一、單選題；每題 2 分，共 30 分 ※注意：請於試卷內之「選擇題作答區」依序作答。

Part A. Group questions about Cardiovascular-Kidney-Metabolic Syndrome

1. A 52-year-old patient diagnosed with T2D and CKD presents in your primary care practice with glycated hemoglobin (HbA1c) of 9.4%, eGFR of 62 mL/min/1.73 m^2, urine albumin-to-creatinine ratio (UACR) of 521 mg/g, and BP of 140/90. The physician prescribed metformin, a renin-angiotensin system (RAS) inhibitor, and a sodium-glucose cotransporter-2 (SGLT2) inhibitor. At their 6-month check-up, their HbA1c is 5.8%, and their UACR is 254 mg/g. Mean serum potassium is normal, and their BP is now 132/84. According to the 2022 KDIGO guidelines, what is the appropriate next step for managing this patient's care?

A. Leave the treatment regimen as it is and make a follow-up appointment in 6 months
B. Add a glucagon-like peptide-1 receptor agonist (GLP-1 RA)
C. Add a non-steroidal mineralocorticoid receptor antagonist (ns-MRA)
D. Refer to a nephrologist

2. According to the 2022 Kidney Disease Improving Global Outcomes (KDIGO) guidelines, how often should a risk factor assessment be carried out on a patient who is on treatment for type 2 diabetes (T2D) and chronic kidney disease (CKD)?

A. Monthly
B. Every 6 to 8 weeks
C. Every 3 to 6 months
D. Yearly

3. What factors are evaluated in the Fibrosis-4 (FIB-4) Index for assessing liver fibrosis?

A. Age, aspartate aminotransferase (AST), alanine aminotransferase (ALT), and platelet count
B. Age, body mass index (BMI), and platelet count
C. BMI, AST, and ALT
D. Weight, age, AST, and ALT

4. A 58-year-old man with obesity (body mass index 36) presents for review. He tells you he is desperate to lose weight for his daughter's wedding and wants to try the new weight loss injections he has heard about. After a discussion, do you think he could benefit from weekly incretin-based therapy? He says he wants to lose "as much as possible as quickly as possible." What should your approach be when starting this patient on an incretin-based therapy?

A. Start at the maintenance dose and assess the patient's symptoms after 2 weeks
B. Start at the maintenance dose and assess the patient's symptoms after 4 weeks
C. Start at the lowest dose and increase after 4 weeks if the patient is finding adverse effects tolerable
D. Start at the lowest dose and increase after 2 weeks if the patient is finding adverse effects tolerable

Part B. Group questions about Generalized Tonic-Clonic Seizures (GTCSs)

5. A 19-year-old man with a history of myoclonic and generalized tonic-clonic seizures (GTCSs) presents to an adult healthcare professional for the first time as he prepares to attend college in another state. Which of the following points are important to discuss during the review and modification of the patient's seizure action plan?

A. Adjusting the rescue medication dose when GTCS begins and possible self-administration
B. Adjusting the rescue medication dose when GTCS begins and identifying new triggers (e.g., alcohol use, sleep deprivation)
C. Identifying new triggers (e.g., alcohol use, sleep deprivation) and possible self-administration

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6. A 48-year-old woman with frequent GTCS had been to the emergency department 3 times in the past year for seizure clusters. Each cluster lasted for 25 to 40 minutes, and a second dose of rescue medication was needed to terminate the seizures. During a follow-up visit with her neurologist, the patient and her spouse asked about the use of a rescue medication. Which of the following medications is the best option for this patient?

A. Rectal benzodiazepine
B. Oral benzodiazepine
C. Intranasal benzodiazepine

Part C. Group questions about Chronic Refractory Gout (CRG)

7. Chronic refractory gout (CRG) is frequently used in clinical trials to classify patients who, despite treatment, have continued clinical manifestations of gout, including frequent flares, chronic inflammatory arthritis, tophi, and persistent elevated serum urate (SU). Which of the following is most commonly used as a measure of elevated SU in the definition of CRG?

A. 6 mg/dL
B. 8 mg/dL
C. 10 mg/dL
D. 12 mg/dL

8. Globally, what percentage of patients with gout on urate-lowering therapies (ULTs) achieve an SU level ≤ 6 mg/dL (360 μmol/L)?

