POSTGRADUATE INSTITUTE OF MedicIne
UNIVERSITY OF COLONIBO

MD (DERMATOLOGY) EXAMINATION
DECEMBER, 2002

Date: 3rd December, 2002
Duration: 2 hours

Index No : ....................

LONG QUESTIONS

Answer all questions.
Answer each question in a separate book.

1. List the Retinoids used in dermatology. Describe their mode of action, current usage and their side effects.

2. a) Draw a schematic diagram of the basement membrane zone at the dermoepidermal junction.
   b) Label 4 different antigens that are involved in autoimmune blistering diseases of the skin.
   c) Name the structures involved in each of the following diseases.
   i. Epidermolysis bullosa simplex
   ii. Epidermolysis bullosa junctional
   iii. Epidermolysis bullosa dystrophica

3. A 35 year old female patient presented with numbness of the ulnar border and the medial 2 fingers of the right hand. On examination she had several skin coloured and erythematous papules and nodules on the face and nose and some large hypopigmented areas on the back of the trunk. Only some of these showed diminution of sensation.
   a) What is the probable diagnosis?
   b) A biopsy was taken from one of the nodules. Describe the microscopic features that were probably seen.
c) List the important points in the advice that you would give the patient regarding her disease.

d) Name the drugs and instructions that you would give the patient.

e) During the 2nd month of therapy the patient develops a large number of erythematous swollen tender nodules, accompanied with arthralgia and fever.

   i. What is the complication that has occurred?
   ii. Outline the management of her disease at this stage.

4. A 36 year old recently married female executive, consults you for the management of her psoriasis. She was found to have severe chronic plaque psoriasis involving her scalp, elbows, lumbar region and legs. She also complains of itching.

   a) Mention the treatment options available for her and the reasons for choosing them.

   b) What treatments are contraindicated if any and give the reasons why they are contraindicated.

   c) Being a working female she prefers non messy treatments. What are your options?

   d) Phototherapy is contemplated. What option is preferred.
SHORT ANSWER QUESTIONS

Answer all questions.
Answer each question in a separate book.

1. a) List five cutaneous features of chronic renal failure.
   b) Will dialysis relieve the pruritus of chronic renal failure?
   c) What are the steps in the management of pruritus of chronic renal failure?

2. A 20 year old woman presented with non-blanching red papules on her legs and ankles of two weeks duration. On examination she had in addition vesicles and a few necrotic ulcerated lesions on her legs. Systemic examination was normal.
   a) What is your most likely diagnosis?
   b) Describe what you would see on histological examination of a red papular lesion.
   c) What further tests would you do to find a likely cause for the condition?
   d) Outline the management.

3. A 19 year old school boy who actively takes part in sports presents with worsening of his acne lesions. He has been taking treatment from many medical practitioners. Details of treatment are not available. He feels unwell; complains of loss of appetite and pain in the legs. On examination he is febrile and has severe nodulocystic acne.
   a) What is the diagnosis?
   b) What is the pathogenesis of this complication of acne?
   c) What are the possible precipitating factors in this condition?
   d) What therapy is indicated?
Date: 12th January, 2004
Duration: 2 hours

Index No : ..................

LONG QUESTIONS

Answer all questions.
Answer each question in a separate book.

1. Describe the typical clinical features and the histopathology of the following conditions.
   a) Extramammary Paget's Disease.
   b) Bowen's Disease
   c) Erythroplasia of Queyrat
   d) Paraneoplastic Pemphigus

2. a) Enumerate the differences between allergic contact dermatitis and irritant contact dermatitis?
   Describe the pathogenesis in detail.
   b) What are the common sources of following allergens.
      Potassium dichromate
      Para phenylene diamine (PPD)
      Colophony
      Mercapto benzothiazole
      Wool alcohol
      Epoxy resin

   c) What are the skin disorders caused by contact with cement?
   d) What precautions should be taken to reduce the occurrence of cement contact dermatitis?
3.  
a) List 4 subepidermal autoimmune blistering diseases.
b) Outline the histological features found in each condition.
c) Outline the direct, indirect and split skin immunofluorescence findings in each condition.
d) Draw a diagram and mark the auto antigens involved in each condition.
e) Outline the treatment modalities useful in each of these conditions.

