G.C.E. O/L Grade 11 ICT · Lesson 4

Lesson 4 O/L Exam Practice: Questions and Answers

These questions are in the style of the O/L ICT exam. Paper I has multiple choice questions. Paper II has structured questions with parts, model answers and marking points. They cover all of Lesson 4 (4.1–4.4): multimedia elements, pixels, resolution, colour depth, image file size, lossy and lossless formats, raster and vector graphics, image editing with layers, 2D animation frames, key frames, fps, frame-by-frame and tweening, audio recording and editing, audio and video formats, video resolution, video editing on a timeline, storyboards, integrating multimedia, copyright, captions and aspect ratios.

Paper I – Multiple choice questions (25)

1. Text, images, audio, video and animation used together is called

A. compression
B. multimedia
C. rendering
D. hypertext

2. PPI measures

A. pages per image
B. pictures per second
C. pixels per inch
D. points per icon

3. How many colours can 16-bit colour show?

A. 256
B. 16,777,216
C. 16
D. 65,536

4. Minimum bits per pixel for 200 colours?

A. 16
B. 8
C. 7
D. 200

5. Uncompressed size of a 1920 × 1080, 24-bit screenshot?

A. 5.93 MB
B. 2.07 MB
C. 47.46 MB
D. 6.22 KB

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

6. A 640 × 480, 8-bit image is

A. 37.5 KB
B. 2400 KB
C. 300 KB
D. 3 MB

7. Which format is lossy?

A. JPEG
B. TIFF
C. WAV
D. PNG

8. GIF images are limited to

A. black and white only
B. 2 colours
C. 16 million colours
D. 256 colours

9. A logo that must print sharply on a 3-metre banner is best made as a

A. JPEG photo
B. vector (SVG)
C. BMP
D. GIF

10. Which is raster editing software?

A. Synfig
B. Inkscape
C. GIMP
D. Audacity

11. In GIMP, the file type that keeps all layers is

A. .gif
B. .mp3
C. .jpg
D. .xcf

12. An animation of 90 frames at 30 fps lasts

A. 3 seconds
B. 90 seconds
C. 2700 seconds
D. 30 seconds

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

13. How many frames for a 5-second clip at 24 fps?

A. 5
B. 29
C. 120
D. 24

14. Key frames at frame 1 and frame 25. In-between frames made by the software?

A. 26
B. 23
C. 25
D. 24

15. A key frame with nothing drawn yet is a

A. layer
B. tween
C. blank key frame
D. destination frame

16. The software creating frames between two key frames is

A. rendering text
B. sampling
C. cropping
D. tweening

17. A square turning into a circle is a

A. transition
B. fade in
C. motion tween
D. shape tween

18. A 3:20 recording is trimmed to 0:45–2:15. How long is the result?

A. 3:20
B. 1:30
C. 2:15
D. 1:50

19. Which audio format is uncompressed and very large?

A. WAV
B. MP3
C. AAC
D. OGG

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

20. Which video format is used by iPhones (Apple QuickTime)?

A. AVI
B. MOV
C. MP3
D. MKV

21. The pixel size of 4K UHD is

A. 3840 × 2160
B. 1920 × 1080
C. 1280 × 720
D. 4000 × 4000

22. Making the final MP4 from an OpenShot project is

A. export / render
B. import
C. split
D. crop

23. Clips of 5 s, 80 s, 35 s, 10 s are placed on a timeline. Total?

A. 120 s
B. 145 s
C. 130 s
D. 100 s

24. A plan of scenes drawn as boxes before editing is a

A. codec
B. waveform
C. timeline
D. storyboard

25. Vertical videos for Shorts and Reels use

A. 9:16
B. 4:3
C. 16:9
D. 21:9

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

Paper II – Structured questions

1. Digital images. Study the zoomed picture. *(6 marks)*

(i) What is a pixel, and what does RGB stand for? *(2 marks)*
(ii) Calculate the uncompressed size of a 1024 × 768, 24-bit class photo in MB. Show working. *(3 marks)*
(iii) How many colours can a 24-bit pixel show? *(1 marks)*

2. Raster, vector and formats. *(8 marks)*

(i) Explain why the left circle looks blocky and the right one does not. *(2 marks)*
(ii) Choose a format for (a) a holiday photo for WhatsApp (b) a logo with a transparent background. Give reasons. *(4 marks)*
(iii) Name one raster and one vector editor. *(2 marks)*