A. 34%
B. 52%
C. 67%
D. 83%

9. Delays in prescribing and lack of up-titration of ULTs are major reasons for failing to reach SU targets for treatment. However, which of the following factors most significantly contributes to treatment failure in patients on ULTs?

A. Low adherence to ULTs
B. Resistance to ULTs
C. Intolerance to ULTs
D. Interactions of ULTs with other medications

Part D. Group questions about Resistant Hypertension

10. Patients with resistant hypertension (HTN) often exhibit specific characteristics. Which of the following are commonly associated with them?

A. Age < 50 years
B. Black race
C. Female sex
D. Glomerular filtration rate > 70 mL/min

11. Kevin is a 49-year-old man referred to you for resistant HTN. He is requiring increasing amounts of BP-lowering medication without control. His daytime mean BP is 162/85 mm Hg (heart rate 60 bpm), and nighttime mean BP is 144/75 mm Hg (heart rate 53 bpm). For his BP, he is currently taking amlodipine 10 mg once daily; chlorthalidone 50 mg once daily; clonidine 0.075 mg QD; furosemide 40 mg twice weekly; hydralazine 25 mg once daily in the evening; lisinopril 40 mg daily; nebivolol 20 mg once daily; and spironolactone 50 mg once daily. He has been evaluated for secondary causes of HTN, which are all negative. In addition, he has a history of coronary artery disease, type 2 diabetes, chronic kidney disease

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(estimated glomerular filtration rate = 38 mL/min), and obesity (body mass index 32 kg/m^2). In addition, which strategies would be most appropriate to help treat Kevin's resistant HTN?

A. Perform renal denervation
B. Add a non-steroidal mineralocorticoid receptor antagonist
C. Add a dual endothelin antagonist

Part E. Group questions about Dry Eye Disease

12. Which characteristics are associated with optimal Dry Eye Disease (DED) therapy?

A. Minimal absorption and measurable improvement in inflammatory response
B. Static and maintained for each disease stage
C. Improved bioavailability, minimal ocular adverse effects, and effective dosing
D. Uniform dosing ability

13. Reducing and preventing which of these is a primary goal of DED pharmacotherapy?

A. Irritation and infection
B. Morbidity and complications
C. Spreading and comorbidity
D. Severity and spread to the second eye

Part F. Group questions about the Use of Topical Analgesics for Diabetic Peripheral Neuropathy.

14. A clinician is seeing a male patient who has hypertension and a fasting plasma glucose level of 110 mmol/L. The patient's waist circumference is 38 inches; he takes atorvastatin and losartan. Why is this patient at risk for developing diabetic peripheral neuropathy (DPN)?

A. His data are indicative of diabetes
B. His data are indicative of metabolic syndrome
C. His waist circumference is too large
D. He is receiving combined treatment with atorvastatin and losartan

15. According to the guidelines for DPN management, which first-line oral therapy is currently approved for DPN treatment?

A. Amitriptyline
B. Carbamazepine
C. Pregabalin
D. Venlafaxine

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※ 注意：請於試卷內之「非選擇題作答區」依序作答，並應註明作答之大題及小題題號。

二、問答題：閱讀以下文章摘要並回答問題(共 14 分)

SOAP Notes

① **The Subjective, Objective, Assessment and Plan (SOAP) note is an acronym representing a widely used method of documentation for healthcare providers.** The SOAP note is a way for healthcare workers to document in a structured and organized way.

This widely adopted structural SOAP note was theorized by Larry Weed almost 50 years ago. ② **It reminds clinicians of specific tasks while providing a framework for evaluating information. It also provides a cognitive framework for clinical reasoning.** The SOAP note helps guide healthcare workers use their clinical reasoning to assess, diagnose, and treat a patient based on the information provided by them. SOAP notes are an essential piece of information about the health status of the patient as well as a communication document between health professionals. The structure of documentation is a checklist that serves as a cognitive aid and a potential index to retrieve information for learning from the record.

