



THE ROYAL AUSTRALIAN COLLEGE OF GENERAL PRACTITIONERS

KEY FEATURE PROBLEMS

PRACTICE PAPER

Please Note: This practice paper contains 14 KFP Cases - the College Examination will include **26** KFP Cases.

<p style="text-align: center;">THE KEY FEATURE PROBLEMS FORMAT Information for Candidates</p>

Key Feature Problems (KFP) test clinical decision making skills in general practice. They deliberately focus on critical aspects in the resolution of a general practice problem, typically involving decisions relating to data gathering (eg history-taking, physical findings or laboratory tests), the formulation of diagnoses or decisions relating to clinical management. KFP cases are written by teams of practising general practitioners to reflect the typical decision making challenges faced by Australian GPs.

In the KFP format, a general practice case scenario is briefly described and then followed by a number of related questions (usually two to four) addressing the key features of the case. Each question is answered by selecting choices from a numbered list of options, or by writing in the answer(s) in the space(s) provided, **in note form only**.

The KFP format differs from applied knowledge question formats in that questions differ in terms of:

- (i) the number of options listed (usually between 10 and 30), or written answers required,
- (ii) the number of options or written answers that are correct, and
- (iii) the maximum number of options or written answers that are to be provided without penalty.

It is therefore important that the case description, the question, and if applicable, the option list be read carefully.

In most questions, the maximum number of choices from the option list or maximum number of written answers will be specified eg "Fill in **up to four (4)** ovals from the following list" or "List, in note form only, **up to two (2)** diagnoses".

Alternatively, the maximum number of options to be selected, or written answers to be provided is **not** stated, eg "Fill in **as many ovals as are appropriate**". In this type of question, a maximum number of allowable answers or options may have been pre-set in the scoring key. Here, the candidate is expected to focus their answers carefully to the key information that has been asked for in the question.

Each problem (case) is of equal value. Incomplete answers **usually** receive a partial mark provided that:

- The number of answers or options selected did not exceed the maximum.
- Any option or answer rated as 'essential' was included.

The question will receive **no** mark if:

- The number of answers or options selected exceeded the maximum.
- Any option rated as 'dangerous' was included in the answer(s) or options selected.
- An option or answer rated as 'essential' was not included.

'WRITE IN' RESPONSES

When providing a 'write in' answer, the following points are important:

- Write, in note form only, in the space provided. Do not write in sentences. For example, if two diagnoses are required, simply list them as follows:

Rheumatoid arthritis
Polymyalgia rheumatica

- Generally components of the 'write in' answers are expected to be conceptually distinct. Therefore avoid giving multiple versions of the same answer. For example, if three (3) differential diagnoses are required **do not** write

Gastric\duodenal ulcer
Peptic ulcer
Gastroduodenal ulcer

- Please write clearly and neatly. If your handwriting is difficult to read, please **print** your answers. **Illegible answers cannot be marked.**
- Avoid abbreviations which are not commonly used and which may not be clear to an examiner, or may be in local use only.
- Use keywords or very brief notes only.
- Multiple answers are marked irrespective of the order in which they are given.

'FILL-IN' RESPONSES

Mark your answer by filling in the appropriate oval(s) on the paper, as follows:

CORRECT



INCORRECT



The quickest way of filling in the oval is in a left to right fashion, covering most of the space within the oval, from top to bottom. Do not attempt to fill in exactly within the lines.

Errors must be clearly marked with a cross, as follows:

CORRECT



INCORRECT



Please do not fold or bend your paper in any way.

Finally, most candidate errors arise from failing to read the question carefully. Every question is different. It may help you to underline key features in the scenario provided, and key words in the question, to assist you in providing exactly what is being requested.

CASE 1

Sonya Turner, a 16 year old girl, presented for the fourth time in six weeks with recurrent bouts of high fever, abdominal discomfort, nausea and sore throat. She has generalised fatigue, is off her food and is losing weight. Mum said, "Looks like she has tonsillitis again!"