3. Image editing. *(5 marks)*

(i) Name the layers in the Science Day poster from top to bottom. *(2 marks)*
(ii) Give one advantage of using layers. *(1 marks)*
(iii) What is the difference between crop and resize? *(2 marks)*

4. 2D animation. Study the timeline. *(6 marks)*

(i) Identify the symbols ● and ○ on the timeline. *(2 marks)*
(ii) The ball moves by a motion tween from frame 1 to frame 13 at 12 fps. Find the number of in-between frames and the time taken. *(2 marks)*
(iii) Give one difference between frame-by-frame animation and tweening. *(2 marks)*

5. Audio editing. *(6 marks)*

(i) From the figure, how long is the part that is kept? *(2 marks)*
(ii) Name the effects to (a) start the sound smoothly (b) remove fan noise. *(2 marks)*
(iii) Calculate the size of 1 minute of uncompressed 44.1 kHz, 16-bit stereo audio in bytes. *(2 marks)*

6. Video editing. Study the timeline. *(6 marks)*

(i) What is the total length of the video? *(1 marks)*
(ii) What do tracks V1 and A1 hold? *(2 marks)*
(iii) List three more steps to finish and share this video. *(3 marks)*

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

7. Integrating multimedia – Sigiriya project. *(8 marks)*

(i) Find the total time and the number of frames at 30 fps. *(2 marks)*
(ii) State the purpose and target audience. *(2 marks)*
(iii) Give two ways the group respects copyright and two good practices when uploading to YouTube. *(4 marks)*

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

Exam tips

- Multimedia = text, image, audio, video, animation.
- n bits → 2^n colours; 24-bit = 16,777,216.
- Image bytes = w × h × bits ÷ 8.
- 1 KB = 1024 bytes; 1 MB = 1024 KB.
- Inches = pixels ÷ PPI.
- JPEG lossy; PNG/GIF/TIFF lossless; BMP uncompressed.
- Raster = pixels; vector = shapes (SVG).
- Duration = frames ÷ fps.
- In-betweens = last − first − 1.
- Kept audio = end − start (in seconds).
- 720p 1280×720, 1080p 1920×1080, 4K 3840×2160.
- Plan: purpose, audience, storyboard, size, copyright.

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

Answers and explanations

Paper I

1. **B** – Many media together.
2. **C** – PPI = pixels per inch.
3. **D** – 2^{16} = 65,536.
4. **B** – 2^7 = 128 is too few; 2^8 = 256.
5. **A** – 1920 × 1080 × 3 = 6,220,800 bytes ÷ 1024 ÷ 1024 ≈ 5.93 MB.
6. **C** – 640 × 480 × 1 byte = 307,200 bytes = 300 KB.
7. **A** – JPEG removes detail.
8. **D** – GIF uses 8-bit colour.
9. **B** – Vectors scale without pixelation.
10. **C** – GIMP edits pixels.
11. **D** – Save as XCF; export JPEG/PNG.
12. **A** – 90 ÷ 30 = 3.
13. **C** – 5 × 24 = 120.
14. **B** – 25 − 1 − 1 = 23.
15. **C** – Shown as ○.
16. **D** – In-betweening.
17. **D** – Shape changes.
18. **B** – 135 − 45 = 90 s = 1:30.
19. **A** – WAV = raw samples.
20. **B** – MOV = QuickTime.
21. **A** – 4K = 3840 × 2160.
22. **A** – Export writes the video file.
23. **C** – 5 + 80 + 35 + 10 = 130.
24. **D** – Storyboard = plan.
25. **A** – 1080 × 1920.

