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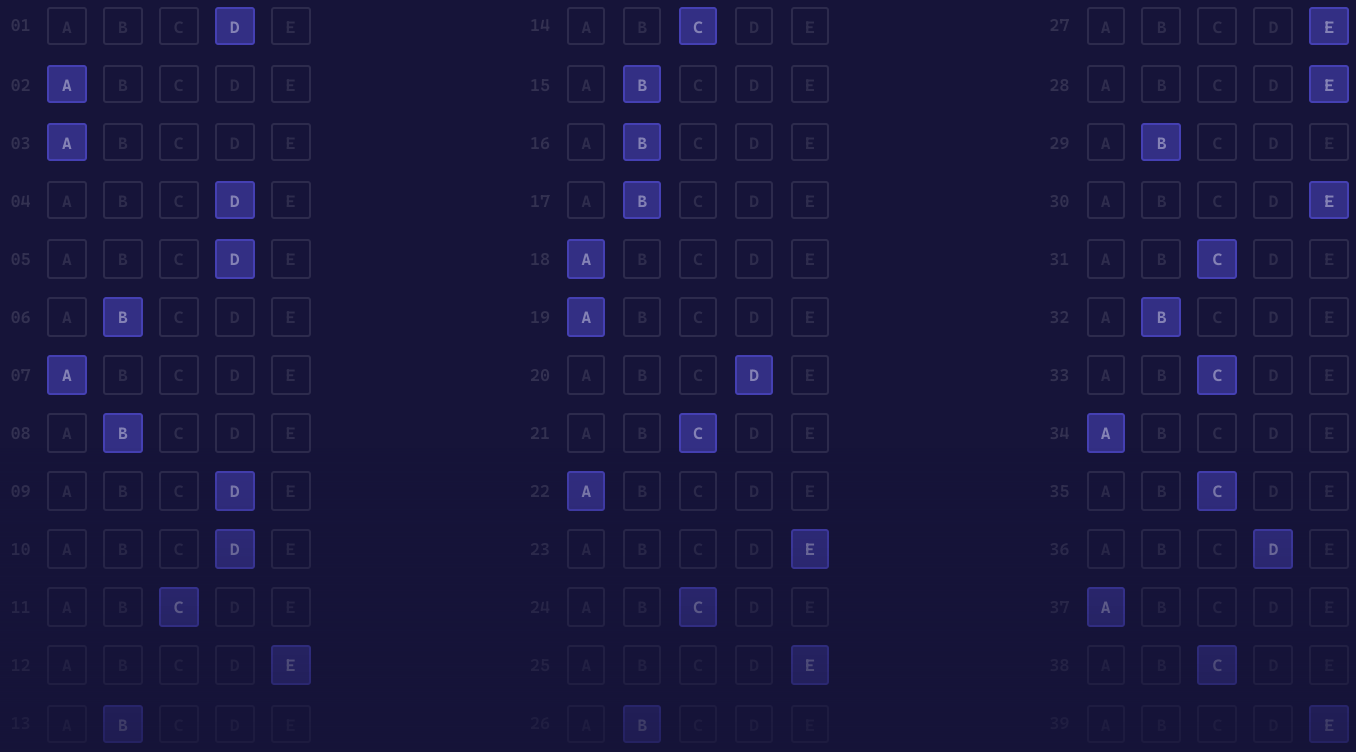

PRACTICE QUESTIONS

Dubai Health Authority (DHA)

CENCR

Consultant Endocrinology

EDITION	QUESTIONS	FORMAT
Demo	9	Limited Edition PDF

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Before you begin

What this is

9 practice questions for Dubai Health Authority (DHA) `CENCR`, each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, `CENCR`
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

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QUESTION 1 SINGLE CHOICE

A 54-year-old man with a 12-year history of type 2 diabetes mellitus presents with persistent microalbuminuria (albumin-to-creatinine ratio 95 mg/g) and an estimated GFR of 58 mL/min/1.73 m^2. His blood pressure is 148/92 mmHg despite lifestyle measures. Which of the following first-line pharmacological interventions provides the most appropriate renal and cardiovascular protection at this stage?

A Amlodipine titrated to a target systolic blood pressure below 130 mmHg

B An ACE inhibitor (e.g., ramipril) titrated to the maximum tolerated dose

C A thiazide diuretic as monotherapy

D A beta-blocker such as carvedilol

ANSWER B

WHY In patients with type 2 diabetes and diabetic kidney disease (albuminuria with reduced eGFR), an ACE inhibitor (or an ARB if ACEi is not tolerated) is the first-line agent. It reduces intraglomerular pressure, slows progression of nephropathy, and provides cardiovascular protection independent of blood pressure reduction. Amlodipine and thiazides do not offer the same renoprotective effect, and beta-blockers are not first-line for diabetic nephropathy.