Question 1

What are the most important differential diagnoses? Fill in **up to three (3)** ovals from the following list.

1. Acute HIV seroconversion illness
2. Acute type 1 diabetes
3. Bulimia nervosa
4. Congenital hypogammaglobulinaemia
5. Cytomegalovirus
6. Epstein Barr Virus (Infectious mononucleosis)
7. Giardiasis
8. Hepatitis A
9. Hepatitis B
10. Hepatitis C
11. Hepatitis D
12. Hypochondriasis
13. Leishmaniasis
14. Leukaemia
15. Liver fluke infestation
16. Reflux oesophagitis
17. School refusal
18. Substance abuse (glue sniffing, snorting etc.)
19. Toxoplasmosis

CASE 1 continued

Question 2

What immediate investigations would be most likely to assist your diagnosis? Fill in **up to three (3)** ovals from the following list.

1. Anti-nuclear antibodies
2. Blood cultures
3. Blood sugar level, fasting
4. Blood sugar level, random
5. CMV serology
6. Epstein Barr Virus serology
7. ESR
8. Full blood count (FBC)
9. Hepatitis A serology
10. Hepatitis B serology
11. Hepatitis C serology
12. HIV antibodies
13. Liver function tests
14. Protein and immunoglobulin EPG
15. Schilling test
16. Serum cholesterol
17. Serum gastrin level
18. Stool cultures
19. Toxoplasmosis serology
20. Ultrasound liver
21. Urea and electrolytes

CASE 2

Paul Young, a 56 year old man, consults you in your surgery because of pain in his left leg which began two days ago and has been getting progressively worse. He states his leg is tender below the knee and swollen around the ankle. He has never had similar problems. His other leg is fine.

Question 1

What is your principal working diagnosis? List, in note form only, your single (1) diagnosis.

1.

CASE 2 continued

Question 2

To establish your diagnosis, what elements of his history would you particularly want to elicit? Fill in **up to six (6)** ovals from the following list.

1. Activity at onset of symptoms
2. Alcohol intake
3. Allergies
4. Angina pectoris
5. Anti-inflammatory therapy
6. Cigarette smoking
7. Colour of stools
8. Cough
9. Headache
10. Haematemesis
11. Impotence
12. Intermittent claudication
13. Low back pain
14. Nocturia
15. Palpitations
16. Paraesthesia
17. Paroxysmal nocturnal dyspnoea
18. Polydipsia
19. Previous back problems
20. Previous knee problems
21. Previous neoplasia
22. Previous urinary tract infection
23. Recent dental procedure
24. Recent immobilisation
25. Recent sore throat
26. Recent surgery
27. Wounds on foot
28. Wounds on hand

CASE 3

Samuel Ritchie, a 69 year old man, comes to your office for evaluation of occasional dyspepsia partially relieved by antacids, vague lower abdominal discomfort, chronic constipation, and blood-stained toilet paper after defaecating.

Physical examination shows an anal fissure and external haemorrhoids. Blood count shows haemoglobin of 10.8 g/dl (normal range 13.0 - 17.5 g/dl) and mean corpuscular volume (MCV) of 76 fl (normal range 80-98 fl). Prothrombin time, partial thromboplastin time, serum calcium, creatinine, bilirubin and liver function tests are normal.

Question 1

What are the most important differential diagnoses of Samuel's problem? List, in note form only, **up to five (5)** diagnoses.

1.
2.
3.
4.
5.

Question 2

Which of the following investigations should be included in an initial diagnostic work-up? Fill in **as many ovals as are appropriate** from the following list.

1. Barium enema
2. CA –125
3. Carcinoembryonic antigen
4. CT scan of the abdomen
5. Coeliac arteriography
6. Colonoscopy
7. Faecal Human Haemoglobin
8. Gated blood pool scan
9. Oesophageal pH monitoring
10. Radionucleotide liver scan
11. Sigmoidoscopy
12. Upper gastrointestinal endoscopy

CASE 4

Martha Thompson, a 74 year old widow, presents to your surgery complaining of sudden onset of severe mid-thoracic back pain which occurred after a fall in the garden. Her general health has been good apart from a left mastectomy for carcinoma five years ago. She has had intermittent backache for several years but has not required regular medication for this.