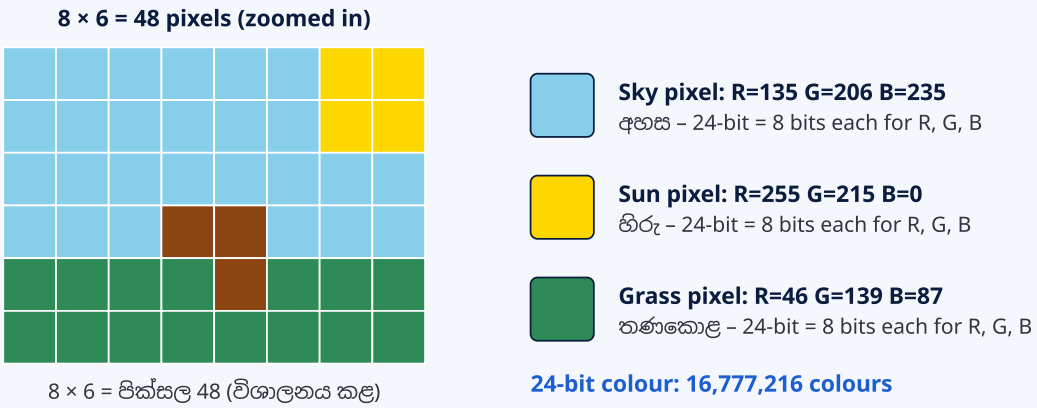
© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

Paper II – model answers and marking points

1. *(6 marks)*

(i) (2 marks)

The smallest coloured square of an image (1); Red, Green, Blue (1).



Pixels and RGB values.

(ii) (3 marks)

1024 × 768 × 24 ÷ 8 = 2,359,296 bytes (1); ÷ 1024 = 2304 KB (1); ÷ 1024 = 2.25 MB (1).

(iii) (1 marks)

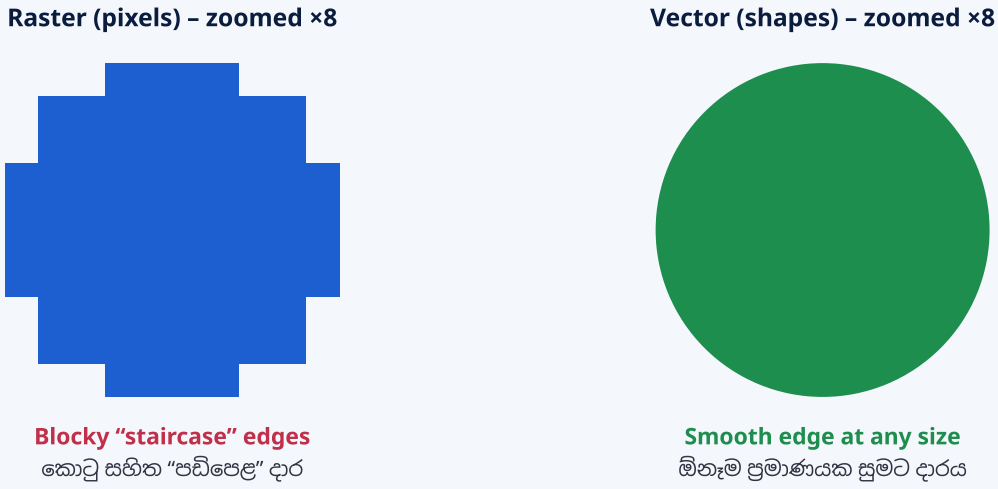
2^{24} = 16,777,216 (1).

🎯 Examiner tip: divide bits by 8 for bytes, then by 1024 for KB and MB.

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

2. *(8 marks)*

(i) (2 marks)
Left is raster – made of pixels that show when enlarged (1); right is vector – shapes redrawn sharply at any size (1).



Raster and vector zoomed.

(ii) (4 marks)
(a) JPEG (1) – lossy, small file (1). (b) PNG (1) – lossless and supports transparency (1).

(iii) (2 marks)
Raster: GIMP or Photoshop (1); vector: Inkscape or Illustrator (1).

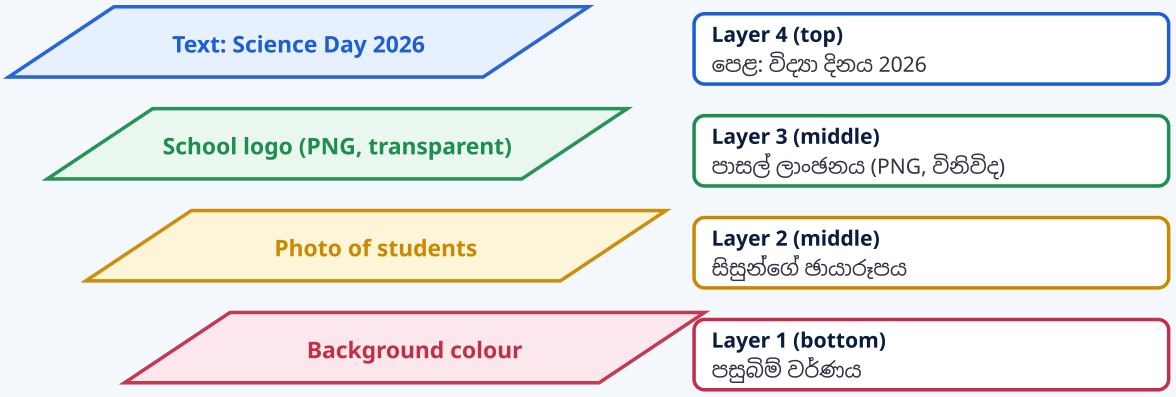
🎯 Examiner tip: always give the reason with the format – the reason earns a mark.