4. Similar clinical features are seen in the following conditions. Write down briefly the aetiology, clinical features, diagnostic criteria and the treatment in each of the following conditions.
   
a) Toxic shock syndrome
b) Staphylococcal scalded skin syndrome
c) Kawasaki Disease
d) Scarlet fever
SHORT ANSWER QUESTIONS

Answer all questions.
Answer each question in a separate book.

1. An obstetrician refers a primigravida in the 36th week of pregnancy, for the assessment of her recent severe pruritus of the body.
   a) Name 3 conditions related to the pregnancy in which pruritus is an important symptom.
   b) List 3 important clinical features of each condition.
   a) Give the relevant findings of 2 investigations that are useful in the diagnosis of each of these conditions.
   b) What effect could each of these conditions have on the foetal outcome?

2. A young girl of 20 years presents to the skin department as an emergency. The skin is red and tender. There are large areas of skin detachment. There are extensive erosions of the lips and the buccal mucosa and the patient is unable to swallow. She gives a history of the use of phenytoin sodium from 2 weeks earlier for the control of convulsions of recent onset.
   a) What is the likely diagnosis and how would you confirm it?
   b) List the main investigations and clinical parameters that will be of use to you in the management of this patient.
   c) Outline the steps you would take in managing this patient.
3) A 25 year old youth from the North Central Province presents with smooth non-scaly erythematous plaque on the cheek of 6 months duration.

a) Give 3 differential diagnosis.

b) What findings in the examination will be useful in making the diagnosis?

c) How do you confirm the diagnosis in each condition?

d) Briefly mention the treatment of each condition.
1. A patient presents with extensive unstable plaque type psoriasis, with pin point papules surrounding some of the plaques. She has considerable itching and some of the lesions show an active edge with intense erythema.

(a) List 8 features of a skin biopsy, stained with haemotoxylin and eosin, taken from an active lesion of the upper arm. (16 marks)

(b) Name the topical treatments that should and should not be used on this patient. Give reasons for not using some of the topical treatments. (18 marks)

(c) List the systemic therapies that could be used on this patient. (03 marks)
   
i. List the investigations that you would perform in pre treatment screening for any two of these therapies. (30 marks)
   
ii. Which evaluations would you use in monitoring the course of these two therapeutic regimes. (20 marks)

(d) Relate the immunology of psoriasis to the mechanism of action of one of the new biological agents used in severe psoriasis. (13 marks)

2. (a) Describe in detail the histological features of a Granuloma. (20 marks)

(b) Give a broad classification of Granulomas giving a few (2 to 3) examples in (30 marks)
(c) Describe the clinical, histological features, prognosis and associations of Granuloma Annulare. (20 marks)

(d) Describe the common presentations of cutaneous leishmaniasis in this country. Describe the histopathology of this disease and diagnostic techniques used in Sri Lanka. (30 marks)

3. (a) List the major criteria for the diagnosis of atopic eczema. (20 marks)

(b) Describe briefly the role of lymphocytes and cytokines in the pathogenesis of atopic eczema. (20 marks)

(c) Outline your management of an adult patient with atopic eczema
   i. in the initial phase of the disease. (30 marks)
   ii. in the severe refractory phase of the disease (second line therapy). (30 marks)

4. Describe the structural and ultrastructural changes that occur in normal epidermal maturation. (60 marks)

(a) Outline briefly the basic defect in each of the following conditions:
   i. Ichthyosis vulgaris (10 marks)
   ii. Sex linked Ichthyosis (10 marks)
   iii. Lamellar Ichthyosis (10 marks)
   iv. Bullous Ichthyosiform Erythroderma (10 marks)
SHORT ANSWER QUESTIONS

Answer all questions.
Answer each question in a separate book.

1. (a) List five (5) risk factors in the aetiology of malignant melanoma.

   (20 marks)

(b) In relation to primary nodular melanoma explain the following:

   i. Breslow thickness.

   (30 marks)

   ii. Clark's levels

   (30 marks)

(c) Indicate the relationship between five year survival figures and Breslow thickness measurement.

   (20 marks)

2. A 30 year old married woman presented with a one year history of diffuse non-scarring hair loss from her scalp. Her youngest child is 3 years old. She has no recent history of any illness or surgery. She was not on any medication.

