

mcq_sample										
question	option_a	option_b	option_c	option_d	option_correct	CO	LO mapping	difficulty	marks	topic
A patient has a posterior mandibular edentulous span restored with two implants (4.0 × 10 mm) at positions #35 and #36 supporting a splinted restoration. The planned prosthesis includes a distal cantilever to replace #37. Key measurements (from CBCT + scan): Crown height space (CHS) from implant platform to occlusal table: 15 mm Proposed distal cantilever length: 10 mm Opposing dentition: natural molars, no parafunction reported Bone quality: Type II-III Which modification most predictably reduces bending moment at the implant–abutment complex without sacrificing the distal tooth replacement?	Increase distal cantilever to improve occlusal table distribution	Narrow the occlusal table and move contacts slightly mesial of implant centers	Use a resilient attachment (nonrigid connector) between #37 and cantilevered unit	Increase cusp inclination to reduce horizontal forces	B	CO1	LO1	Hard	2	Implant biomechanics
You torque an implant abutment screw to the manufacturer's recommended 30 N-cm. After 10 minutes, you re-check and the screw rotates an additional 10–15 degrees before reaching the same torque. No stripping is observed. Which statement best explains what happened and the most evidence-consistent clinical response?	The screw is plastically deforming; discard it immediately	This is "embedment relaxation"; retorque after a short interval improves maintained preload	This indicates thread damage; reduce torque by 30%	This proves the implant–abutment interface is misfit; retorque worsens it	B	CO2	LO1	Hard	3	Screw mechanics
A monolithic zirconia crown (3Y-TZP) was tried in and contaminated with saliva. It will be cemented adhesively because the preparation has short axial walls and limited retention. You have access to: alumina air abrasion, MDP-containing primer, HF acid, silane, and resin cements. Most defensible protocol for bond reliability?	HF etch 9% for 60 seconds + silane + resin cement	Phosphoric acid clean + silane + resin cement	Air-abrade with alumina + MDP primer + resin cement (MDP-containing)	HF etch + MDP primer + glass ionomer cement	C	CO3	LO2	Hard	5	Bonding Protocols
A maxillary central incisor requires a crown after endodontic treatment. Remaining coronal structure: Palatal wall: 2.5 mm height Facial wall: 0.5–1.0 mm height (thin) Circumferential dentin height after caries removal: 1.0 mm (nonuniform) Planned crown: all-ceramic Which plan best respects fracture resistance principles while staying prosthodontically defensible?	Place a deeper shoulder facially to create ferrule by margin extension alone	Use a knife-edge margin to preserve tooth; ferrule irrelevant in all-ceramic crowns	Use a post and core; ferrule is optional if a fiber post is used	Consider orthodontic extrusion or surgical crown lengthening to obtain ferrule	D			Hard	5	Fixed Prosth
A 48-year-old with generalized wear and multiple failing restorations needs full-mouth rehabilitation. Findings: Stable joints, no pain; mild muscle tenderness MI shows bilateral posterior contacts, but CR record reveals a 1.5 mm anterior slide with a left deflective contact #26. Esthetics: reduced VDO suspected, but phonetics (F/V) acceptable; freeway space ~3–4 mm. Which occlusal philosophy is most defensible as a starting point for definitive planning?	Maintain MI as reference because it has more contacts (more stable)	Restore to CR at an increased VDO immediately without reversible trial	Use CR as the reference position for mounting and planning, verify with a reversible trial (splint/provisionals) before definitive rehab	Ignore CR records because they are operator dependent	C			Hard	5	FMR
A patient with an edentulous maxilla has a prominent torus palatinus and a history of poor retention. During evaluation, the soft palate shows moderate mobility; the fovea palatinae are visible but not symmetric. You must design the posterior palatal seal (PPS). Which statement is most correct?	The fovea palatinae always mark the posterior border of the denture	Extending beyond the posterior vibrating line increases retention without risk	PPS is placed on compressible tissue between the anterior and posterior vibrating lines; avoid impinging on non-displaceable torus area	A torus palatinus contraindicates PPS entirely	C			Hard	5	Complete Denture
You are designing a mandibular Kennedy Class I RPD (bilateral distal extension). Surveying reveals: #34 and #44 are primary abutments (first premolars) Lingual sulcus depth allows a lingual bar Patient has a history of repeated distal extension base soreness The occlusal rests on #34 and #44 are currently planned distal to the abutment centers There is mild mandibular tori (not prohibitive) Which design change most directly reduces tissueward rotation and base-movement-induced soreness without compromising clasp function?	Move rests to mesial of abutment (RPI/RPA concept) and alter clasping accordingly	Add more buccal undercut engagement to increase retention	Use a lingual plate to rigidly splint teeth and stop rotation	Eliminate indirect retainers to allow stress release	A			Hard	5	Removable Partial Dentures
Considering the anatomical location of the anterior and posterior vibrating lines, what is the ideal posterior extension of the maxillary complete denture to achieve an effective posterior palatal seal?	At the fovea palatinae	Anterior to the anterior vibrating line	Between the anterior and posterior vibrating lines over compressible tissue	Posterior to the posterior vibrating line to maximize retention	C			Moderate	3	Complete Denture
