higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

MULTIMEDIA BASICS
NQF LEVEL 2

(10040162)

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13:00–16:00

This question paper consists of 8 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)
MULTIMEDIA BASICS
NQF LEVEL 2
TIME: 3 HOURS
MARKS: 150

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
2. Read all the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Start each section on a new page.
5. Use only a black or blue pen.
6. Write neatly and legibly.

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SECTION A

QUESTION 1

1.1 Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (1.1.1–1.1.10) in the ANSWER BOOK.

1.1.1 Artists use the rules of … to create the visual illusion of depth.

A gradation
B perspective
C unity
D repetition

1.1.2 In typography, the … is the smallest unit of measure. It is used for measuring font size.

A dots
B pixel
C bits
D point

1.1.3 … refers to distance between lines of text.

A Leading
B Alignment
C Spacing
D Kerning

1.1.4 A font that is most suitable for headings on formal certificates.

A Display
B Slab serif
C Blackletter
D Decorative

1.1.5 The hum in a sound recording that is often caused by incorrect grounding and badly shielded cables, is an example of … .

A broadband noise
B narrowband noise
C impulse noises
D irregular noise

1.1.6 A tool in audio software that allows the editing of bass- and or frequencies.

A Equalisers
B Volume control
C Amplifier
D Normaliser

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1.1.7 Photographs intended for the internet or social media need to be … dpi.

A 300
B 40
C 120
D 72

1.1.8 To capture a photograph of a fast-moving object, the following setting is needed:

A A high f-stop number
B fast shutter speed
C long exposure time
D high resolution

1.1.9 When editing images in Photoshop, the *magic wand* tool allows the user to …

A sharpen images
B apply a filter
C select pixels based on colour
D crop an image

1.1.10 Mouth movements and facial expressions are often animated using the … technique.

A morphing
B scan-line rendering
C procedural animation
D overlapping

(10 × 1) (10)

1.2 Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (1.2.1–1.2.10) in the ANSWER BOOK.

1.2.1 Maya and Toon Boom are free, open-source video editing software.

1.2.2 .GIF is a file format commonly used for simple animations and images with limited colours.

1.2.3 When a soundtrack in a different language is added to a movie, it is called *translation*.

1.2.4 Codecs are file formats.

1.2.5 Traffic noise and people talking are examples of sound effects.

1.2.6 Sound colour refers to the colours of the tracks in sound editing software.

1.2.7 A pop-up flash can cause red-eye in photographs.

1.2.8 The pupil in the human eye can be compared to the diaphragm in a camera lens.

1.2.9 A digital zoom is a simulated zoom that reduces picture quality.

1.2.10 Polarising filters reduce reflections on non-metallic surfaces.

(10 × 1) (10)

1.3 Choose a term from COLUMN B that matches a description in COLUMN A. Write only the letter (A–K) next to the question number (1.3.1–1.3.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
1.3.1	A small size image file that is ideal for fast loading of images to a website.	A	.MP4
1.3.2	A compressed audio file format that is widely used for audio files on YouTube.	B	.JPEG
1.3.3	Professional photographers generally shoot in this format.	C	.TIFF
1.3.4	Use this lossless format to save and print high-quality images such as digital fine art.	D	.MOV
1.3.5	This type of file is an archive that can hold multiple files or folders for compression and storage to reduce the file size without data loss.	E	.DOCX
1.3.6	A lossy format for videos on social media platforms.	F	.MP3
1.3.7	A vector file format.	G	.PDF
1.3.8	Use this file format to make sure the user will see it as intended, regardless of the software, hardware or operating system being used to view the document.	H	.AI
1.3.9	The latest file format used for storing documents created in Microsoft Word.	I	RAW
1.3.10	An .MPEG4 video container that is used with Apple's QuickTime software.	J	.ZIP
		K	.WAV

(10 × 1) (10)

1.4 Complete the following sentences by using the word or words in the list below. Write only the word or words next to the question number (1.4.1–1.4.10) in the ANSWER BOOK.