Access to StatPearls at https://www.ncbi.nlm.nih.gov/books/NBK482263/ on 1/8/2025

1. Translate the underlined sentences (marked with ① and ② ahead of the sentences) in Chinese. (4 points)

2. The following information describes a case involving health issues related to the management of diabetes, respiratory infection, and insomnia.

CC:
Tina is a 50-year-old female with adult-onset diabetes mellitus (DM) presenting to the urgent care clinic with a three-day history of fever, chills, pleuritic chest pain, productive cough, and severe fatigue.

PMH:
Tina returned from a stressful four-day business trip to Germany two days ago and has since developed the symptoms mentioned above. For the past week, she has been feeling restless and anxious, with difficulty sleeping. She reports that her frequent cough, tactile fever, and increased nocturia are further disrupting her sleep. Additionally, she has noticed increased numbness in her toes and a "burning" leg pain at night over the past two months.

SH:
Cigarettes: one pack per day for 10 years
Coffee: three cups per day, more on business trips
Compliant with ADA diet

Medication History
Pseudoephedrine 60 mg PO QID x 5 days
Glipizide 10 mg PO QD
Acetaminophen/codeine (300 mg/ 15 mg) PO PRN for leg pain (average 10 tablets per day for one month)

Allergy: NKDA

PE

GEN: Tired, obese, agitated female in moderate respiratory distress

VS: BP 140/90, RR 28, HR 125, T 39.5°C, Wt 70 kg, Ht 160 cm

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HEENT:	"Bags under the eyes," yellow purulent sputum for three days
COR:	Normal S1 and S2, no murmurs, tachycardic
CHEST:	LLL dullness
ABD, GU:	WNL
RECTAL:	Deferred
EXT:	Numbness to toes bilaterally
NURO:	Decreased DTR lower extremities

Results of Laboratory Tests

Na	140 mEq/L	Hct	37%	Ca	9.0 mg/dL
K	4.3 mEq/L	Hb	12.5 g/dL	PO_4	2.2 mg/dL
Cl	107 mEq/L	WBC	$15*10^3/\mu L$	Mg	2.7 mg/dL
HCO_3	24 mEq/L	PLT	$250*10^3/\mu L$	Alb	3.9 g/dL
BUN	18 mg/dL	MCV	93 fl	Fast glu	270 mg/dL
Scr	1.1 mg/dL			HbA1c	11%

WBC differential: PMN 87%, bands 13%, lymphs 4%
Sputum: gram stain shows many pleomorphic gram (-) coccobacilli, few gram (+) cocci pairs, chains and clusters, 30 neutrophils, < 10 epithelial cells per low-power field; culture pending
Blood: smear negative, culture x 2 pending
Urine: 1+ protein, (-) glucose, (-) ketone; culture pending
Chest radiography: LLL consolidation, no pleural effusion

2-1 Please provide the full names for all the abbreviations mentioned above, including **CC**, **PMH**, **SH**, and **NDKA**. (2 points)
2-2 Please focus solely on the **diabetes** and write a pharmacy note using the **SOAP format**. (8 points)

三、綜合題組(共 16 分)

1. Pain is a complex and subjective experience that can greatly affect an individual's quality of life. Among the different types of pain, ***nociceptive*** and ***neuropathic*** pain are two of the most common. Because they have different causes and feel different, each type needs its own approach for effective treatment and care. Please explain how nociceptive and neuropathic pain differ in terms of their causes and medical management. (4 points)

2. Breakthrough pain dosing involves providing access to an immediate-release (short-acting) opioid to address acute pain episodes requiring additional relief during the first 24–48 hours after conversion to a long-acting opioid. This short-acting opioid serves as a "rescue" option for pain that exceeds the analgesia provided by the long-acting opioid during the titration phase or to manage episodic pain, including incident pain, end-of-dose failure, and breakthrough pain.

   Jasper is a 75-year-old man with lung cancer and severe bone pain, currently prescribed morphine oral solution (0.5%; 5 mg/mL) at 4 mL PO every 4 hours (Q4H). When Jasper consistently takes all six doses per day, his pain is well-controlled. However, missed doses lead to pain crises. His prescriber seeks assistance in converting Jasper's regimen to transdermal

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fentanyl. What would you recommend?

