

※ 注意：全部題目均請作答於試卷內之「非選擇題作答區」，請標明題號依序作答。

一. 配合題：30%

每題一分

A. Hemoglobin abnormality (5%)

\_\_\_\_\_ 1. Hb G-Taichung

a. alpha globin abnormality

\_\_\_\_\_ 2. Hb J-Meinung

b. beta globin abnormality

\_\_\_\_\_ 3. Hb Constant Spring

\_\_\_\_\_ 4. Hb E

\_\_\_\_\_ 5. Hb S

B. Fe associated (3%)

\_\_\_\_\_ 6. Methemoglobin

a. Fe<sup>2+</sup>

\_\_\_\_\_ 7. Ferritin

b. Fe<sup>3+</sup>

\_\_\_\_\_ 8. Ferroportin

C. Specific tests (4%)

\_\_\_\_\_ 9. Osmotic fragility test

a. paroxysmal nocturnal hemoglobinuria

\_\_\_\_\_ 10. Acid Ham test

b. hereditary spherocytosis

\_\_\_\_\_ 11. Eosin-5-maleimide staining

\_\_\_\_\_ 12. CD55, CD59 examination

D. Main site for protein synthesis (5%)

\_\_\_\_\_ 13. Intrinsic factor

a. kidney

\_\_\_\_\_ 14. Transferrin

b. liver

\_\_\_\_\_ 15. Hemopexin

c. stomach

\_\_\_\_\_ 16. Heparin

d. bone marrow

\_\_\_\_\_ 17. Heptoglobin

E. Folate associated (3%)

\_\_\_\_\_ 18. Main form in plasma

a. THF

\_\_\_\_\_ 19. Homocysteine → methionine

b. methyl THF

\_\_\_\_\_ 20. dUMP → dTMP

c. 5, 10-methylene THF

F. Vit B12 (cobalamin) associated (4%)

\_\_\_\_\_ 21. Main form for treatment

a. hydroxo-B12

\_\_\_\_\_ 22. Main form in plasma

b. methyl-B12

\_\_\_\_\_ 23. Homocysteine → methionine

c. cyano-B12

\_\_\_\_\_ 24. Methylmalonyl CoA → succinyl CoA

d. 5'-deoxyadenosyl-B12

見背面

G. RBC metabolism associated (4%)

- |  |                       |
|--|-----------------------|
| _____ 25. Embden-Meyerhof glycolytic pathway | a. NADH production    |
| _____ 26. Leubering-Rapoport shunt           | b. NADPH production   |
| _____ 27. Hexose monophosphate shunt pathway | c. NADH utilization   |
| _____ 28. Methemoglobin reductase pathway    | d. 2,3-DPG production |

H. RBC membrane associated (2%)

- |                    |                        |
|--------------------|------------------------|
| _____ 29. Band 3   | a. glucose transporter |
| _____ 30. Band 4.5 | b. anion exchanger     |

二. 問答題：50%

1. 請敘述凝血機制的“coagulation cascade”及“water fall theory”？(10%)
2. 請敘述如何測定 VWF:RCo 及 VWF:Ag. (10%)
3. 請敘述 TAFI (thrombin activatable fibrinolytic inhibitor)的特性及功能 (8%)
4. 請敘述如何測定 lupus anticoagulant (7%)
5. 請列出血液腫瘤疾病常見的分子病變種類，各舉一例及其可行的檢測技術 (15%)

三. 選答題：20%

請就下列五題中，任選兩題作答，一題 10 分

1. 何謂 stem cell mobilization? 請說明其原理與應用
2. 請寫出急性白血病的血液相變化 (各種細胞數目及種類的變化)
3. 何謂「minimal residual disease」(MRD)? 請說明其臨床意義、列出可行各種的偵測方法及各別優、缺點
4. 臨床血液檢驗中檢驗品管活動有 X-bar B (XB)control，請說明其原理、使用優點及使用限制
5. 請寫出臨床上微生物感染病人常見到的血液相變化(各種細胞數目及種類的變化)

試題隨卷繳回