the timeline so that the rectangle stays on the screen for 25 frames rather than 20. [1 mark]
 - iv. Set the stage size. [1 mark]
 - v. Import the sound dogsout.mp3 to the library. [1 mark]
 - vi. Give object instance name. [1 mark]
 - vii. Insert and manage scenes in flash. [1 mark]
 - viii. Increase the brightness to an object on stage. [2 marks]
 - ix. Create an animated button with movie clip. [3 marks]
- B. Write an event listener in ActionScript 3.0 for a mouse event that is attached to a button called `pressme_btn` and will trigger the function named `play_me`. [3 marks]
- C. Write ActionScript 3.0 code that will allow two web pages to be linked. The names of the scenes are 'home' and 'contact_us' and you can define your own name for the eventsource. [3 marks]

Question 2**[30 marks]**

- A. What is the difference between changes made to symbols and changes made to instances? [1 mark]
- B. When are the following events triggered:
- a. ActionScript attached to a frame. [0.5 mark]
 - b. ActionScript attached to an object. [0.5 mark]
- C. What is storyboarding? [1 mark]
- D. How do you create the illusion of movement in an animation? [1 mark]
- E. Write a paragraph explaining five qualities an individual needs to have if he/she wants to be an Animator? Also, add some additional qualities apart from the text which you think is essential. [5 marks]

- F. Explain what you understand by blue drop zone. Also state what single blue line and rectangle with blue border indicate. [2 marks]
- G. Layers are used on a timeline as a way to organize objects. Discuss five types of layers. [2.5 marks]
- H. In flash, buttons have four states. Explain the four button states. [2 marks]
- I. While coding in Flash, exact syntax are essential. Explain four syntax rules which need to be followed while writing Action Script in Flash. [2 marks]
- J. It is important that you provide the audience with as much information or idea as you can at a time. Elaborate on the statement. [1 mark]
- K. Gradient fill is a multicolour fill in which a colour gradually changes into another colour. Differentiate between the two types of gradient which can be applied to a shape. [1 mark]
- L. Write the steps used in guide animation. [1 mark]
- M. Discuss 5 things which can be determined after studying a timeline of a movie in flash. [2.5 marks]
- N. Use this to make a symbol disappear from view (great for changing pictures). You would use motion tween or classic tween for this method. You have to change the "alpha" setting of the symbol. Alpha represents transparency. Name and Explain the concept. [3 marks]
- O. Differentiate between Bitmap and vector images. [1 mark]
- P. Name and describe the three types of text which can be used in Flash? [3 marks]

- A. It is very important to consider the tips provided by the experts from the animation field. Explain at least six animation tips and techniques. [6 marks]
- B. Planning is one of the most essential tools in your entire animation toolbox. Discuss at least seven points which need to be considered when planning an animation. [4 marks]
- C. Animation was borne out of different reasons. Write an essay explaining at least 6 areas where animation are and can be used also state its advantages and disadvantages with examples. Also state your opinion on using animation locally and its impact on our economy. [6 marks]
- D. The main purpose of the principles of Animation was to produce an illusion of characters adhering to the basic laws of physics, but they also dealt with more abstract issues, such as emotional timing and character appeal. Discuss at least four Principles of animation with examples. [4 marks]

End of Exam

