Faculty of Dental Surgery
ROYAL COLLEGE OF SURGEONS OF ENGLAND

Licence in Dental Surgery

Part 1 Sample Questions

Overview

This document contains sample questions designed to illustrate the format and style of questions used in the Part 1 Licence in Dental Surgery (LDS) examination.

Each sample SBA question is accompanied by the correct answer and explanatory notes to help you understand which is the single best answer.

The questions included are not taken from the live examination banks and are provided solely as examples to support preparation and familiarisation with the exam.

Question 1

A 21-year-old male patient presents with a flat, red-purple macule on his palate. Which one of the following conditions is most likely to be associated with this lesion?

A. Haemophilia
B. Human immunodeficiency virus (HIV) infection
C. Mucosal melanoma
D. Palatal torus
E. Squamous cell carcinoma

Correct answer: B. Human immunodeficiency virus (HIV) infection

Reasoning:

A flat purple vascular lesion on the palate is suggestive of Kaposi sarcoma. Kaposi sarcoma is strongly associated with HIV infection and immunosuppression. The palate is a common oral site for this type of lesion.

Why the other options are incorrect:

Haemophilia causes a tendency to bleed rather than a fixed vascular lesion. Mucosal melanoma is usually dark brown, black, or irregularly pigmented. A palatal torus is a bony swelling. Squamous cell carcinoma more commonly presents as an ulcer, red or white patch, or indurated mass.

Question 2

What is the principal purpose of using a facebow with a semi-adjustable articulator during complete denture construction?

A. To orientate the mandibular cast relative to the Frankfort plane
B. To orientate the maxillary cast relative to the patient's approximate hinge axis
C. To record the vertical dimension of occlusion
D. To record the patient's maxillomandibular relationship
E. To set the articulator's condylar guidance

Correct answer: B. To orientate the maxillary cast relative to the patient's approximate hinge axis

Reasoning:

A facebow records the spatial relationship of the maxillary arch to an estimated transverse horizontal hinge axis and transfers this relationship to the articulator. This allows the maxillary cast to be mounted in an anatomical orientation that approximates its relationship to the patient's temporomandibular joints.

Why the other options are incorrect:

A facebow is used to position the maxillary cast, not the mandibular cast. It does not determine the vertical dimension of occlusion or record the maxillomandibular relationship; separate jaw-registration records are required for these purposes. Condylar guidance is established using protrusive or lateral records, depending on the articulator, rather than by the facebow record.

Question 3

An adult patient is being assessed for conscious sedation in a primary dental care setting. Subject to an individual pre-sedation assessment, which ASA Physical Status categories generally represent the lowest-risk patients for routine management in this setting?

A. ASA I and II
B. ASA I only
C. ASA II and III
D. ASA III and IV
E. ASA IV and V

Correct answer: A. ASA I and II

Reasoning:

ASA I describes a healthy patient, while ASA II describes a patient with mild systemic disease. These categories generally represent the lowest-risk patients for conscious sedation in primary dental care. Suitability must nevertheless be determined through an individual assessment that considers the patient's medical history, proposed sedation technique, dental procedure and available facilities.

Why the other options are incorrect:

ASA III patients have severe systemic disease and are at increased risk. ASA III status does not automatically preclude outpatient sedation, but medical advice, additional precautions or treatment in a specialist setting may be required. ASA IV and V patients have serious or life-threatening systemic disease and would not normally be managed with routine conscious sedation in primary dental care.

Question 4

Under the General Dental Council's enhanced Continuing Professional Development (CPD) scheme, what is the recommended required minimum number of verifiable CPD hours that a dentist must complete during a five-year cycle?

A. 50
B. 75
C. 100
D. 150
E. 200

Correct answer: C. 100

Reasoning:

Dentists are recommended required to complete a minimum of 100 hours of verifiable CPD during each five-year cycle. They must also undertake CPD regularly, completing at least 10 hours during every consecutive two-year period.

Why the other options are incorrect:

50 and 75 hours are below the required minimum for dentists. Although completing 150 or 200 hours is permissible, these figures are greater than the minimum requirement and are therefore not the best answer.

Question 5

During dental treatment, a 20-year-old patient develops a seizure generalised tonic–clonic seizure. Sharp instruments are removed and the patient is protected from injury. The seizure continues for five minutes. Which emergency drug is the most appropriate to administer?

A. Carbamazepine
B. Midazolam
C. Phenytoin
D. Temazepam
E. Sodium valproate

Correct answer: B. Midazolam

Reasoning:

A generalised tonic–clonic seizure lasting five minutes or longer requires emergency treatment. Emergency assistance should be summoned, the patient's airway and breathing managed, and buccal or oromucosal midazolam administered by a suitably trained dental professional in accordance with current guidance and local protocols.

Why the other options are incorrect:

Carbamazepine, phenytoin and sodium valproate are used in the longer-term management of epilepsy but are not appropriate first-line chairside treatments for an ongoing convulsive seizure. Temazepam is a benzodiazepine but is not the recommended rescue medicine for this emergency.

Question 6

A 21-year-old patient has tooth-surface loss associated with recurrent vomiting caused by bulimia nervosa. Which restorative material is most susceptible to degradation by repeated exposure to gastric acid?