Physical examination shows her to be in severe pain and she has a noticeable thoracic kyphosis. Her back is tender to percussion in the mid-thoracic region with associated muscle spasm.

Question 1

Which are the most important differential diagnoses to consider now? List, in note form only, **up to two (2)** diagnoses.

1.
2.

You admit Martha to your local hospital for pain relief and investigation.

Question 2

Assuming they are available, which investigations would you order on admission? Fill in **up to two (2)** ovals from the following list.

1. Bone densitometry
2. Bone scan
3. CT scan spine
4. Electrolytes
5. FSH level
6. Full blood count (FBC)
7. Liver function tests
8. Liver scan
9. Mammogram of the right breast
10. MRI spine
11. Plain X-ray spine
12. Serum calcium
13. Ultrasound of the right breast
14. Serum creatinine

CASE 5

Monica Landers, a 5 year old girl, presents with a three day history of fever, increasing lethargy and vague left upper quadrant abdominal pain.

On examination her temperature is 38°C. Her respiratory rate is thirty breaths per minute. Her abdomen is soft with mild central tenderness. There is no rebound tenderness and bowel sounds are normal. ENT examination is normal, and her chest is clear.

Question 1

What are your most likely differential diagnoses? List, in note form only, **up to three (3)** diagnoses.

1.
2.
3.

Question 2

What are the most appropriate investigations? List, in note form only, **up to two (2)** investigations.

1.
2.

CASE 6

Susanna La Bella, a 23 year old, presents for the first antenatal visit of her second pregnancy. The first day of her last normal period was seven weeks ago. Susanna's son, now aged 18 months, was born normally at term with a birth weight of 4.2 kg. Susanna developed post-natal depression when her son was aged three months and she continues to take sertraline (Zoloft) 50mg daily.

Question 1

What are the most important areas of advice/counselling that you would offer Susanna today? List, in note form only, up to **nine (9)** areas.

1.
2.
3.
4.
5.
6.
7.
8.
9.

Question 2

What test(s) will you offer Susanna today? List, in note form only, **up to twelve (12)** tests.

1.
2.
3.
4.
5.
6.
7.
8.

CASE 6 continued

9.

10.

11.

12.

Question 3

What pregnancy complication is Susanna at increased risk for? Write, in note form only, **your single (1) answer**.

1.

CASE 7

Mrs Betty Oliver, aged 76, is known to have carcinoma of the submandibular gland with secondaries in cervical nodes and both lungs. She was initially treated with chemotherapy three years ago, and has just completed a course of radiotherapy to the known metastases, but without obvious reduction in size of deposits.

She lives alone, is widowed and her two children live interstate.

A neighbour rang to inform you that Mrs Oliver appeared to be hallucinating, walking around the back garden shouting at non-existent people. You attend, to find Mrs Oliver sitting in bed and apparently quite lucid. She complains of no symptoms, but on specific questioning she admits to seeing men climb through her window and sit on the end of her bed talking. Mrs Oliver is flushed but otherwise has no new physical signs.

Question 1

What are the most likely differential diagnoses? List, in note form only, **up to five (5)** diagnoses.

1.
2.
3.
4.
5.

CASE 7 continued

Question 2

What are the most important investigations to arrange today? List, in note form only, **as many investigations as appropriate.**

.....

.....

.....

.....

.....

CASE 8

Jessie Munipindi, a 48 year old Aboriginal woman, attends for a regular three monthly blood pressure check-up. She is a cleaner at a nearby primary school and her medication is atenolol 50 mg daily. Since the last visit, Jessie has been feeling tired. Jessie attributes this to recent family events with the wedding of her youngest child recently and the birth of her seventh grandchild. Her husband recently retired because of frequent angina. She has also noticed some vulval itch which is controlled by hydrocortisone 0.5% cream obtained from a pharmacy. Her periods are regular. On examination, her blood pressure is 160/95 and her weight has increased to 93 kg.