(a) List four likely causes for her hair loss.

   (20 marks)

(b) In the clinical examination of her scalp, list six features you would look for.

   (60 marks)

(c) Outline briefly the pathogenesis of androgenetic alopecia in the female.

   (20 marks)
3. A 22 year old female presented with a six month history of episodic bluish discolouration of the fingers of both hands on exposure to cold.

(a) What is the clinical diagnosis. (10 marks)

(b) Give six possible causes. (30 marks)

(c) How do you investigate this patient to arrive at a diagnosis? (60 marks)
THEORY A - LONG QUESTIONS (Total Mark 120)

Answer all questions.
Answer each question in a separate book.

1. Discuss the mucocutaneous manifestations of Human Immunodeficiency Virus (HIV) infection. (100 marks)

2. (a) Define leukocytoclastic vasculitis. (15 marks)

(b) Describe the clinical features of Henoch-Schonlein purpura. (40 marks)

(c) Discuss the interpretation of investigations helpful in the diagnosis of the following conditions:
   i. Wegener's granulomatosis
   ii. urticarial vasculitis
   iii. cryoglobulinaemic vasculitis (45 marks)

3. (a) What are the main types of genetic diseases? (20 marks)

(b) What information can be obtained from a pedigree chart? (20 marks)

(c) What are the methods available for prenatal diagnosis of inherited skin diseases...? Give an example of each. (30 marks)

(d) What are the disadvantages of methods mentioned in (c) above? (30 marks)
4. 

(a) Name 3 pustular dermatoses of sudden onset, which are not caused by bacterial infections. (27 marks)

(b) Give 3 main clinical features of each of these conditions. (27 marks)

(c) What histopathological changes seen in hematoxylin-eosin stained sections could distinguish one from the other among these diseases? (15 marks)

(d) What are the aetiological or precipitating causes for each of the diseases? Name two for each condition. (18 marks)

(e) List 2 main therapies that you would employ in each of these conditions. (13 marks)
THEORY B - STRUCTURED TYPE (Total Mark 60)

Answer all questions.
Answer each question in a separate book.

1. A female of 40 years presents with erythematous macular and papular lesions on the face and upper chest. There are telangiectasia, mild scaling, non-scarring diffuse alopecia and a complaint of arthralgia of the small joints of the hands.
   (a) Name 3 possible diagnoses in order of probability (30 marks)
   (b) Give 2 other clinical features for each of these conditions that will be supportive of the diagnosis. (36 marks)
   (c) What one investigation other than a biopsy of the skin may help in the diagnosis of any 2 of these conditions? (10 marks)
   (e) A skin biopsy is done. List 4 histological features suggestive of 1 of these conditions. (24 marks)

2. A 14 year old girl presents with non scarring patchy alopecia.
   (a) Give three possible causes. (30 marks)
   (b) Give three features that differentiate them clinically. (30 marks)
   (c) What factors could predict the outcome of these conditions? (40 marks)
3. A 20 year old male who is in the 2nd month of treatment for leprosy, presents with generalized itching, fever and dark urine.

(a) Mention 3 likely diagnosis. (30 marks)

(b) List 4 relevant investigations and describe how these will be helpful in arriving at a diagnosis. (40 marks)

(c) Outline the important aspects in managing one of the conditions mentioned under (a). (30 marks)
POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (DERMATOLOGY) EXAMINATION
JANUARY 2007

Date : 8th January 2007
Duration: 2 hours

Index No : ... ... ... ... ... ... ...

Answer all questions.
Answer each question in a separate book.

THEORY A - LONG QUESTIONS (Total Mark 120)

1. Discuss the immunological basis of psoriasis. Describe the mode of action of biological agents and their potential side effects. (100 marks)

2.
(a) Define occupational dermatosis. (10 marks)
(b) What features will favour a dermatosis to be occupational in origin? (40 marks)
(c) What relevant information can be obtained by visiting a factory? (30 marks)
(d) Give four examples of non eczematous occupational dermatoses. (20 marks)

3.
(a) Describe the structure, maturation and differentiation of the epidermal skin barrier. (30 marks)
(b) Discuss the functions of the epidermal skin barrier. (30 marks)
(c) List four diseases where barrier function is disrupted. (10 marks)
(d) Outline the relevant structural changes in two of the conditions mentioned in c). (30 marks)
4. 