Vector; colour depth; sound waves; script; Resolution; OCR; Negative; alteration; Pixel; sepia

1.4.1 The … of an image determines its clarity and sharpness.

1.4.2 The smallest unit of a digital image is called a/an … .

1.4.3 … are based on mathematical equations and can be scaled without losing quality.

1.4.4 … refers to the number of bits used to represent the colour of each pixel in an image.

1.4.5 Sound is made up of mechanical vibrations transmitted through air, called … .

1.4.6 Scanner software comes with a/an … that converts analogue text characters into digital text characters that the user can edit.

1.4.7 … is a film shot in shades of warm brown colour.

1.4.8 In design, the empty space between objects is called … space.

1.4.9 The written version of a play or movie is called a … .

1.4.10 Sound processing is the … of sound from the original recording.

(10 × 1) (10)

1.5 Complete the following sentences by choosing the correct word or words from those given in brackets. Write only the word or words next to the question number (1.5.1–1.5.10) in the ANSWER BOOK.

1.5.1 The (RGB/CMYK) colour system is used for colours that are going to be viewed on a digital screen.

1.5.2 (Tone/value) refers to the lightness/darkness of a colour.

1.5.3 (Transmitted/reflected) light occurs when light bounces off a physical object before reaching your eyes.

1.5.4 (Warm/Cool) colours appear closer when used in a landscape image.

1.5.5 (Bitmap/vector) graphics is best suitable for logos.

1.5.6 (Audacity/Adobe Audition) is free and open-source software.

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1.5.7 (Serif/sans serif) is a typeface that has short strokes at the beginning and end of characters.

1.5.8 The system for (development/playback) needs to be high in processing ability.

1.5.9 (Omni-directional/clip-on) microphones is best for individuals in conversation.

1.5.10 To control over-exposure time when taking a photograph, use a (ND neutral density/graduate ND) filter.

(10 × 1) (10)

TOTAL SECTION A: 50

SECTION B

QUESTION 2

2.1 Discuss *lossy* file compression. (5)

2.2 Discuss the term *interactivity* in multimedia. (3)

2.3 Explain what *rigging* is in animation. (4)

2.4 Discuss the following elements of digital storytelling:

2.4.1 Text

2.4.2 Sound

2.4.3 Transitions

(3 × 3) (9)

2.5 Explain TWO differences between visual stories and stories in a book. (2 × 2) (4)

[25]

QUESTION 3

3.1 Explain why a logo should be versatile. (5)

3.2 List the FOUR applications of symbols in multimedia. (4)

3.3 Describe the procedure for digital recording. (6)

3.4 Explain the following terms in sound editing:

3.4.1 Modulation

3.4.2 Pitch

(2 × 2) (4)

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3.5 Explain any FOUR advantages of digital photography. (4)

3.6 In terms of photography, describe an *image histogram*. (2)
[25]

QUESTION 4

4.1 List the essential components included in EVERY camera. (5)

4.2 Describe a camera's *lens aperture*. (5)

4.3 Explain the following photography concepts:

4.3.1 Wide framing (3)

4.3.2 Close-up framing (3)

4.4 Describe how the rule of thirds is applied by photographers. (3)

4.5 Describe desktop publishing. (2)

4.6 Explain the purpose of layout in desktop publishing. (4)
[25]

QUESTION 5

5.1 Discuss any TWO types of texture filters that can be applied to an image with the use of image editing software. (2)

5.2 Describe the term *image opacity*. (2)

5.3 Describe the following animation techniques:

5.3.1 Rotoscoping (3)

5.3.2 Stop-motion (3)

5.4 Describe the main goal of animation. (2)

5.5 Explain the importance of character design in animated stories. (3)

5.6 Explain the process of *rendering* in 3D animation. (3)

5.7 Name THREE platforms where computer-based animation is applied. (3)

5.8 Explain *motion capture* as a way of creating animation in 3D. (4)
[25]

TOTAL SECTION B: 100
GRAND TOTAL: 150

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