Table 1. Opioid conversion chart

Medication	Parenteral ED	Oral ED	Transdermal ED	Duration of action
Codeine	—	200 mg	—	4-6 hrs
Fentanyl	0.1-0.2 mg			1-2 hrs
Fentanyl			25 mcg/hr	72 hrs
Morphine	10 mg	30 mg		3-7 hrs
Tramadol	100 mg	120 mg		2 hrs

ED: equivalent dose

2-1. How is pain assessed in clinical practice? (2 points)
2-2. Provide a brief description of breakthrough pain dosing in Chinese. (2 points)
2-3. Calculate the total daily dose of oral morphine that Jasper consumes each day. (2 points)
2-4. Based on the information in Table 1, what would you recommend for transdermal fentanyl dosing during Jasper's opioid conversion? (2 points)
2-5. Based on the information in Table 1, how would you recommend Jasper's breakthrough pain dosing by using oral morphine? Please include the specific medication, dose, frequency, and route in your recommendation. (4 points)

四、問答題 (共 40 分)

1. Read the following abstract carefully and answer questions I ~ IV below

Title: Datopotamab deruxtecan versus docetaxel for previously treated advanced or metastatic non–small cell lung cancer: the randomized, open-label phase III TROPION-Lung01 study
Authors: Ahn MJ, Tanaka, K, Paz-Ares L, et al.
Journal of Clinical Oncology 2025 Jan 20;43(3):260-272.

Purpose: The randomized, open-label, global phase III TROPION-Lung01 study compared the efficacy and safety of datopotamab deruxtecan (Dato-DXd) versus docetaxel in patients with pretreated advanced/metastatic non–small cell lung cancer (NSCLC).

Methods: Patients received Dato-DXd 6 mg/kg or docetaxel 75 mg/m^2 once every 3 weeks. Dual primary end points were ① progression-free survival (PFS) and overall survival (OS). Objective response rate, duration of response, and safety were secondary end points.

Results: In total, 299 and 305 patients were randomly assigned to receive Dato-DXd or docetaxel, respectively. The median PFS was 4.4 months (95% CI, 4.2 to 5.6) with Dato-DXd and 3.7 months (95% CI, 2.9 to 4.2) with docetaxel (hazard ratio [HR], 0.75 [95% CI, 0.62 to 0.91]; P = 0.004). The median OS was 12.9 months (95% CI, 11.0 to 13.9) and 11.8 months

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(95% CI, 10.1 to 12.8), respectively (HR, 0.94 [95% CI, 0.78 to 1.14]; P = 0.530). In the prespecified nonsquamous
② histology subgroup, the median PFS was 5.5 versus 3.6 months (HR, 0.63 [95% CI, 0.51 to 0.79]) and the median OS was 14.6 versus 12.3 months (HR, 0.84 [95% CI, 0.68 to 1.05]). In the squamous histology subgroup, the median PFS was 2.8 versus 3.9 months (HR, 1.41 [95% CI, 0.95 to 2.08]) and the median OS was 7.6 versus 9.4 months (HR, 1.32 [95% CI, 0.91 to 1.92]). Grade ≥3 treatment-related adverse events occurred in 25.6% and 42.1% of patients, and any-grade adjudicated
③ drug-related interstitial lung disease/pneumonitis occurred in 8.8% and 4.1% of patients, in the Dato-DXd and docetaxel groups, respectively.

Conclusions: Dato-DXd significantly improved PFS versus docetaxel in patients with advanced/metastatic NSCLC, driven by patients with nonsquamous histology. OS showed a numerical benefit but did not reach statistical significance. No unexpected safety signals were observed.

Questions:

I. Translate the underlined sentences (marked with ①②③ in front of the sentences) into Mandarin. (15%)
II. Describe the pharmacological class of datopotamab deruxtecan and its composition. (5%)
III. Describe the pharmacological class and most common adverse effects of docetaxel, and its pre-medications. (10%)
IV. Explain which information in the *Results Section* supporting the conclusion "Dato-DXd significantly improved PFS versus docetaxel in patients with advanced/metastatic NSCLC, driven by patients with nonsquamous histology. OS showed a numerical benefit but did not reach statistical significance." (10%)

試題隨卷繳回