(a) What do you understand by the term paraneoplastic dermatosis? 
(10 marks)

(b) What features may suggest that a dermatosis is of paraneoplastic origin? 
(30 marks)

(c) Outline four mechanisms by which paraneoplastic dermatoses occur. 
(30 marks)

(d) Describe the clinical features of five paraneoplastic skin diseases. 
(30 marks)
THEORY A - LONG QUESTIONS

01. Outline the steps involved in formation of melanin and it's transfer to keratinocytes. Choose an inherited disorder characterized by generalized absence of melanin and discuss the defective step, clinical features and the use of photo protective agents in this condition. (100 marks)

02. (a) Mention 6 types of primary cutaneous lymphomas. (12 marks)
     (b) Describe how you approach a patient who has a possible cutaneous lymphoma. (28 marks)

     (c) (i) What is the most frequently encountered cutaneous lymphoma in your clinical practice? (06 marks)
         (ii) Mention 6 treatment modalities you would consider for this condition. (18 marks)
         (iii) What are the advantages and disadvantages of 4 of the above treatment Modalities? (36 marks)

03. (a) Define hirsutism and describe the pathophysiological mechanisms involved. (35 marks)
     (b) Outline the investigations of a patient with hirsutism and discuss the relevance of each investigation you have mentioned. (30 marks)
     (c) List 3 causes of hirsutism and outline the management of two of the conditions mentioned. (35 marks)

04. (a) Outline the mechanisms of action of systemic antifungal agents. (40 marks)
     (b) Outline the management of the following conditions
         (i) Candidaemia due to candida krusei in a 16-year old. (10 marks)
         (ii) Severe muco-cutaneous candidiasis in an adult with AIDS. (10 marks)
         (iii) Eumycotic mycetoma in a 50-year old farmer. (10 marks)
         (iv) A kerion in a 10-year old boy. (10 marks)
     (c) List the side effects of drugs used in (i)-(iv) above. (20 marks)
THEORY B - STRUCTURED TYPE

01. An 18 year old girl presents with recurrent episodes of transient swellings involving face, eyelids, lips, palms and soles of several months duration.

(a) What is/are the likely cause/causes? (20 marks)
(b) What additional information from the history and examination would help in arriving at a diagnosis? (30 marks)
(c) Outline the management of this patient. (50 marks)

02. A week old baby girl is being followed up for a vascular birth mark involving the right upper thigh.

(a) What features will help to distinguish a haemangioma from a vascular malformation? (30 marks)
(b) 6 months later, the child is admitted with excessive crying, rapid swelling of the right thigh and purpura.

(i) What is the likely explanation for this presentation? (15 marks)
(ii) What is the likely underlying condition? (15 marks)

(c) (i) List four investigations relevant to (b) above (20 marks)
(ii) Name 4 drugs useful in the medical management of this child. (20 marks)

03. A 28 years old female at 12 weeks of pregnancy was referred by her obstetrician with non itchy maculo papular lesions of 3 days duration. She is only taking iron and folic acid for the last 4 months.

(a) Mention 3 conditions you would consider in this patient. (15 marks)

(b) (i) How would you differentiate them clinically? (35 marks)
(ii) What investigations will help in the diagnosis? (30 marks)

(c) What possible complications could occur? (20 marks)
POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (DERMATOLOGY) EXAMINATION
JANUARY, 2008

Date: 14th January 2008

Duration: 45 minutes

Index No. ..........................................................

Answer all questions.

THEORY C – OSCE

01. (a) What 2 clinical features are seen?

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(b) What is the diagnosis?

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02. A six year old child presented with these lesions.

(a) What do you see?

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(b) What additional clinical features would you look for?

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03. This is from a patient with fever. What is the most likely diagnosis?

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04. This 45 year old female presented with epistaxis. What is the diagnosis?

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05. This is a 60 year old female

(a) List 3 clinical features related to her diagnosis.

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……………………………………………………………………………………

(b) What is the diagnosis?

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06. This is from a 4 year old child

(a) Write 2 clinical features seen.