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

3. *(5 marks)*

(i) (2 marks)

Text; school logo; photo of students; background colour (2 – all four in order).



Top layers cover lower layers. Edit one layer without spoiling the others.
ඉහළ ස්තර පහළ ස්තර වසයි. අනෙක් ඒවා නරක් නොකර එක් ස්තරයක් සංස්කරණය කළ හැක.

Poster layers.

(ii) (1 marks)

One part can be edited or moved without changing the others (1).

(iii) (2 marks)

Crop cuts away outer parts (1); resize changes the pixel size of the whole image (1).

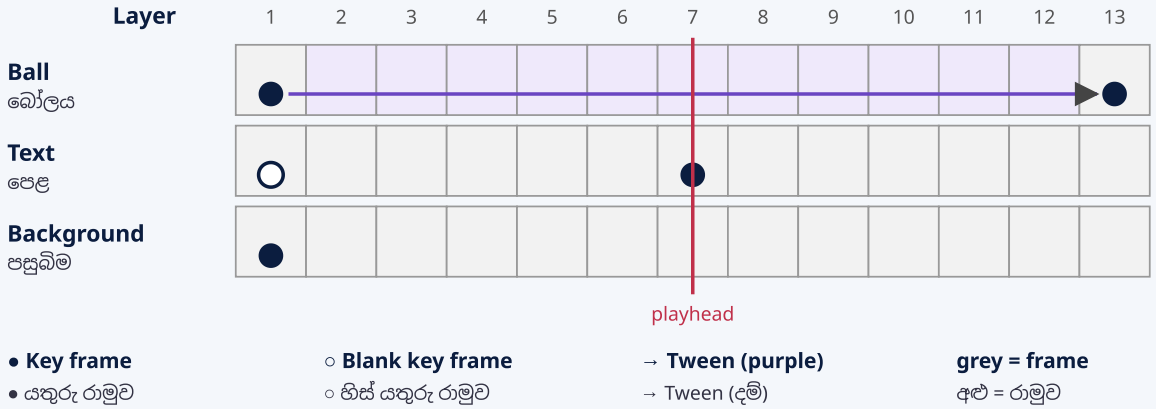
🎯 Examiner tip: name the tool and what it does to the picture.

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

4. *(6 marks)*

(i) (2 marks)

● key frame (1); ○ blank key frame (1).



Animation timeline.

(ii) (2 marks)

11 in-betweens (1); 13 ÷ 12 = 1.08 s (1).

(iii) (2 marks)

Frame-by-frame: every frame drawn by hand (1); tweening: only key frames drawn, software makes the rest (1).

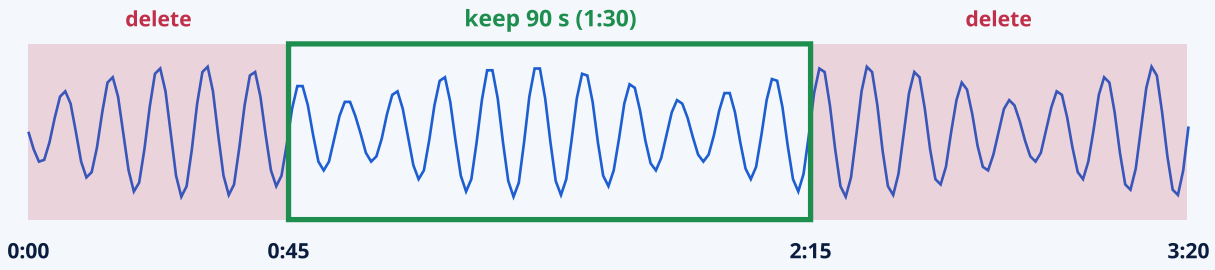
🎯 Examiner tip: in-betweens = last key frame − first key frame − 1.

