

Name: \_\_\_\_\_

Class: \_\_\_\_\_

## EXAM SKILLS

**1 3** Read the passage and answer questions 1-9.

# HOLOGRAPHICS AND ANIMATION IN MUSIC AND PERFORMANCE

**A** For hundreds of years, the more forward-thinking elements of science and technology have stoked imaginations in the world of entertainment. For example, a huge number of science fiction movies were produced over the 20th century, a period during which space exploration became first a possibility, then a reality. Many such films depict situations in which one character (in full bodily form) interacts with a 3D, holographic image of another. Despite the optimism in some quarters, genuine interaction with holograms in the real world is still as far from becoming a reality as ever. Additionally, there is some doubt as to whether the existing, limited holographic technology is even worth exploring any further. However, what is currently available has begun to be used for entertainment purposes in a wide range of industries.

**B** The music industry is one. It has sought to take advantage of this technology since its infancy. There have been numerous examples – concerts and events – during which audiences have been able to watch modern vocalists sharing the stage with holographic images of performers who departed this world some time ago. In fact, the technology has been developed to such an advanced stage that it is almost possible to stage an entire concert ‘performed’ by dead rock stars. Critics have argued that this is exploitative of both audience and musician, pointing out the questionable morality of putting on stage an artist who has no way of refusing to be there.

**C** On the other hand, it might be argued that, to modern audiences so accustomed to a daily intake of entertainment viewed almost entirely on 2D screens, on-stage animation allows people once again to embrace the excitement of the 3D, live arena. Such shows, its advocates argue, are likely to become commonplace as the world of entertainment expands its horizons. (Great actors could also be resurrected to take their place on the theatre stage, for example.) This is due in no small part to the fact that the on-stage technology making this possible is actually less complex than one might expect, certainly if, rather than a true holographic performance, reflective technology is used instead.

**D** To achieve this, a laser projector shoots down an image beam that is set up to be exactly perpendicular to the floor. If the angle of projection is greater or less than 90 degrees, even by the tiniest amount, the projection will fail. As the song is being played, the animated image is projected onto a mirrored surface which has been set into the stage floor. This set up means that a ‘suspension of disbelief’ can be created

within the onlooking audience, as it collectively sees the moving image while, at the same time, the transparent foil used to make the screen is invisible, stretched back as it is at an angle of 45 degrees. There is no maximum or minimum height at which projection fails to work, and, after a series of relatively simple calculations, the laser projector can be simply fixed to a lighting rig set up high above the stage.

**E** The future of holographic performance does appear rather limited, however, particularly in the context of bringing musicians back to life in this way. For one thing, it is impossible to create a new performance from old videotape, and there is a limited amount of original footage of these icons that was shot while they were alive. It is unlikely that a great deal more will be found. Following on from this, the only way to generate an entirely new show would be through Computer-Generated Imagery (CGI) and this, for most fans, would defeat the object of the exercise entirely. Finally, most of this past footage was shot on acetate film, which cannot come close to the modern ultra HD technology that is the bare minimum required for a truly lifelike reanimation. Consumers would soon grow tired of these limitations, however much of a novelty the experience might once have been.

**F** Away from the revival of past performers, it is now possible to film and project ultra HD holographic visuals in real time, in just the same way as they might appear on a 2D screen. In this way, the individual musicians in a group could ‘perform’ together on the same stage, even though they may be in completely different locations at that moment in time. This has led some people inside the music industry to predict a future of bands touring without needing to leave the rehearsal studio, but any investment of either time or money into this area does seem risky. It would be highly unlikely for any fan to buy a ticket to watch their favourite artists, knowing that the performance they have paid to see is not technically a live show, and the musicians they admire do not wish to be present in the same room as they are.

**G** Essentially, then, stage projection of deceased stars of entertainment is a straightforward endeavour, but one limited both in visual appeal and available source material. Real-time, 3D representations of artists are becoming ever more accurate, but have less appeal for audiences than authentic performances do. As is often the case, the will to create something new and exciting for consumers of entertainment is hindered by the technology currently available to it.



**Questions 1–5**

Complete the summary using the list of words, A–J, below.

Write the correct letter, A–J.



While the music industry has begun to explore potential uses for holographic technology in the context of live performance, critics argue that the staging of a **1** \_\_\_\_\_ to include a fake performance from a deceased artist is both exploitative and morally questionable. Despite a belief elsewhere that 3D **2** \_\_\_\_\_ in live shows will inevitably become commonplace, it is more likely that the lack of original

**3** \_\_\_\_\_ will limit how much can be achieved. Additionally, real-time holographic concerts and tours could potentially be staged that allow the artists to remain in a practice

**4** \_\_\_\_\_ while performing, but it is thought that this is unlikely to hold much

**5** \_\_\_\_\_ for audiences.

- |           |           |             |              |           |
|-----------|-----------|-------------|--------------|-----------|
| A appeal  | B event   | C rehearsal | D animation  | E screens |
| F footage | G concert | H artists   | I innovation | J studio  |

**Questions 6–9**

Label the diagram below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

**The projection of on-stage 3D animation**