Question 1

What are the most likely causes of her tiredness? List, in note form only, **up to six (6)** causes.

1.
2.
3.
4.
5.
6.

CASE 8 continued

Question 2

What initial investigations would be most likely to help you establish the cause of Jessie's tiredness? Fill in **up to four (4)** ovals from the following list.

1. 24 hour ambulatory blood pressure monitoring
2. B12 and folate
3. Blood sugar
4. Chest X-ray
5. Electrocardiogram (ECG)
6. Erythrocyte sedimentation rate (ESR)
7. Full blood count (FBC)
8. HbA1C
9. Hepatitis B serology
10. HIV serology
11. HSV serology
12. Iron studies
13. Lipid profile
14. Liver function tests
15. Pap smear
16. Paul Bunnell
17. Plasma cortisol
18. Plasma oestrogen
19. Renal ultrasound
20. Serum calcium, phosphate
21. Stool microscopy and cultures
22. Thyroid stimulating hormone (TS.H)
23. Urea, creatinine and electrolytes
24. Vulval/vaginal swab

CASE 9

Tanya Adams, a previously well 3 year old, is carried in to your surgery. Tanya has been refusing to walk since waking this morning. There is no history of recent trauma. On examination you note pain and limitation of left hip flexion and internal rotation. Her temperature is 37.3°C .

Question 1

What is your initial working diagnosis? Write, in note form only, your single (1) diagnosis.

1.

Question 2

What initial investigations, if any, would you now perform? Fill in **up to two (2)** ovals from the following list.

1. Aspiration left hip
2. Blood cultures
3. Bone scan
4. CRP
5. CT scan left hip
6. ESR
7. Full blood count
8. Mid stream urine
9. None
10. Rheumatoid factor
11. Ultrasound of hip
12. Urinalysis
13. X-ray left knee
14. X-ray left lower limb/pelvis
15. X-ray left hip

CASE 9 continued

Later that day you receive Tanya's results and they are all normal.

Question 3

What is now the most appropriate management? Fill in **as many ovals as are appropriate** from the following list.

1. Admit to hospital for observation
2. Analgesia
3. Arrange for joint aspiration
4. Arrange to review child the following morning
5. Commence a five day course of prednisolone (1 mg/kg/day)
6. Commence a course of cephalexin
7. Educate parents and explain diagnosis
8. Encourage child to walk
9. Physiotherapy referral for therapeutic ultrasound
10. Request MRI scan left hip
11. Rest
12. Nil further action required

CASE 10

Elizabeth Baxter is a nurse at the local public hospital who has sustained a needlestick injury at work, from which she has contracted hepatitis C. She visits you for information and advice, having just received her results from the occupational health officer.

Question 1

In advising Elizabeth about the characteristics of Hepatitis C infection, which of the following would you wish to discuss? Fill in **up to six (6)** ovals from the following list.

1. Carrier state does not occur after primary infection
2. Incubation period is usually less than fifteen days
3. Jaundice is common
4. Maternal transmission may occur
5. May be associated with cardiomyopathy
6. May be treated with alpha-interferon
7. Rarely results in chronic liver disease
8. Results in chronic liver disease in up to 50% of cases
9. Serial liver function tests of infected individuals are recommended
10. Signs of infection are often subclinical
11. Some immunity to hepatitis C may be conferred by hepatitis B vaccine
12. Spreads readily by sexual contact
13. Vaccination is not available

CASE 10 continued

Question 2

What advice should be given to Mrs Baxter about preventing transmission of her hepatitis C to others? List, in note form only, **up to seven (7)** features of advice you would give to Mrs Baxter.

1.
2.
3.
4.
5.
6.
7.

CASE 11

Mrs Cheryl Kay, a 35 year old woman, who works in a sandwich bar, presents with sudden onset of frequent watery diarrhoea and vomiting with abdominal cramps over the last eighteen hours. She was previously well. She is not sure whether there has been any blood in the stools.