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……………………………………………………………………………………
……………………………………………………………………………………

(b) What is the diagnosis?

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07. A 70 year old female presented with this lesion of 6 months duration.

What is the most likely diagnosis?

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08.

(a) List 2 clinical features helpful in making the diagnosis.

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……………………………………………………………………………………

(b) What is the diagnosis?

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09. This 40 year old female presented with multiple plaques of one week duration.
   (a) List 2 abnormalities seen.
       ........................................................................................................
       ........................................................................................................
   (b) What is the diagnosis?
       ........................................................................................................

10. What is the diagnosis?
    ........................................................................................................

11. This biopsy is from a papular lesion. What is the diagnosis?
    ........................................................................................................

12. What is this inherited condition?
    ........................................................................................................

13. This is a bacterial culture isolated from a skin lesion
   (a) What is the possible pathogen?
       ........................................................................................................
   (b) Name 2 skin manifestations caused by this organism.
       ........................................................................................................
       ........................................................................................................
14. A 75 year old Englishman presented with this lesion on the dorsum of his right hand of 3 months duration.

(a) What is the diagnosis?

(b) What instruments would you use to excise this lesion?
Select them from the instruments provided, name them and mention their use.

(c) Diagrammatically illustrate how you would make the incision.
(photocopy of the photograph is provided.)

(d) What suture materials would you use to close the wound?
Select them from the suture materials provided.

15. Communication skills
Question No. 14 (Photocopy of the Photograph)
THEORY A - LONG QUESTIONS

01.
(a) How is itch (pruritus) perceived. Describe the pathways concerned, using a diagram. (30 marks)
(b) What are the mediators of pruritus. Discuss their significance in skin diseases. (40 marks)
(c) Discuss the aetiology and treatment of pruritus in (30 marks)
   (i) atopic dermatitis
   (ii) senile skin
   (iii) chronic renal failure

02.
(a) Diagrammatically illustrate the Electromagnetic spectrum with expanded UV region. (15 marks)
(b) Briefly discuss the normal cutaneous response to sun exposure. (40 marks)
(c) Clinically compare chronological ageing and photoaging of skin (15 marks)
(d) Write short notes on:
   (i) Extracorporeal photo chemotherapy (30 marks)
   (ii) Phototherapy for cutaneous T cell lymphoma

03.
(a) What are cytokines ? (10 marks)
(b) What are the main types of cytokines ? (30 marks)
(c) Outline the immunopathogenesis of
   (i) Atopic dermatitis
   (ii) Cutaneous leishmaniasis
   (iii) Erythema nodosum leprosum

04.
(a) Name and Describe 4 morphological patterns of Hand Dermatitis. (12 marks)
(b) Mention 4 aetiologial types of Hand Dermatitis. (8 marks)
(c) Mention the most useful investigation in a patient with Hand Dermatitis. (4 marks)
(d) Describe its methodology. (20 marks)
(e) Describe its interpretation. (36 marks)
(f) What advice would you give a patient with Hand Dermatitis(20 marks)
01. An eighteen month old baby girl is admitted with a history of recurrent diarrhea and episodes of cough and fever of six months duration. She had been previously healthy. Her immunization was complete. Both her parents are healthy and tested negative for Human Immunodeficiency Virus. Examination reveals an ill-looking child with generalized oedema and a skin rash. The results of the following investigation are available.

Stool cultures - Negative three times
Urine albumin - Negative five times
S. proteins - Total - 50g/L (normal 65-80g/L)
  S.albumin - 20g/L (normal 35-50g/L)
S.globulin - 30g/L

(a) List four unrelated causes for this clinical picture. (20 marks)
(b) Name 3 cutaneous features of each of the conditions you have mentioned above. (48 marks)
(c) List two relevant investigations for each of the conditions. (32 marks)

02. A previously healthy 16 year old girl from Central Province presents with a history of persistent spiking fever, arthralgia and malaise of 4 weeks’ duration. One week after the onset of her fever, she developed a fit. She was started on carbamazepine by a neurologist. A rash had developed 3 days prior to admission. Examination reveals an ill, febrile child with a rash involving her face. Her cervical lymph nodes are enlarged and the liver is palpable, 4cm below the right costal margin. The following investigations are available.

