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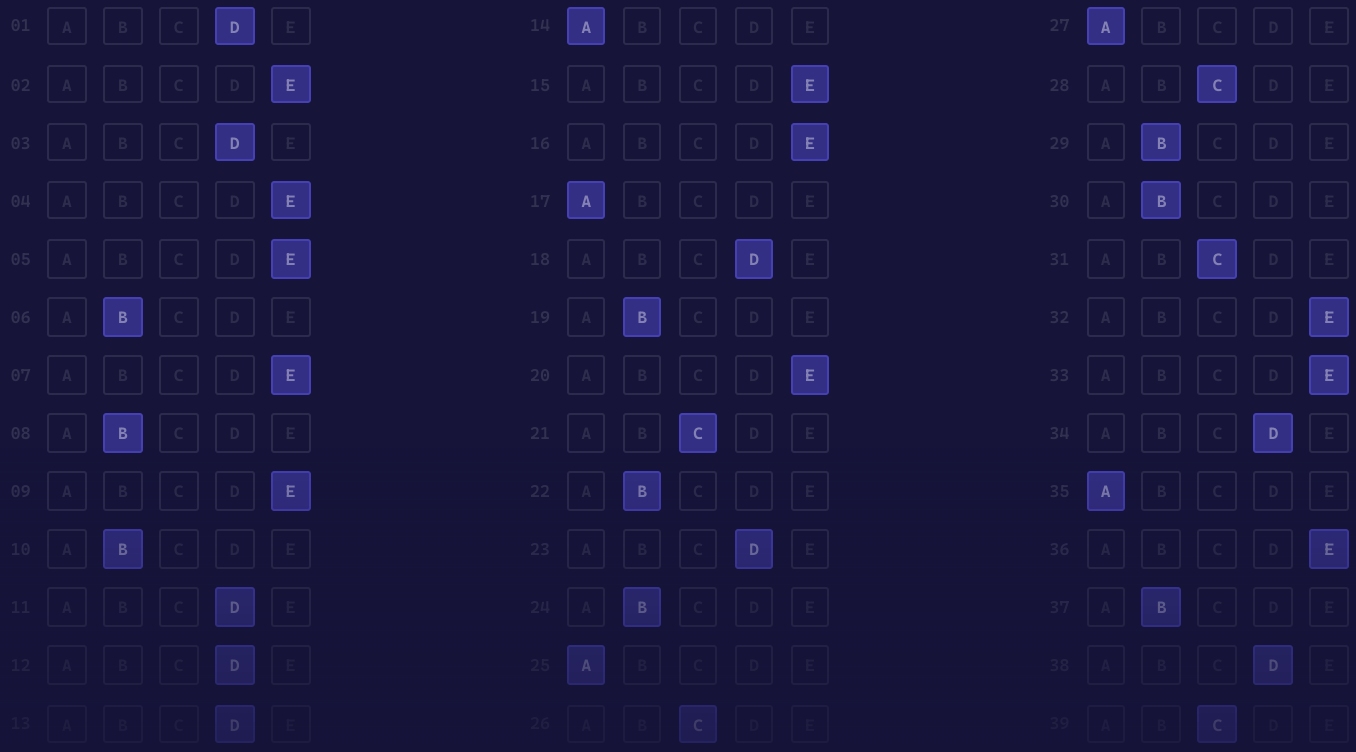

PRACTICE QUESTIONS

Saudi Commission For Health Specialties (SCFHS)

ENDOC

Endocrinology

EDITION	QUESTIONS	FORMAT
Demo	9	Limited Edition PDF

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Before you begin

What this is

9 practice questions for Saudi Commission For Health Specialties (SCFHS) `ENDOC`, 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, `ENDOC`
- 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 type 2 diabetes has an HbA1c of 9.2% on metformin 1000 mg BID and glimepiride 4 mg daily. BMI is 31 kg/m^2. Renal and hepatic function are normal. Which is the most appropriate next step to improve glycemic control?