A mandibular molar prepared for a full coverage crown has: Short clinical crown height Excessive occlusal convergence Subgingival finish line due to caries Which modification would most effectively improve resistance form?	Extending the margin further apically	Adding proximal grooves or boxes	Using a resin cement instead of GIC	Reducing occlusal clearance	B			Moderate	3	Fixed Prosth
A posterior implant crown shows repeated screw loosening. Radiographs show adequate osseointegration. The crown height space is 14 mm. Which factor most likely contributed to this complication?	Short implant length	higher bending moments	Lack of keratinized tissue	Platform switching design	B			Moderate	3	Implant
In a Kennedy Class II mandibular RPD, which component primarily helps resist rotational movement of the distal extension base away from the tissue?	Major connector	Direct retainer on terminal abutment	Indirect retainer placed anterior to the fulcrum line	Minor connector	C			Moderate	3	Removable Partial Dentures
A patient with generalized attrition is planned for full-mouth rehabilitation. CR–MI discrepancy of 1 mm is noted with no TMJ symptoms. What is the most appropriate initial step?	Proceed with definitive restorations in maximum intercuspal position	Selectively grind defective contacts permanently	Fabricate an occlusal splint to deprogram and verify CR	Ignore CR discrepancy since patient is asymptomatic	C			Moderate	3	FMR
Which preparation design is most suitable for lithium disilicate crowns in the anterior region?	Knife-edge margin	Heavy chamfer with rounded internal angles	Feather edge margin	Shoulder with sharp internal line angle	B			Moderate	3	Fixed Prosth
In a patient with severely resorbed mandibular ridges and unstable lower complete denture, the most appropriate technique to improve denture stability is:	Using a palatal ramp	Reducing the flange extension	Recording and arranging teeth in the neutral zone	Using zero-degree teeth	C			Moderate	3	Complete Denture
For a patient with Aramany Class II defect and periodontally compromised remaining teeth, What type of design modification will predictably improve the prosthesis stability and load distribution?	Shift fulcrum line posteriorly by adding a posterior occlusal rest on the non-defect side	Design broad palatal coverage with rigid major connector and cross-arch stabilization	Eliminate clasping on compromised teeth to reduce torque	Use flexible materials in the framework to allow stress relief	B			Moderate	3	MFP
You plan a full-arch implant-supported fixed prosthesis using intraoral scanning (IOS) for impression. Which factor most significantly compromises trueness in long-span digital impressions?	Use of powder-free scanning systems	Stitching errors accumulating over large spans	Use of scan bodies with anti-rotational features	Capturing edentulous areas with additional scanning time	B			Easy	2	Fixed Prosth

In an anterior single-tooth implant, the peri-implant mucosa shows a flattened emergence profile and reduced papilla fill despite correct 3D implant positioning. Which prosthetic modification most predictably improves pink esthetic score (PES)?	Increasing crown length to mask soft tissue deficiency	Subgingival cementation of the final crown	Designing a customized temp to sculpt peri-implant soft tissues	Increasing incisal translucency of the ceramic crown	C			Easy	2	Implant
A digital workflow is used to fabricate a full-mouth rehabilitation using a virtual articulator. Which limitation of virtual articulators must be critically acknowledged during occlusal scheme planning?	Excessive occlusal errors compared to mechanical articulators in all cases	Inability to design occlusal morphology digitally	Inaccurate simulation of individual patient-specific condylar movements without precise jaw-tracking data	Mandatory need for facebow transfer in digital workflows	C			Easy	2	Fixed Prosth
In an anterior esthetic rehabilitation, strict application of the Golden Proportion results in patient dissatisfaction due to perceived “narrow” lateral incisors. What is the most scientifically sound explanation?	Golden proportion is universally applicable but patient expectations vary	Golden proportion does not account for facial width and arch form, and perceived proportions differ with viewing angle	Digital smile design software automatically corrects this limitation	Golden proportion is outdated and should never be used	B			Easy	2	Fixed Prosth
A patient requires esthetic rehabilitation of maxillary anterior teeth using a fully digital workflow (IOS → CAD smile design → 3D-printed mock-up → definitive ceramic restorations). The patient is highly esthetic-demanding and reports that the printed mock-up looks perfect extraorally but appears “unnatural” intraorally during dynamic smiling and speech. Which factor most plausibly explains this discrepancy and should be addressed before finalizing the definitive restorations?	Absence of a facebow transfer during digital mounting	Color mismatch due to limitations of 3D printing resins	Marginal discrepancy caused by printer layer thickness	Failure to incorporate dynamic lip mobility and phonetics into the digital smile design	D			Easy	2	Fixed Prosth