Urine full report – albumin 1+
ALT – 280 IU/L (Normal < 32 IU/L)
Leptospira antibodies – Negative
ESR – 100 mm/1st hour
ANA – Negative
(a) Name four most likely diagnoses. (30 marks)
(b) Name two characteristic cutaneous features of each of the conditions you mentioned. (40 marks)
(c) List five additional investigations that would help in establishing the diagnosis. (30 marks)

03. A 38-year-old married woman had undergone extensive investigations following the death of her 1st baby, aged three months due to cardiac failure. She now presents with a period of gestation of 14 weeks duration. Examination of her skin reveals no abnormalities. This patient is referred to you with the following investigations.

Urine full report - normal
Rheumatoid factor - positive
Anti-nuclear antibodies - positive
Ro-antibodies - positive
VDRL - negative

(a) List two most likely diagnoses. (20 marks)
(b) List 4 cutaneous features of the conditions mentioned in (a). (40 marks)
(c) (i) What would have been the cause of cardiac failure of her first baby? (40 marks)
(ii) Outline the management of this mother giving reasons for your choice of drug/drugs.
(iii) Name 5 side effects of a drug used in © ii which can adversely affect her pregnancy.
THEORY A - LONG QUESTIONS

01. Discuss the principles of using systemic glucocorticoids in dermatological practice including mechanisms of action, indications and contraindications, with special emphasis on measures to reduce adverse effects. (100 marks)

02.
(a) Briefly outline the pathogenesis of acne. (20 marks)
(b) List five factors known to aggravate acne. (10 marks)
(c) On what basis would you select appropriate therapy? (15 marks)
(d) Outline the mode of action and indications for use of two tropical and two systemic treatment options most useful in acne (40 marks)
(e) Mention types of acne scars and briefly discuss their treatment options. (15 marks)

03.
(a) Write short notes on
   (i) Toll like receptors (20 marks)
   (ii) Tumour necrosis factor – alpha (20 marks)

(b) Discuss briefly the role of keratinocytes in the immune response of the skin. (20 marks)

(c) Briefly discuss the immunopathogenesis of psoriasis. (40 marks)

04.
(a) Draw and label a diagram of a vertical section of the nail apparatus. (20 marks)

(b) Discuss
   (i) clinical types of onychomycosis (20 marks)
   (ii) causative organisms in onychomycosis (20 marks)

(c) (i) How will you collect specimens for mycological diagnosis in onychomycosis? (20 marks)
   (ii) Outline the important steps in the management of onychomycosis. (20 marks)
01. A week-old baby born at term presents with a vesiculo-pustular eruption. She is a product of a non-consanguinous marriage and the ante-natal period had been uncomplicated.

(a) Name 6 conditions you would consider in the differential diagnosis of this patient. (18 marks)

(b) What cutaneous features would enable you to arrive at a clinical diagnosis
List three each for conditions mentioned in (a) (45 marks)

(d) Mention simple bedside test/s you would perform and list the positive findings in each condition mentioned in (a) (37 marks)

02. A 70-year old woman presented with a purpuric rash on her lower legs of four months duration. According to her, the rash is more burning than itchy. She also complained of numbness of her hands and feet of recent onset. General examination revealed swollen legs. Her cardiovascular, respiratory, abdomen and central nervous system were clinically normal. Urine analysis showed a persistent proteinuria (++). Other investigations were as follows.

FBC - normal
Serum creatinine - normal
ALT – 300 IU (0-20 IU/l)
Alkaline phosphatase – normal

(a) List three conditions you would consider in the differential diagnosis of this patient. (15 marks)

(b) List three additional cutaneous manifestations of each of the conditions you mentioned. (45 marks)

(c) List two additional relevant investigations for each of the conditions mentioned in (a) above. (40 marks)
03. A 25 year old male who is warded in a medical ward for backache, mild fever and sore mouth has developed an erythematous scaly eruption over the hands and feet. You are called to see him.

(a) Mention two conditions you consider in the differential diagnosis. 

(b) List three relevant questions that you would ask. 

(c) Outline five clinical features that you would specifically look for. 

(d) Mention three relevant investigations and indicate how these will be helpful. 

(e) What medications are indicated?