A. Amalgam
B. Compomer
C. Resin composite
D. Glass polyalkenoate cement
E. Gold foil

Correct answer: D. Glass polyalkenoate cement

Reasoning:

Glass polyalkenoate cement, also known as glass-ionomer cement, is comparatively susceptible to erosion and dissolution in an acidic environment. Repeated exposure to gastric acid can therefore adversely affect its surface integrity and longevity.

Why the other options are incorrect:

Amalgam, resin composite and gold are generally more resistant to acid dissolution than conventional glass polyalkenoate cement. Compomer may also undergo degradation in an acidic environment, but glass polyalkenoate cement is the most susceptible material among the options provided.

Question 7

A 30-year-old patient develops trismus two days after extraction of the lower-left second molar. Several attempts were required to administer an inferior alveolar nerve block. Examination reveals a haematoma in the retromolar region. Trauma to which muscle is the most likely cause?

A. Buccinator
B. Lateral pterygoid
C. Masseter
D. Medial pterygoid
E. Temporalis

Correct answer: D. Medial pterygoid

Reasoning:

The needle used for an inferior alveolar nerve block may traumatise the medial pterygoid muscle or adjacent tissues, particularly following repeated or inaccurately positioned injections. The resulting bleeding and inflammation can produce a haematoma and painful limitation of mouth opening.

Why the other options are incorrect:

Although the masseter and temporalis contribute to mandibular elevation and may be associated with trismus, they are not normally traversed during an inferior alveolar nerve block. The lateral pterygoid is situated away from the usual injection path. Buccinator trauma is less likely to cause marked trismus.

Question 8

You are the principal dentist in a general dental practice. An associate who takes dental radiographs notifies you in writing that she is pregnant. Under the Ionising Radiations Regulations 2017, what must you ensure as her employer?

A. That all radiographic procedures are delegated to other operators
B. That occupational exposure is as low as reasonably practicable and the dose to the foetus is unlikely to exceed 1 mSv during the remainder of the pregnancy
C. That she wears a personal dosimeter throughout the pregnancy in every case
D. That she wears a lead apron whenever she takes a radiograph
E. That she takes only intraoral radiographs

Correct answer: B. That occupational exposure is as low as reasonably practicable and the dose to the foetus is unlikely to exceed 1 mSv during the remainder of the pregnancy

Reasoning:

Once an employee has formally notified the employer of her pregnancy, the Ionising Radiations Regulations 2017 require the employer to ensure that working conditions are such that the dose to the foetus is kept as low as reasonably practicable and is unlikely to exceed 1 mSv for the remainder of the pregnancy. The risk assessment and working arrangements should be reviewed and adjusted where necessary to ensure compliance.

Why the other options are incorrect:

Pregnancy does not automatically require the employee to stop taking radiographs or to be restricted to intraoral radiography only. The use of personal dosimetry may be considered following a risk assessment or advice from the radiation protection adviser, but it is not a universal requirement in all cases. The use of a lead apron alone does not fulfil the employer’s legal obligations under the regulations.

Question 9

A 30-year-old patient with Down's syndrome who lives in supported accommodation requests extraction of a carious upper central incisor because she is unhappy with its appearance.

Which statement most accurately describes the approach to consent?

A. Consent must be obtained from her carer
B. Consent must be obtained from her parents
C. Consent must be obtained from the manager of her accommodation
D. Consent is valid only if she signs a written consent form
E. She must be presumed to have capacity to consent unless it is established that she lacks capacity for this particular decision.

Correct answer: E. She must be presumed to have capacity to consent unless it is established that she lacks capacity for this particular decision.

Reasoning:

An adult must be presumed to have capacity unless established otherwise. Down's syndrome does not, by itself, demonstrate a lack of capacity. Information should be presented in an accessible way and the patient should receive appropriate support to make her own decision. Capacity is specific to the decision and the time at which it is made.

If there is a valid reason to assess capacity, the dentist must determine whether the patient can understand and retain the relevant information, use or weigh that information, and communicate her decision.

Why the other options are incorrect:

A carer, parent or accommodation manager cannot provide consent on behalf of an adult who has capacity. A signature does not make consent valid by itself; valid consent requires capacity, adequate information and a voluntary decision.

Question 10

Which histopathological feature distinguishes invasive squamous cell carcinoma from severe epithelial dysplasia?

A. Increased nuclear-to-cytoplasmic ratio
B. Irregular epithelial islands within the underlying connective tissue
C. Loss of normal epithelial stratification
D. Premature keratinisation of individual cells
E. Atypical mitotic figures above the basal layer

Correct answer: B. Irregular epithelial islands within the underlying connective tissue

Reasoning:

Severe epithelial dysplasia may show marked cytological and architectural abnormalities extending into the upper epithelial layers. However, the abnormal epithelium remains confined above the basement membrane. The presence of irregular islands of atypical epithelial cells within the underlying connective tissue demonstrates invasion and therefore distinguishes invasive squamous cell carcinoma from epithelial dysplasia.

Why the other options are incorrect:

An increased nuclear-to-cytoplasmic ratio, loss of normal epithelial stratification, premature keratinisation and atypical mitotic figures above the basal layer are recognised features of epithelial dysplasia. These abnormalities may also be present in squamous cell carcinoma, but none demonstrates invasion when considered in isolation.