A **Add empagliflozin 10 mg daily**

B Add sitagliptin 100 mg daily

C Switch glimepiride to pioglitazone 30 mg daily

D Discontinue oral therapy and initiate basal-bolus insulin

ANSWER **A**

WHY The patient has inadequate control on dual oral therapy and has a high cardiovascular risk profile (type 2 diabetes, obesity). Empagliflozin, an SGLT2 inhibitor, provides effective HbA1c reduction, promotes weight loss, and has proven cardiovascular and renal protective benefits, making it the preferred add-on. Adding a DPP-4 inhibitor lowers HbA1c modestly without weight loss benefit. Pioglitazone causes weight gain and fluid retention. Switching directly to basal-bolus insulin is premature given the availability of effective oral add-ons.

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QUESTION 2 SINGLE CHOICE

A 32-year-old woman presents with fatigue, cold intolerance, weight gain, and constipation. TSH is 12.5 mIU/L (reference 0.4–4.0) and free T4 is 0.6 ng/dL (reference 0.8–1.8). Anti-thyroid peroxidase antibodies are positive. What is the most likely diagnosis?

A Subclinical hypothyroidism

B Primary overt hypothyroidism due to Hashimoto thyroiditis

C Central (secondary) hypothyroidism

D Thyroid hormone resistance

ANSWER B

WHY Elevated TSH with low free T4 indicates overt primary hypothyroidism, and positive anti-TPO antibodies confirm autoimmune (Hashimoto) thyroiditis. Subclinical hypothyroidism would have a normal free T4. Central hypothyroidism is characterized by low or inappropriately normal TSH with low T4. Thyroid hormone resistance shows elevated TSH with elevated (not low) free T4.

QUESTION 3 SINGLE CHOICE

A 46-year-old woman presents with progressive weight gain, central obesity, easy bruising, proximal muscle weakness, and hypertension. 24-hour urinary free cortisol is markedly elevated and the overnight 1 mg dexamethasone suppression test fails to suppress cortisol. What is the next best step to localize the source?

A Pituitary MRI

B Adrenal CT scan

C Inferior petrosal sinus sampling (IPSS)

D Plasma ACTH measurement

ANSWER D

WHY Once Cushing syndrome is biochemically confirmed, plasma ACTH should be measured first to distinguish ACTH-dependent from ACTH-independent causes. ACTH-dependent causes (pituitary or ectopic) are then evaluated with pituitary MRI ± IPSS, while ACTH-independent causes (adrenal) are evaluated with adrenal imaging. Jumping directly to pituitary MRI or IPSS before establishing ACTH status is inappropriate.

QUESTION 4 SINGLE CHOICE

A 38-year-old man has bitemporal hemianopia, headaches, and decreased libido. MRI shows a 2.5 cm sellar mass with suprasellar extension. Hormonal work-up reveals low cortisol, low free T4 with inappropriately normal TSH, and low testosterone. Which is the most appropriate immediate management?

A Oral levothyroxine replacement alone

B Transsphenoidal surgical decompression and glucocorticoid coverage

C Dopamine agonist therapy

D External beam radiotherapy

ANSWER B

WHY A large pituitary macroadenoma with mass effect (visual field defect) and panhypopituitarism requires urgent transsphenoidal decompression to relieve optic chiasm compression. Glucocorticoid coverage must be initiated before any other hormone replacement (especially before levothyroxine) to avoid precipitating adrenal crisis. Dopamine agonists are used for prolactinomas, not non-functioning macroadenomas. Radiotherapy is reserved for residual or recurrent disease after surgery.

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QUESTION 5 SINGLE CHOICE

A 62-year-old woman is found to have a corrected serum calcium of 11.4 mg/dL (reference 8.5–10.5), with a serum phosphate of 2.3 mg/dL and PTH of 95 pg/mL (reference 15–65). She is asymptomatic. Which investigation is most appropriate to confirm the underlying etiology?

A Serum 25-hydroxyvitamin D level

B 24-hour urinary calcium excretion

C Neck ultrasound of the parathyroids

D Sestamibi scan of the parathyroids

ANSWER B

WHY The biochemical picture (hypercalcemia, low phosphate, elevated PTH) is consistent with primary hyperparathyroidism. In an asymptomatic patient, the next step is to assess disease severity and eligibility for surgery by measuring 24-hour urinary calcium (to exclude familial hypocalciuric hypercalcemia) along with creatinine clearance, bone densitometry, and evaluation for nephrolithiasis. Parathyroid imaging (ultrasound or sestamibi) is performed only after surgery is decided upon. Vitamin D measurement does not establish the etiology here.