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QUESTION 2 SINGLE CHOICE

A 38-year-old woman presents with a 3-month history of weight loss, heat intolerance, palpitations, and a diffusely enlarged, nontender goiter. Laboratory testing reveals a suppressed TSH (<0.01 mIU/L) with elevated free T4 and free T3. Radioactive iodine uptake scan shows diffuse, markedly increased uptake. Which is the most appropriate initial management?

A Total thyroidectomy

B Antithyroid drugs (e.g., methimazole) as first-line therapy

C Radioactive iodine (I-131) ablation as first-line therapy

D Observation only with repeat thyroid function testing in 6 months

ANSWER B

WHY The clinical picture (diffuse goiter, hyperthyroidism with suppressed TSH, and diffusely increased radioactive iodine uptake) is classic for Graves' disease. In a non-pregnant adult without contraindications, antithyroid drugs such as methimazole are appropriate first-line therapy in many settings, particularly when the goal is to attempt a trial of remission. Radioactive iodine ablation or thyroidectomy are definitive options, typically chosen if antithyroid drugs fail, are not tolerated, or are contraindicated. Observation alone is inappropriate given symptomatic and biochemical hyperthyroidism.

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QUESTION 3 SINGLE CHOICE

A 46-year-old woman presents with resistant hypertension (BP 162/100 mmHg on three antihypertensive agents), muscle weakness, and spontaneous hypokalemia (serum K^+ 2.9 mmol/L). Plasma aldosterone concentration is markedly elevated and the plasma renin activity is suppressed. Which of the following is the most appropriate next step?

A 24-hour urinary metanephrines

B Confirmatory testing such as the saline infusion test followed by adrenal imaging

C Metyrapone therapy to block cortisol synthesis

D Empirical spironolactone without further biochemical workup

ANSWER B

WHY The combination of resistant hypertension, hypokalemia, elevated aldosterone, and suppressed renin strongly suggests primary aldosteronism (Conn's syndrome). According to the Endocrine Society guidelines, when the screening aldosterone-to-renin ratio is positive, confirmatory testing (e.g., saline infusion, oral sodium loading, fludrocortisone suppression, or captopril challenge) should be performed before proceeding to adrenal imaging. Confirmatory testing avoids false positives and inappropriate surgery. Urinary metanephrines are used for pheochromocytoma workup, not primary aldosteronism. Empirical spironolactone without confirmation is not appropriate when a curative surgical cause (aldosterone-producing adenoma) may exist.

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QUESTION 4 SINGLE CHOICE

A 32-year-old man presents with headaches, bitemporal hemianopia, and biochemical evidence of decreased gonadotropins, cortisol, and TSH. MRI shows a 2.5 cm sellar mass with suprasellar extension consistent with a non-functioning pituitary macroadenoma causing compressive hypopituitarism. What is the most appropriate initial definitive management?

A Dopamine agonist therapy (e.g., cabergoline)

B **Transsphenoidal surgical decompression of the pituitary**

C Stereotactic radiosurgery as first-line therapy

D Long-term observation with serial MRI only

ANSWER **B**

WHY In a non-functioning pituitary macroadenoma causing compressive symptoms such as visual field defects and hypopituitarism, transsphenoidal surgery is the first-line treatment to relieve mass effect, preserve or restore vision, and decompress the optic chiasm. Dopamine agonists are used for prolactinomas (not for non-functioning adenomas, which do not typically respond). Stereotactic radiosurgery is reserved for residual or recurrent disease, not as first-line in compressive macroadenomas. Observation alone is inappropriate given visual compromise and panhypopituitarism.

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QUESTION 5 SINGLE CHOICE

A 62-year-old postmenopausal woman with a history of a fragility distal radius fracture has a DXA T-score of -2.7 at the lumbar spine. She has no history of secondary causes of osteoporosis and no contraindications to therapy. Which of the following is the most appropriate first-line pharmacological therapy?

A Calcium and vitamin D supplementation alone without pharmacological therapy

B Anabolic therapy with teriparatide as first-line

C Bisphosphonate therapy (e.g., alendronate or zoledronic acid)

D Estrogen replacement therapy

ANSWER C

WHY For postmenopausal women with osteoporosis and a history of fragility fracture (or T-score ≤ -2.5), first-line therapy is an antiresorptive agent, most commonly a bisphosphonate such as alendronate (oral) or zoledronic acid (intravenous). Calcium and vitamin D are essential adjuncts but not sufficient as monotherapy. Teriparatide (an anabolic agent) is reserved for severe osteoporosis, multiple fragility fractures, or bisphosphonate failure. Estrogen therapy is no longer recommended as first-line for osteoporosis due to unfavorable risk-benefit profile.