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

5. *(6 marks)*

(i) (2 marks)

135 − 45 (1) = 90 s / 1:30 (1).



Trim: keep 0:45 → 2:15 of a 3:20 speech recording in Audacity

කප්පාදුව: 3:20 කථන පටිගත කිරීමෙන් 0:45 → 2:15 තබා ගැනීම

Trimming audio.

(ii) (2 marks)

(a) Fade in (1); (b) Noise reduction (1).

(iii) (2 marks)

44,100 × 16 × 2 × 60 ÷ 8 (1) = 10,584,000 bytes (1).

🎯 Examiner tip: change m:ss to seconds before subtracting.

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

6. *(6 marks)*

(i) (1 marks)
130 s = 2:10 (1).



Video timeline.

(ii) (2 marks)
V1 video clips (1); A1 audio/music (1).

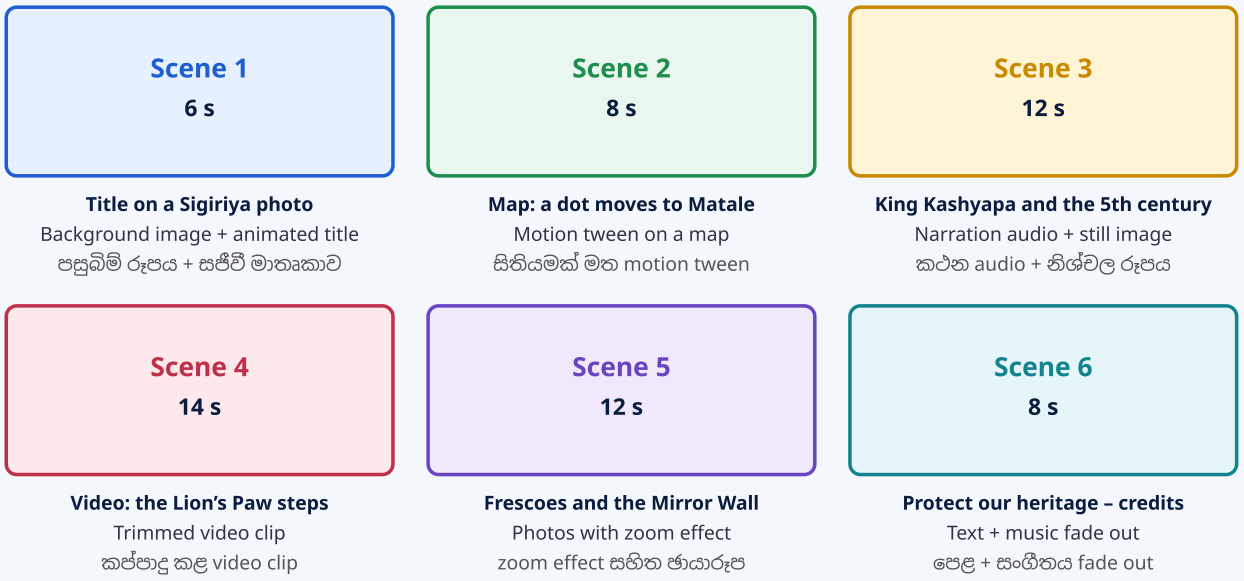
(iii) (3 marks)
Add transitions between clips (1); add titles/captions (1); export as MP4 and upload (1).

🎯 Examiner tip: use the exact editing words – import, trim, transition, export.

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

7. *(8 marks)*

(i) (2 marks)
60 s (1); 60 × 30 = 1,800 frames (1).



Sigiriya storyboard.

(ii) (2 marks)
Purpose: teach about Sigiriya and heritage (1); audience: Grade 6 students (1).

(iii) (4 marks)
Own photos (1); Creative Commons music with credit (1); captions/subtitles (1); clear title, "Made for kids", or a 9:16 Shorts version (1).

🎯 Examiner tip: link every answer to the given scenario (Sigiriya, Grade 6).

© 2026 schoolict.net (Ruwan Mangala Suraweera). All rights reserved.