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QUESTION 6 SINGLE CHOICE

A 22-year-old man with type 1 diabetes presents with nausea, vomiting, abdominal pain, and Kussmaul respiration. Blood glucose is 480 mg/dL, serum bicarbonate is 10 mEq/L, and serum ketones are strongly positive. Which intravenous fluid and insulin regimen is most appropriate for initial management?

A 0.45% saline at 250 mL/hr with subcutaneous insulin lispro

B 0.9% saline with an IV insulin infusion at 0.1 U/kg/hr

C 5% dextrose in water with an IV insulin infusion

D Oral rehydration solution and subcutaneous insulin glargine

ANSWER B

WHY Diabetic ketoacidosis (DKA) requires prompt IV fluid resuscitation with isotonic saline and a continuous IV regular insulin infusion (typically 0.1 U/kg/hr) to correct hyperglycemia, acidosis, and dehydration. Subcutaneous insulin is inadequate in DKA. Hypotonic saline is not used initially. Dextrose is added only when blood glucose falls below ~200 mg/dL to prevent hypoglycemia while continuing insulin until the anion gap closes. Oral rehydration and basal insulin are inappropriate in DKA.

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QUESTION 7 SINGLE CHOICE

A 48-year-old man has resistant hypertension (BP 168/104 on three antihypertensive drugs including a diuretic) with spontaneous hypokalemia (K 3.0 mEq/L). Which initial screening test is most appropriate to evaluate for primary aldosteronism?

A **Plasma aldosterone-to-renin ratio (ARR)**

B 24-hour urinary metanephrines

C Morning serum cortisol after 1 mg dexamethasone

D Plasma renin activity alone

ANSWER **A**

WHY Patients with resistant hypertension and spontaneous hypokalemia should be screened for primary aldosteronism using the plasma aldosterone-to-renin ratio (ARR). A high ARR (elevated aldosterone with suppressed renin) suggests primary aldosteronism and prompts confirmatory testing. Urinary metanephrines screen for pheochromocytoma. The low-dose dexamethasone test screens for Cushing syndrome. Renin alone is insufficient for diagnosing primary aldosteronism.

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QUESTION 8 SINGLE CHOICE

A 28-year-old woman has oligomenorrhea, hirsutism, acne, and obesity. Total testosterone is mildly elevated and the LH:FSH ratio is greater than 2:1. Which is the first-line pharmacologic treatment for her long-term management?

A Metformin

B Spironolactone

C Combined oral contraceptive pills

D Clomiphene citrate

ANSWER C

WHY Combined oral contraceptives (COCs) are first-line pharmacologic therapy for PCOS in non-fertility-seeking women. They regulate menstrual cycles, reduce androgen-related symptoms (hirsutism, acne), and provide endometrial protection. Metformin is adjunctive, particularly when metabolic features dominate. Spironolactone is added for persistent hyperandrogenism despite COCs. Clomiphene is used only when the patient desires pregnancy.

QUESTION 9 MULTIPLE CHOICE

Which of the following are characteristic features of Graves disease? (Choose three.)

A Diffuse increased uptake on radioactive iodine (RAI) scan

B Presence of TSH receptor stimulating antibodies (TRAb)

C Painless thyroiditis with transient hyperthyroidism

D Pretibial myxedema and thyroid eye disease

E Cytologic evidence of granulomatous inflammation with multinucleated giant cells

ANSWER A · B · D

WHY Graves disease is an autoimmune hyperthyroidism characterized by diffuse increased uptake on RAI scan, positive TSH receptor stimulating antibodies (TRAb or TSI), and extrathyroidal manifestations such as pretibial (dermopathy) myxedema and Graves ophthalmopathy. Painless thyroiditis and granulomatous (subacute/De Quervain) thyroiditis are separate entities that produce hyperthyroidism through thyroid follicular destruction, not autoantibody stimulation.

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