On examination, she is mildly dehydrated (5%), pulse 96 regular, BP 130/82, abdomen soft, no masses, temperature 37.2°.

Question 1

What are the most likely pathogens? List, in note form only, **up to seven (7)** pathogens.

1.
2.
3.
4.
5.
6.
7.

Question 2

What is the most important investigation? Write, in note form only, your **single (1)** answer.

1.

Question 3

While waiting for the results of your investigation, what are the important features of your management? List, in note form only, **up to three (3)** features.

1.
2.
3.

CASE 12

Shirley Evans, aged 52, accompanies her mother Elsie, age 77, for a consultation about Elsie's forgetfulness and behaviour. Elsie has lived alone since her husband died a year ago. She forgets simple things like turning off the stove, having a bath and putting out the rubbish, and has become frail. Shirley has responded by helping out with cooking and cleaning, but her mother is very independent and, at times, difficult to handle. Elsie looks slightly dishevelled. She is on no medications.

Question 1

What diagnoses would you consider to explain Elsie's problems? List, in note form only, **up to six (6)** diagnoses.

1.
2.
3.
4.
5.
6.

Question 2

What investigations are most likely to elucidate the cause of Elsie's problems? List, in note form only, **up to five (5)** investigations.

1.
2.
3.
4.
5.

CASE 13

You are John's regular general practitioner and have been seeing him quite frequently because of warts on his hands which have been difficult to clear up. He also recently had a thrush infection on the soft palate.

The following health summary information is provided in the record:

John Kilpatrick, aged 25, unmarried male, electrician. No allergies. Smoker. Immunisations up-to-date. No medications are recorded.

His opening remark today is: "Doc - my warts are settling down but this time I've come out with blisters on my chest. I noticed them yesterday, and now they are quite painful and itchy and I feel a bit crook with them."

On examination you find the rash as shown in Appendix A. Examination is otherwise unremarkable, BP 125 / 70 urinalysis negative.

Question 1

What is your diagnosis of this rash?

Write in note form only, your single diagnosis.

1.

Question 2

What immediate steps will you take to treat John's rash? List, in note form only, **up to two (2)** steps.

1.

2.

CASE 13 continued

You discuss the problem with John and explain the diagnosis and immediate management.

Question 3

What other aspects of his history would you explore today? List, in note form only, **up to two (2)** answers.

1.
2.

CASE 14

Mrs Lorna Bradshaw, aged 72, is brought to your surgery in a distressed state. She has not previously been seen at your surgery.

She collapsed at home and is now complaining of central chest pain.

Pulse	100 regular
BP	100/60

You take an ECG. (Appendix B)

Question 1

What is your probability diagnosis? Write, in note form only, your **single (1)** diagnosis. Be specific.

1.

Question 2

What are the features of the ECG which contribute to your diagnosis? List, in note form only, **up to three (3)** features. Make specific reference to the abnormalities and the leads involved.

1.

2.

3.

Case 14 continued

Question 3

What is your immediate management of this patient? Fill in **as many** ovals as are appropriate from the following list.

1. Administer oxygen
2. Advise smoking cessation
3. Aspirin 300mg orally stat
4. Atropine intravenously
5. Call an ambulance
6. Cardiologist's opinion
7. Change ECG limb leads
8. Commence Digoxin
9. Diazepam intravenously
10. Diazepam orally
11. Echocardiogram
12. Elevate the patient's legs
13. Establish intravenous access
14. Exercise ECG
15. Glyceryl trinitrate – sublingual
16. Intravenous morphine
17. Measure peak flow rate
18. Prescribe antacids
19. Reassure and review if pain persists
20. Repeat ECG in 1 hour
21. Stop Digoxin
22. Take blood for serum lipids
23. Take blood for serum potassium
24. Urgent referral for pacemaker
25. Verapamil intravenously
26. Verapamil orally



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2007

APPENDICES

Appendix A Case 13



Appendix B Case 14