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QUESTION 6 SINGLE CHOICE

A 22-year-old man with type 1 diabetes presents with vomiting, abdominal pain, Kussmaul respirations, blood glucose 480 mg/dL, serum bicarbonate 9 mmol/L, anion gap 26, and serum potassium 5.6 mmol/L. Which of the following is the most appropriate initial step in management?

A Administer insulin bolus followed by an insulin infusion

B Begin aggressive IV fluid resuscitation with isotonic saline, then start an IV insulin infusion (without an initial bolus)

C Administer IV sodium bicarbonate immediately

D Administer insulin only after potassium replacement is documented

ANSWER B

WHY The first priority in DKA is volume resuscitation with isotonic saline to restore intravascular volume and improve tissue perfusion. Current guidelines recommend against giving an initial IV insulin bolus because it increases the risk of hypokalemia and rapid osmolar shifts. Insulin infusion is typically started after initial fluids, usually at 0.1 U/kg/h. Although the serum potassium is elevated (typical in DKA due to acidosis-driven shift), total body potassium is depleted, so potassium must still be carefully replaced; insulin is generally held only if potassium is below 3.3 mmol/L, not above it. Bicarbonate is reserved for severe acidosis (pH < 6.9) and is not given empirically here.

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QUESTION 7 SINGLE CHOICE

A 41-year-old woman presents with episodic headaches, palpitations, diaphoresis, and paroxysmal hypertension (BP up to 210/118 mmHg during episodes). Plasma free metanephrines are elevated. What is the most appropriate next step in management?

A Initiate a beta-blocker such as propranolol as first-line therapy

B Initiate alpha-blockade (e.g., doxazosin or phenoxybenzamine) for blood pressure control prior to any diagnostic imaging or surgery

C Proceed directly to adrenalectomy without alpha-blockade

D Order a thyroid panel as the next diagnostic step

ANSWER B

WHY The clinical scenario with paroxysmal symptoms and elevated plasma free metanephrines is highly suggestive of pheochromocytoma. The cornerstone of safe management is adequate alpha-adrenergic blockade (typically phenoxybenzamine, or doxazosin) initiated before any procedure, biopsy, or definitive surgery, to prevent hypertensive crisis. Beta-blockers must never be given before alpha-blockade because unopposed alpha stimulation can precipitate severe hypertensive emergency. Definitive treatment (adrenalectomy) follows after adequate alpha-blockade and volume expansion. Cross-sectional imaging and functional imaging are arranged after biochemical confirmation.

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QUESTION 8 SINGLE CHOICE

A 28-year-old woman presents with oligomenorrhea, hirsutism, and infertility. Her BMI is 31 kg/m^2. Laboratory testing shows an elevated free testosterone, normal prolactin, normal TSH, and an LH:FSH ratio greater than 2. Pelvic ultrasound shows multiple peripheral ovarian follicles. Which is the most appropriate first-line intervention?

A Metformin monotherapy

B Laparoscopic ovarian drilling

C Lifestyle modification (weight loss through diet and exercise) as first-line

D Low-dose glucocorticoid therapy

ANSWER C

WHY This presentation is classic for polycystic ovary syndrome (PCOS). In overweight or obese women with PCOS, lifestyle modification — including calorie restriction, weight loss (≥5–10% of body weight), and exercise — is recommended as first-line therapy and improves ovulation, insulin sensitivity, and androgen excess. Pharmacologic therapy (e.g., metformin, clomiphene, letrozole, or oral contraceptives) is added when needed, but lifestyle is the foundation. Laparoscopic ovarian drilling is reserved for clomiphene-resistant cases. Glucocorticoids are not first-line therapy for PCOS.

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QUESTION 9 SINGLE CHOICE

A 47-year-old woman is found incidentally on abdominal CT to have a 3.2-cm left adrenal mass with Hounsfield units of 8 and signal loss on out-of-phase chemical-shift MRI. She has no symptoms of hormone excess and takes no medications. Which of the following is the most appropriate next step in management?

A Immediate laparoscopic adrenalectomy because of the size of the lesion

B Biochemical evaluation for catecholamines, cortisol, and aldosterone before any management decision

C Percutaneous biopsy of the adrenal mass for histological diagnosis

D Repeat CT in 12 months and defer biochemical workup because the imaging features suggest adenoma

E Empiric mitotane therapy while arranging further imaging

ANSWER B

WHY Every adrenal incidentaloma must undergo biochemical screening for catecholamine excess (plasma/urinary metanephrines), cortisol excess (overnight 1 mg dexamethasone suppression test or late-night salivary cortisol), and—where relevant—aldosterone excess and sex steroid production, regardless of imaging characteristics. Adrenalectomy is reserved for functional lesions or imaging features suggesting malignancy; biopsy is generally avoided due to risk of pheochromocytoma-induced crisis and limited diagnostic yield; and deferring workup is unsafe even when imaging is consistent with adenoma.

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